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Underpricing of newly issued corporate bonds in the CEE markets

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A B S T R A C T

IPO anomalies in the corporate debt markets are to great extent unexplored field in the academic literature. The aim of this paper is to investigate the undepricing phenomenon of newly issued corporate bonds on the Catalyst market and its determinants. I use event study methodology to test for underpricing and perform regressions to find its determinants. The sample includes 142 corporate bonds issued between March 2010 and August 2013 and listed on the Catalyst market. The computations confirm the uderpricing effect in the CEE market, however do not allow to indicate its determinants.

A R T I C L E I N F O

Keywords:
corporate bonds, undepricing anomaly, new issues, IPOs, CEE markets

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1. INTRODUCTION

IPO anomalies on the stock market are extensively documented in the literature. Researchers all over the world investigated both short term mispricing and long term underperformance phenomena. Papers offer plenty of hypotheses explain these patterns and their origins. Taking that into account it may seem astonishing, that very few studies concern similar phenomena in the bond market1. Up to now, there are several papers including observations from the United States and foreign markets, mostly Japan. What is more, it seems that no paper investigated bond IPOs in the markets of Central and Eastern Europe.

The aim of this paper is to investigate, whether the initial underpricing of the bond IPOs could be observed in the e market and to find out which factors contribute to the underpricing. The study is composed of 3 parts. The reminder of the article is organised as follows. First, I review the existing literature in the field, focusing both on theoretical explanations and empirical research. Second, I present datasets and research methods employed. Finally, I present the empirical research and its results. My computations are based on a preselected sample of 142 corporate bonds issued between March 2010 and August 2013 which were listed Catalyst, the only regulated market in CEE dedicated to corporate debt. The paper ends with conclusion and suggestions for further research.

The paper makes two crucial contributions to the relatively modest literature on initial bond offering (IBO) mispricing. Firstly, it attempts to verify whether the IBO mispricing is present also in the CEE markets. Secondly, it tries to identify which factors influence a size of the mispricing, by amplifying it or minimising. The results of analysis are important for both "sides" of financial markets. From the point of

[1] Interesting reviews could be found in studies of Ritter (1998) or Jenkinson and Ljungqvist (2001).

companies seeking financing, they allows to better estimate a cost of capital and its components, and thus helps to decrease and optimise it. On the other hand, the research results helps investors to better forecast the expected rate of returns in the corporate bond market.

2. THEORETICAL BASIS

There are many hypotheses explaining initial underpricing at stock IPOs, but not many of them could be applied to the bond market. In practice, two standard explanations are offered: asymmetric information between investors and excessive competition between underwriters.

The first prominent explanation is presence of asymmetry in access to information among various market participants. The hypotheses may come in a few forms which may slightly differ from each other. Rock (1986) emphasise the winner's curse problem, which emerges when well informed investors request allocation only of low and fair value IPOs. Thus, the allocation of overpriced and frequently unprofitable IPOs is left to uninformed investors. The problem is solved through underpicing. It offers profit to uninformed investors, which would otherwise not participate in the IPOs. The Rock's model is extended by Benveniste, Busaba and Wilhelm (2002), and also by Sherman and Titman (2002). Those authors regard undepricing as a sort of payment to IPO participants for revealing information about their opinions and valuations of the bonds offered.

Another extension of information-based theories focuses on differences in access to information of investors and managers. This hypothesis involves signalling models (Allen and Faulhaber 1989, Welch 1989, Grinblatt and Hwang 1989) and is related to a lemons problem. If investors cannot tell the difference between "good" and "bad" companies, they value all of them the same. This is the reason why managers of good companies want to differentiate themselves from the bad ones and take advantage of underpricing mechanism "to receive their true, high worth" (Cai, Helwege, Warga 2007). Some authors suggest that the underpricing problem may be reduced thanks to a good reputation of an underwriter (Chemmanur and Paeglis 2005, Chemmanur and Fulghieri 1994, Hughes and Thakor 1992, Diamond 1989, Diamond 1991, Gorton 1996, Fenn 2000, Carty 1996).

Datta, Iskandar-Datta and Patel (1997) suggest that undepricing could be also a result of excessive competition among underwriters. According to their explanation, underwrites compete rather for high credit quality issues than low quality ones (junk bonds or not rated bonds). As a consequence, they drive up prices of investment grade bonds and push down prices of junk bonds. Due to that, the first group may be overpriced, and the other underpriced.

The competition hypothesis appears to have two weak points. Firstly, it is difficult to justify why some investors actually buy overpriced bonds. Secondly, there is an issue of other dimensions over which underwrites compete: commissions, size of an issue, etc.

The competition hypothesis seems to be confirmed for instance by Datta, Iskandar-Datta and Patel (1997), who observed that positive abnormal rates of return on the IPO day are characteristic for low rating bonds, while investment grade debt often perform poorly during IPO. These studies appear to be confirmed by Cai, Helwege and Warga (2007), but it is worth noting that McKenzie and Takaoka (2008) come to an opposite conclusion. Some extensions of the competition model may be found also in the paper of Takaoka and McKenzie (2006).

Besides the theories described above, some attempts were taken to explain the underpricing phenomenon with liquidity issues. However, this field of research resulted in mixed conclusions. Ellul and Pagano (2006) think that bond underpricing may be regarded as a form of compensation for low liquidity right after the IPOs, which they partly confirm with their empirical research. On the other hand, Booth and Chua (1996) conclude, that initial underpricing induce higher investors' activity right after the bond IPOs. Finally, the study of McKenzie and Takaoka (2008) is also worth mentioning. The authors connect the IPO underpricing effect with a level of market and interest rates volatility.

Empirical research over abnormal IBO returns takes usually two forms: either analysis of bond YTMs or price patterns. Early studies (Ederington 1974, Lindvall 1977, Sorensen 1982) examined mostly YTMs and indicated that these of newly issued bonds before the first listing are usually higher than already listed bonds with a matching maturity and credit quality. However, because of difficulties in proper YTM calculation in case of bonds with built-in options, Weinstein (1978) decided to use benchmark-corrected prices instead of YTMs. He based his computations on a sample of 179 initial bond offerings and 412 seasoned bond offerings from years 1962-74. Most of the bonds were investment grade. Weinstein observed 0,366% average abnormal return in the first month of listing. On the other hand, Fung and Rudd (1986) did not manage to confirm existence of IBO underpricing and Wasserfallena and Wydler (1988) found proofs of this phenomena in the Swiss market.

Older studies did not distinguish between initial and secondary bond offerings. In contrast, Datta, Iskandar-Datta and Patel (1997) investigated exclusively IBOs. The authors used listings from NYSE and found positive abnormal returns averaging 1,85% for junk bonds and negative abnormal returns for investment grades. A similar methodology was employed by Helwege and Kleiman (1988), who used also dealer quotations. The regarded such approach as more appropriate due dealer-dominated character of the bond market. These researchers found statistically significant underpricing of speculative bonds, but only of 39 basis points.

Among the newer IBO research, it is necessary to point out papers of Kozhanov and Ogden (2012), as well as Cai, Helwege and Warga (2007), which both generally confirm underpricing phenomenon. In contrast, McKenzie and Takaoka (2008), find out that corporate bonds in the Japanese market were rather overpriced than underpriced. Finally, interesting remarks could be found in a paper of Kohanov, Ogden and Vaghefi (2011). These authors indicate, that corporate bonds usually right after the IPO deliver abnormal rates of return, which last up to 6 months. However, later the bonds usually underperform effectively erasing initial superior returns.

3. DATA SOURCES AND RESEARCH METHODS

I based my computations on all corporate bonds listed on the Catalyst market, which were issued between March 2010 and August 2013 (the full period since the market was opened). I eliminated from the sample zero-coupon bonds (because of different price behaviour), government guaranteed bonds (because there are more similar to government bonds than corporate bonds), and bonds with no single trade during the first 100 days from IPO (in order to eliminate the distortions implied by lack of liquidity). After these operations, the final sample consisted of 142 corporate bond offerings. Data involving prices, dates, and benchmarks come from Bloomberg.

The analysis of behaviour of corporate bonds after an offering was performed according to a following procedure. First, I begin with the popular average cumulative abnormal returns (ACAR) approach. Next, using previously calculated ACARs, I performed regression analysis with dummy variables.

I begin by calculating abnormal returns (ARs) for each day within the 180-days period after the first listing. The daily AR was calculated as:

$$\mathrm{AR_{it}} = \mathrm{R_{it}} - \mathrm{R_{E(i,t)}}, \qquad (1)$$

where Rit denotes bond i return[2] on day t, and RE(i,t) is bond's i expected return on day t. The econometric literature offers a wide range of expected return models, which additionally in recent years significantly gained on sophistication. Interesting reviews could be found for instance in Campbell, Lo and MacKinlay (1996), MacKinlay (1997) or Kothari and Warner (1997, 2006). In this paper I employ benchmark-corrected rates of return, which is similar to the methodologies employed in the studies of Datta, Iskandar-Datta, Patel (1997) and Cai, Helwege, Warga (2007). From the formal point of view, it is a variation of a market model, as presented by MacKinlay (1996).

$$\mathrm{R_{it}} = \alpha_\mathrm{i} + \beta_\mathrm{i}\mathrm{R_{mt}} + \varepsilon_\mathrm{it}, \qquad (2)$$
$$\mathrm{E}(\varepsilon_\mathrm{it0}) = 0, \qquad \mathrm{var}(\varepsilon_\mathrm{it0}) = \sigma_\varepsilon^2.$$

where Rit and Rmt are the period-t returns on security and the market portfolio, ε_it is the zero mean disturbance term and αi, βi and σ_ε^2 are the parameters of the market model. The actual model I use was a

[2] I used logarithmic rates of return in all the computations.

market-adjusted return model (MacKinlay 1996). The market adjusted model is a restricted market model with αi constrained to be 0 and βi constrained to be 1.

Finally, the model's specifications is as follows:

$$R_{it} = R_{mt}. \qquad (3)$$

I use maturity-matched Bloomberg/EFFAS Bond Price Indices as benchmark portfolios. It would be more appropriate to use a corporate bond index, which would factor not only variation in interest rates, but also changes in credit spreads, but there are no such indices available in the CEE market.

It is also necessary to point out, that the first ARit was computed against the issuing price, and that it related to the benchmark behaviour in the period between the offering and the first transaction day.

After computing daily ARs based on expected return models, I proceed with time-series aggregation, so as to obtain cumulative abnormal returns (CARs):

$$CAR_i = \sum_{t=1}^{T} AR_{it}, \qquad (4)$$

and then I average CARs cross-sectionally for all the bonds in the sample, in order to obtain average cumulative abnormal returns (ACARs):

$$ACAR = \sum_{i=1}^{N} CAR_i. \qquad (5)$$

When I calculate ACARs, I divide the full sample additionally into subsamples, based on various bond characteristics, which could potentially influence the scale of abnormal returns: maturity, collateral, public status at the time of issue, its size and its character (initial or secondary).

The zero hypothesis that ACARs are not significantly different from zero was confronted with an alternative hypothesis that ACARs actually differ from zero. I verified this hypothesis with parametric (t-statistic and t-Student distribution) and non-parametric tests (z-statistic from a bootstrap procedure).

Next, using the CARs based on the closing price at the first session with any transactions, I regress CARs against some dummy variables. The aim of the regression was to investigate which factors contribute to the variation in abnormal returns and was based on the same variables, which were used earlier to divide the sample into the subsamples:

1) IPO – the first offering on the bond market,
2) private status – issuer's stocks were not listed in any regulated market at the day of offering,
3) lack of collateral – bonds were not secured with any collateral,
4) small issue – a total size of an issue did not exceed 10 mio. PLN,

5) long term bond – bond's maturity was longer than 3 years.

The regression analysis was performed in 8 separate dummy variable configurations. The regression parameters are estimated employing OLS and tested in parametric way.

4. RESULTS AND INTERPRETATION

Figure 1:. presents the cumulated ACAR rates during 180 days after the first transaction.

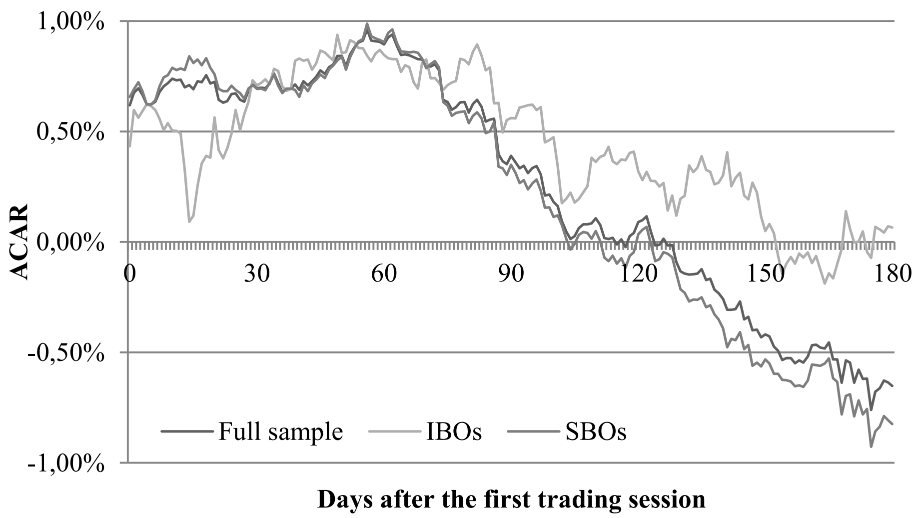

Figure 1: ACARs during 180 days following the first trading session.

The price behaviour generally follow the patterns observed in the US market in the subinvestment grade bonds segment. During the first 2 months of listings the bonds delivered almost 1% abnormal returns. Next, the superior performance successively weakened, and finally between the 4th and the 6th month the positive abnormal returns were erased to 0 or even became negative. Nonetheless, as it is depicted in Table 1., although the initial positive returns were statistically different from 0, the later negative ACARs lacked statistical significance.

Table 1: ACARs among IBOs and SBOs.

	Full sample			IBOs			SBOs		
Day no.	ACAR (%)	*t-stat*	N	ACAR (%)	*t-stat*	N	ACAR (%)	*t-stat*	N
1	0,619***	*3,783****	142	0,432**	*2,005***	24	0,656***	*3,414****	118
2	0,675***	*4,139****	142	0,597***	*2,767****	24	0,691***	*3,601****	118
3	0,696***	*4,198****	142	0,561***	*2,588****	24	0,723***	*3,707****	118
10	0,718***	*3,969****	141	0,538	*1,583*	24	0,755***	*3,638****	117
30	0,713***	*3,909****	136	0,732**	*1,986***	24	0,709***	*3,404****	112
60	0,906***	*3,57****	130	0,869*	*1,907**	23	0,914***	*3,108****	107
90	0,351	*1,531*	118	0,551	*1,250*	23	0,303	*1,138*	95
150	-0,432	*-1,313*	103	0,114	*0,275*	20	-0,563	*-1,421*	83
180	-0,636	*-1,461*	98	0,071	*0,159*	19	-0,806	*-1,522*	79

*, **, *** denote statistical difference from 0 at 10%, 5% and 1% levels. "N" is the number of observations.

What is interesting, the IBOs' returns were not higher, but actually lower, than these of SBOs. It stays in vivid contrast to what is observed in developed markets.

Table 2. depicts ACARs during the first trading session in the subsamples.

Table 2: ACARs in the subsamples (own computations)

	ACAR (%)	N	% of the sample	*t-stat*
Panel 1: private/public status				
Private companies	0,308	54	38,03	*1,075*
Public companies	0,809***	88	61,97	*4,117****
Panel 2: maturity				
Short-term bonds (up to 3 years)	0,677***	92	64,79	*4,725****
Long-term bonds (more than 3 years)	0,510	50	35,21	*1,317*
Panel 3: size of an issue				
Small issues (up to 10 mio. PLN)	0,396**	64	45,07	*2,055***
Big issues (over 10 mio. PLN)	0,801***	78	54,93	*3,171****
Panel 4: collateral				
Lack of collateral	0,634***	128	90,14	*3,539****
Collateral	0,475	14	9,86	*1,700*
Panel 5: IPO/SPO status				
Initial bond offerings	0,432**	24	16,90	*2,005***
Seasoned bond offerings	0,656***	118	83,10	*3,414****

*, **, *** denote statistical difference from 0 at 10%, 5% and 1% levels. "N" is the number of observations.

Analysing the Table 2., it is difficult to indicate which factors determine the size of underpricing. In fact, none of the factors, which were analysed in previous research, does not seem to contribute to forming the abnormal returns. These observations are confirmed by regression analysis shown in Table 3.

Table 3: Dummy variable regression (own computations).

Parameters	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept (%)	0,656***	0,806***	0,475	0,801***	0,677***	0,831***	0,652	0,787
	3,663*	***3,930****	***0,912***	***3,650****	***3,337****	***3,861****	***1,228***	***1,405***
IPO (%)	-0,224					-0,174		-0,243
	-0,514					***-0,399***		***-0,524***
Private company (%)		-0,501				-0,490		-0,359
		-1,493				***-1,452***		***-0,998***
Lack of collateral (%)			0,159				0,371	0,358
			0,291				***0,654***	***0,626***
Small issue (%)				-0,405			-0,529	-0,431
				-1,239			***-1,524***	***-1,188***
Long-term bond (%)					-0,167		-0,368	-0,345
					-0,489		***-1,004***	***-0,883***
R^2 (%)	0,19	1,57	0,06	1,08	0,17	1,68	1,93	2,97
Adjusted R^2 (%)	-0,53	0,86	-0,65	0,38	-0,54	0,27	-0,20	-0,60

*, **, *** denote statistical difference from 0 at 10%, 5% and 1% levels.

Although the intercept in most cases is significantly different from 0, but it was not possible to extract the factors that determine the size of underpricing.

5. CONCLUSIONS

In comparison with stock IPOs, anomalies connected with bond issues are relatively weakly investigated in the economic literature. Few studies concentrated mostly on US market suggested underpricing phenomenon among newly issued corporate bonds. This paper was probably the first attempt to find out whether the similar phenomenon may be observed on the Catalyst, and to answer the question which factors contribute to its creation.

The performed analysis allowed to confirm the existence of uderpricing of newly issued bonds in the CEE corporate bond market. However, it was not possible to indicate any specific factors which particularly impacted the size of underpricing. What is more, I was unable to confirm observations from the US market, that the abnormal returns are characteristic particularly for initial public offerings. On the Catlyst market in years 2010-13 the abnormal returns were generally similar, without regard for issue size, maturity, collateral, public or private status of an issuer, or the issue character: IBO or SBO.

Further research should concentrate on a few areas. Firstly, the sample should be expanded in both the time dimension (emissions which took place after publication of this paper) and the geographic dimension (emerging markets other than CEE). Moreover, it would be highly valuable to expand the sample into OTC market, for instance based on dealer quotations. Secondly, it would be very useful to design some credit risk index for the CEE corporate bond markets. It would allow more precise estimations of the underpricing. Thirdly, it would be valuable to assess the impact of a credit quality on the size of the underpricing and the price patterns following offerings. Nonetheless, the main obstacle is that most bonds on the Catalyst are not rated. Finally, increasing the number of dummy variables (for example with liquidity) could shed some light on the determinants of abnormal returns.

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Corporate Accruals Practices of Listed Companies in Bangladesh

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ABSTRACT

Corporate accounting scandal is not a new phenomenon and it is the outcome of corporate accruals i.e., accruals by management choice. This study investigated the use of corporate accruals in the financial statements of the listed companies in Dhaka Stock Exchange (DSE) through segregating total accruals into corporate (discretionary) and accounting (non-discretionary) accruals. The average rate of corporate accruals was 35 percent and in many cases, cash flow from operation exceeded the net income, the growth in accounts receivable was faster than sales growth, and inventory growth was not consistent with sales growth. In this context, this study may create awareness of the risk factors of corporate accruals among external users' of accounting information especially analysts, regulator, policy makers, existing and potential shareholders, lenders, trade creditors, external auditors, researchers, financial advisors, and stock brokers. Consequently, it may reduce the use of management discretion in preparing the financial statements.

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1. INTRODUCTION

Corporate swindle has subjugated the financial news in recent years. The scandal at Waste Management (1998), Enron Corporation (2001), Tyco International (2002), WorldCom (2002), Health-South (2003), Freddil Mac (2003), American International Group (2005), Lehman Brothers (2008), Bernie Madoff (2008), and Satyam (2009) to name but a few, emphasizing the will and ability of unscrupulous managers to defraud investors and other stakeholders. These scandals call into the question of reliability of reported earnings. The recent wave of corporate governance failures has raised concerns about the integrity of the accounting information provided to investors and resulted in a drop in investor confidence (Jain et al, 2003; Rezaee 2004; Jain & Rezaee 2006). These failures were highly exposed and ultimately led to the drop of investors' confidence on accounting information. In Bangladesh, investors' do not have strong confidence on information provided in annual report (Razzaque 2004). The recent wave of corporate scandals in the United States and elsewhere has dramatized, once again, the severity of the agency problems that may arise between managers and shareholders (Joseph et al, 2004). A principal concern of many users of financial statements has been whether or not earnings are overstated. Companies may be motivated to increase earnings in a particular period to meet analysts' earnings expectations, to meet debt covenants, or to improve incentive compensation. Importantly, management also may have incentives to lower reported earnings in a particular period.

In the United States, the SEC study (2002), *Report Pursuant in Section 704 of Sarbanes-Oxley Act of 2002*, reviews 515 enforcement actions between July 31, 1997 and July 30, 2002. The study classified improper accounting practices into four categories: (i) Improper revenue recognition (126 cases) including reporting revenue in advance through techniques, such as holding the accounting period open, billing without shipping (bill and hold), fictitious revenue, and improper valuation of revenue; (ii) Improper expenses recognition (101cases) including improper capitalization, overstating inventory, understating bad debts/loan losses, improper use of restructuring reserves, and failure to record asset impairments; (iii) Improper accounting in connection with business combination (23 cases); and, (iv) Other accounting and reporting issues (130 cases) including inadequate disclosures, failure to disclose related party transactions, inappropriate accounting for non-monetary and round-trip transactions, improper accounting for foreign payments in violation of the Foreign Corrupt Practice Act, improper use of off-balance sheet arrangements, and improper use of non-GAAP financial measures (CFA:2011).

In Bangladesh, the stock market had been crashed twice- one in 1996 and the other in 2010-2011. In 1996, the cause of crash was speculative bubble and in 2010-2011 the cause was asset pricing bubble. In DSE it is observed that, the stock price moves up if the earning per share is higher than that of the same quarter of the previous year. It is an indication of earnings manipulation in order to move up the price or better performance of their stock in the capital market. A probe committee was formed by the government to find out the real causes behind the crash of the capital market in 2010-2011. The probe committee digs out various ways to manipulate the capital market. Among those ways, accounting manipulation was important one which is somewhat responsible for creating asset pricing bubble in the capital market (Probe Committee Report: 2011).

The Institute of Chartered Accountants of Bangladesh (ICAB) provided their opinion and recommendations to the probe committee in 2011. Quality of financial statements of the issuers was one of the concerned issues. Major areas of concern were as follows:

i. Quality of earnings
ii. Non-compliance of accounting standards
iii. Revaluation of fixed assets
iv. Poor quality of work of some audit firms that are in the SEC panel of auditors

During investigation, Probe Committee (2011) observed that companies were overstating their assets in the name of revaluation as there was a weakness of the revaluation process in Bangladesh and deferred tax implications were not properly accounted in the financial statement. Even, many companies had issued bonus shares against such unrealized gains which were not legal. The probe committee provides the following information to observe the scenario of the revaluation of assets.

Table 1: Test Case of Overvaluation of Assets

Name	NAV per share in Taka		
	Before revaluation	After revaluation	% change
Libra Infusions	438	15667	3472
Sonali Aansh Industries	297	2156	626
Rahim Textile	127	785	518
BD Thai Aluminum	142	566	298
Orion Infusion Ltd	20	101	413
Ocean Containers Ltd.	13	50	296
Shine Pukur Ceramic	12	26	120
Eastern Insurance	151	309	104

Source: Probe Committee Report, 2011; NAV = Net Assets Value

Earnings per share (EPS) is an important indicator to justify the share price of a company. In Bangladesh, earnings per share of companies are manipulated in order to hike the offer price in the stock market. Institute of Chartered Accountants of Bangladesh (ICAB) mentioned the manipulating strategies as follows:

(i) Annualizing EPS computation – There were instances where issuers annualized the latest quarterly or semi-annual EPS without using latest available full year EPS. Such quarterly/semi annually EPS figures were significantly higher than historical EPS which is most likely to be "managed"

(ii) Manipulation related to weighted average number of shares in computing EPS- There were instances where issuers had issued a large number of shares closer to the balance sheet date so that such new shares would have lesser impact in computing weighted average number of shares.

(iii) Issue of shares subsequent to the balance sheet date – There were instances where new shares issued subsequent to the balance sheet date and impact of such new shares were not taken into account in computing EPS in pricing the IPO.

(iv) Inclusion of exceptional non-recurring income into the EPS computation (example: capital gains).

(Source: Probe Committee Report, 2011)

Management has a unique ability to commit fraud because it often is in a position to directly or indirectly manipulate accounting records and present deceitful financial information. Fraudulent financial reporting often involves management override of controls that otherwise may appear to be operating effectively. Management can either direct employees to perpetrate fraud or solicit help in carrying it out. In addition, management personnel as a component of the entity may be in a position to manipulate the accounting records of the component in a manner that causes a material misstatement in the consolidated financial statements of the entity. Management override of controls can occur in unpredictable ways (CFA: 2011).

In view of the above facts, it is clear that agency issues is a severe problem in the corporate world of Bangladesh and there is a great possibility of using discretionary accruals (choice by management) in the financial statements to achieve desired goals. Discretionary accrual is an important economic variable to assess the quality of earnings. The quality of earnings is directly related with the quality of accruals. Higher discretionary accruals indicate lower quality of earnings and lower discretionary accruals indicate higher quality of earnings. In this context, the main objective of this study is to examine whether there is an existence of discretionary accruals in the corporate financial statements in Bangladesh and if so, assess the level of discretionary accruals. The secondary objectives are to find out some evidences that could lead to accounting irregularities and to refer the risk factors associated with the fraud triangle and common accounting warning signs.

The remainder of the paper is organized as follows. Section 2: presents literature review, section 3: describes various accruals models, section 4: empirical methodology, section 5: discussion of results and section 6: conclusion.

2. LITERATURE REVIEW

Accrual manipulation is an important way to managers to produce a desired earnings number. The company does not change its activities but, rather, opportunistically reports income for an existing activity. Accruals create the opportunity for earnings management because they require managers to make forecasts, estimates, and judgments. The greater the degree of discretion in an accrual, the greater the opportunity for earnings management (Dechow & Schrand, 2004). Generally, managers prefer the manipulation of accruals over the manipulation of real activities. Consequently, managers are likely to resort to the manipulation of real activities only when there is limited scope left for accrual manipulation. The manipulation of both accruals and real activities has severe consequences on the reliability of earnings for decision making. Managerial manipulation reduces the reliability of accounting numbers, leading to reduced conditional conservatism (Juan et al. 2009). The articulation between the income statement and the balance sheet ensures that accruals reflected in earnings also are reflected in net assets. Therefore, an optimistic bias in earnings implies net assets measured and recorded temporarily at values exceeding those based on a neutral application of GAAP. Generous assumptions of managers' about recognition and measurement in one period reduce their ability to make equally generous assumptions in later periods, if managers want to stay within the guidance provided by accounting regulators and professional groups. Therefore, managers' ability to optimistically bias earnings decreases with the extent to which net assets are already overstated (Barton & Simko, 2002). Discretionary accruals are accounting adjustments to cash flows that managers can choose within the flexibility of GAAP. Since GAAP allows certain discretion over financial reporting, there is a possibility that accruals contain management's intention to manipulate information (Beneish 1997; Dechow & Skinner 2000). Previous studies detected earnings management behavior through various methods including the changing of accounting policies (Balsam et al., 1998), discretionary accruals (Jones 1991), real transactions (Barber et al. 1991; Bushee 1998; Cheng 2005), and earnings distribution (Burgstahler and Dichev 1997). Since the middle of 1980s, discretionary accruals have become the primarily focus on detecting earnings management. There are two main reasons. Firstly, accrual is a generally accepted accounting principle. Accruals are used to reduce inconsistencies encountered as a result of difference in timing of the recognition (Dechow & Skinner 2000). Secondly, the accrual technique is less visible and hard to detect compare to the changing of accounting policies or real transactions. As such, accruals open a door for opportunistic earnings management within the requirement of GAAP. Managers believe that accrual technique is a desirable vehicle to achieve their objectives (Dechow 1994; Beneish 2001).

The accrual method began with Healy (1985) and DeAngelo (1986), who used total accruals and changes in total accruals as a proxy for discretionary accruals respectively. These models capture either income-increasing or income-reducing techniques that managers have incentives to employ, however, they misclassified all accruals as discretionary which lead to biased test if earnings management stimulus is correlated to non-discretionary accruals to overcome this limitation. Jones (1991) introduced a linear regression approach to control non-discretionary determinants of accruals. She used change in sales control for non-discretionary accruals of current assets and liabilities; property, plant and equipment control for the non-discretionary component of depreciation expense. The rationale is that a firm's working capital requirements depend on sales, while its depreciation accruals depend on the level of property, plant and equipment. Then, she uses the residual for regression of total accruals on non-discretionary determinants of accruals as discretionary accrual proxy. However, this model misclassified all revenue as non-discretionary accruals. Dechow et al. (1995) introduced a Modified Jones Model, they adjusted the Jones model by removing credit sales from revenues. However, the modified Jones Model could still yield biased results if no earnings management occurs in credit sales. In the literature, both Jones Model and Modified Jones Model have been widely used in estimating discretionary accruals the proxy for earnings management. Since earnings management is not observable, the validity and reliability of Jones and Modified Jones empirical models have been often criticized (Bernard & Skinner 1996; Wilson 1996;

Guay et al. 1996; Beneish 1997; Healy & Wahlen 1999; Thomas & Zhang 2000; Peasnell et al. 2000; Xie 2001; Leuz et al. 2003). Researchers argued that model misspecification problem at least reduces the power of detecting earnings management, and at worst causes researchers to conclude that there is earnings management when none actually exist (e.g., McNichols & Wilson 1988; Dechow et al. 1995). Moreover, it is more likely to detect income increasing earnings management for higher profitable firms and income – decreasing earnings management for lower profitable firms. Likewise, researchers are more likely to detect income-increasing earnings management for lower cash flow firms and income –decreasing earnings management for higher cash flow firms. Accruals are correlated with a firm's contemporaneous and past performance. Jones and Modified Jones models attempt to control for contemporaneous performance but ignore the past performance. Empirical assessments suggest that estimated discretionary accruals are significantly influenced by a firm's contemporaneous and past performance. If a firm experiences an unusual performance, for example, has one-time extreme high or low sales; or a fast growth stock exhibit momentum for a period of time, then there is a danger of a false detection of earnings management unless discretionary accruals models can adequately filter out the component that affected by firm performance (Kothari et al. 2005).

So far a few studies on discretionary accruals might have yet been conducted in Bangladesh. The researcher found only one study entitled 'Earnings Management: An Analysis on Textile Sector of Bangladesh' (Razzaque *et al.*, 2006). The study was conducted long back (period 1992-2002) using the Modified Jones Model (1995) and confined to the textile industry only. The study did not provide any information about the level of discretionary accruals. Besides, the study did not use separate models for non-discretionary and discretionary accruals. They define discretionary accruals as residuals of total accruals model.

In light of the above, the researchers feel that an in-depth study is urgently needed to measure the level of discretionary accruals in the corporate financial statements in Bangladesh so as to find out the clues that could lead to accounting irregularities. The researchers also feel that the external stakeholders should be acquainted with the risk factors for each condition of the fraud triangle and common accounting warning signs that may lead to reduce the use of management discretion in preparing financial statement.

3. MODELS OF NON-DISCRETIONARY ACCRUALS (ACCOUNTING ACCRUALS)

A wide variety of non-discretionary accrual models have been employed by previous researchers. Estimating the non-discretionary component of accruals typically involves a regression model. We termed non-discretionary accruals as accounting accruals and discretionary accruals as corporate accruals in the study. The common variants of the most popular models are discussed below:

3.1 The Jones Model (1991)

Jones offers a new and potentially more effective way to estimate non-discretionary accruals in her model. She uses a property, plant and equipment variable (PPE) to control for any changes in non-discretionary accruals arising from the depreciation charge and hence resulting from changes in business activities of the firm. Using the same idea, a sales revenue variable is used to control changes in non-discretionary accruals related to working capital accounts arising from changes in the economic environment of the firm. However, revenues, according to Jones, are not completely exogenous; for example, shipments for merchandise could be postponed in order to postpone recognition of revenue until the next year. The regression is estimated for each sample firm as follows:

$$\frac{TA}{LTA} = \beta 1\left[\frac{1}{LTA}\right] + \beta 2\left[\frac{\Delta\, REV}{LTA}\right] + \beta 3\left[\frac{PPE}{LTA}\right] + \varepsilon$$

Where:

TA = Total Accruals

Δ REV = Change in Revenues from the preceding year

PPE = Gross Value of Property , Plant & Equipment

LTA = Lagged Total Assets

All variables in her model are scaled by lagged assets to reduce heteroscedasticity. Discretionary accruals (DA), as shown below are computed as the difference between total accruals and non-discretionary components of accruals.

$$DA = \frac{TA}{LTA} - \ [\beta 1\left[\frac{1}{LTA}\right] + \beta 2\left[\frac{\Delta\, REV}{LTA}\right] + \beta 3\left[\frac{PPE}{LTA}\right]]$$

Looking at the Jones model, it is clear that the idea of using two variables (Δ REV and Δ PPE) to control for changes in non-discretionary accruals makes this model potentially more accurate for an analysis of earnings manipulations. However, the assumption that coefficient estimates are stationary over time would create survivorship bias. As well, sales manipulation that can be managed by managers is completely ignored since this model assumes that all revenues in the period are non-discretionary.

3.2 The Modified Jones Model (1995)

Dechow et al. (1995) modify the original Jones model to eliminate the conjectured tendency to measure discretionary accruals with error when discretion is exercised over revenues. The change in revenues is adjusted for the change in receivables in the event period. They assume that all changes in credit sales in the event period proceed from earnings management. They conclude that managing earnings by exercising discretion over the recognition of revenue on credit sales is easier than managing earnings by exercising discretion over the recognition of revenue on cash sales. The regression for the sample is estimated as follows:

$$\frac{TA}{LTA} = \beta 1 \left[\frac{1}{LTA}\right] + \beta 2 \left[\frac{\Delta\, REV - \Delta\, AR}{LTA}\right] + \beta 3 \left[\frac{PPE}{LTA}\right] + \varepsilon$$

Where:

TA = Total Accruals

Δ REV = Change in Revenues from the preceding year

Δ AR = Change in Accounts Receivable from the preceding year

PPE = Gross Value of Property , Plant & Equipment

LTA = Lagged Total Assets

Discretionary accruals (DA), as shown below, are computed as the difference between total accruals and the non-discretionary components of accruals.

$$DA = \left[\frac{TA}{LTA}\right] - \left[\beta 1 \left[\frac{1}{LTA}\right] + \beta 2 \left[\frac{\Delta\, REV - \Delta\, AR}{LTA}\right] + \beta 3 \left[\frac{PPE}{LTA}\right]\right]$$

3.3 The Extended Jones Cash Flow Model (1999)

Kasznik (1999) adds to modified Jones model changes in operating cash flow as an explanatory variable to explain the negative correlation between cash flow from operations and total accruals. He finds that managers use income-increasing discretionary accruals to manage reported earnings toward their forecast numbers when they have overestimated earnings. In contrast, he finds no evidence that managers use income-decreasing discretionary accruals to manage reported earnings downward when they have underestimated earnings in their forecasts. The regression for the sample is estimated as follows:

$$\left[\frac{NDA}{LTA}\right] = \alpha 0 + \alpha 1 \left[\frac{1}{LTA}\right] + \alpha 2 \left[\frac{\Delta\, REV - \Delta\, AR}{LTA}\right] + \alpha 3 \left[\frac{PPE}{LTA}\right] + \alpha 4 \left[\frac{\Delta CFO}{LTA}\right] + \varepsilon$$

Where:

NDA = Non-Discretionary Accruals

Δ REV = Change in Revenues from the preceding year

Δ AR = Change in Accounts Receivable from the preceding year

PPE = Gross Value of Property , Plant & Equipment

ΔCFO = Change in cash flows from operation

LTA = Lagged Total Assets

3.4 Modified Jones Model with Book-to-Market Ratio and Cash Flows (2004)

Larcker and Richardson (2004) add the book-to-market ratio (*BM*) and operating cash flows (CFO) to modified Jones model to mitigate measurement error associated with the discretionary accruals. BM controls for expected growth in operations and if left uncontrolled, growth will be picked up as discretionary accruals. CFO controls for current operating performance. Controlling for performance is important because Dechow et al. (1995) find that discretionary accruals are likely to be misspecified for firms with extreme levels of performance. Larcker and Richardson (2004) note that their model is superior to the modified Jones model in several ways: it has far greater explanatory power, identifies unexpected accruals that are less persistent than other components of earnings, the estimated discretionary accruals detect earnings management identified in SEC enforcement actions, and identifies discretionary accruals that are associated with lower future earnings and lower future stock returns. The regression for the sample is estimated as follows:

$$\left[\frac{TA}{LTA}\right] = \beta 1\left[\frac{1}{LTA}\right] + \beta 2\left[\frac{\Delta\, REV - \Delta\, AR}{LTA}\right] + \beta 3\left[\frac{PPE}{LTA}\right] + \beta 4\left[\frac{BM}{LTA}\right] + \beta 5\left[\frac{CFO}{LTA}\right] + \varepsilon$$

Where:

TA = Total Accruals

Δ REV = Change in Revenues from the preceding year

Δ AR = Change in Accounts Receivable from the preceding year

PPE = Gross Value of Property , Plant & Equipment

BM = Book-to-Market Ratio

CFO = Cash Flows from Operations

LTA = Lagged Total Assets

3.5 The Performance Matching Model (2005)

Kothari, Leone, and Wasley (2005), develop a performance-matching model. They offer two different approaches. The first involves matching similar firms, which alleviates the need to use an ordinary least square estimate of DA. They detect earnings management by comparing the accruals of firms that are otherwise almost identical. The second, the linear-performance matching model, embodies two modifications of the Jones and modified Jones models: an intercept, and an additional control for lagged rate of return on assets, $ROA_{t-1.}$

Because the first term in the Jones model is the reciprocal of lagged assets, econometrically, the Jones model does not have an intercept. Deflating by lagged assets is meant to mitigate heteroscedasticity. Finding that heteroscedasticity is still an issue, Kothari, Leone, and Wasley also include an intercept to mitigate it. They find that an intercept yields higher symmetry around zero discretionary accruals, which enhances the power of test for type 1 error.

Roodposhti, Rezaei and Salehi (2012) named this model as Kothari-Jones and Modified Kothari-Jones models and the regression for the sample is estimated as follows:

3.5.1 Kothari-Jones Model

$$\left[\frac{NDA}{LTA}\right] = \alpha 0 + \alpha i\left[\frac{1}{LTA}\right] + \alpha 1\left[\frac{\Delta\ REV}{LTA}\right] + \alpha 2\left[\frac{PPE}{LTA}\right] + \alpha 3\ [ROA_{t-1}] + \varepsilon$$

Where:

NDA = Non-Discretionary Accruals

Δ REV = Change in Revenues from the preceding year

PPE = Gross Value of Property , Plant & Equipment

ROA_{t-1} = Lagged Rate of Return on Assets

LTA = Lagged Total Assets

3.5.2 Modified Kothari-Jones Model

$$\left[\frac{NDA}{LTA}\right] = \alpha 0 + \alpha 1\left[\frac{1}{LTA}\right] + \alpha 2\left[\frac{\Delta\ REV - \Delta\ AR}{LTA}\right] + \alpha 3\left[\frac{PPE}{LTA}\right] + \alpha 4\ [ROA_{t-1}] + \varepsilon$$

Where:

NDA = Non-Discretionary Accruals

Δ REV = Change in Revenues from the preceding year

Δ AR = Change in Accounts Receivable from the preceding year

PPE = Gross Value of Property , Plant & Equipment

ROA_{t-1} = Lagged Rate of Return on Assets

LTA = Lagged Total Assets

3.6 Performance Matched Free Cash Flow Model

Cash flow is an important basis for accrual measurement (Ingram & Lee 2007). There is considerable body of literature that defines total accruals as the difference between net income and cash flow from operating activities (Dechow, Solan & Sweeny 1995; Xie Davidson & DaDalt 2003). This traditional approach has been extended by Dechow and Ge (2006) who define total accruals as the difference between earnings and free cash flow. Recent research studies have used the free cash flow approach to accruals measurement (Bukit & Iskandar 2009). Free cash flow (FCF) is the combination of cash flow from operating activities and investing activities, which reflects the impact of cash spending on fixed assets and investments. Companies operating with high FCF provide greater opportunities for opportunistic behavior by management. Therefore, it is appropriate to suggest that FCF better reflects accruals for individual firms (Bhuiyan et al. 2013).

$$DA = \left[\frac{TA}{LTA}\right] - \left[\alpha 0 + \alpha 1 \left[\frac{1}{LTA}\right] + \alpha 2 \left[\frac{\Delta\, REV - \Delta\, AR}{LTA}\right] + \alpha 3 \left[\frac{PPE}{LTA}\right] + \alpha 4\, [ROA_{t-1}] + \varepsilon\right]$$

Where:

TA = Total Accruals (Net Income before extraordinary items less free cash flow from operating activities and cash flow from investing activities)

Δ REV = Change in Revenues from the preceding year

Δ AR = Change in Accounts Receivable from the preceding year

PPE = Gross Value of Property , Plant & Equipment

ROA_{t-1} = Lagged Rate of Return on Assets

LTA = Lagged Total Assets

4. METHODOLOGY

4.1 Data and sample description

As on June 30, 2012 total listed securities of Dhaka Stock Exchange (DSE) were 511, of which 273 were securities (3 corporate bonds, 8 debentures, 41 mutual funds, & 221 treasury bonds) and 238 were companies. Again, 30 companies were banks, 22 were financial institutions and 45 were insurance companies out of 238 listed companies. Annual reports of 68 listed companies of 2010-2011 out of 141 listed non financial companies were taken as sample in the current study. The relevant data were collected through the survey of financial statements of annual report for the year 2010-2011 of each firm of the sample companies. The relevant pages of the annual report were statement of income (for revenue, net income), statement of cash flow (cash flow from operation), statement of financial position (for accounts receivable, total assets), and schedule of fixed assets (for gross value of fixed assets).

4.2 Measurement of accounting accruals manipulation

Earnings management is predominantly a function of manipulating accruals, so it is intuitive to use the magnitude of accruals as a proxy for earnings quality: the higher the total accruals as a percentage of assets, the greater the likelihood that earnings quality is low. The size of accruals can be used as a rough measure for earnings manipulation, especially in high-accrual firms (Tim Keefe: 2013). Three steps are involved in deriving discretionary accruals i.e., Step-1: *Total accruals*, Step-2: *Accounting accruals* (*Non-discretionary accruals)* and Step-3: *Corporate accruals* (*Discretionary accruals).*

4.2.1 Measuring the Total Accruals

There are two ways to measure the total accruals created in a given period (Tim Keefe: 2013).

a. The Balance Sheet Approach
b. The Statement of Cash Flow Approach

4.2.1.1 The Balance Sheet Approach

Using the balance sheet, we can find the total net accruals by subtracting:

$$Total\ Accruals = Accrual\ Earnings - \ Cash\ Earnings$$

But the balance sheet doesn't directly tell us what accrual earnings or cash earnings were in the period, so we will have to perform further calculation to retrieve this information.

4.2.1.1.1 Accrual Earnings

Net income flows into the balance sheet as retained earnings, which can be found in the owners' equity section of the balance sheet. Owners' equity also reflects net distributions to equity holders, and we will need to make some adjustments for these items. So, owners' equity at the end of the period will be as under:

$$\begin{aligned} End\ Equity = {} & Start\ Equity + Accrual\ Earnings - Cash\ Dividends - Stock\ Repurchases \\ & + Equity\ Issuance \end{aligned}$$

To calculate accrual earnings, we can rearrange the equation above and find that it is the difference between ending owners' equity and beginning owners' equity, adjusted for dividends, stock repurchases and stock issuances. This adjustment can be summarized as net cash distribution to equity.

$$\begin{aligned} Accrual\ Earnings &= \ \Delta\, Owners'Equity + Cash\ Dividends + Stock\ Repurchases - Equity\ Issuance \\ &= \ \Delta\, Owners'Equity + Net\ Cash\ Distributions\ to\ Equity \end{aligned}$$

Now, assuming that *Assets – Liabilities = Owners' Equity*, we can substitute to get the following equation for accrual earnings:

$$Accrual\ Earnings = \ \Delta\, Assets - \ \Delta\, Liabilities + Net\ Cash\ Distributions\ to\ Equity *$$

$$*\ Net\ Cash\ Distributions\ to\ Equity = Cash\ Dividends + Stock\ Repurchases - Equity\ Issuance$$

4.2.1.1.2 Cash Earnings

To begin, cash earnings must be somehow related to the cash account and can be found by looking at the change in the cash account. The cash account is also affected by net cash distributions to equity holders, and we will need to make some adjustments for these items. So, cash earnings at the end of the period will be as under:

$$\begin{aligned} Cash\ Earnings &= \ \Delta\, Cash + Cash\ Dividends + Stock\ Repurchases - Equity\ Issuance \\ &= \ \Delta\, Cash + Net\ Cash\ Distributions\ to\ Equity \end{aligned}$$

Total Accruals

The section began with the basic total net accruals equation and then went to define accrual earnings and cash earnings. Now with these definitions in hand we can substitute them in.

$$Total\ Accruals = Accrual\ Earnings - Cash\ Earnings$$
$$= [\Delta\ Assets - \Delta\ Liabilities + NCDE\ *] - [\Delta\ Cash + NCDE\ *]$$

$$Total\ Accruals = \Delta\ Assets - \Delta\ Liabilities - \Delta\ Cash$$

$*\ NCDE = Net\ Cash\ Distribution\ to\ Equity$

4.2.1.2 The Statement of Cash Flow Approach

Using the statement of cash flow, we can find total accruals with the same basic equation as stated before:

$$Total\ Accruals = Accrual\ Earnings - Cash\ Earnings$$

4.2.1.2.1 Accrual Earnings

Calculating total accruals from the statement of cash flow is a bit more straightforward. This is because we don't need to pull out accrual earnings, because net income is stated right on the report.

$$Accrual\ Earnings = Net\ Income\ (NI)$$

4.2.1.2.2 Cash Earnings

Cash earnings can be found from statement of cash flow. Cash flow from operating activities is treated as cash earnings.

$$Cash\ Earnings = Cash\ flow\ from\ Operating\ Activities\ (CFO)$$

Total Accruals

$$Total\ Accruals = Accrual\ Earnings - Cash\ Earnings$$
$$= NI - CFO$$

In this study, due to non-articulation issues, the cash flow approach has been used to measure total accruals for each of sample companies by following equation:

$$TA\left[\frac{1}{LTA}\right] = \left[\frac{1}{LTA}\right][NI - CFO]$$

Where,

TA	=	Total Accruals
NI	=	Net Income for the current period
CFO	=	Cash Flow from Operations for the current period
LTA	=	Lagged Total Assets [Total assets of the last year]

**Both items in the equation are scaled by lagged total assets in order to reduce heteroscedasticity.*

4.2.2 Measuring Accounting Accruals (Non-Discretionary Accruals)

Using the raw accrual amounts as a proxy for earnings management is a simple method to evaluate earnings quality because firms can have high accruals for legitimate business reasons, such as sales growth. A more complicated proxy can be created by attempting to categorize total accruals into accounting accruals and corporate accruals. The accounting accruals component reflects business conditions such as growth and the length of the operating cycle that naturally create and destroy accruals, while the corporate accruals component identifies management choices. The following two steps are involved in measuring accounting accruals.

4.2.2.1 Measuring Co-efficient Estimates by using Regression Model

The following regression model for the sample has been developed in light of the modified Kothari-Jones Model (2005) as to eliminate possible mechanical relationship between performance metric and current period's corporate accrual estimate in order to measure the coefficient estimates (*ß value)* that are used to segregate the accruals into accounting accruals and corporate accruals components. The regression model for total accruals for the sample firm is estimated as follows:

$$\left[\frac{TA}{LTA}\right] = \beta 1\left[\frac{1}{LTA}\right] + \beta 2\left[\frac{\Delta\, REV - \Delta\, AR}{LTA}\right] + \beta 3\left[\frac{PPE}{LTA}\right] + \beta 4\left[\frac{NI}{LTA}\right] + \varepsilon$$

Where:

TA = NI – CFO, where NI (net income) is taken from the statement of income and CFO (operating cash flows) is taken from the statement of cash flows.

Δ REV = Change in Revenues from the preceding year

Δ AR = Change in Accounts Receivable from the preceding year

PPE = Gross Value of Property , Plant & Equipment

NI = Net Income

LTA = Lagged Total Assets

Each ß is the estimated relationship of the independent variable to the dependent variable, and the error term represents the composite effect of all variables not explicitly stated as an independent variable.

4.2.2.2 Measuring firm's accounting accruals by using regression Equation

The above coefficient estimates (*ß value*) are used in the following regression equation to estimate the firm-specific normal accruals (NA) or non-discretionary accruals for our sample firms:

$$\left[\frac{AA}{LTA}\right] = \beta 1\left[\frac{1}{LTA}\right] + \beta 2\left[\frac{\Delta\, REV - \Delta\, AR}{LTA}\right] + \beta 3\left[\frac{PPE}{LTA}\right] + \beta 4\left[\frac{NI}{LTA}\right]$$

Where:

AA = Accounting (Non-Discretionary) Accruals

Δ REV = Change in Revenues from the preceding year

Δ AR = Change in Accounts Receivable from the preceding year

PPE = Gross Value of Property , Plant & Equipment

NI = Net Income

LTA = Lagged Total Assets

4.2.3 Measuring Corporate Accruals (Discretionary Accruals)

The value of total accruals and accounting accruals are available at this stage and corporate accruals is the difference between total accruals and the fitted normal accruals, defined as

$$CA = \left[\frac{TA}{LTA}\right] - \left[\frac{AA}{LTA}\right]$$

Where,

CA = Corporate (Discretionary) Accruals

TA = Total Accruals

AA = Accounting (Non-discretionary) Accruals

LTA = Lagged Total Assets

5. RESULTS AND DISCUSSION

The statistical results of our analysis captured the existence of discretionary accruals in the financial statements of listed companies in Dhaka Stock Exchange (DSE) of Bangladesh. The practicing average rate of discretionary accruals of listed non-financial companies is 35 percent in Bangladesh (Annex-1). Table 1 shown below reveals that 12 percent of non-financial listed companies scored 0 to 10 percent (of either sign), 22 percent scored 11 to 20 percent, 16 percent companies scored 21 to 30 percent, 21 percent companies scored 31 to 40 percent, 15 percent companies scored 41 to 50 percent, 7 percent companies scored 51 to 60 percent and 7 percent scored more than 61 percent. Companies with large accruals tend to have large estimation errors. The diligence of earnings is lower when earnings consists mainly accruals. When accruals are large in magnitude, they are likely to contain significant estimation error, which reduces the diligence of earnings. Managers often want earnings to be highly persistent and predictable because these characteristics can improve their reputations with analysts and investors. If such earnings do not annuitize the intrinsic value of the firm, however, the earnings are low quality. Under accrual accounting, current experience is used to make accounting estimates for future periods and these estimates feed back into current- period earnings (Dechow & Schrand; 2004).

Table 2 :Distribution of Corporate Accruals

Class interval of discretionary accruals, (%)	Frequency (No of companies)	No of companies (%)
< 10	8	12%
11 – 20	15	22%
21 – 30	11	16%
31 – 40	14	21%
41 – 50	10	15%
51 – 60	5	7%
61 <	5	7%
	68	100%

The quality of accruals can vary among companies as a function of accruals even in the absence of intentional earnings manipulation. The determination of earnings requires estimations and judgments and some companies require more forecasts and estimates than others. For example, companies in growing industries will typically have high accruals, which raises a question about reliability because accruals are likely to contain estimation errors. Estimation errors reduce earnings persistence (because they must be corrected in future earnings) and are irrelevant for valuation. Therefore, large accruals (of either sign) can indicate great underlying volatility in the company's operations and low-quality earnings. Accrual accounting opens the door to opportunistic short-run income smoothing that can lead to future restatements and write-downs. In this method, the company does not change its activities but, rather, opportunistically reports income for an existing activity. Examples, increase in income is reducing the allowance for doubtful accounts, capitalizing rather than expensing costs, and avoiding write-offs of assets. Accruals create the opportunity for earnings management because they require managers to make forecasts, estimates, and judgments. Many studies found that high accruals, in absolute magnitude, are a potential "red flag" that indicates companies are engaged in earnings management. In absolute magnitude, the result shows that the average rate of practicing discretionary accruals of listed non-financial companies in Bangladesh is 37 percent (Annex-1). Table 2 reveals that 26 percent of sample companies scored 0 to 10 percent, 24 percent of sample companies scored 11 to 20 percent, 13 percent of sample companies scored 21 to 30 percent, 18 percent of sample companies scored 31 to 40 percent, 7 percent of sample companies scored 41 to 50 percent, 7 percent of sample companies scored 51 to 60 percent and 5 percent of sample companies scored more than 61 percent respectively. Thus, on the whole, 74 percent of the sample companies scored more than 10 percent, which is clearly a 'red flag' for all the stakeholders both internal and external. It is also evident that management is abusing their discretionary power through manipulating accounting accruals. As a result, the level of confidence of the external stakeholders on corporate financial reporting is still too low like earlier studies.

Karim (1998) found that financial reporting in developing countries is generally characterized by lack of transparency, adequacy, reliability and timeliness. Ahmed (1982) found that the image and reliability of financial statements prepared by Bangladeshi companies are not up to international standard and in most cases those are dressed up and cosmetics. What they reveal is interesting but what they conceal is vital. That's why nobody has confidence on those financial statements and hardly anybody uses them for making economic decisions. Rahman (1982) also found that there is no truth in accounting. Accounting is what one wants it to be. Rahman (1982) found that multinational enterprises understate profits through the manipulations of accounting policies. Razzaque (2004) and Hasan (2013) found the same poor level of confidence of the stakeholders on corporate financial reporting in Bangladesh.

Table 3: Distribution of Corporate Accruals*

Class interval of discretionary accruals, (%)	Frequency (No of companies)	No of companies (%)

< 10	18	26%
11 – 20	16	24%
21 – 30	9	13%
31 – 40	12	18%
41 – 50	5	7%
51 – 60	5	7%
61 <	3	5%
	68	100%

*Absolute Value

In many cases, it is observed that cash flow from operation exceeds net income (Annex -2) like Enron's case, the growth rate of accounts receivable is faster than sales growth (Annex-3), the growth of inventory is not consistent with sales growth (Annex-4) and it could lead accounting irregularities. Therefore, it can be said that the external users including analysts of accounting information in Bangladesh are not aware about the risk factors of three conditions of fraud triangle and common accounting warning signs.

Statement of Auditing Standard (SAS) No.99 warns practitioners to be alert for the 'fraud triangle' or three conditions that are generally present when fraud occurs:

1. Incentives or pressures exist that can lead to fraudulent financial reporting, such as pressure to meet debt covenants or analysts' earnings expectations.
2. Opportunities to commit fraud exist, such as poor internal control.
3. The individuals themselves are able to rationalize their behavior, such as a desire to get the company through a difficult time, after which they plan to undo their accounting games.

SAS-99 provides examples of fraud risk factors for each of the conditions of the fraud triangle (Annexure-5). Based on the SEC, USA studies (2002) and a review of accounting scandals, several common accounting warning signs are apparent (Annex–6).

6. CONCLUSION

The study focuses on the existence of discretionary accruals in the corporate financial statements published in the annual report of non-financial companies listed in Dhaka Stock Exchange of Bangladesh. There are two different approaches to measure total accruals e.g., The Balance Sheet Approach and Statement of Cash Flow Approach. In this study, due to non-articulation issues, Statement of Cash Flow Approach is used to find out the total accruals for each of the sample companies. Total accruals are scaled by lagged total assets in order to reduce heteroscedasticity.

The division of total accruals into non-discretionary and discretionary accruals (accruals by management choice) is an important area in accounting research. A wide variety of models have been employed by researchers such as The Jones Model, The Modified Jones Model, The Extended Jones Cash Flow Model, The Performance Matching Model (The Kothari-Jones Model and The Modified Kothari-Jones Model), and The Performance Matched Free Cash Flow Model. The detailed discussions of these models have been presented earlier in the later part of literature review section of this study. The performance matched regression model is used for measuring the degree of influence of four independent variables (co-efficient estimates i.e., ß value) over total accruals (dependent variable). Non-discretionary accruals are predicted by using a linear regression equation. The discretionary accrual is the difference between total accruals and non-discretionary accruals. The study found discretionary accruals (accruals by management choice) is practiced by all the sample companies. The average practicing rate of discretionary accruals is 35 percent. The external users of accounting information of public limited companies are not aware of the risk factors of three conditions of fraud triangle and common accounting warning signs as in some cases it is observed that cash flow from operation exceeded the net income like Enron's case, the growth rate of accounts receivable is faster than sales growth, and the growth of inventory is not consistent with sales growth.

The existence of these red flags (the risk factors) and accounting warning signs does not mean that the company is engaged in accounting fraud. The analysts should take care while performing the evaluation of corporate financial statements with multiple red flags. If too many red flags exist, it is undoubtedly right to tread with caution and it may be best to walk away. It is high time for all the stakeholders to be aware of the possible risk factors associated with each condition of fraud triangle and common accounting warning signs otherwise management may have the opportunity to exercise their discretionary power to achieve their desired goals.

Findings of this study warrant further investigation on decomposition of discretionary components of accruals for each of the listed companies in DSE.

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Accruals Data

Annex-1

SN	TA	AA/NDA	CA/DA	AVDA/AVCA
1	-0.08064	-0.43823	0.35759	0.35759
2	-0.06167	-0.63757	0.5759	0.5759
3	-0.08714	-0.54974	0.46261	0.46261
4	0.12136	-0.44044	0.5618	0.5618
5	-0.02729	-0.29067	0.26338	0.26338
6	-0.07211	-0.62908	0.55697	0.55697
7	-0.03805	-0.54223	0.50417	0.50417
8	-0.06092	-0.45033	0.38941	0.38941
9	-0.00518	-0.22245	0.21727	0.21727
10	0.05904	-0.09688	0.15592	0.15592
11	0.16143	0.11607	0.04537	0.04537
12	-0.17659	0.00203	-0.17862	0.17862
13	0.18291	-0.18828	0.37119	0.37119
14	-0.07475	-0.21653	0.14179	0.14179
15	0.0049	-0.2444	0.2493	0.2493
16	-0.16673	-0.30526	0.13853	0.13853
17	-0.00043	-0.37041	0.36998	0.36998
18	0.00496	-0.41305	0.41801	0.41801
19	0.0071	-0.57176	0.57887	0.57887
20	0.29875	-0.42375	0.7225	0.7225
21	0.45121	-0.01746	0.46866	0.46866
22	0.07178	-0.0875	0.15928	0.15928
23	0.07282	-0.22029	0.29311	0.29311
24	0.22967	-0.1882	0.41788	0.41788
25	0.12005	-0.30653	0.42658	0.42658
26	0.10662	-0.3451	0.45172	0.45172
27	0.02157	-0.16724	0.18881	0.18881
28	-0.00651	-0.17183	0.16532	0.16532
29	0.04671	-0.34473	0.39144	0.39144
30	-0.04777	-0.13801	0.09024	0.09024
31	-0.19318	-0.37667	0.18349	0.18349
32	-0.07499	-0.17008	0.09509	0.09509
33	0.18148	-0.0916	0.27309	0.27309

34	-0.01703	-0.24259	0.22556	0.22556
35	-0.06439	-0.17536	0.11097	0.11097
36	-0.25379	-0.00165	-0.25214	0.25214
37	-0.12077	-0.50041	0.37964	0.37964
38	-0.18739	-0.18977	0.00238	0.00238
39	-0.00256	0.00186	-0.00442	0.00442
40	-0.02766	-0.10096	0.0733	0.0733
41	0.0345	-0.42143	0.45593	0.45593
42	-0.04145	-0.30466	0.2632	0.2632
43	-0.0383	0.01452	-0.05282	0.05282
44	-0.07612	-0.26903	0.19291	0.19291
45	-0.01012	-0.73848	0.72836	0.72836
46	0.00841	-0.53088	0.53929	0.53929
47	0.06156	-0.13116	0.19272	0.19272
48	0.15144	-0.22206	0.3735	0.3735
49	0.12052	-0.13384	0.25437	0.25437
50	0.18174	0.04463	0.13711	0.13711
51	-0.12495	-0.16388	0.03894	0.03894
52	0.08328	-0.06109	0.14437	0.14437
53	0.01563	-0.15454	0.17017	0.17017
54	-0.00949	-1.03011	1.02062	1.02062
55	0.04107	-0.40622	0.44729	0.44729
56	-0.07635	-0.30497	0.22862	0.22862
57	-0.1331	-4.2679	4.13481	4.13481
58	-0.30365	-0.45877	0.15512	0.15512
59	0.15061	-0.20053	0.35114	0.35114
60	0.01731	-0.43674	0.45405	0.45405
61	0.05287	0.4179	-0.36503	0.36503
62	0.14023	-0.68649	0.82672	0.82672
63	0.04621	-0.19307	0.23928	0.23928
64	-0.01182	-0.3927	0.38088	0.38088
65	-0.08275	-0.48604	0.40329	0.40329
66	-0.00017	-0.31841	0.31823	0.31823
67	0.02171	-0.32888	0.35059	0.35059
68	0.08459	-0.23341	0.318	0.318
Avaerage			**35%**	**37%**

**TA = Total Accruals, NDA= Non-Discretionary Accruals, DA= Discretionary Accruals, ABDA= Absolute Value of Discretionary Accruals*

Negative Accruals Data

Annex-2

SN	Negative Total Accruals	SN	Positive Total Accruals
1	-0.08064	1	0.121359
2	-0.06167	2	0.059037
3	-0.08714	3	0.161435

4	-0.02729	4	0.18291
5	-0.07211	5	0.004904
6	-0.03805	6	0.004963
7	-0.06092	7	0.007101
8	-0.00518	8	0.298749
9	-0.17659	9	0.451208
10	-0.07475	10	0.071779
11	-0.16673	11	0.072824
12	-0.00043	12	0.229672
13	-0.00651	13	0.120054
14	-0.04777	14	0.106615
15	-0.19318	15	0.021572
16	-0.07499	16	0.046713
17	-0.01703	17	0.181483
18	-0.06439	18	0.034497
19	-0.25379	19	0.008413
20	-0.12077	20	0.061562
21	-0.18739	21	0.151444
22	-0.00256	22	0.120523
23	-0.02766	23	0.181742
24	-0.04145	24	0.083278
25	-0.0383	25	0.015629
26	-0.07612	26	0.041067
27	-0.01012	27	0.150608
28	-0.12495	28	0.017309
29	-0.00949	29	0.052873
30	-0.07635	30	0.140232
31	-0.1331	31	0.046212
32	-0.30365	32	0.021709
33	-0.01182	33	0.084585
34	-0.08275		
35	-0.00017		

Faster Growth in Accounts Receivables

Annex-3

SL No	Sales CY	Sales LY	Δ Revenue	Growth	A/R CY	A/R LY	Δ A/R	Growth
1	409222369	378791393	30430976	8%	86154875	117310024	-31155149	-27%
2	208899878	193256165	15643713	8%	5318815	4004301	1314514	33%
3	59470831	30239404	29231427	97%	2624589	2952108	-327519	-11%
4	158314383	180527578	-22213195	-12%	148501911	81573209	66928702	82%
5	974979892	888159807	86820085	10%	302293636	332055981	-29762345	-9%
6	93104303	98711998	-5607695	-6%	8644720	16665270	-8020550	-48%
7	346865382	192845764	154019618	80%	1317531	5147410	-3829879	-74%
8	238862215	221571751	17290464	8%	45190258	69521673	-24331415	-35%

9	64692631	66194674	-1502043	-2%	3324122	3017470	306652	10%
10	1427769789	620956330	806813459	130%	487570913	120948692	366622221	303%
11	5805912325	5020795305	785117020	16%	18104898	86453752	-68348854	-79%
12	1014599816	773598085	241001731	31%	9221258488	9806477599	-585219111	-6%
13	9499256667	6931516622	2567740045	37%	953496096	881553360	71942736	8%
14	220466600	273719984	-53253384	-19%	9549893	32492525	-22942632	-71%
15	59315592	63061238	-3745646	-6%	6272400	4962700	1309700	26%
16	9714017016	7945762818	1768254198	22%	893573574	1185346485	-291772911	-25%
17	457763769	434418786	23344983	5%	158280622	107276877	51003745	48%
18	351429516	379294228	-27864712	-7%	35968890	32540145	3428745	11%
19	865921216	824257200	41664016	5%	382657712	312639332	70018380	22%
20	2880611405	2085432500	795178905	38%	857055084	470824787	386230297	82%
21	31234710327	22007682247	9227028080	42%	3438356670	846869584	2591487086	306%
22	450135177	369254488	80880689	22%	457164376	327785317	129379059	39%
23	2409785749	1028992604	1380793145	134%	380378450	160094731	220283719	138%
24	4022271063	3127352627	894918436	29%	343047480	316068872	26978608	9%
25	709168568	539554916	169613652	31%	100067414	59343138	40724276	69%
26	97588294	68738716	28849578	42%	37793156	26897045	10896111	41%
27	1850615137	1491770828	358844309	24%	5980378	5773092	207286	4%
28	27065415	20467307	6598108	32%	24713114	22790996	1922118	8%
29	792299845	706331972	85967873	12%	193153145	176829323	16323822	9%
30	1391712665	1368041514	23671151	2%	21635567	15283483	6352084	42%
31	89006700775	74724497824	14282202951	19%	5350043235	5237659409	112383826	2%
32	12475609225	10989191414	1486417811	14%	2703257156	2375140475	328116681	14%
33	68551233852	64557072881	3994160971	6%	15253503781	14110569127	1142934654	8%
34	13471424469	11462578410	2008846059	18%	772421345	508249174	264172171	52%
35	271506761	268488269	3018492	1%	46380934	44592065	1788869	4%
36	1525430000	1347312000	178118000	13%	1560461000	979377000	581084000	59%
37	98002412	84587474	13414938	16%	40939924	41092839	-152915	0%
38	23268861000	20946040000	2322821000	11%	926842000	488053000	438789000	90%
39	2234047200	1595086400	638960800	40%	0	13109600	-13109600	-100%
40	6647846013	5663090394	984755619	17%	190610122	132014023	58596099	44%
41	573719257	767892320	-194173063	-25%	19109686	27388344	-8278658	-30%
42	402855276	419612074	-16756798	-4%	104693679	119115984	-14422305	-12%
43	1139423635	720827428	418596207	58%	429163986	436201003	-7037017	-2%
44	881494445	729333960	152160485	21%	118081196	62165497	55915699	90%
45	1152265740	935094525	217171215	23%	28334623	25135080	3199543	13%
46	468240190	434207010	34033180	8%	7865104	26222248	-18357144	-70%
47	681573793	622571342	59002451	9%	290908139	236000082	54908057	23%
48	1088085260	633983507	454101753	72%	577029624	272546947	304482677	112%
49	6017281699	3898046048	2119235651	54%	442592334	177520128	265072206	149%
50	1768097695	1347603761	420493934	31%	1037198898	457541474	579657424	127%
51	5247748947	4445402112	802346835	18%	2008696513	1666731087	341965426	21%
52	5461234639	4829017641	632216998	13%	740479176	542510111	197969065	36%
53	2443657886	1924403783	519254103	27%	546036962	577768167	-31731205	-5%

54	1947342997	1506444690	440898307	29%	138484116	415221300	-276737184	-67%
55	570302654	383956707	186345947	49%	62568728	90176034	-27607306	-31%
56	1814459565	1241049945	573409620	46%	523184050	400180750	123003300	31%
57	1316345576	1205155338	111190238	9%	55696134	41282366	14413768	35%
58	2231013380	1586094474	644918906	41%	220273158	235362912	-15089754	-6%
59	1744462051	1522562141	221899910	15%	972482363	1027773365	-55291002	-5%
60	3509105802	1978824374	1530281428	77%	777543982	629187317	148356665	24%
61	876725792	656836533	219889259	33%	19594956	19585582	9374	0%
62	172717375	126138066	46579309	37%	53819343	34362074	19457269	57%
63	275209157	229875624	45333533	20%	24448300	10144604	14303696	141%
64	1780954287	1114948678	666005609	60%	76224568	65045991	11178577	17%
65	210283278	172586011	37697267	22%	0	0	0	0%
66	734972610	554265199	180707411	33%	110776095	68041157	42734938	63%
67	596355557	541672423	54683134	10%	60474635	58222456	2252179	4%
68	442640850	166412261	276228589	166%	54446444	33097645	21348799	65%

Inconsistent Growth in Inventory

Annex-4

SL No	Sales CY	Sales LY	Δ Revenue	Growth	Inventory CY	Inventory LY	Δ Inventory	Growth
1	409222369	378791393	30430976	8%	46923572	35845349	11078223	31%
2	208899878	193256165	15643713	8%	8426124	7089406	1336718	19%
3	59470831	30239404	29231427	97%	11952326	11826266	126060	1%
4	158314383	180527578	-22213195	-12%	4512329	3321090	1191239	36%
5	974979892	888159807	86820085	10%	317376043	313815439	3560604	1%
6	93104303	98711998	-5607695	-6%	23189309	12461762	10727547	86%
7	346865382	192845764	154019618	80%	143522819	131175686	12347133	9%
8	238862215	221571751	17290464	8%	72618415	62840545	9777870	16%
9	64692631	66194674	-1502043	-2%	9347000	10152000	-805000	-8%
10	1427769789	620956330	806813459	130%	263226755	193502758	69723997	36%
11	5805912325	5020795305	785117020	16%	646758251	534237582	112520669	21%
12	1014599816	773598085	241001731	31%	4746305762	5223057730	-476751968	-9%
13	9499256667	6931516622	2567740045	37%	2828333227	2239199979	589133248	26%
14	220466600	273719984	-53253384	-19%	134880791	118560778	16320013	14%
15	59315592	63061238	-3745646	-6%	40165720	36377090	3788630	10%
16	9714017016	7945762818	1768254198	22%	1040056908	814059612	225997296	28%
17	457763769	434418786	23344983	5%	34268049	20207289	14060760	70%
18	351429516	379294228	-27864712	-7%	75681214	74711893	969321	1%
19	865921216	824257200	41664016	5%	408931379	347461213	61470166	18%
20	2880611405	2085432500	795178905	38%	850885939	450055441	400830498	89%
21	31234710327	22007682247	9227028080	42%	6452929268	3649002576	2803926692	77%
22	450135177	369254488	80880689	22%	459900004	417199584	42700420	10%
23	2409785749	1028992604	1380793145	134%	807801205	240085542	567715663	236%
24	4022271063	3127352627	894918436	29%	587645695	352650104	234995591	67%
25	709168568	539554916	169613652	31%	100367939	63978805	36389134	57%

26	97588294	68738716	28849578	42%	7639356	6955268	684088	10%
27	1850615137	1491770828	358844309	24%	719482437	680748217	38734220	6%
28	27065415	20467307	6598108	32%	172806531	175495791	-2689260	-2%
29	792299845	706331972	85967873	12%	314515290	295080069	19435221	7%
30	1391712665	1368041514	23671151	2%	349148687	347471297	1677390	0%
31	89006700775	74724497824	14282202951	19%	331379759	834355326	-502975567	-60%
32	12475609225	10989191414	1486417811	14%	4026231885	4671791624	-645559739	-14%
33	68551233852	64557072881	3994160971	6%	1815003716	1819262670	-4258954	0%
34	13471424469	11462578410	2008846059	18%	2541688329	2207078082	334610247	15%
35	271506761	268488269	3018492	1%	120593022	117206304	3386718	3%
36	1525430000	1347312000	178118000	13%	8651382000	7360493000	1290889000	18%
37	98002412	84587474	13414938	16%	19181562	17103892	2077670	12%
38	23268861000	20946040000	2322821000	11%	5373033000	4366664000	1006369000	23%
39	2234047200	1595086400	638960800	40%	12283726500	12039800600	243925900	2%
40	6647846013	5663090394	984755619	17%	1756397259	1701382223	55015036	3%
41	573719257	767892320	-194173063	-25%	168634337	155881884	12752453	8%
42	402855276	419612074	-16756798	-4%	148820065	131731339	17088726	13%
43	1139423635	720827428	418596207	58%	5732912051	5763969084	-31057033	-1%
44	881494445	729333960	152160485	21%	319001200	268575640	50425560	19%
45	1152265740	935094525	217171215	23%	256192433	221552993	34639440	16%
46	468240190	434207010	34033180	8%	135692738	95299788	40392950	42%
47	681573793	622571342	59002451	9%	196460713	128611091	67849622	53%
48	1088085260	633983507	454101753	72%	437246882	460477009	-23230127	-5%
49	6017281699	3898046048	2119235651	54%	1932418996	1039932035	892486961	86%
50	1768097695	1347603761	420493934	31%	566800853	551866626	14934227	3%
51	5247748947	4445402112	802346835	18%	1236014474	1623278528	-387264054	-24%
52	5461234639	4829017641	632216998	13%	1392109377	1009211317	382898060	38%
53	2443657886	1924403783	519254103	27%	704746537	699819589	4926948	1%
54	1947342997	1506444690	440898307	29%	596728610	511555137	85173473	17%
55	570302654	383956707	186345947	49%	284599985	172626204	111973781	65%
56	1814459565	1241049945	573409620	46%	78500199	110913971	-32413772	-29%
57	1316345576	1205155338	111190238	9%	514774187	491757780	23016407	5%
58	2231013380	1586094474	644918906	41%	263164972	150077244	113087728	75%
59	1744462051	1522562141	221899910	15%	1286872443	779176551	507695892	65%
60	3509105802	1978824374	1530281428	77%	1932774214	844148180	1088626034	129%
61	876725792	656836533	219889259	33%	280656746	197565052	83091694	42%
62	172717375	126138066	46579309	37%	19781631	13631338	6150293	45%
63	275209157	229875624	45333533	20%	58058489	36577632	21480857	59%
64	1780954287	1114948678	666005609	60%	121892636	5924845	115967791	1957%
65	210283278	172586011	37697267	22%	75543574	92214272	-16670698	-18%
66	734972610	554265199	180707411	33%	886225292	667168268	219057024	33%
67	596355557	541672423	54683134	10%	113774226	87700510	26073716	30%
68	442640850	166412261	276228589	166%	144744695	81632221	63112474	77%

Annex- 5

Risk factors related to incentives or pressures	
1	Financial stability or profitability is threatened by economic, industry, or entity operating conditions, such as high degree of competition or market saturation, accompanied by declining margins.
2	Excessive pressure exists for management to meet the requirements or expectations of third parties, such as need to obtain additional debt or equity financing to stay competitive.
3	Information available indicates that management or board of directors' personal financial situation is threatened by the entity's financial performance, such as significant portion of their compensation being contingent upon achieving aggressive targets for stock price, operating results, financial position, or cash flow.
4	There is excessive pressure on management or operating personnel to meet financial targets set up by the board of directors or management, including sales or profitability incentives goals.

Source: AICPA, SAS No.99, Consideration of Fraud in a Financial Statement Audit, October 2002

Risk factors related to opportunities	
1	The nature of the industry or the entity's operations provides opportunities to engage in fraudulent financial reporting, such as assets, liabilities, revenues, or expenses based on significant estimates that involve subjective judgments or uncertainties that are difficult to corroborate.
2	There is ineffective monitoring of management, such as domination of management by a single person or small group without compensating controls.
3	There is a complex or unstable organizational structure, such as overly complex organizational structure involving unusual legal entities or managerial lines of authority.
4	Internal control components are deficient, such as inadequate monitoring of controls, including automated controls and controls over interim financial reporting (when external reporting is required).

Source: AICPA, SAS No.99, Consideration of Fraud in a Financial Statement Audit, October 2002

Risk factors related to attitudes / rationalizations	
1	Ineffective communication, implementation, support, or enforcements of the

	entity's values or ethical standards by management or the communication of inappropriate values or ethical standards.
2	Non-financial management's excessive participation in or preoccupation with the selection of accounting principles ot the determination of significant estimates.
3	Known history of violations of securities laws or other laws and regulations or claims against the entity, its senior management, or board members alleging fraud or violations of laws and regulations.
4	Excessive interest by management in maintaining or increasing the entity's stock price or earnings trend.
5	A practice by management of committing to analysts, creditors, and other third parties to achieve aggressive or unrealistic forecasts.
6	Management failing to correct known reportable conditions on a timely basis.
7	An interest by management in employing inappropriate means to minimize reported earnings for tax-motivated reasons
8	Recurring attempts by management to justify marginal oe inappropriate accounting on the basis of materiality.
9	The relationship between management and the current or predecessor auditor is strained, such as frequent disputes with current or predecessor auditor on accounting, auditing, or reporting matters
Source: AICPA, SAS No.99, Consideration of Fraud in a Financial Statement Audit, October 2002	

Annex- 6

Common Accounting Warning Signs	
1	Aggressive revenue recognition
2	Operating cash flow out of line with reported earnings
3	Growth in revenues out of sync with economy, industry, or peer companies and with growth in receivables.
4	Growth in inventory out of line with sales growth or days inventory increasing over time.
5	Classification of non-operating or non-recurring income as revenue.
6	Deferral of expenses
7	Excessive use of operating leases by lessees.
8	Classification of expenses or losses as extraordinary or non-recurring.
9	LIFO liquidations

10	Gross margins or operating margins out of line with peer companies.
11	Use of long useful lives for depreciation and amortization.
12	Use of aggressive pension plan assumptions.
13	Common use of fourth-quarter surprises.
14	Equity method of accounting / frequent use of off-balance sheet SPEs or variable-interest entities.
15	Other off-balance sheet financing or guarantees.
Source: Financial Reporting and Analysis, CFA Institute, Level 1, Reading 33, 2011	

Volatility spillovers and stock market co-movements among Western, Central and Southeast European stock markets

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ABSTRACT

The aim of this paper is to examine the return and volatility spillovers and stock market co-movements among Western, Central and Southeast European stock markets. To examine the volatility spillover effects we employ a multivariate GARCH-BEKK (1, 1) model on a daily data from 2005 to 2014. There is a high and stable conditional correlation between Central and Western European markets during most of the analyzed period and the conditional correlation rises sharply during the periods of financial turmoil, suggesting some evidence on contagion. Conditional correlation between Croatian and Romanian markets and their Western counterparts is modest but it increases during the periods of financial crisis. Conditional correlation coefficients indicate that Macedonian and Serbian stock markets are relatively isolated from the advanced European markets. The return spillovers are investigated with the forecast-error variance decomposition based on the generalized VAR model. Following Diebold and Yilmaz (2012), we develop "spillover indices" based on the variance decomposition results on the generalized VAR model. The results indicate that total spillover index rose sharply during the periods of major financial disruptions. DAX and FTSE100 are the major net transmitters of spillovers to Central and Southeast European markets. There are bi-directional spillovers between DAX and FTSE100, between PX and WIG-20 and between MBI10 and BELEX15.

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1. INTRODUCTION

The "financial contagion" phenomenon is one of the most exploited topics in the modern finance. After the US stock market crash from the 1987 and the emerging-market crisis during the 1990s, the economists developed many theoretical concepts to explain this phenomenon. The economists were particularly interested to explain how country-specific shocks were transmitted to the countries that are geographically distant, have different economic and financial structures and countries that don't exhibit significant economic and financial links (Forbes and Rigobon, 2008; Pericolli and Sbracia, 2001). In other words, financial contagion means that increased volatility cannot be explained by macroeconomic fundamentals (Pericoli and Sbracia, 2001). By macroeconomic fundamentals in the sense of the contagion phenomenon, the economists commonly refer to the trade, financial and economic linkages which are normally responsible for transmissions of shocks among financial markets (Dungey, 2003; Jing 2013). There are two common characteristics of the contagion phenomenon- volatility spillovers and increased co-movements among financial markets during the periods of financial disruption. The degree of stock market co-movements have very important implications for the international investors. If the stock market co-movements are small, international investors could diversify their portfolios while reducing the overall portfolio risk. While the stock market co-movements tend to increase during the periods of financial turbulence, the benefits of diversification become smaller. Many authors tried to explain the financial contagion with psychological elements. Among one of the most popular theories trying to explain this phenomenon is the theory that suggests that contagion occurs as a result of the herding behaviur (Cipriani and Guarino 2001, Cheung et.al 2009). Herding behavior theory assumes that market participants have asymmetric information. When there are turbulences in one of the markets, market participants tend to revaluate other markets based in their limited information.

Some authors explain the financial contagion using the “wake-up call” hypothesis. When one of the countries experiences financial crisis or financial disruptions, investors from the other countries tend to reexamine the stability of their home countries and they might develop expectations of a future financial crisis in their home countries. King and Wadhwani (1990) explained the volatility spillovers after the US stock market crash with their “information correlation” theory. Kodres and Pritsked (2002) examined the portfolio channel of financial contagion. When the investors from one country are hit by idiosyncratic shock, they tend to rebalance their portfolios through other countries in order to adjust their risk.

There are several different approaches to measure the “contagion” effect. One of the most popular techniques was the “correlation approach” developed by Forbes and Rigobon (1999). This approach measures the correlation between the stock market returns during the “tranquil” periods and crisis periods. Most of the research is based on multivariate GARCH models and their extensions. Some of the researchers also use VAR models and cointegration technique to analyze the spillover effects.

There is a vast literature analyzing the contagion in the case of developing and emerging markets. However, there are only a few papers that examine the volatility spillovers and stock market co-movements in the case of Central and Southeast European countries. The aim of this paper is to examine the time-varying stock market correlations and return and volatility spillovers among Western European and Central and Southeast European countries. Conditional correlation plots will be estimated based on the results from multivariate GARCH BEKK (1, 1) model. We are particularly interested to examine whether the conditional correlation increases significantly during the period of the global financial crisis and European debt crisis. Volatility spillovers will be examined from the coefficients of the estimated GARCH BEKK model. To examine the return spillovers, we will create spillover index based on generalized VAR framework developed by Diebold and Yilmaz (2012).

2. LITERATURE REVIEW

The correlation approach was introduced by Forbes and Rigobon in 1999. Their approach shows that previous findings of increased co-movements during the crisis periods were biased. Their results show that increased co-movements during the crisis periods are conditional of increased volatility and some authors misinterpreted these findings as an evidence of contagion. Their approach can calculate cross-market correlations while correcting for the heteroskedasticity. Forbes and Rigobon (1999) conclude that there is no evidence of contagion during the Asian crisis, Mexican crisis and 1987 US stock market crash.

While the Forbes-Rigobon (1999) method corrects for the heteroskedasticity, it doesn't control for the volatility clustering phenomenon. Dungey (2005; 2010) introduced a model that accounts for the volatility clustering. Opposite of the Forbes and Rigobon (1999), Dungey (2010) finds evidence of contagion across the analyzed markets.

Gravelle et.al (2006) extented the Forbes-Rigobon approach to allow for regime switching volatility. Their approach can detect regime changes using the Markov regime-switching model. Unlike the Forbes-Rogobon approach where we need to know the source (country) of the specific shock, this approach allows financial disruptions to be driven by large common shocks.

Favero and Giavazzi (2002) use VAR model to test for contagion during the ERM currency crisis. They find evidence of contagion among the six ERM countries (France, Italy, Spain, Belgium, Holland and Denmark). Diebold and Yilmaz (2009; 2012) developed the return and volatility "spillover index" based on the forecast error variance decompositions on a generalized VAR model. In the recent period, this approach is widely used to analyze return and volatility spillovers among stock markets, bond markets and currency markets (Claeys and Vasicek, 2014; Louzis, 2013; Suwanpong 2011). Alter and Bayer (2013) use a VAR with exogenous variables (VARX) model and a generalized VAR framework proposed by Diebold and Yilmaz (2012) to create so called "contagion index". Their results show evidence of significant spillovers from the sovereign credit crisis to the euro-zone banking system.

However, most of the researchers used multivariate GARCH models to examine volatility spillovers across the stock markets. Echner (2006) used the DCC-GARCH model on the case of the stocks in the Dow Jones Industrial Avarage, and found statistically significant volatility spillovers among stocks.

Horvath and Petrovski (2012) examined the stock market co-movements between Western European stock markets and their Central and Southeast counterparts. They employed GARCH-BEEK model on the daily stock market data from 2006 to 2011. Their results suggest that Central European stock markets are strongly integrated with Western European markets. They found that conditional correlation between Central and Western European stock market varies around 0,6. Interesting, their results indicate that global financial crisis didn't changed the value of conditional correlation. On the other side, Horvath and Petrovski (2012) found that correlation between Serbian and Macedonian vis-a-vis their Western counterparts fluctuates around zero. Croatia exhibits somehow higher correlation (particularly in the pre-crisis periods), suggesting that Croatia is financially more integrated than the Serbia and Macedonia. Horvath and Gjika (2012) also find strong stock market correlations between Central European and Euro-Area stock markets using assymetric DCC-GARCH model. Li and Majerowska (2006) used the GARCH-BEEK model and found evidence for volatility spillovers from developed markets to Hungary and Poland. The results from the variance decomposition suggest that only 20% of the variation of the returns in the Hungary and Poland can be explained by shocks from the developed markets.

Babecky et.al. (2008) examined the speed of convergence (β-convergence) and degree of financial integration (σ-convergence) between four Central European Countries and Euro Area. Their results suggest that Central European countries (except Slovakia) exhibit strong and significant correlation between stock market returns.

Analysis on more frequent intraday data can be found in Egert and Kocenda (2011). They use DCC-GARCH model and 5-minute intraday stock market prices for the period 2003-2006. Their results indicate strong correlation between developed Western stock markets (German, French and UK). On the other side, the correlation between Central (Poland, Hungary and Czech) and Western (Germany, France and UK) markets is small but it exhibits an upward trend.

3. DATA

We use daily index values for the eight stock market indices: MBI10 (Macedonian stock exchange), WIG20 (Warsaw stock exchange), FTSE100 (London stock exchange), BET (Bucharest stock exchange), CROBEX (Zagreb stock exchange), BELEX15 (Belgrade stock exchange), DAX (Frankfurt stock exchange) and PX (Prague stock exchange). Data is collected for the period 04/10/2005- 03/03/2014 from the Quandl database and national stock market websites. Daily time-series on stock market prices are available in Figure 1. Series of daily returns are created as a logarithmic differences series on a daily index values (Figure 2). There are 1818 observations for each of the stock market indices. Descriptive stats for the daily return series are presented in table 1. All of the return series exhibit similar standard deviations in a range from 1,5% to 1,9%. JB values indicate that the stock markets returns series are not normally distributed (series exhibit fat tails and high peaks), which is a common characteristic of financial time series. As we can see from the Figure1, series on stock market returns exhibit volatility clustering, which is common for stock markets data- large stock market returns tend to be followed by large stock market returns and small returns tend to be followed by small stock market returns (Brooks, 2002). GARCH models can capture all of the characteristics that were mentioned above.

Table 1: Descriptive stats: daily stock index returns

	DAX	FTSE100	PX	WIG20	MBI10	CROBEX	BET	BELEX15
Mean	0.000335	9.99E-05	-0.000217	-2.94E-05	-0.000219	-0.000106	6.58E-06	-0.000313
Median	0.001262	0.000472	0.000323	0.000296	-0.000479	-4.98E-06	0.000495	-0.000273
Maximum	0.107975	0.096416	0.123641	0.108961	0.166301	0.147790	0.106994	0.140103
Minimum	-0.086140	-0.092656	-0.161855	-0.116855	-0.102831	-0.107636	-0.154782	-0.125890
Std. Dev.	0.015927	0.014321	0.017806	0.017943	0.015925	0.014995	0.019652	0.016836
Skewness	-0.028187	0.033319	-0.472076	-0.288982	0.677558	-0.121056	-0.867652	0.061047
Kurtosis	10	11	15	7	18	17	13	19
Jarque-Bera	3.236	4.940	1165,63	1.282	16479.90	14555,07	7.838	18371,73
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Observations	1818	1818	1818	1818	1818	1818	1818	1818

4. METHODOLOGY

4.1 Multivariate GARCH model

The families of ARCH and GARCH models are one of the most popular tools for modeling volatility. These models are designed to capture the specific characteristics of financial data: heteroskedasticity, volatility clustering, leptokurtosis and the leverage effects. The ARCH model was introduced by Engle (1982). The GARCH model was developed as a natural generalization of an ARCH model by Bollerslev (1986). Under the GARCH model, conditional variance depends on the long term average variance (v), volatility during the previous period (α) and the lagged term for the variance (β). GARCH (1, 1) model can be expressed as:

$$\sigma^2_t = \nu + \alpha\varepsilon^2_{t-1} + \beta\sigma^2_{t-1}$$

There are many extensions of the standard GARCH models, designed to capture some of the specific characteristics of the analyzed financial data. The GJR-GARCH and EGARCH models were developed to account for the leverage effects (Brooks, 2002). GARCH-M (GARCH in mean) model adds a heteroskedasticity term in the mean equation (Su and Huang, 2010). The IGARCH (integrated GARCH) model is a strictly stationary variant of the GARCH model – it is a restricted version of the standard

GARCH model. For more information about the different variants of GARCH models see Bollerslev et.al. (1992).

Multivariate GARCH models are designed to capture the co-movements (interdependence) of the financial asset returns and to capture the dynamics of the conditional variances and conditional covariances. As financial markets become more integrated, volatilities tend to move together over time. Also, there is often a "volatility spillover" across the financial markets – financial disruptions in a specific market are transmitted to other financial markets.

The mean equation in the multivariate GARCH models can be defined as:

$$\boldsymbol{Rt} = \mu + u_t$$

Bollerslev, Woolbridge and Engle (1988) developed the VECH model. The VECH model can be specified as:

$$\boldsymbol{VECH}\,(\boldsymbol{H}_t) = \boldsymbol{C} + \boldsymbol{A}\,\boldsymbol{VECH}\,(\boldsymbol{\varepsilon}_t - \mathbf{1}\boldsymbol{\varepsilon}'_{t-1} - \mathbf{1}) + \boldsymbol{B}\,\boldsymbol{VECH}\,(\boldsymbol{H}_{t-1}) \qquad \text{where}$$

$\boldsymbol{C}$ *is an* $N(N+1)/2\ x\ 1$ parameter vector

$\boldsymbol{A}$ ***and*** $\boldsymbol{B}$ *are* $N(N+1)/2\ x\ N(N+1)/2$ matrices and

VECH – "operator that stacks the upper triangular portion of a symmetrical matrix" (Horvath and Petrovski, 2012 p.9)

So, the conditional variances and conditional covariances depend on the returns on the assets, the lags of the squared errors and on the lags of the conditional variances and conditional covariances between the asset returns (Brooks, 2002).

In order to ensure that H matrix is always positive definite, Baba, Engle, Kraft and Kroner (1995) introduced the BEKK model. The BEKK model can be specified as:

$$\boldsymbol{H}_t = \boldsymbol{CC'} + \boldsymbol{A'H}_t - \mathbf{1}\boldsymbol{A} + \boldsymbol{B'}\,\boldsymbol{\varepsilon}_t - \mathbf{1}\,\boldsymbol{\varepsilon}'_t - \mathbf{1}\boldsymbol{B}$$

where C is an upper triangular matrix of parameters. Matrix A measures the effects on the conditional variance from the own past shocks (innovations) and the effects from the past cross innovation from variable i to variable j. Diagonal elements of the B matrix measure the own volatility spillover effects, or effect from the past conditional variance (GARCH effects). The off-diagonal elements measure the cross-volatility spillovers among variables.

Multivariate GARCH models are commonly estimated with the Maximum likelihood function:

$$Log\, L_t(\boldsymbol{\theta}) \;=\; -\;\frac{N-T}{2} log\,(2\pi) \;-\frac{1}{2}\sum_{t=1}^{T} log\;|H_t| - \frac{1}{2}\sum_{t=1}^{T}\; \varepsilon_t{'}Ht - 1\,\varepsilon_t$$

In this paper, we will use the GARCH-BEKK model to estimate the volatility spillovers and stock market co-movements among eight different stock markets.

4.2 Generalized VAR model

In order to examine the return spillovers among the eight stock markets we will create "spillover index" based on Diebold and Yilmaz (2009; 2012). Diebold and Yilmaz developed an intuitive measure for stock market interdependence to analyze the return and volatility spillovers across the stock markets. Since the estimated "spillover index" is time varying, we can see if there is any evidence of contagion during the recent financial crisis. This approach is based on the estimated VAR model, and the variance decomposition approach from the estimated VAR model. Firstly, we test the stationarity of the stock market indices using the Augmented Dickey-Fuller test. In their first paper, Diebold and Yilmaz (2009) use Cholesky decomposition and the results are very sensitive to the ordering of the variables. To overcome this limitation, Diebold and Yilmaz (2012) use variance decomposition based on generalized VAR, which is independent on the ordering of the variables. Here, we will also use the generalized variance decomposition.

Using the generalized VAR we will estimate the total spillovers index, directional spillovers and net spillovers among stock market indices.

Vector Autoregressive (VAR) models are developed by Sims (1980). Under the framework created by Sims the standard (covariance stationary) VAR model can be presented as:

$$\boldsymbol{x_t} \;=\; \sum_{i=1}^{p} \boldsymbol{\Phi_i x_{t-i}} + \boldsymbol{\varepsilon_t} \;+\; and\ Et\ is\ a\ white\ noise\ process\;\; \boldsymbol{\varepsilon} \sim\; (\boldsymbol{0}, \boldsymbol{\Sigma}).$$

To get the variance decomposition estimations, we present the VAR model in a moving average form:

$$\boldsymbol{x_t} \;=\; \boldsymbol{A_1\phi_{t-1}} \;+\; \boldsymbol{A2\;\phi_{t-2}} \;+\cdots..\boldsymbol{Ap\;\phi_{t-p}}\; \boldsymbol{and\;A = 0\;for\;i} < 0$$

To meet the stability conditions equation 1:

$$\left|\boldsymbol{I_n}\lambda^p - \boldsymbol{\Phi_1}\lambda^{p-1} - \boldsymbol{\Phi_2}\lambda^{p-2} - \cdots - \boldsymbol{\Phi_p}\right| = 0$$

As we noted earlier, Cholesky decomposition of the variance-covariance matrix makes the variance decomposition to be dependent on the ordering of the variables. Following Koop et.al (1996) H-step forecast error variance decomposition based on generalized impulse response functions can be estimated as:

$$\theta_{ij}^{g}(H)=\frac{\sigma_{ii}^{-1}\sum_{h=0}^{H-1}\left(\boldsymbol{e}_i'\boldsymbol{A}_h\boldsymbol{\Sigma}\boldsymbol{e}_j\right)^2}{\sum_{h=0}^{H-1}\left(\boldsymbol{e}_i'\boldsymbol{A}_h\boldsymbol{\Sigma}\boldsymbol{A}_h'\boldsymbol{e}_i\right)}$$

Where: (Louzis, 2013, p.10)

- σ_{ii}^{-1}" is the square root of the diagonal elements of the variance-covariance matrix $\boldsymbol{\Sigma}$", or the standard deviation of the i-th error term.
- e_i is an $n\times 1$ selection vector. The i[th] elements of the selection vector takes 1 all other elements of the selection vector are zero which takes 1 for the i th element and 0 otherwise.
- Unlike the standard VAR, in a generalized VAR framework the sum of the each row of the forecast error variance decomposition doesn't have to be one. Each element of the variance decomposition is normalized by dividing with the row sum. (Louzis, 2013).

$\tilde{\theta}_{ij}^{g}(H)=\theta_{ij}^{g}(H)/\sum_{j=1}^{N}\theta_{ij}^{g}(H)$ where $\sum_{j=1}^{N}\tilde{\theta}_{ij}^{g}(H)=1$ and $\sum_{i,j=1}^{N}\tilde{\theta}_{ij}^{g}(H)=N$.

Following Diebold and Yilmaz (2012), total spillover index can be estimated as:

$$S^{g}(H)=\frac{\sum_{\substack{i,j=1\\ i\neq j}}^{N}\tilde{\theta}_{ij}^{g}(H)}{\sum_{i,j=1}^{N}\tilde{\theta}_{ij}^{g}(H)}\times 100=\frac{\sum_{\substack{i,j=1\\ i\neq j}}^{N}\tilde{\theta}_{ij}^{g}(H)}{\mathrm{N}}\times 100$$

Directional spillovers index can be estimated as:

$$S_{i\cdot}^{g}(H)=\frac{\sum_{\substack{j=1\\ j\neq i}}^{N}\tilde{\theta}_{ij}^{g}(H)}{\sum_{j=1}^{N}\tilde{\theta}_{ij}^{g}(H)}\times 100$$
$$S_{\cdot j}^{g}(H)=\frac{\sum_{\substack{i=1\\ i\neq j}}^{N}\tilde{\theta}_{ij}^{g}(H)}{\sum_{i=1}^{N}\tilde{\theta}_{ij}^{g}(H)}\times 100$$

The difference between the spillover index that is transmitted to the other markets and the spillover index that is received from the other markets gives the net spillover index. A net pairwise spillover index is simply a difference between the spillover index that is transmitted from the market i to the market j and the spillover index that is received by the market i from the market j.

4.2.1Results from the VAR model

- Total spillover index rose sharply during the periods of major financial and political events (US subprime mortgage crisis, Lehman Brothers collapse, Greek public debt revision, and the European Debt crisis) and remained at a high and stable level during the tranquil period.

- Net directional spillover index suggests that DAX and FTSE100 are the major net transmitters of spillover across other analyzed markets. On the other hand Southeast European markets (MBI10 and BELEX15) are net receivers of spillover from the other analyzed stock markets. However, there are relatively smaller effects of 'contagion' from advanced markets to the Serbian and Macedonian stock markets relatively to their Central European counterparts. In the case of CROBEX and BET the spillover index from the other markets rapidly increases during the periods of financial disruptions (from 20-30% to almost 85%). In the case of Central European markets (PX and WIG20) spillover index varies from around 40-60% during the tranquil periods to almost 90% in the periods of financial disruptions. The results seem to be logical, indicating that MBI10 and BELEX15 are less integrated with the advanced financial markets. International investors can reduce their overall portfolio risk across Southeast stock markets.
- DAX and FTSE100 markets are net transmitters of spillovers to the other analyzed stock markets. There is bi-directional spillover between DAX and FTSE100, between PX and WIG-20 and between MBI10 and BELEX15.

5. RESULTS

5.1 Return spillover index -VAR model

Firstly, we start analyzing the stock market returns by examining the stationarity of the series. ADF test shows that all of the log-differences time series are stationary (the null hypothesis for unit root are rejected on a 1% confidence level).

Table 2: ADF unit root test

Results of ADF test		
log-differenced series		
index	**t-stat**	**p-value**
DAX	-42.40743	0
FTSE100	-33.78733	0
PX	-32.43415	0
WIG20	-41.63193	0
BET	-41.21245	0
CROBEX	-37.65197	0
BELEX	-32.53627	0
MBI10	-27.15664	0

Second, we determine the appropriate number of lags using the Akaike information criterion (AIC) and Schwartz Bayesian information Criterion (SBIC). Here we select 4 lags, based on the Akaike information criterion.

Table 3. The selection of lag length based on VAR models

The selection of lag length		
Lag	**AIC**	**SC**
0	-47.09144	-47.06713
1	-47.36641	**-47.14759***
2	-47.40372	-46.99038
3	-47.409	-46.80114
4	**-47.41115***	-46.60879
5	-47.39483	-46.39795
6	-47.40475	-46.21336
7	-47.39558	-46.00967
8	-47.40451	-45.82409

Now we estimate VAR (4) model using the log-differenced daily time series of the eight stock market indices as a dependent variables.

Since the estimated coefficients from the VAR model are hard to be interpreted, here we analyze the return spillover effects with the estimated generalized forecast error variance decomposition, an approach based on Koop, Pesaran and Potter (1996).

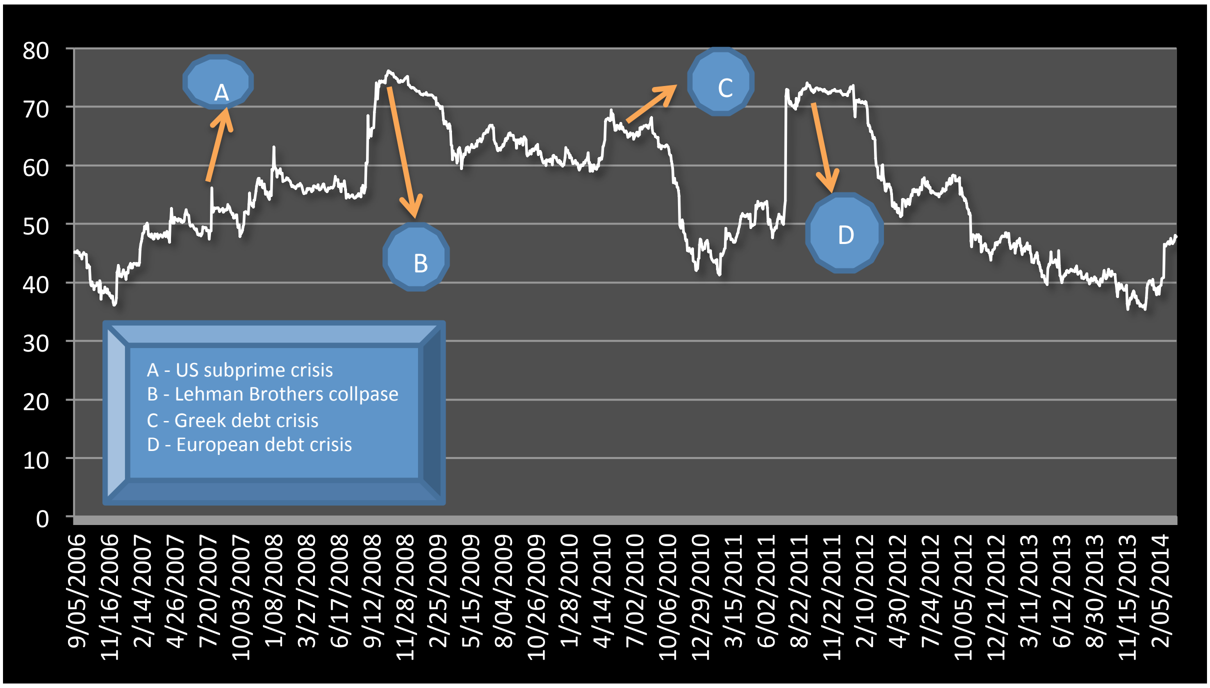
Table 4: Forecast error variance decomposition (Generalized VAR(4) model)

	DAX	FTSE100	PX	WIG20	BELEX15	BET	CROBEX	MBI10	**contribution from others**
DAX	30,8	24,5	13,0	13,6	1,5	7,6	8,1	0,9	69
FTSE100	24,3	30,6	13,8	13	1,7	7,9	8,1	0,7	69
PX	14.3	14,5	31,9	15,4	2,6	10,8	9,8	0,8	68
WIG20	15,7	15,1	16,9	35,3	1,2	7,7	7,5	0,6	65
BELEX15	5,2	5	6,3	3,3	61,3	7	9,1	2,7	39
BET	10,5	10,3	13,5	9,2	3,9	39,7	11,4	1,5	60
CROBEX	10,9	10,7	11,8	8,4	3,8	11,3	40,6	2,5	59
MBI10	3,8	3,4	3,1	2,3	4,9	3,9	9,3	69,3	31
contribution to others	85	84	78	65	20	56	63	10	461
contribution including own	115	114	110	101	81	96	104	79	**Total spillover index 57,6%**
Net spillovers	16	15	10	0	-19	-4	4	-21	

The results indicate a large return spillover from DAX and FTSE indices to PX and WIG20 indices. Also, the results indicate that innovations in the DAX and FTSE indices account for about 16% of the 10 days ahead forecast error variance in the PX and WIG20 indices. Return spillovers from the Western are smaller for the BET and CROBEX (around 10%) and almost insignificant for the MBI10 and BELEX15 indices. Also there are large return spillovers across two Central European stock markets (PX and WIG20). Also, the results show large return spillovers from the Western European markets to other markets. On the other side, return spillovers from Macedonian and Serbian stock markets are relatively small. Central European markets (PX and WIG 20) and Romanian and Croatian stock markets seem to be far more integrated with the Western markets. As we can see on the table 4, DAX, FTSE, PX and CROBEX are net transmitters of shocks. Among them, DAX and FTSE are the biggest transmitters of shocks to other markers. On the other side, BELEX and MBI are the biggest net receivers of shocks.

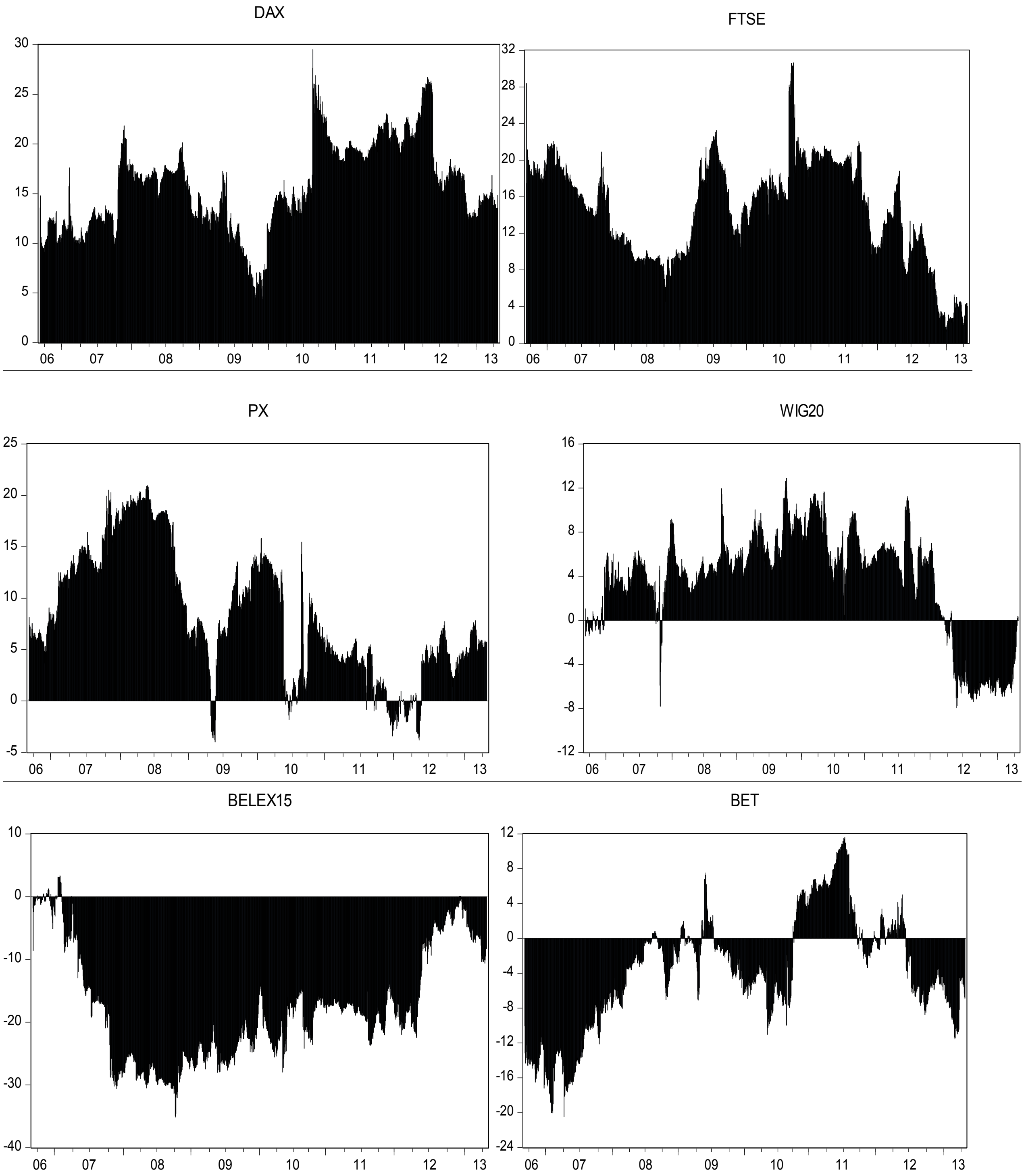
To analyze the time-varying return spillovers, we create total spillover index, directional spillover indices and net spillover indices. The total spillover index is presented in Figure3. The “total spillover” index tended to rise during the periods of financial disruptions (from 40% to 70%). During the period of financial crisis 2007-2009 (particularly during the credit crunch, and the collapse of Lehman Brothers) total spillover index was above 50%. The total spillover index started to rise during the US subprime crisis (August 2007) and remained at a relatively high level until the beginning of 2011. The spillover index was particularly high during the Lehman Brothers) collapse (September 2008) and during the Greek bailout (April-May 2010). During the calm periods, spillover index stays on a stable level (around 40%).

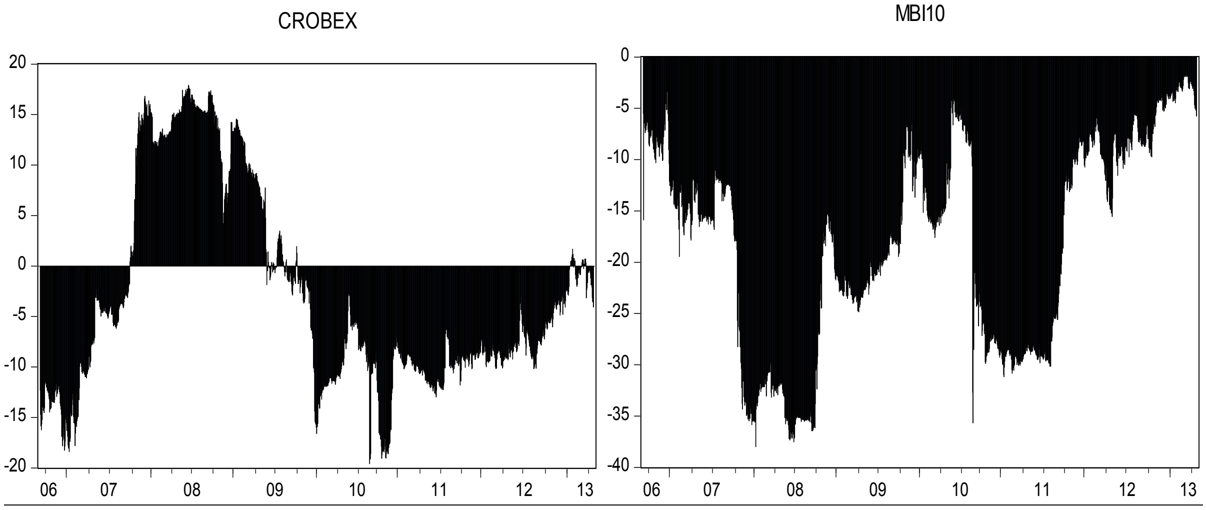
Figure 3: Total spillover index



Now, we analyze the directional return spillover indices, based on estimated variance decomposition presented in the table 4. As we can see, directional spillovers are time varying. As expected, DAX and FTSE100 stock markets are net transmitters and Southeast european (MBI10, BELEX15) markets are dominantly net receivers of return spillovers. During the calm periods spillover effects are relatively small in the case of MBI10, BELEX15, BET and CROBEX. However, in the case of CROBEX and BET the spillover index from the other markets rapidly increases during the periods of financial disruptions (from 20-30% to almost 85%). On the case of Central European markets (PX and WIG20) spillover index varies from around 40-60% during the tranquil periods to almost 90% in the periods of financial dusruptions. There are relatively smaller effects of "contagion" from advanced markets to the Serbian and Macedonian stock markets. MBI10 and BELEX15 are relatively isolated from the international financial disruptions. International investors can reduce the overall portfolio risk, if they diversify their portfolios across MBI and BELEX indices.

Figure 4: Directional Spillover index


DAX
30
25
20
15
10
5
0
06 07 08 09 10 11 12 13
FTSE
32
28
24
20
16
12
8
4
0
06 07 08 09 10 11 12 13
PX
25
20
15
10
5
0
-5
06 07 08 09 10 11 12 13
WIG20
16
12
8
4
0
-4
-8
-12
06 07 08 09 10 11 12 13
BELEX15
10
0
-10
-20
-30
-40
06 07 08 09 10 11 12 13
BET
12
8
4
0
-4
-8
-12
-16
-20
-24
06 07 08 09 10 11 12 13



5.1.1Net pairwise spillover indices:

Net pairwise spillover indices are presented in the Figure 5. Positive values imply that the country i is a net transmitter to country j and negative values indicate that country i is a net receiver of spillovers. As expected, DAX and FTSE100 markets are net transmitters of spillovers to other markets. All of the analyzed markets are net receivers of spillovers from DAX and FTSE100, particularly during the periods of financial turmoil. There are bi-directional spillovers between DAX and FTSE100 indices. PX is a net transmitter of spillovers to BET, BELEX15, CROBEX and MBI10. Interestingly, the results indicate very high spillovers from the PX to Macedonian stock market (MBI10). Similarly to DAX and FTSE100, there are strong bi-directional spillovers between the PX and WIG20. WIG20 is a net transmitter of shocks to southeast European stock markets and to Romanian stock market. Serbian stock market (BELEX15) is a net receiver of spillovers from all other markets, except from MBI10. There is evidence of bi-directional spillover between Serbian and Macedonian stock market. Similarly to BELEX15, MBI10 is a net receiver of spillovers from the other stock markets. The results indicate strong spillovers from Croatian to Macedonian stock market.

Results from the VAR model:

- Total spillover index rise sharply during the periods of major financial and political events (US subprime mortgage crisis, Lehman Brothers collapse, Greek public debt revision, and the European Debt crisis) and remained at a high and stable level during the tranquil period.
- Net directional spillover index suggests that DAX and FTSE100 are the major net transmitters of spillover across other analyzed markets. On the other hand Southeast European markets (MBI10 and BELEX15) are net receivers of spillover from the other analyzed stock markets. However, there are relatively smaller effects of 'contagion' from advanced markets to the Serbian and

Macedonian stock markets relatively to their Central European counterparts. In the case of CROBEX and BET the spillover index from the other markets rapidly increases during the periods of financial disruptions (from 20-30% to almost 85%). In the case of Central European markets (PX and WIG20) spillover index varies from around 40-60% during the tranquil periods to almost 90% in the periods of financial disruptions. The results seem to be logical, indicating that MBI10 and BELEX15 are less integrated with the advanced financial markets. International investors can reduce their overall portfolio risk across Southeast stock markets.

- DAX and FTSE100 markets are net transmitters of spillovers to the other analyzed stock markets. There is bi-directional spillover between DAX and FTSE100, between PX and WIG-20 and between MBI10 and BELEX15.

5.2 Volatility spillovers - GARCH-BEEK Results

In this part, we measure the volatility spillovers across the analyzed stock markets using the multivariate GARCH model. First, we estimate 8-variable multivariate BEKK-GARCH (1, 1) model. The stock market indices DAX, FTSE100, PX, WIG20, BELEX15, BET, CROBEX and MBI10 are noted 1, 2, 3, 4, 5, 6, 7 and 8 respectively. The results for the variance-covariance parameters are presented in the table 5. We will use different approach to model the return spillover, so here we only report the estimation results for the variance equation. The "A" terms (diagonal elements of matrix A) capture the own-shock (residual) spillovers (own ARCH effect). The B terms (diagonal B terms) capture the own volatility spillovers. Except DAX, FTSE100 and WIG20, own-lagged shocks on all other stock markets (A3,3; A5,5; A6,6; A7,7; A8,8) are statistically significant, which means that most of the markets exhibit own-shocks spillovers. Own-shocks spillovers are the highest for MBI10 (0,53) and for BET (0,42). The own-shocks spillover effects are smaller for the CROBEX, BELEX15 and PX indicating that own-shocks spillovers are less important for the more developed markets. Table 4 also reports statistically significant own-volatility spillovers in the case of PX, BELEX15, BET, CROBEX and MBI10. The results are in line with Li and Giles (2013), who found that advanced markets are less affected by their own past shocks and own past variances.

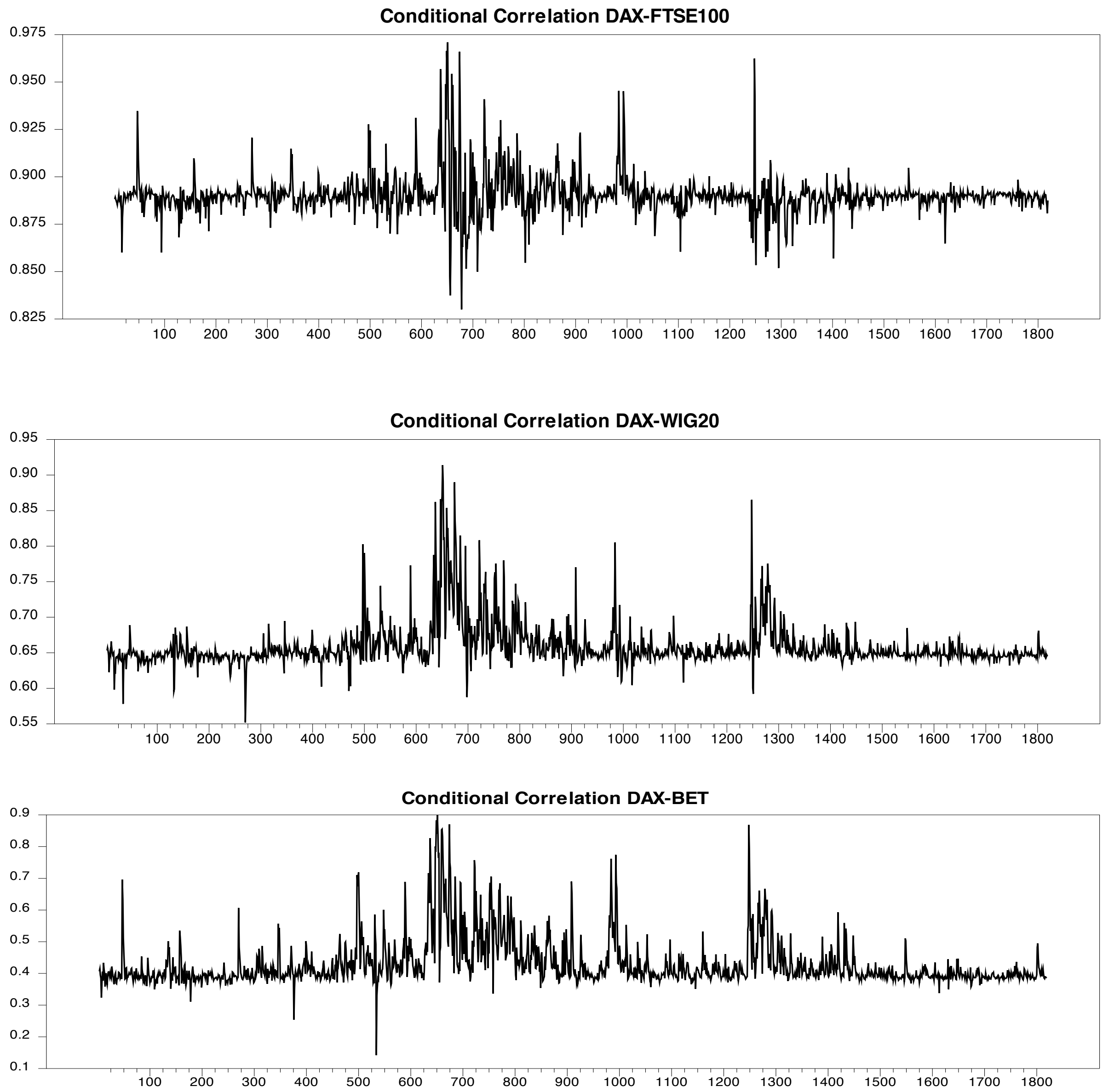
The results indicate several significant cross-volatility spillovers among the analyzed stock markets (off diagonal elements of matrix A and B). There is a positive unidirectional shocks spillover from DAX to CROBEX and from FTSE100 to WIG20. Also, there is a positive shock spillover from Czech stock market (PX) to Serbian and Romanian stock markets. Finally, there are positive unidirectional shock spillovers from WIG20 to PX, and from CROBEX to Macedonian stock market (MBI10). The results for the off-diagonal elements of matrix B indicate only one significant volatility spillover-from MBI10 to CROBEX.

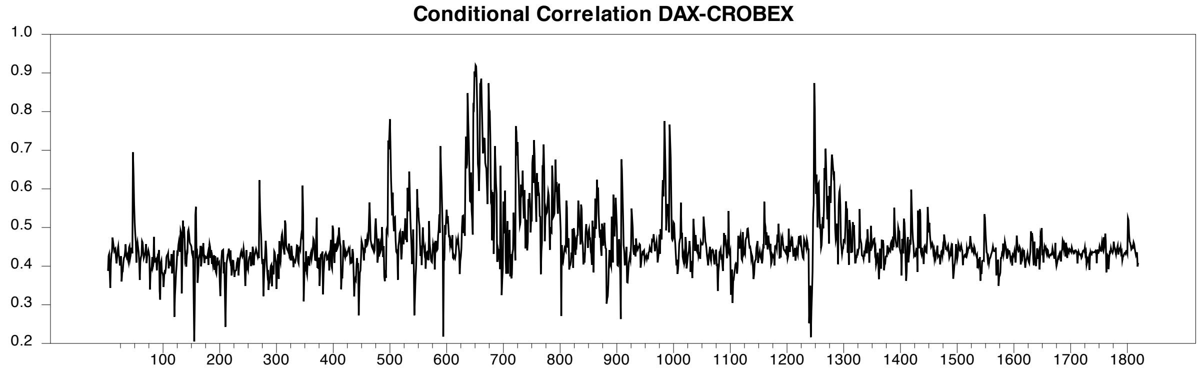
Table 5: GARCH BEKK estimation results: Variance covariance matrix

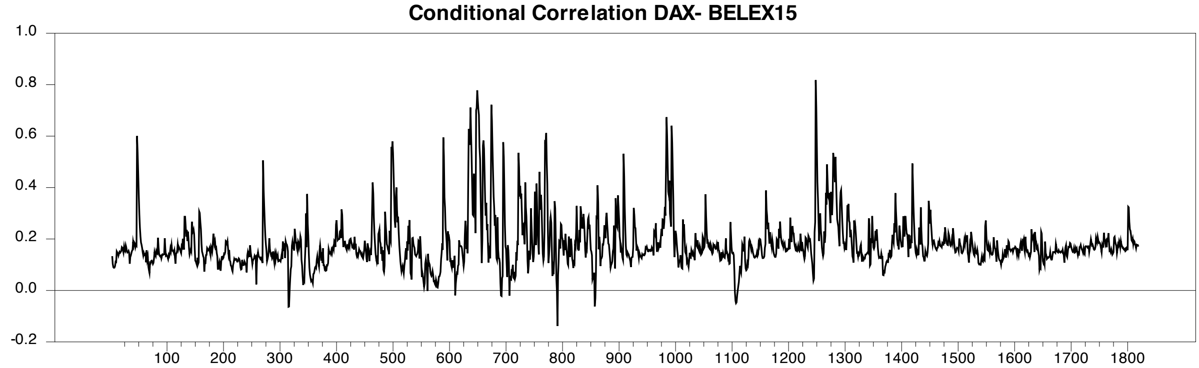
GARCH BEKK estimation results									
period 10/04/2005 to 03/27/2014									
	A	p-value	B	p-value		A	p-value	B	p-value
(1,1)	0.092	0.195	0.556	0.138	(5,1)	0.054	0.148	0.073	0.627
(1,2)	-0.031	0.638	0.042	0.904	(5,2)	0.066	0.044	0.059	0.676
(1,3)	0.065	0.364	-0.035	0.950	(5,3)	0.080	0.012	-0.042	0.856
(1,4)	0.019	0.830	-0.024	0.963	(5,4)	-0.006	0.867	0.051	0.804
(1,5)	0.060	0.522	0.025	0.965	(5,5)	0.268	0.000	0.567	0.009
(1,6)	0.025	0.652	-0.082	0.786	(5,6)	-0.036	0.143	0.014	0.917
(1,7)	0.111	0.109	-0.028	0.936	(5,7)	0.036	0.234	0.025	0.844
(1,8)	0.024	0.732	0.037	0.927	(5,8)	0.027	0.396	-0.137	0.334
(2,1)	0.042	0.578	-0.114	0.793	(6,1)	0.039	0.430	0.055	0.425
(2,2)	0.089	0.186	0.424	0.246	(6,2)	0.088	0.037	0.007	0.908
(2,3)	0.051	0.499	-0.067	0.892	(6,3)	0.164	0.000	0.027	0.756
(2,4)	0.217	0.022	-0.353	0.489	(6,4)	0.027	0.663	0.099	0.255
(2,5)	0.060	0.576	-0.156	0.757	(6,5)	0.127	0.004	0.021	0.793
(2,6)	0.084	0.180	-0.026	0.939	(6,6)	0.427	0.000	0.789	0.000
(2,7)	-0.009	0.912	-0.090	0.825	(6,7)	-0.013	0.757	-0.076	0.188
(2,8)	0.055	0.437	-0.093	0.817	(6,8)	0.002	0.955	0.079	0.201
(3,1)	0.024	0.625	0.007	0.957	(7,1)	0.022	0.514	0.006	0.846
(3,2)	0.032	0.433	0.011	0.926	(7,2)	0.032	0.294	0.014	0.613
(3,3)	0.238	0.000	0.273	0.071	(7,3)	0.045	0.232	-0.023	0.612
(3,4)	0.041	0.444	0.048	0.765	(7,4)	0.009	0.828	0.010	0.811
(3,5)	0.128	0.017	0.028	0.872	(7,5)	-0.025	0.462	-0.004	0.905
(3,6)	0.063	0.055	-0.026	0.839	(7,6)	0.001	0.942	-0.001	0.971
(3,7)	-0.003	0.926	0.032	0.828	(7,7)	0.279	0.000	0.941	0.000
(3,8)	-0.039	0.304	0.036	0.821	(7,8)	0.068	0.005	-0.007	0.707
(4,1)	-0.041	0.335	-0.007	0.979	(8,1)	0.045	0.224	0.015	0.656
(4,2)	-0.042	0.274	-0.099	0.642	(8,2)	0.049	0.105	0.014	0.697
(4,3)	0.065	0.092	-0.151	0.603	(8,3)	0.014	0.722	0.038	0.483
(4,4)	-0.002	0.960	0.445	0.141	(8,4)	-0.007	0.868	0.045	0.368
(4,5)	0.046	0.311	-0.084	0.794	(8,5)	0.017	0.625	0.014	0.742
(4,6)	0.002	0.958	-0.035	0.861	(8,6)	0.045	0.050	0.025	0.313
(4,7)	0.038	0.272	-0.074	0.752	(8,7)	-0.011	0.703	0.047	0.019
(4,8)	0.056	0.103	-0.025	0.923	(8,8)	0.534	0.000	0.840	0.000

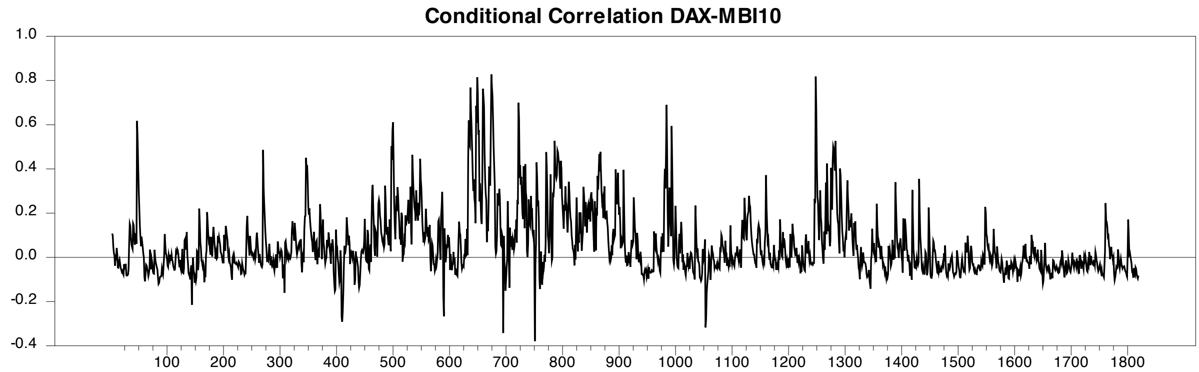
However, it is very hard for the estimated GARCH BEKK model to be interpreted in the economic sense (Li and Majerowska, 2006). To overcome this issue, we create conditional correlation plots based on estimated model. The time-varying conditional correlation plots are presented in Figure 5. The results suggest a strong connection between Central European market (PX and WIG20) and their western counterparts (DAX and FTSE100). The conditional correlation coefficient between DAX and PX and between DAX and WIG20 varies from 0,80 and 0,65 during the tranquil periods to almost 0,9 during the periods of financial turmoil (for PX and WIG 20 respectively). There is only a modest connection between Croatian and Romanian market and Western markets. The correlation varies around 40% most of the time, while in the period of financial crisis correlation coefficient rises sharply. There is no evidence of connection between Macedonian and Serbian stock markets and the advanced western markets. The correlation coefficient varies around zero for most of the time. However, during the period of the financial crisis, correlation coefficient rose to almost 0,5 suggesting some evidence of volatility spillovers from the advanced markets during the period of financial crisis.

Figure 5: Conditional Correlation plots









6. CONCLUSION

This paper analyzed the return spillovers, volatility spillovers and stock market co-movements among Western, Central and Southeast European stock markets. Following Diebold and Yilmaz (2012), we created the spillover index based on a generalized VAR framework. The “total spillover index” rose sharply during the periods of major financial and political events (US subprime mortgage crisis, Lehman Brothers collapse, Greek public debt revision, and the European Debt crisis) and remained at a high and stable level during the tranquil periods.

The results show that Western markets are the biggest net transmitters of spillover to Central and Southeast European markets. On the other side, in the terms of “return spillovers”, Serbian and

Macedonian markets are the biggest net receivers of spillover from the other six markets. There are relatively small effects of "contagion" from the advanced markets to Serbian and Macedonian stock markets relatively to their Central European counterparts. In the case of CROBEX and BET the spillover index from the other markets rapidly increases during the periods of financial disruptions (from 20-30% to almost 85%). In the case of Central European markets (PX and WIG20) spillover index varies from around 40-60% during the tranquil periods to almost 90% in the periods of financial disruptions. The results seem to be logical, indicating that MBI10 and BELEX15 are less integrated with the advanced financial markets. International investors can reduce their overall portfolio risk across Southeast stock markets. During the financial crisis of 2007, most of the spillovers to the Macedonian and Serbian stock market came from Croatian, German and Czech stock market. During the European debt crisis, most of the spillovers to the Serbian and Macedonian markets came from German, Czech and Romanian market. There are bi-directional spillovers between DAX and FTSE100, PX and WIG20 and between MBI10 and BELEX15. Unlike the Southeast market, the spillovers to the PX and WIG20 came mostly from DAX and FTSE100.

The volatility spillovers and stock market co-movements were analyzed with the multivariate GARCH BEKK (1,1) model. The results indicate several significant cross-volatility spillovers among the analyzed stock markets (off diagonal elements of matrix A and B). There are positive unidirectional shock spillovers from DAX to CROBEX and from FTSE100 to WIG20. Also, there is a positive shock spillover from Czech stock market (PX) to Serbian and Romanian stock markets. Finally, there are positive unidirectional shock spillovers from WIG20 to PX, and from CROBEX to Macedonian stock market (MBI10). The results for the off-diagonal elements of matrix B indicate only one significant volatility spillover-from MBI10 to CROBEX. Because it is hard to analyze the estimated coefficients from the GARCH BEKK model, we estimated the time-varying conditional correlation coefficients. The results suggest a strong connection between Central European market (PX and WIG20) and their western counterparts (DAX and FTSE100). The conditional correlation coefficient between DAX and PX and between DAX and WIG20 varies from 0,80 and 0,65 during the tranquil periods to almost 0,9 during the periods of financial turmoil (for PX and WIG 20 respectively). There is only a modest connection between Croatian and Romanian markets and Western markets. The correlation varies around 0,4 most of the time, while in the period of financial crisis correlation coefficient rises sharply. There is no evidence of a connection between Macedonian and Serbian stock markets and the advanced western markets. The correlation coefficient varies around zero for most of the time. However, during the period of the financial crisis, correlation coefficient rose to almost 0,5 suggesting some evidence of volatility spillovers from the advanced markets during the period of financial crisis.

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APPENDENCIES:

Figure 1: Log-Index values on eight stock markets (04/10/2005- 03/03/2014)

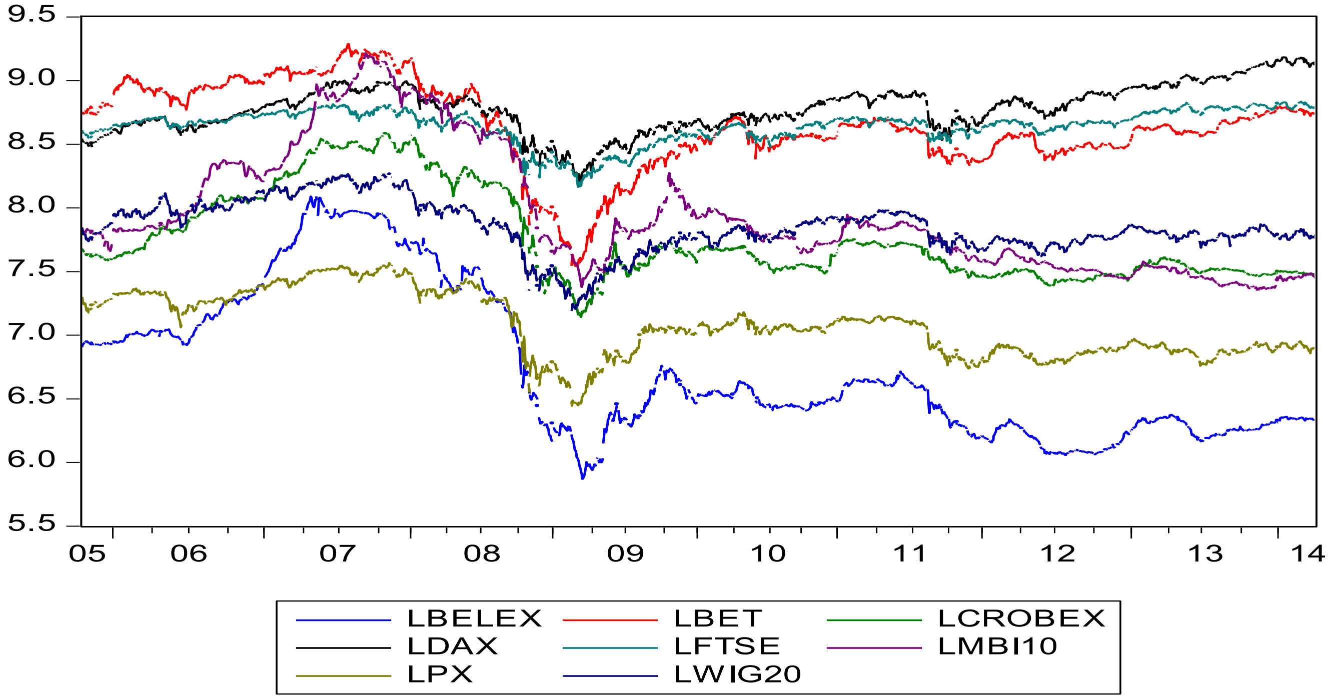
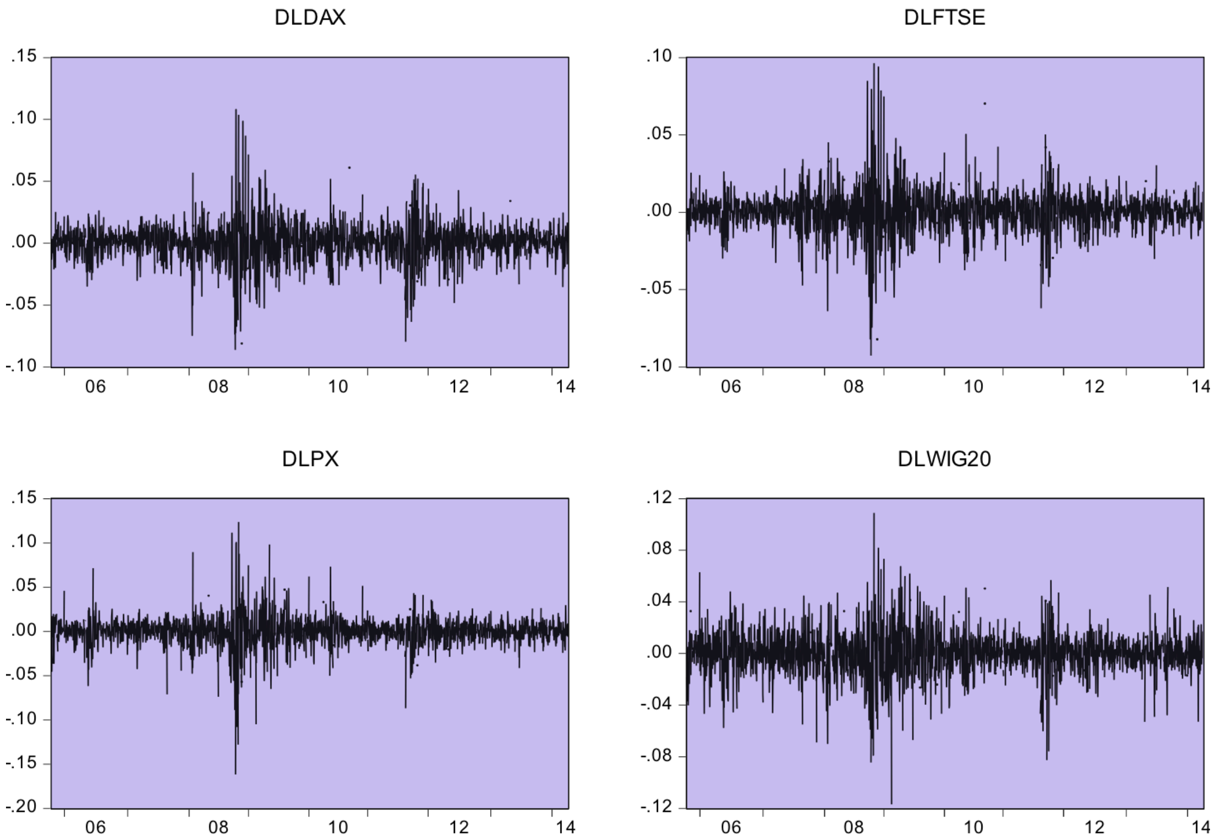


Figure 2. Daily Return Series



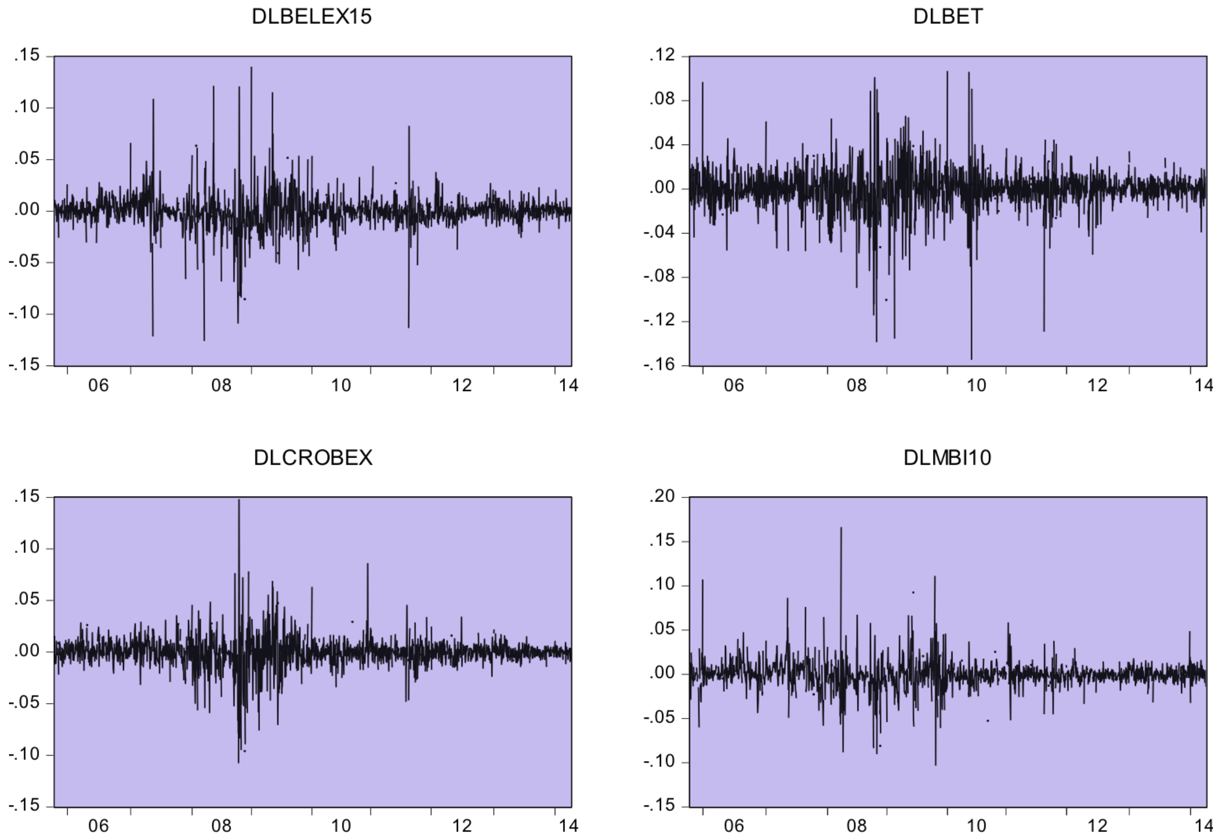
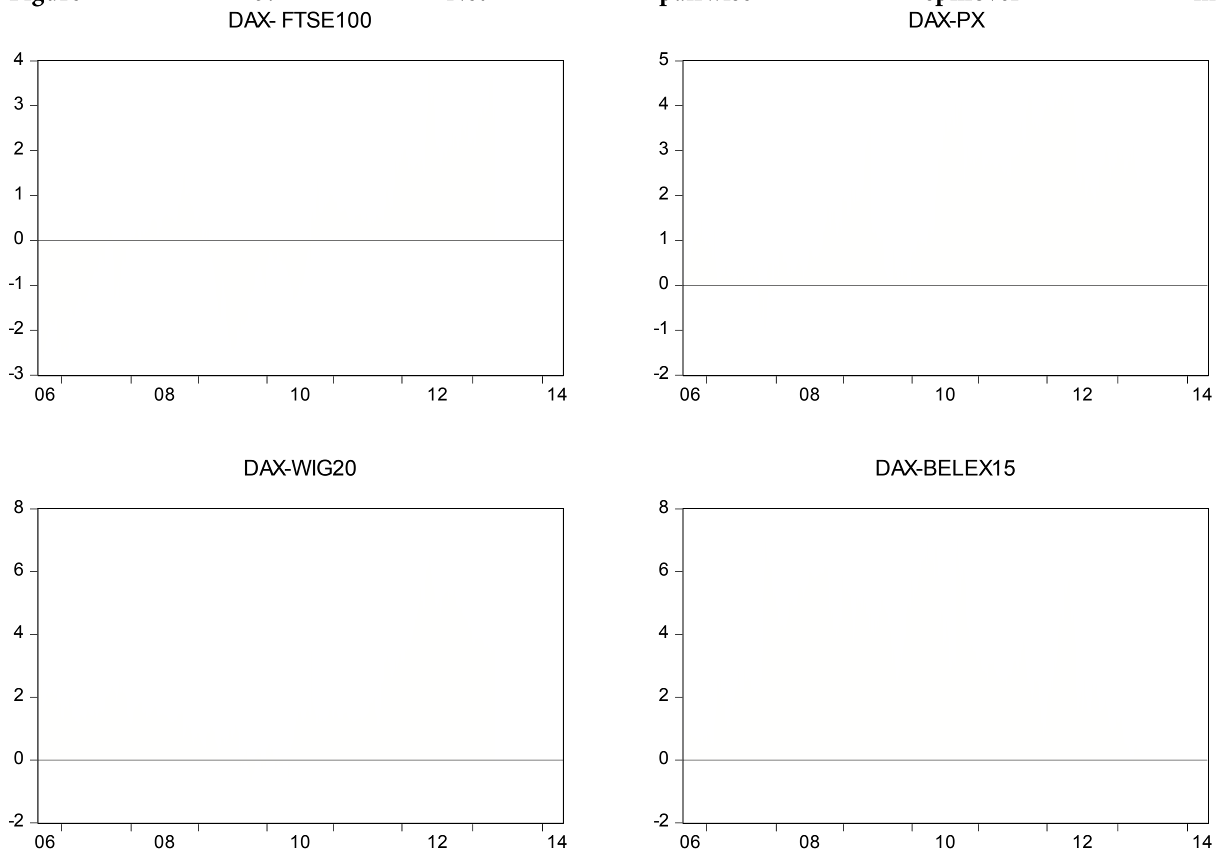
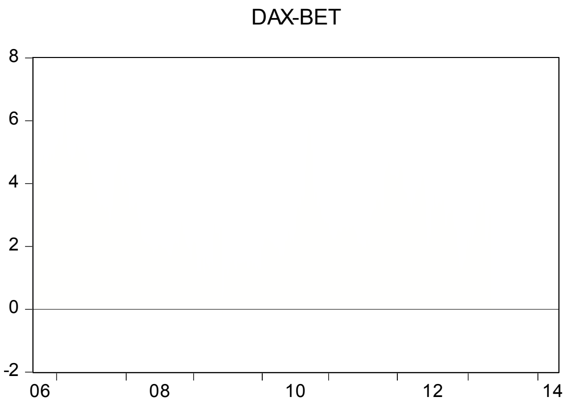
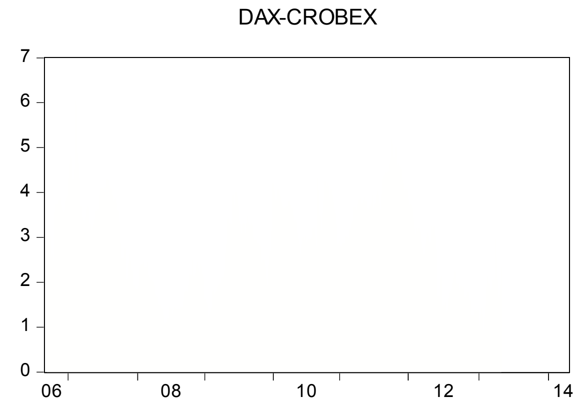
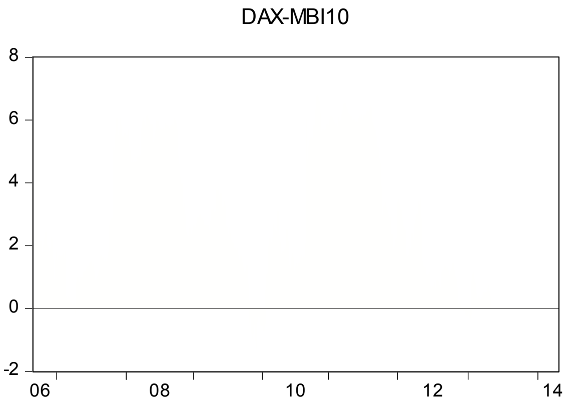


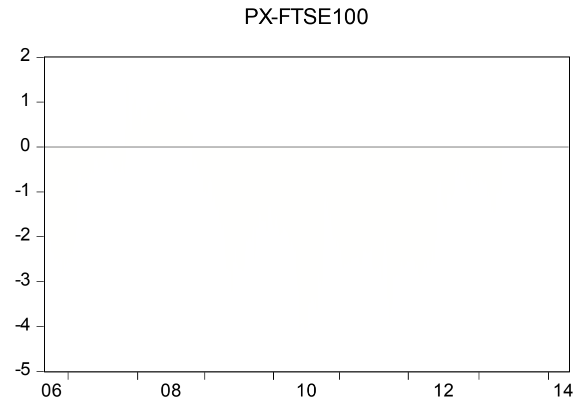
Figure 5: Net pairwise spillover indices



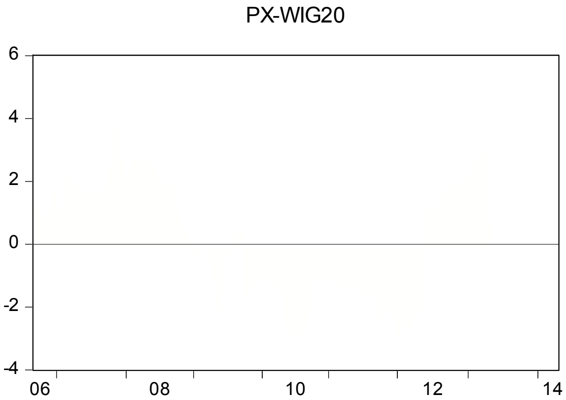


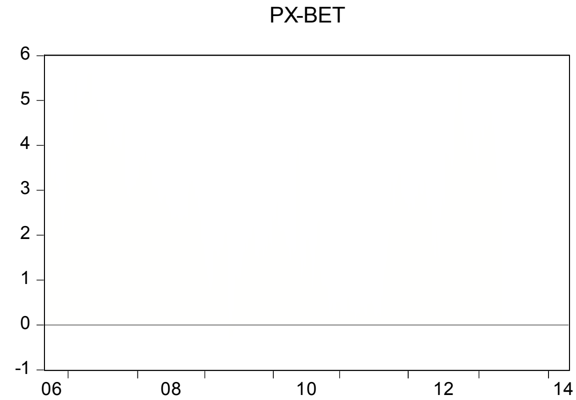


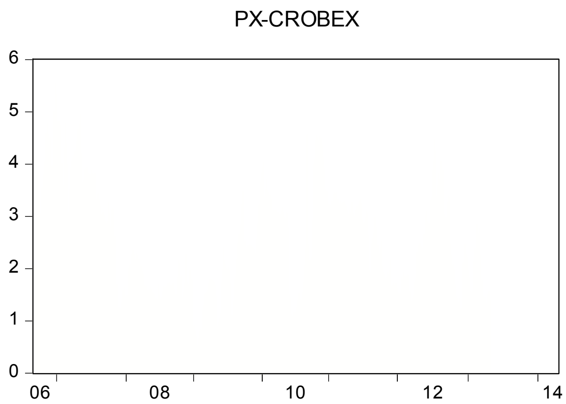


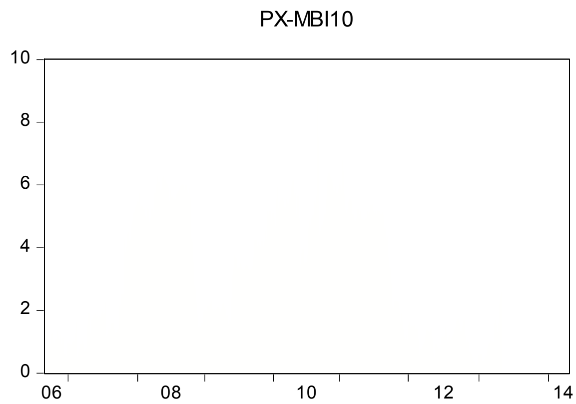


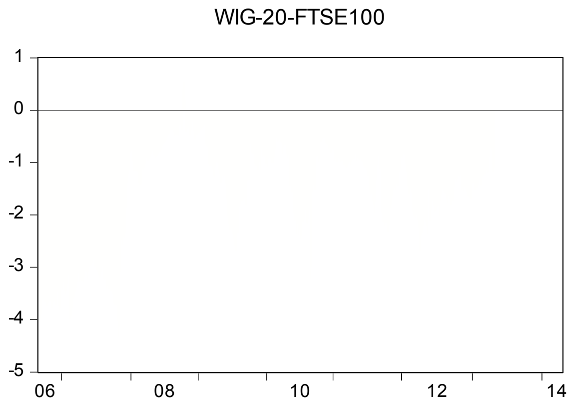
PX – WIG20 PX-BET







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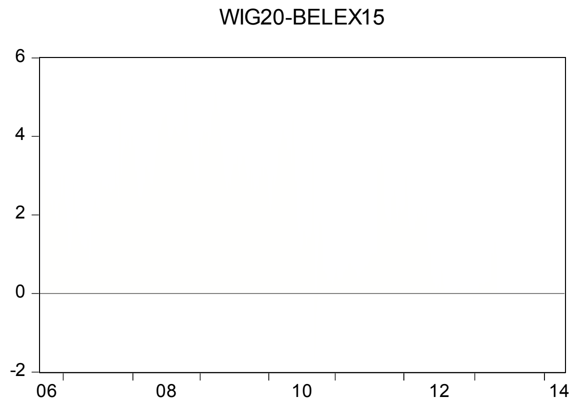
WIG20-BELEX15
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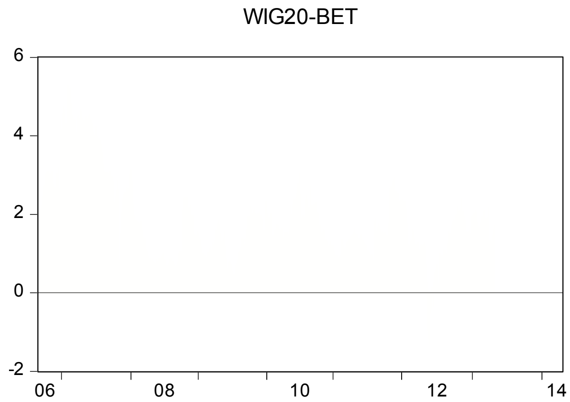
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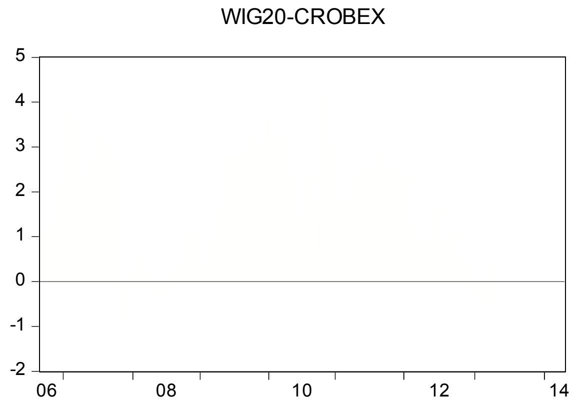
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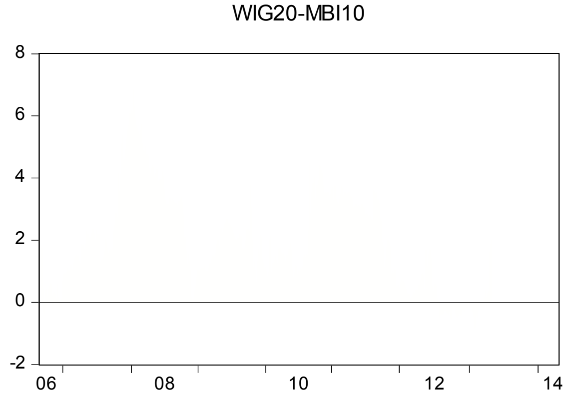
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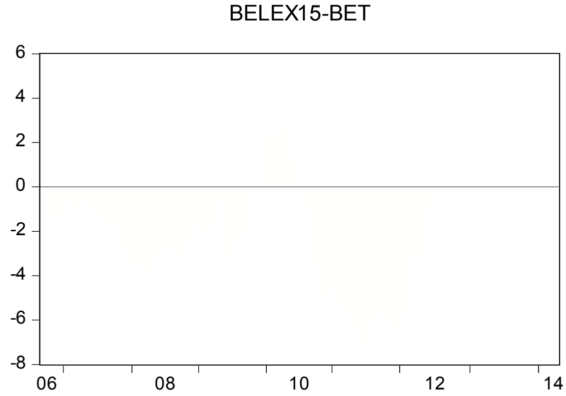
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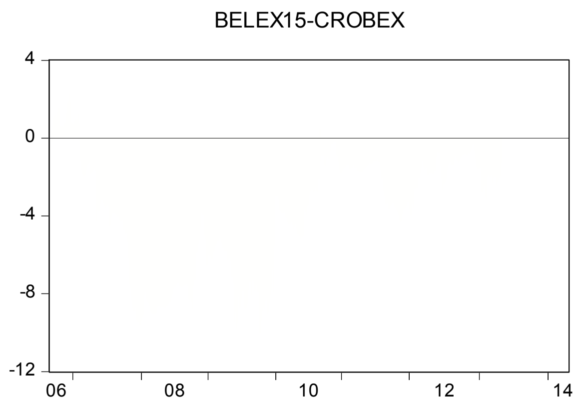
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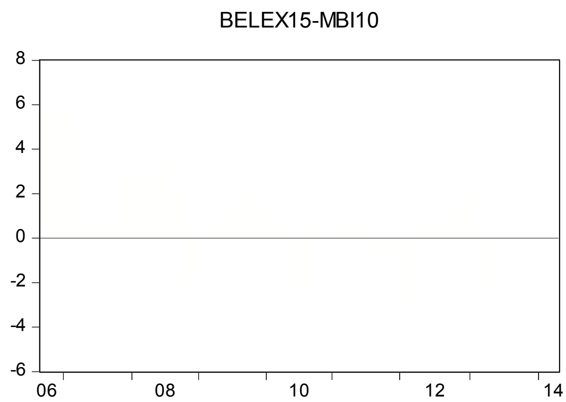
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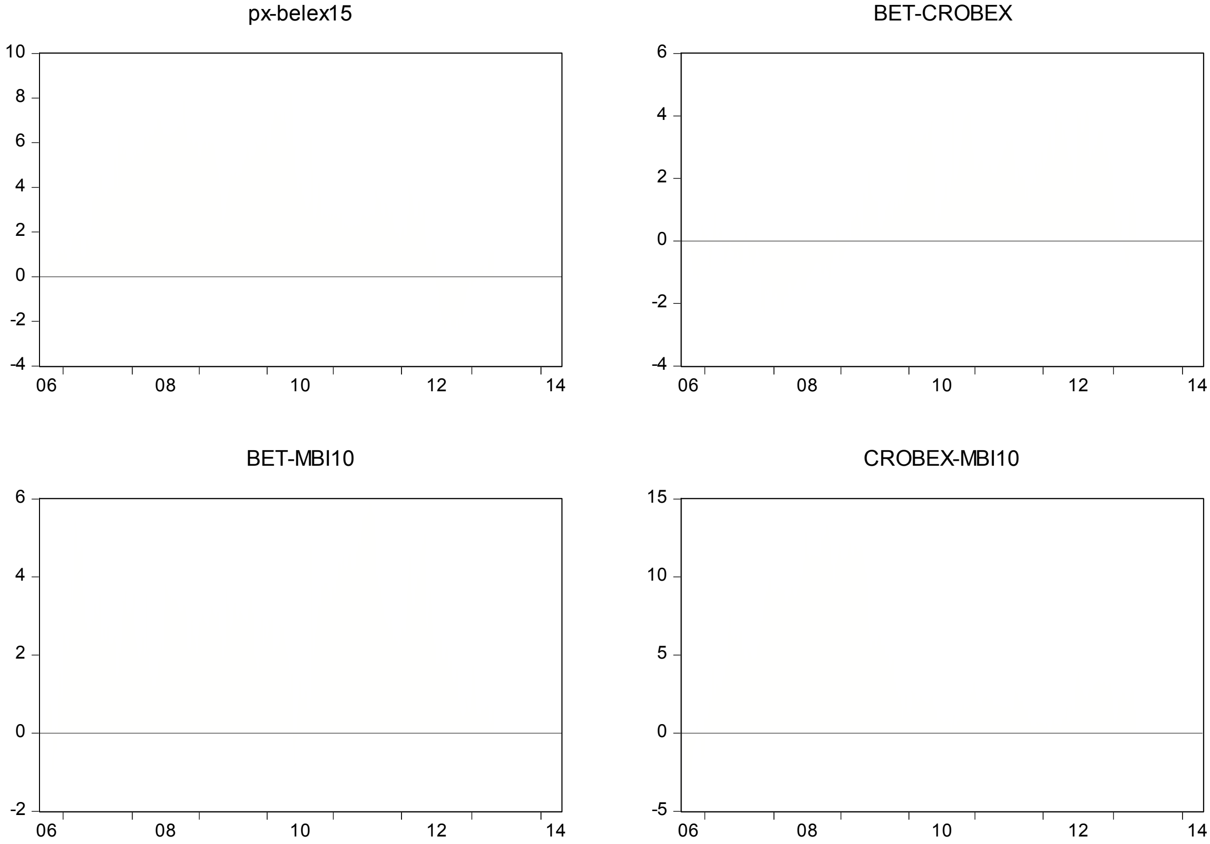
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A Linear Programming Approach to Determine an Optimum Value in a Single Currency Project of West Africa

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A B S T R A C T

The paper discusses the primary and secondary convergence conditions for the second monetary zone in West Africa. The focal point is however the primary conditions as these provide the basis for the attainment of the secondary conditions. Panel data for the research are obtained from the West African Monetary Agency website: www.wami.imao.org. The variables are those given in the primary conditions and these are first tested for unit root and stationarity for each country. A panel cointegration test is then applied to obtain a long-run equation which is used as an objective function in the Simplex method of linear programming with the primary conditions as constraints. The panel unit root test results show that all the variables are integrated with the degree of integration varying from zero to one for different countries. The stationarity test confirms the result, as the variables are non-stationarity in level for some countries but stationarity for others. Since the unit root and stationarity test show conflicting results, the pooled mean group estimator is used to obtain long-run cointegration equation. This equation can be applied irrespective of whether the variables are integrated or not. Linear programming is then used to obtain the optimal condition for attainment of a single currency project for West Africa. The result shows that the objective function is minima at 0.0462 with inflation contributing more to the variation in the government external reserves. The paper recommend that Central Banks in those countries preparing for second monetary zone should avoid implementing inflation targeting as a way to solving their economic problem.

A R T I C L E I N F O

Keywords: Simplex method; optimal condition; convergence criteria; objective function; pooled group mean estimator, inflation targeting.

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1. INTRODUCTION

Regional economic groupings of countries to form monetary unions are fast becoming the norm in the world today. Many regions including those in Africa (in particular West Africa) have set-up one time table or the other towards a single monetary union. The Economic Community of West African States (ECOWAS) is a regional body which was formed on May 28, 1975 with fourteen members. Countries that signed the treaty creating ECOWAS include the following: Benin Republic, Burkina Faso, Gambia, Ghana, Guinea Bissau, Guinea Conakry, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. Out of these countries, eight of them, Benin Republic, Burkina Faso, Guinea Bissau, Ivory Coast, Mali, Niger, Senegal and Togo already have a single monetary union, Union Économique et Monétaire Ouest-Africaine (UEMOA) using a single currency, franc de la Communauté Financière de l'Afrique (CFA franc), and a common central bank, the Banque Centrale des Etats de l'Afrique de Ouest (BCEAO) (Benassy-Quere and Coudet, 2005).

The issue of a single monetary zone for the West African sub-region was on the initial agenda of the ECOWAS members at its inception in 1975 (Masson and Pattillo, 2001). They formulated the following primary objectives as targets to be achieved:

(i) Integration of monetary and fiscal policies to eventually create a common market,

(ii) Creation of a single currency,

(iii) Improve welfare of members through intra-regional trade (see Masson and Pattillo, 2001 & Ogunkola, 2005 for details).

The initial enthusiasm of members made them to pursue these objectives with vigor (Ojo, 2003). The lack of economic power however made the volume of intra-regional trade to be very low (Itsede, 2002 and Ogunkola, 2005). Similarly the objective to form a single monetary union for the entire region is still far away from being realized (Benassy-Quere and Coudet, 2005). Instead the five Anglophone countries Ghana, Nigeria, The Gambia, Guinea and Sierra Leone have gone ahead to initiate another monetary union tagged "The West African Monetary Zone (WAMZ)" which is expected to merge with the UEMOA after its take-off on December 1, 2015. Till date there is no assurance that this arrangement for the five countries will work.

Four primary and six secondary convergence criteria have been agreed upon. The targets and schedule of primary and secondary convergence criteria are shown in Table 1 and Table 2 below.

Table 1: **Targets for Primary Convergence Criteria**

Criteria	**Benchmark**
Inflation Rate	Single digit $(\leq 10\%)$
Gross External reserves (Months of Imports)	≥ 3 months
Central Bank Financing of Fiscal deficit as % of Previous Tax's Revenue	$\leq 10\%$
Fiscal Deficit/Surplus/GDP (%) Excl. Grants	$\leq 4\%$

Table 2: **Targets for Secondary Convergence Criteria**

Criteria	Benchmark
Change in Domestic Arrears	$\leq 0\%$
Tax Revenue/GDP ratio	$\geq 20\%$
Salary Mass /Total Tax Revenue	$\leq 35\%$
Exchange Rate (+:Depreciation/ -: Appreciation)	$\leq \pm 15\%$
Real Interest Rate	$> 0\%$
Domestically Financed Investments/Domestic Revenue	> 20%

The core issues under the ECOWAS monetary union are the convergence in microeconomic variables and stability of exchange rate as stated in the primary and secondary convergence criteria. In addition to facilitating policy coordination, it affords the opportunity to ensure microeconomic stability (WAMA, 2009). Available literature (WAMA, 2009 & Egwaikhide and Ogunleye, 2010) shows that as at end of 2008 three primary criteria were satisfied except inflation whose average was 13.6 above the targeted value $(\leq 10\%)$. It is sad to note that from that point, these countries could not maintain the momentum for which they used to satisfy these primary conditions. As demonstrated above, all the countries performed poorly in attaining the targets set by the monetary agency. The five countries have to tighten their belts if not, the dream of a single currency come December 2015 will be a mirage.

The past had not been pleasant for ECOWAS, in terms of implementation of set goals. The objectives set by the regional body have not been achieved on time. The region remains amongst the poorest in the world, with weak institutions as reported in Benassy-Quere and Coudet (2005) and Roudet et al. (2007). The big question is, "can the goals set by ECOWAS be achieved in the near future?"

Many solutions have been suggested in the literature as documented by Ojo (2003), Itsede (2002), Obadan (2002), Ogunkola (2002), Masson and Pattillo (2001, 2003), Benassy-Quere and Coudet (2005), Ogunkola (2002, 2005) and WAMI (2006, 2007). Masson and Pattillo (2001) for instance argued in favour of genuine trade liberalization as a precondition for successful monetary unification with an independent single currency. Quoting from Hanink and Owusun (1998), and Yeats (1998), they observed that because of low market potentials, high transportation costs, similar factor endowments, liberalization might not be the solution. Itsede (2002) quoting from Corden (1972) emphasized the concept of monetary union as premised on two essential but interwoven parts. These include: exchange rate union which is an area in which exchange rates bear permanent relationship to each other and currency convertibility where exchange rate controls are permanently removed. Monetary union is then defined as the existence of a single monetary zone with a high degree of monetary stability in furtherance of economic integration (Itsede, 2002).

Other obstacles besides the conditions laid in the OCA[3] theory that militate against monetary integration all over the world are lack of commitment, political will and strong leadership to implement the policies and actions that will move the programmes forward (Itsede, 2002). In West Africa, another factor is the non convertibility of the currencies of countries in the zone. Besides the UEMOA countries that already use the CFA Franc whose convertibility is backed by the French Treasury, all the other currencies (including the Nigerian naira) are not yet fully convertible. According to Obadan (2002), for a monetary union to be successful, the several currencies in the integrating zone must be fully convertible one into the other at permanently fixed exchange rates, thereby effectively creating a single currency. As stated earlier, the focus of the paper is to use the convergence criteria given at Table 1 to obtain an optimum convergence point for these economic variables. This point is to serve as a point of convergence to be satisfied by the primary conditions, hence this study.

2. THEORETICAL FRAMEWORK

Before the commencement of monetary union, conditions for sustenance have to be in place. Implementing the monetary union before these primary and secondary convergence conditions are satisfied is like putting the cart before the horse, a major asymmetric shock would result in unbearable pressure within the union because of limited mobility and inadequate fiscal redistribution (Yuen, 2008). There is a common understanding that lasting economic convergence is a main panacea for a full monetary union. As such, significant degrees of convergence will have to be attained prior to monetary unification. The steps to be taken will be interdependent and will reinforce one another, in particular the development of monetary unification, must be based on sufficient progress in the field of convergence and then the unification of economic policies (Yuen, 2008).

The quantity theory of money explains the relationship between money supply and inflation. It states that there is direct relationship between quantity of money in an economy and prices of goods and services. In its simplest form the theory could be expressed as MV=PQ, where M is the money supply in an economy, V is the velocity of money in expenditures, P is the price level associated with transactions for the economy and Q is the real output. The equation assumes that V and Q are constant in short terms. This has however

[3] An Optimum Currency Area (OCA) is an area that maintains fixed exchange rate within their members, and flexible exchange rate with trading partners outside the area (Appleyard and Field, 1998).

been criticized by prominent economists like Keynes, especially the assumption that V is constant (Catao and Terrones, 2003).

The criticisms above suggest the relaxation of the assumptions underlying the quantity theory of money. The relaxation allows for a broader analysis of the possible interactions among the variables in the identity. Thus, given that the percentage change in a product, say U and V which is equal to the sum of the percentage changes ($\Delta U + \Delta V$). The quantity theory could be rewritten in terms of percentage changes as: $\Delta\pi + \Delta Q = \Delta M + \Delta V$. Rearrange the variables to get the identity:

$$\Delta M_t = \Delta\pi_t + \Delta Q_t - \Delta V_t \tag{1}$$

Equation (1) implies that an increase in money supply leads to increase in inflation or output. In other words, a decrease in money supply leads to decrease in inflation or output. Thus a decrease in velocity or a combination of changes in these variables (depending on a number of factors) such as elasticity of supply and the level of unemployment in the economy concerned leads to increase in money growth or decrease in inflation.

The relationship between fiscal deficit to GDP ratio and inflation has been investigated by many authors including Catao and Terrones (2003), Bhattacharya (2009) and Ammama et al. (2011). A study conducted by Catao and Terrones (2003) for 23 countries found that a 1% reduction in ratio of fiscal deficit to gross domestic product (GDP) ratio lower long-run inflation by 1.5 to 6%. They concluded that fiscal deficit is efficient determinant of inflation. Similarly, Bhattacharya (2009) tested the effect of fiscal deficit on inflation and concluded that any increase in demand caused by large deficit will raise prices. Simulation studies by Solomon and De-Wet (2004) indicate that inflation is very responsive to shocks in budget deficit as well as GDP. These studies did not investigate convergence, and the use the linear programming approach as adopted in this paper. Moreover, their focus was on long-run economic relationship between these variables.

3. MATERIALS AND METHODS

3.1. Data

The data for this research was collected from the West African Monetary Agency (WAMA) in the website http://www.wami.imao.org. The annual data is for 10 years 2001 - 2010. The variables are: inflation rate (π_t), ratio of fiscal deficit/surplus to GDP (b_t), Central Bank financing of fiscal deficit (d_t), and gross external reserves (m_t). These data were collected for the five countries The Gambia, Ghana, Guinea, Nigeria and Sierra Leone.

3.2. The Model Formulation

The starting point of the model formulation is the empirical relationship between fiscal deficit, gross external reserve (G) and inflation of a single equation model as given by Akçay et al. (2002), Vit (2003) and Solomon and De Wet (2004). Let us assume that inflation (π_t) $\leq \mathbf{0.1}$, gross external reserve (G) ≥ $0.25Imp_t$, where Imp_t is annual imports, central bank financing of fiscal deficit $\leq \mathbf{0.1}Tr_{t-1}$, where Tr_{t-1} is the tax revenue in the previous year and fiscal deficit to GDP ratio (Fd) $\leq \mathbf{0.04}$. The equation linking fiscal deficit to GDP ratio (Fd_t) with real interest rate (r_t) is given by Vit (2003) as:

$$r_t = c + Fd_t + \varepsilon_t \tag{2}$$

where c is a constant and ε_t is the random error.

However, similar to equation (1) Akcay et al. (2002) started with the following equation:

$$G_t - Tr_t + i_t B_{t-1} = \Delta M_t + \Delta B_t \tag{3}$$

where M_t is the reserve money, B_t is total stock of domestic and foreign debt, i_t is nominal interest rate, G_t and Tr_t are already explained above. If the budget deficit is inclusive of interest payment then

$$D_t^* = \Delta M_t + \Delta B_t \tag{4}$$

where D_t^* is the budget deficit. For countries with high inflation like those in WAMZ

$$d_t + b_{t-1}\rho_t = \Delta b_t \tag{5}$$

where d_t is the primary deficit less reserve money with each variable scaled by nominal output Y, b_t is total stock of domestic and foreign debt at period t, and ρ_t is reserve money (see Akcay et al. 2002 for details). Equation (4) therefore follows that:

$$b_{t-1} = \frac{\mathbf{1}}{(\mathbf{1} + \rho_t)}(b_t - d_t) \tag{6}$$

The discounted debt-output ratio can be thus calculated using

$$X_t = b_t \prod_{k=1}^{t} \left(1 + \rho_k\right)^{-1} \tag{7}$$

Taking logarithm transformation of equation (6) and rearranging leads to

$$\log(b_t) = \log(X_t) + \sum_{k=1}^{t} \left(1 + \rho_k\right) \tag{8}$$

The starting point of the long run government budget constraint of Solomon and De Wet (2004) is:

$$\frac{B_{t-1}}{P_t} = \sum \frac{1}{r_j} \left(\tau_{t+j} - g_{t+j} + \left(M_{t+j} - \frac{M_{t-j-1}}{P_{t+j}} \right) \right) \tag{9}$$

where $\frac{B_{t-1}}{P_t}$ is government debt, r_j is discount rate, τ_t is the tax revenue, g_t is the government expenditure and M_t is the broad money supply. Catao and Terrones (2003) derived a long-run equation that explains the inflation rate by the budget deficit and money supply as:

$$\pi_t = \alpha\, b_t \frac{p_t}{M_t} \tag{10}$$

where α is the inverse linear multiplier, b_t is the budget deficit which is $b_t = g_t - \tau_t - B_{t-1}$ and $\frac{M_t}{P_t}$ is the money supply.

Studies carried out by Vit (2003) found the relationship between real interest rate (discount rate) and budget deficit as follows:

$$r_t = c + b_t + \varepsilon_t \tag{11}$$

where r_t is the real interest rate, b_t is the budget deficit, c and ε_t are drift and residual terms respectively. Considering equations (5), (9) and (10), we have the functional form of the model given as:

$$m_t = \mathrm{f}(\pi_t, d_t, b_t) \tag{12}$$

Linearly, equation (11) can be expressed as

$$m_t = \phi_1 d_t + \varphi_2 b_t + \varphi_3 \pi_t + \varepsilon_t \tag{13}$$

where π_t is the inflation rate $\leq \mathbf{0.1}$, b_t is the fiscal deficit/surplus/GDP ratio $\leq \mathbf{0.04}$, d_t is Central Bank financing of fiscal deficit $\leq \mathbf{0.1}$, and m_t is the gross external reserves $\geq \mathbf{0.25}$.

The long-run economic relationships between these variables are obtained by conducting the cointegration test. The long run cointegration equation is:

$$\Delta y_t = \Pi y_{t-1} + \sum_{t=1}^{p-1} \Gamma_j \Delta y_{t-j} + x_t + \varepsilon_t$$

(14)

where $y_t = (m_t, d_t, b_t, \pi_t)'$ is a vector of endogenous variables, x_t is a vector of exogenous (explanatory) variables which include deterministic terms and ε_t is the residual error term.

This can be extended to the panel cointegration like the pooled mean group estimator of Persaran et al. (1999) given in section 3.4.

3.3. Panel Unit Root Tests

3.3.1 Im, Pesaran and Shin test

The Im, Pesaran and Shin (2003), test is based on N augmented Dickey-Fuller regressions:

$$\Delta y_{it} = \rho_i y_{i,t-1} + \sum_{j=1}^{p_i} \varphi_{ij} \Delta y_{i,t-j} + \alpha_i + \gamma_i t + u_{it} \text{ for } i = 1,\ldots,N;\ t = 1,\ldots,T \tag{15}$$

where T is the length of the sample, N is the cross-section dimension, $\Delta y_{i,t-j}$ are the lagged dependent variables included to eliminate serial correlation in the error term, p_i are the country-specific lag lengths, α_i and γ_i are country-specific intercepts (fixed effects) and trend parameters, respectively. The error term u_{it} is distributed as a white-noise random variable across i and t, with

E(u_{it}) = 0, E(u_{it}^2) = $\sigma_i^2 < \infty$ and E(u_{it}^4)$< \infty$. p_i, is assumed to be known and in practice it is estimated using an information criteria. The null hypothesis in the IPS test is $H_0 : \rho_i = 0$ for all i, which implies that all individual series contain a unit root (are independent random walks). The alternative hypotheses assume that $H_{1a} : \rho_1 < 0, \ldots, \rho_{N_0} < 0$, and $H_{1b} : \rho_i = 0$ for i = $N_0 + 1,\ldots,N$ (heterogeneous alternative). The IPS test averages the Augmented Dickey-Fuller statistics across groups to remove contemporaneous correlation in the errors. The statistic is given by:

$$\bar{t}_{NT} = \frac{1}{N} \sum_{i=1}^{N} t_{iT}(p_i, \varphi_i). \tag{16}$$

This statistic converges sequentially to normal distribution as $T \to \infty$ followed by $N \to \infty$, while the ratio $\frac{N}{T} \to \alpha > 0$, where α is a constant (see Lukacs, 1975). IPS compute the values $E[t_{iT}(p_i, \varphi_i)]$ and $Var[t_{iT}(p_i, \varphi_i)]$ and propose a statistic which tends asymptotically to the standard normal distribution.

$$W_{\bar{t}} = \frac{\sqrt{N}\left[\bar{t}_{NT} - N^{-1}\sum_{i=1}^{N} E[t_{iT}(p_i, 0) \mid p_i = 0]\right]}{\sqrt{N^{-1}\sum_{i=1}^{N} Var[t_{iT}(p_i, 0) \mid p_i = 0]}} \xrightarrow[T,N\to\infty]{d} N(0,1) \tag{17}$$

In practice, IPS test has been recommended for use in many empirical applications (see for example Al-Rabbaie and Hunt, 2004; Aslan, 2008).

3.3.2 The Hadri test

The test proposed by Hadri (2000) is a residual-based Lagrange Multiplier test (LM) in the spirit of the KPSS test suggested by Kwiatkowski et al. (1992). The Hadri test has a reverse null hypothesis, i.e. that the time series for each cross-section unit is stationary around a deterministic level or trend, against the alternative hypothesis of a unit root. It is based on the following regression:

$$y_{it} = \alpha_i + \gamma_i t + \sum_{t=1}^{T} u_{it} + \varepsilon_{it} \tag{18}$$

where α_i and $\gamma_i t$ are the deterministic terms defined in (16) above, and the error term has two components: ε_{it} which is white noise, and $\sum_{t=1}^{T} u_{it}$ which is a random walk. Under the null hypothesis $H_0 : \sigma_u^2 = 0$, whereas under the alternative hypothesis $H_1 : \sigma_u^2 > 0$. That is the null hypothesis is that the variance of the random walk component $\left(\sigma_u^2\right)$ is zero. The autocorrelation in ε_{it} is accounted for by considering the long-run variances of the ε_{it} which is estimated by

$$\hat{\sigma}_{\hat{\varepsilon}_i}^2 = \frac{1}{T-1}\sum_{t=2}^{T} \hat{\varepsilon}_{it}^2 + 2\sum_{j=1}^{\bar{k}} w_{\bar{k}j}\left(\frac{1}{T-1}\sum_{t=j+2}^{T} \hat{\varepsilon}'_{it}\hat{\varepsilon}_{i,t-j}\right) \tag{19}$$

where $w_{\bar{k}j}$ are weights used to ensure that $\hat{\sigma}_{\hat{\varepsilon}_i}^2$ are always positive. These Bartlett weights are given by $w_{\bar{k}j}$ $= 1-\left(\frac{j}{\bar{k}+1}\right)$, where k is the bandwidth. The k has to be efficiently chosen in order to get reasonable results. The statistic H_0 is the average of the individual KPSS statistic for each series. The test statistic is standardized to take the form $\frac{\sigma_u^2}{\sigma_\varepsilon^2}$, which has a standard normal distribution under the null hypothesis.

3.4 The Pooled-Mean Group Estimator

The test for panel ARDL as proposed by Pesaran et al. (1999) is based on the pooled mean group estimator (PMGE). This allows for the short-run coefficients and error variances to differ across group, but constrains the long-run coefficients to be identical in an error correction framework. The pooled mean group estimator of order $\left(p_i, q_i\right)$ is given by the following equation

$$\Delta y_{it} = \phi_i y_{it-1} + \beta_i' x_{it} + \sum_{j=1}^{p_i - 1} \lambda_{ij} \Delta y_{i,t-j} + \sum_{j=0}^{q_i - 1} \delta_{ij}' \Delta x_{i,t-j} + \alpha_i + \varepsilon_{it} \tag{20}$$

where y_{it} is the dependent variable, x_{it} is vector of explanatory variables, α_i are country specific intercepts and λ_{ij} and δ_{ij} are the country specific coefficients of the short-term dynamics, ε_{it} the white noise error term. The long-run coefficients $\phi_i = \phi$ (are defined to be the same across countries). If ϕ_i<0, there is a long-run relationship between y_{it} and x_{it} defined by $y_{it} = -\left(\beta_i' / \phi_i\right) x_{it} + \eta_{it}$. The maximum likelihood procedure based on the concentrated likelihood function is used to estimate the PMGE. A Gauss-Newton algorithm is used to maximize the likelihood function. The pooled mean group regression equation (18) can be estimated with individual specific parameters ϕ_i which are then averaged over N to obtain a PMGE.

3.5 Linear Programming Formulation

The general formulation of a linear programming problem can be stated as follows:

Maximize or minimize the objective function

$$z = CX^T \tag{21}$$

subject to AX ≥=or≤b, b≥0, X≥0.

where $X = (x_1, x_2, \ldots, x_n, x_{n+1}, \ldots, x_{n+m})$,

$C = (c_1, c_2, \ldots, c_n, \mathbf{0}, \mathbf{0}, \ldots, \mathbf{0})$ and $b = (b_1, b_2, \ldots, b_m)$,

$$A = \begin{pmatrix} a_{11} & a_{12} & \cdots & a_{1n} & \mathbf{1} & \mathbf{0} & \cdots & \mathbf{0} \\ a_{21} & a_{22} & \cdots & a_{2n} & \mathbf{0} & \mathbf{1} & \cdots & \mathbf{0} \\ \vdots & \vdots & \ddots & \vdots & \vdots & \vdots & \ddots & \vdots \\ a_{m1} & a_{m2} & \cdots & a_{mn} & \mathbf{0} & \mathbf{0} & \cdots & \mathbf{1} \end{pmatrix}.$$

The model formulated in equation (13) can therefore be expressed as a linear programming problem as follows:

Minimize the objective function

$$m_t = \phi_1 d_t + \varphi_2 b_t + \varphi_3 \pi_t \tag{22}$$

subject to $\pi_t \leq \mathbf{0.1}$

$$b_t \leq \mathbf{0.04} \tag{23}$$

$d_t \leq \mathbf{0.1}$

$m_t \geq \mathbf{0.25}$.

The optimal solution is obtained by the use of the Simplex method as shown in Hillier and Lieberman (2001).

4. RESULTS AND DISCUSSION

A preliminary step is taken to calculate the correlation matrix for the four variables. The result shows that government external reserve is most correlated with the fiscal deficit to GDP ratio.

$$\begin{array}{c|c} & \begin{array}{cccc} \pi_t & b_t & d_t & m_t \end{array} \\ \begin{array}{c} \pi_t \\ b_t \\ d_t \\ \end{array} & \begin{pmatrix} \mathbf{1.0000} & & & \\ \mathbf{0.1161} & \mathbf{1.0000} & & \\ \mathbf{0.4206} & \mathbf{-0.2259} & \mathbf{1.0000} & \\ \mathbf{-0.2657} & \mathbf{0.4590} & \mathbf{-0.2846} & \mathbf{1.0000} \end{pmatrix} \end{array}$$

4.1 Results of Panel Unit Root Tests

The variables are tested for panel unit root and panel stationarity using Im et al. (2003) and Hadri (2000) to determine their degree of integration and level of stationarity. The results of the panel unit root tests are given in Table 3. The result shows that the variables are nonstationary in levels but stationary in first difference, an indication that the variables are integrated of order 1.

Table 3: Panel Unit Root Tests

	IPS-W-test		Hadri-test	
Variable	No trend	Trend	No trend	Trend
m_t	-1.31(0.09)	-0.04(0.48)	2.65(0.00)	4.13(0.00)
Δm_t	-2.76(0.003)	-1.02(0.155)	0.95(0.17)	3.34(0.00)
π_t	-1.19(0.12)	-0.12(0.45)	0.97(0.17)	3.79(0.00)
$\Delta \pi_t$	-1.45(0.07)	-0.28(0.39)	0.16(0.44)	0.12(0.45)
d_t	-1.99(0.02)	-0.55(0.29)	2.53(0.01)	6.68(0.00)
Δd_t	-3.28(0.0005)	-2.57(0.005)	1.25(0.11)	7.82(0.00)
b_t	0.203(0.58)	0.57(0.72)	1.96(0.03)	5.19(0.00)
Δb_t	-0.83(0.204)	0.02(0.51)	2.51(0.01)	13.08(0.00)

The IPS - w - test at 5% are: for N=5, T=50. The numbers in parentheses are the p-values.

4.2 Panel Cointegration Results

The results of the long-run cointegration parameters using the PMGE are given in Table 4a. The long-run panel cointegration test results show that these variables, inflation rate, fiscal deficit/surplus to GDP ratio account for most of the gross external reserves in agreement with the results of Catao & Terrones (2003).

Table 4a: Estimation Results of PMGE

Variables(Dep. var m_t)	PMGE
π_t	0.44(0.10)
d_t	-0.07(0.03)
b_t	0.03(0.12)

The numbers in parenteses are the standard errors

Central Bank financing of the fiscal deficit however, did show little influence on the gross external reserves with a low coefficient value of -0.07 with standard error of 0.03. The long-run panel cointegration relation using the PMGE with individual constants is

$$ec_t^{m_t} = \mathbf{0.44}\,\pi_t + \mathbf{0.03}\,b_t - \mathbf{0.07}\,d_t \tag{24}$$

Equation (24) shows that a 1% increase in government external reserves (m_t) induces 0.44% inflation rate (π_t). Similarly, a 1% increase in m_t will induce a 0.03% increase in the fiscal deficit to GDP ratio, and -0.07% decrease in the Central Bank financing of fiscal deficit. This result compares favorably with Solomon and de Wet (2004) whose simulation study showed that inflation is very responsive to shocks in budget deficit as well as GDP.

In Table 4b, the estimation results for the PMGE for the individual countries are reported. The error correction terms have values that are reasonably substantial for most of the countries except Guinea. The estimated value of the error correction term for Guinea is 0.002 which is low compared to the other countries. This may not necessarily be due to inefficiency of the method, but the fact that in the long-run government external reserve is not affected by inflation, fiscal deficit to GDP ratio and Central bank financing of fiscal deficit in Guinea (see Banerjee et al. 1993 for details).

Table 4b: Estimation Results of PMGE for Individual Countries

Variables	Gambia	Ghana	Guinea	Nigeria	Sierra Leone
ec_t	-1.35(0.4)	-0.69(0.12)	0.002(0.07)	-0.05(0.26)	-0.39(0.20)
$cons$	5.14(2.20)	-1.19(1.25)	-0.24(0.53)	2.56(2.10)	0.41(0.82)
π_t	-0.28(0.12)	-0.20(0.01)	-0.08(0.45)	-0.02(0.32)	-0.12(0.06)
d_t	0.09(0.03)	-0.01(0.004)	0.02(0.01)	-0.12(0.13)	0.01(0.03)
b_t	0.42(0.15)	-0.30(0.06)	0.02(0.11)	-0.36(1.004)	0.14(0.12)

The numbers in parentheses are the standard errors.

4.3 The Optimum Convergence Criteria

The objective value of the optimum convergence criteria is 0.0452. The objective value for the variables, objective coefficients and their objective value contribution are given in Table 5. Inflation is the highest contributor to the optimum value followed by Central Bank financing of fiscal deposit, while fiscal deficit to GDP ratio is the least.

Table 5: The Optimum Convergence Criteria

Variables	Value	Objective Coefficient	Objective Value Contribution	Slack-/Surplus+
m_t	0.25	0.00	0.0000	0.0000
π_t	0.10	0.44	0.0440	0.0000
d_t	0.00	0.03	0.0012	0.0000
b_t	0.04	-0.07	0.0000	0.1000

5. CONCLUSION

The conclusion we draw from the paper is that Government external reserves, inflation rate, fiscal deficit/GDP ratio, Central Bank financing of fiscal deficit are correlated with the highest correlation between government external reserves and fiscal deficit and GDP ratio. The result shows that the objective value of 0.0462 is obtained with inflation contributing more to the variation in the government external reserves at variance with the correlation matrix. This may be due to the non-stationarity of the variables in level. Due to the result of linear programming approach, we advise that Central Banks in the countries studied to be cautious in implementing inflation targeting as a way of tackling their economic problems. In conclusion there is a warning by Solomon and De Wet (2004) that governments should note the sensitivity of price levels to fiscal policy.

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Financial Audit Report Modifications in Malta

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ABSTRACT

This paper analyses the modifications of financial audit reports of Maltese companies between 2005 and 2009. It examines the audit reports of a random sample of 374 limited liability companies registered with the Registry of Companies in Malta. The study shows that the average 2005-2009 modification rate in Malta stood at 22.4%, this representing an increase over previous periods. Most modified reports were noted in the case of private exempt and international trading non-exempt companies. Generally, private exempt companies had their audit report qualified on the basis of a limitation of scope, whilst most international trading companies had their reports qualified on the basis of disagreement with management. Furthermore, the "small company qualification" (which has been long abolished) was still incorrectly being used in Maltese audit reports till 2009. The results therefore show that there is still room for improvement in audit reporting in Malta. Whilst the Big Four audit firms do not appear to have issues in appropriately adhering to audit reporting standards, Maltese smaller audit firms and sole practitioners were found still to be the main cause for inappropriate audit reporting. Towards improvement, the study provides various recommendations including: a more consistent regulatory framework, stricter enforcement of quality assurance, and the reconsideration of the statutory small audit. Such recommendations may also be applicable to other jurisdictions.

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1. INTRODUCTION

1.1 Malta and its Accountancy Requirements

The Republic of Malta is an island state in the Mediterranean Sea, located circa 93 kilometres to the south of Sicily and 288 kilometres to the east of Tunisia. Malta has been a member of the European Union since 2004 and joined the Eurozone in 2008. It has an area of just over 316 km^2 and a population of circa 400,000 residents (National Statistics Office, 2010), this rendering it the smallest of the European Union's member states. Yet, it is one of the fastest growing financial services centres.

The Accountancy Profession in Malta is regulated by the Accountancy Profession Act 1979 (APA, Chapter 281). The Accountancy Board appointed in terms of the Accountancy Profession Act regulates all aspects of the profession, including advising the Maltese Government on the approval of accounting and auditing standards, ethics and on the issue of guidelines and other services to practitioners.

Companies in Malta are required by the Companies Act 1995 (Chapter 386 of the Laws of Malta) to keep proper accounting records sufficient to give a true and fair view of the company's results and affairs.

Companies must also file an annual return and financial statements with the Registrar of Companies. The accounting requirements are similar to those in the UK and in line with the EU Fourth and Seventh Directives.

The Companies Act and the Accountancy Profession Act make International Financial Reporting Standards as adopted by the European Union ("IFRSs as adopted by the EU") the default accounting framework with which companies' financial statements must comply. Certain qualifying companies may however elect to adopt the Accountancy Profession (General Accounting Principles for Smaller Entities) Regulations, 2009 (GAPSE) as their accounting framework. Both quantitative as well as qualitative criteria must be met for a company to qualify for the adoption of GAPSE, which contains a number of measurement simplifications when compared to IFRSs as adopted by the EU.

All companies in Malta (irrespective of their ownership structure, size or business activity) are required to have a statutory audit of their financial statements. Auditors are required by the Companies Act to make a report to the shareholders on the annual accounts examined by them, which is furnished to the shareholders in advance of the annual general meeting. They are required, in accordance with the Companies Act and International Standards on Auditing (ISA), to express an opinion on whether the financial statements prepared by those charged with governance have been properly prepared, in all material respects, in accordance with the Companies Act and IFRSs as adopted by the EU or GAPSE, as applicable, and whether they show a true and fair view of the company's financial position and financial performance and cash flows of the company.

When the auditor has obtained sufficient appropriate audit evidence that the financial statements show a true and fair view, an unmodified audit opinion is issued. Should the auditor fail to obtain such evidence on the financial statements being audited, a modified audit report is issued. Modifications can either be in the form of an emphasis of matter paragraph (which does not affect the auditor's opinion) or a modified auditor's opinion.

1.2 Aim of Study and Paper Structure

This study analyses modified audit opinions issued by Maltese auditors for all locally registered companies between 2005 and 2009. It considers the extent of multiple and repeated qualifications during the same period and examines any significant relationships between the main types of modified audit opinions and firm-specific variables.

The paper is organised as follows. We start by reviewing the literature on modified audit opinions, after which we highlight the research methods used to collect and analyse the data. We then summarise the research findings and deliberate upon them. We conclude by providing a series of recommendations aimed at improving Maltese financial reporting and audit which may also be applicable to other jurisdictions.

2. LITERATURE REVIEW

2.1. Types of Audit Report Modifications

ISA 705 *Modifications to the Opinion in the Independent Auditor's Report* distinguishes between three types of opinions that may be used by the auditor when modifying the audit opinion:

i. Qualified Opinion: there are two instances where a qualified opinion can be issued. The first instance is when the auditor, after having obtained sufficient appropriate evidence, concludes that the financial statements are materially misstated, where such misstatements are non-pervasive. Alternatively, a qualified opinion is issued when the auditor concludes that sufficient appropriate audit evidence on which to base the audit opinion cannot be obtained. Again, in such circumstances, the auditor concludes that the possible effects on the financial statements, if any, could be material but not pervasive.

ii. Adverse Opinion: the auditor expresses such an opinion when, after having obtained sufficient appropriate evidence, the conclusion reached is that misstatements, individually or in the aggregate, are both material and pervasive to the financial statements.

iii. Disclaimer of Opinion: when the auditor is unable to obtain sufficient appropriate audit evidence to the extent that it is deemed that such evidence could be both material and pervasive to the financial statements, a disclaimer of opinion is expressed.

In addition to such types of modified opinions, ISA 706 *Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor's Report* deals with circumstances when the auditor should include an emphasis of matter paragraph in the audit report. By adding such a paragraph, the auditor is drawing the users' attention to a matter properly disclosed in the financial statements which, however, the auditor deems fundamental to the users' understanding of the financial statements.

2.2. The Dilemma: To Modify or Not To Modify

Rodgers *et al.* (2009) argue that auditors face a dilemma when forming and expressing an opinion on the financial statements. DeAngelo (1981) argues that the auditor's economic dependence on their clients may ultimately impair the auditor's objectivity in expressing their audit opinion. The findings by Rodgers *et al.* (2009) suggest that the larger the client, the smaller the chance of receiving a warning signal. Rodgers *et al.* (2009) support the findings that the self-fulfilling prophecy proves another predicament for auditors, arguing that an issuance of a warning signal may bring about a client's failure due to the negative impact that such opinion may have on current and potential stakeholders. A modified audit report, more precisely a going concern modification, could bring about a negative impact in the stock market returns.

Rodgers *et al.* (2009) recommend that auditors must not be hesitant in issuing a modified opinion. The auditor should always act in a professional manner and with due professional scepticism when forming the audit opinion. This is important because should an audit client enter bankruptcy proceedings with a clean audit report, stakeholders and society alike will question the worthiness of the auditor. This argument is also reflected in the study by Guiral *et al.* (2010) who opine that at the centre of the financial scandal is the auditor's opinion about a client's ability to continue in existence - an assessment on the company's going concern. The results of Guiral *et al.* (2010) confirm the existence of the auditors' unintentional reluctance to issue qualified audit opinions alerting investors due to their fear of precipitating clients' final bankruptcy. A modification such as a going concern qualification may undoubtedly put the company in question into more problems, as creditors and investors would be more hesitant in lending or investing their funds with that company. Such a qualification may also serve as an early warning to society that the company may not have good prospects for the future and could possibly go into liquidation proceedings.

2.3 Modified Audit Opinions and their impact

Most of the research on modified audit opinions has studied the empirical relationship between a modified audit opinion and stock market reactions (for example, Firth, 1978; Melumad and Ziv, 1997; Ballesta and Garcia-Meca, 2005; Czernkowski *et al*, 2010). In his study on qualified audit reports and their impact on investment decisions, Firth (1978) concluded that investors react differently to the various types of audit qualifications. The study showed that stock price reactions that took place occurred immediately after the audit reports were released, with prices declining following a qualification. Research on modified audit opinions has also been carried out across different countries and different stock markets. Thus, for example, a study by Ballesta and Garcia-Meca (2005) analysed the relationship between corporate governance and audit qualifications in Spanish listed entities. The researcher found that companies that are managed by their owners are less likely to receive an audit qualification, as these are more interested in acting in the best interest of the firm. Czernkowski *et al* (2010) studied the extent of audit qualifications in

China following the introduction of several regulatory changes. This study analysed 3,128 audit opinions of Chinese listed companies between 1999 and 2003. The findings show a 12.3% modification rate and did not find evidence that modified audit opinions have significant information value to Chinese investors.

Studies on modified audit opinions have also been conducted in Malta. Farrugia (2003) researched qualified audit opinions in Malta between 1997 and 2000 and identified a qualification rate of 19.9%. The findings showed that no public companies received a qualified audit opinion from the selected random sample, which finding was in line with that of Abulizz and Sherer (1990) in respect of UK public companies.

The most common qualification by Maltese auditors identified by Farrugia (2003) was that emanating from a limitation of scope, which arises in those circumstances where the auditor is unable to obtain all audit evidence required to issue an unmodified opinion. The main reason cited for such modifications to the audit opinion was the "Type Six" qualification, a qualification given to small companies which has long been abolished by the auditing standards adopted in Malta. Furthermore, when the results were classified by company type, the results showed that private exempt companies received most of the limitation-of-scope qualifications.

A similar study conducted by Grech (2007) resulted in a qualification rate of 20.8%, which is marginally higher than that found by Farrugia (2003). Again, the most common reason for the issue of a qualified opinion was limitation of scope, therefore continuing the same trend of results as noted in the previous study by Farrugia (2003). There was also a relatively high number of emphasis of matter paragraphs reported, as 11.1% of audit reports from the selected sample were found to include such paragraph – the main reasons for including this paragraph were general going concern issues.

A more recent study focusing on the going concern qualification in Malta by Vella (2011) confirmed the previous trend identified in the study by Grech (2007) where auditors were more inclined towards the addition of an emphasis of matter paragraph rather than issuing a going concern qualification. In fact, from a sample of 100 companies, 13% had an emphasis of matter included in the audit report, whilst it was only 1% that received a going concern qualification. The researcher also found that the companies having an emphasis of matter paragraph included in the auditor's report continued having such paragraph in subsequent years.

3. METHODOLOGY

The empirical study attempts to answer the following four research questions:

1. What types of audit reports were issued between 2005 and 2009? Did the modified reports vary by company type?
2. What are the particularities of each type of modification?
3. Where there multiple and repeated qualifications?
4. Do significant associations exist between modified auditor's reports and firm-specific variables?

To answer these questions, empirical data was collected from audit reports of active companies registered with the Malta Financial Services Authority (MFSA) as at 31 December of 2004. This is in line with a previous study conducted by Farrugia and Baldacchino (2005). In determining the sample size for this study, we specified a population of 14,453 active companies, a confidence level of 95%, a margin of error of 5%, and a response rate of 50% for categorical variables (de Vaus, 2014). The minimum sample size required was 374 (Lenth, 2014). Using the random sampling technique, a sample of 374 companies was selected for analysis. These consisted of one public company, 304 private companies and 69 international trading companies.

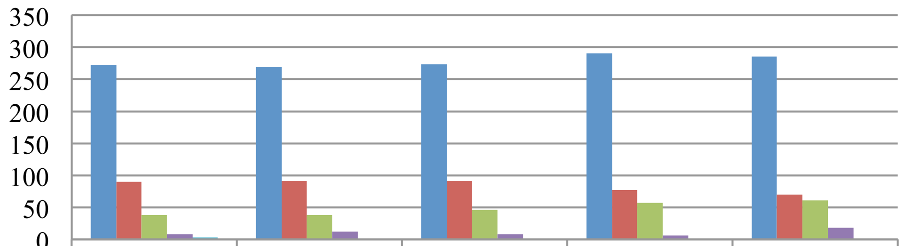
Following the data collection process, the audit opinions on the selected random sample of financial statements were analysed. A set of firm-specific variables ("Company Type", "Small Company", "Type of Industry", "Net Asset Value" and "Company Auditor") were also identified and data was collected to analyse the relationship, if any, between a modification and the aforementioned variables. A company was classified as "small" if it met the small company definition contained in Section 185 of the Maltese Companies Act (1995), which states that a small company is one which, on its balance sheet date, does not exceed the limits of two of the following three criteria: its balance sheet total is less than €2.5 million, turnover is less than €5.1m and the average number of employees during the accounting period does not exceed 50.

In analysing the data, we used counts, relative frequencies and percentages for categorical data. To determine whether observed frequences were evenly distributed across categories or to determine whether a significant association existed between variables that use the nominal scale of measurement, the Pearson chi-squared test of independence was used .

4. RESULTS

4.1.Types of Audit Reports

The types of audit opinions issued for the selected sample between 2005 and 2009 are summarised in Figure 1. The audit opinions were originally classified under five headings. After excluding ‘emphasis of matter’ which was an overlapping group, and those which were unclassified since no financial statements were available for inspection during the years being investigated, the remaining financial statements were classified under 3 main categories. The Chi-squared test of independence showed that the observed frequencies were not evenly distributed across categories ($\chi^2(2) = 1664.23$, $p < 0.001$). In fact, the vast majority of selected financial statements had an unqualified audit opinion (76.5%), some had a qualified opinion (23.1%), while a few issued adverse opinions and disclaimers (0.4%).



	2005	2006	2007	2008	2009
Clean Opinion	272	269	273	290	285
Qualified	90	91	91	77	70
Emphasis of Matter	38	38	46	57	61
No Fin. Statements	8	12	8	6	18
Disclaimer	3	1	1	1	1

Figure 1: Audit Opinions in Sample by Year (2005-2009)

Audit opinions were subsequently analysed by company type (see Table 1). No modifications were noted for public companies in the five-year period under review. It was found that international trading companies received most of the audit modifications, with non-exempt international trading companies registering the highest average qualification rate (48.3%). The most common issue pertaining to a modification in such companies was a limitation of scope arising out of their small size since there is frequently no distinction between the owner and management.

Table 1: Modifications by Company Type

Company Type	Total number of companies*	Modified Opinion					Five-year average number of qualifications	Average five-year qualification rate (%)
		2005	*2006*	*2007*	*2008*	*2009*		
ITC non-exempt	41	19	20	21	20	19	19.8	48.3
ITC exempt	28	4	8	9	8	8	7.4	26.4
Private exempt	255	60	55	55	46	36	50.4	19.8
Private non-exempt	49	7	8	6	3	7	6.2	12.7
Total	**373**	**90**	**91**	**91**	**77**	**70**	**83.8**	**22.4**

**excludes one public company*

4.2. Particularities of each type of Modification

4.2.1. Qualified Opinions

An analysis of the data collected provided further insight on the different types of qualifications that were issued by the auditors (see Table 2). The total number of qualifications shown in Table 2 is not equal to the total number of qualified opinions in the previous tables due to 50 companies receiving a multiple qualification. It is evident from the research findings that limitation of scope and disagreement with management qualifications were the leading cause for qualified audit opinions. Limitation-of-scope qualifications were predominant in private exempt companies, whilst on the other hand, disagreement with management qualifications were mostly identified in the case of international trading companies.

Table 2: Types of Qualified Opinions

Type of Qualified Opinion	Companies with Qualified Opinion by Year					Yearly Average	% of Qualified Opinions
	2005	***2006***	***2007***	***2008***	***2009***		
Limitation on Scope	58	53	45	33	30	43.8	46.7
Disagreement with Management	25	37	43	45	39	37.8	40.3
Going Concern	19	11	13	8	10	12.2	13.0
Total	**102**	**101**	**101**	**86**	**79**	**93.8**	**100.0**

Limitation of Scope Qualification

A limitation of scope was mainly prevalent in Maltese private exempt companies. The main cause for the auditors' work being limited in scope was the limited accounting and internal control procedures in client companies. This factor, on its own, accounted for 37.7% of the limitation-of-scope qualifications. Such a characteristic was mostly associated with small private exempt companies which, in view of their limited size and resource availability, may not have proper systems of internal controls.

The inability to attend the stock take or verify the valuation of stock was another leading cause for the auditor's work to be limited in scope (16.9%). A relatively high number of international trading companies had their financial statements qualified due to the inability of auditors to obtain sufficient appropriate audit evidence on opening balances (20.4%). Upon further analysis of the audit reports, it transpired that "general limitation" qualifications were mainly issued by sole practitioners, whose client portfolio generally comprises small and micro companies intrinsically characterised by limited or no controls. The most common cause for a limitation-of-scope qualification was therefore due to inherent limitations associated with the audit clients where the information supporting an assertion would not be available for audit scrutiny.

Table 3 provides a summary of the main reasons identified for qualifications to the audit opinion attributable to reasons associated with limitations of scope. It is again to be noted that the total number of the qualifications included in Table 3 is not equal to the total number of limitation-of-scope qualifications shown in Table 2 due to instances where companies received a limitation-of-scope qualification on multiple issues.

Table 3: Reasons for Limitation-of-Scope Qualifications

Reasons	**Total**	**Percentage**
Limited accounting and internal control procedures	98	37.7%
Unable to verify opening balances	53	20.4%
Unable to verify stock valuation / attend stock take	44	16.9%
Limited controls on / unable to verify cash sales	38	14.6%
Unable to verify valuation of assets	16	6.1%
Unable to verify valuation of expenditure/revenue	9	3.5%
Unable to obtain confirmations on debtors / creditors balances	1	0.4%
Insufficient evidence on significant judgements and estimates	1	0.4%
Total	**260**	**100.00%**

Disagreement with Management Qualification

The second most common type of qualification related to issues on disagreement with management. Common issues leading to disagreement with management were "technical issues", mostly prevalent in international trading companies. The primary cause for such disagreements was the non-disclosure of the ultimate controlling party required by IAS 24 *Related Party Disclosures*. Directors of the latter companies reported that they did not have the appropriate authority to make such disclosure in the financial statements. This issue accounted for 62.8% of the disagreement-with-management qualifications. Non-compliance with IAS 27 *Consolidated and Separate Financial Statements* was another persistent issue in the findings. Over the five-year period under review, this disagreement was noted in 31 instances. This suggests that Maltese companies tend to prefer to take advantage of the exemption offered by local legislation (the Maltese Companies Act, 1995) and have their accounts qualified on this disagreement, rather than being burdened with the cost of preparing consolidated accounts for the sake of receiving an unqualified audit opinion.

An inconsistency with the requirements of auditing standards was also noted in the empirical findings. There were 15 instances where auditors opted to disclose the non-compliance with IAS 24 and IAS 27 as an emphasis of matter paragraph instead of qualifying the auditor's report. The same inconsistency with regards to IAS 27 was also noted in the previous studies by Farrugia and Baldacchino (2005) and Grech (2007).

Another common issue leading to a disagreement with management was inappropriate accounting treatment and departures from IFRS requirements. This led to 53 instances of a disagreement with management qualification. The most common issue $_{(14/53)}$ was the non-compliance with IAS 40 *Investment Property* with respect to the fair valuation of investment property. Issues on accounting for depreciation, where no depreciation was accounted for on property / property improvements, were also surprisingly common in the selected sample $_{(10/53)}$. Non-compliance with IAS 28 *Investments in Associates* was another cause $_{(10/53)}$ for disagreement where companies accounted for such investments using the cost method instead of the equity method as required by this accounting standard.

Going Concern Qualification

The third most common reason for a qualified audit opinion was a going concern issue. 61 instances of going concern qualifications were identified. The basis for qualifying an opinion on going concern is identified in ISA 570 *Going Concern*. However, the majority of auditors expressing such an opinion were not in compliance with the requirements of this standard. It appears that auditors preferred to take a more "prudent" approach by readily qualifying their report on the basis of the applicability of the going concern assumption. In such cases, the wording of the auditor's reports was uncertain, and at times, unclear. For example, most of the going concern qualifications issued were expressed as follows:

> *"Subject to the applicability of the going concern concept being appropriate, the accounts give a true and fair view of the state of affairs of the company as at…"*

Such wording is not acceptable under auditing standards as it is not sufficiently clear or forceful, and is also not in line with the guidance in the relevant auditing standard.

4.2.2. Disclaimers of Opinion

Seven disclaimers of opinion were identified in the selected sample between 2005 and 2009. Six of the disclaimers were issued to private exempt companies, whilst one was issued to an international trading private exempt company.

Three disclaimers were issued to one private exempt company due to the possible effect in the scope of the audit work of the non-consolidated financial statements of the group as required by IAS 27, the non-recognition of a provision for receivables and the close involvement of the director in the company's system of internal control. The company also failed to disclose the identity of its ultimate controlling party as required by IAS 24.

Another private exempt company received three disclaimers of opinion during the period under review. The basis for such disclaimer was the possible significant effects of the limitation on the scope of the audit work. This company did not carry a stock count and the auditor could not obtain sufficient appropriate audit evidence on the valuation of the stock by performing alternative procedures. Furthermore, the auditor was unable to obtain confirmations on debtor balances and there was no system of control over cash sales.

The disclaimer issued to the international trading private exempt company was based on the significance of failing to disclose the identity of the company's ultimate controlling party as required by IAS 24 and the disagreement with the application of IAS 21 on accounting for the effect of changes in exchange rates.

4.2.3. Adverse Opinions

In the selected sample, only three adverse opinions were identified in the period under review. All three adverse opinions pertained to one company, an international trading private exempt company. In this case, the reporting auditor expressed an adverse opinion as the company did not prepare consolidated financial statements in compliance with the requirements of IAS 27. Such adverse opinions were extremely rare since audit clients would generally be willing to resolve the critical issues possibly leading to such an modification.

4.3. Multiple and Repeated Qualifications

It was observed that 22.8% of the qualified reports had multiple qualifications , as shown in Table 4.

Table 4: Multiple Qualifications by Company Type

	Private Exempt	**Private Non-Exempt**	**ITC Exempt**	**ITC Non-Exempt**	**Total**
Multiple Qualifications	19	0	4	8	31
Qualified Reports	85	12	11	28	136
% Multiple Qualifications	**22.4%**	**0.0%**	**36.4%**	**28.6%**	**22.8%**

This percentage is relatively higher when compared with the multiple qualification rates identified by Grech (2007), Farrugia and Baldacchino (2005) as well as when compared to foreign studies. For instance, Ball et al. (1979) found 15.4% of qualified auditor's reports with multiple qualifications of which 13.8% were repeated for two subsequent years, while 0.9% were repeated for three subsequent years. The majority of multiple qualifications in this study were due to multiple limitation of scope issues, mostly in private exempt companies. On the other hand, the most common reasons for multiple qualifications in international trading companies were again the non-compliance with IAS 24 and IAS 27.

The most common reason *(7/19)* for multiple limitation-of-scope qualifications in private exempt companies was the inability to attend the annual stock-take or verify the valuation of stock, the inability to audit cash transactions and the limited accounting and internal control procedures. Other reasons for multiple qualifications related to the inability to audit opening balances and limited internal controls and procedures *(3/19)*, the non-preparation of consolidated accounts and the non-disclosure of the ultimate controlling party *(3/19)*. On the other hand, international trading companies received most of the multiple qualifications due to the inability to audit comparative balances and the non-disclosure of the ultimate controlling party as required by IAS 24 *(8/12)*.

Most of the multiple qualifications expressed in audit reports of private exempt companies were repeated for two consecutive years *(6/19)*. It was also common for multiple qualifications to be issued for one year *(5/19)* or repeated for the five years *(5/19)* in the period under review. A similar trend was noted in international trading companies (both exempt and non-exempt), with multiple qualifications expressed in the audit reports being repeated for at least three years.

An analysis of the frequency of repeated qualifications (see Table 5) showed that limitation of scope and disagreement with management qualifications were be repeated year-in-year-out .

Table 5: Repeated Qualifications

Qualifications repeated for:	Type of Qualification			Total
	Limitation of Scope	*Disagreement with Management*	*Going Concern*	
Following year only	14	8	4	26
Two subsequent years	12	7	3	22
Three subsequent years	8	11	4	23
Four subsequent years	19	19	4	42

Common issues for repeated and multiple limitation-of-scope qualifications in private exempt companies were associated with stock valuation and the "small company qualification". The fact that the "small company qualification" still features in the audit reports for a repeated number of years clearly implies the need for a concentrated effort to obliterate in a definitive manner this non-specific limitation which is no longer permitted by auditing standards.

Big Four audit firms had very few clients with repeated qualifications arising out of fundamental issues while some of their clients had standard technical qualifications arising from the technicalities of accounting standards, particularly IFRSs. Common examples included the non-consolidation of subsidiaries in view of the exemption granted by the Maltese Companies Act and the non-disclosure of the ultimate controlling party. Non-Big Four auditors had mostly inventory and cash sales leading to repeated qualifications, particularly for small companies having less formal controls. In such cases, the auditor was probably unable to perform the necessary tests year-in year-out, thereby leading to repeated qualifications despite raising the issues for the attention of those charged with governance as part of their audit findings.

Upon comparison with the findings of Grech (2007) and Farrugia and Baldacchino (2005), the repeated qualification rate obtained in this study saw a significant decrease. This is a positive result as it shows that local companies are addressing in a more effective manner the issues identified by their auditors.

4.9. Qualifications and Firm-Specific Variables

The study also sought to analyse whether any particular associations could be established between modified auditor's reports and firm-specific variables using a series of chi-squared tests. Significant associations were found between:

- auditor type and report qualification ($\chi 2(1) = 8.05$, $p = 0.005$), where non-Big Four audit reports were less likely to qualify their reports than Big Four audit reports.

- auditor type and compliance of the modified auditor report with the requirements of ISAs over the five years under investigation. It was observed that non-Big Four auditors including sole practitioners were more likely to express audit reports that were not in compliance with the requirements of auditing standards. For instance, in 2009, while Big Four auditors were fully ISA compliant, non-Big Four Auditor were 86.7% compliant, while sole practitioners were only 48.0% compliant ($\chi 2(2) = 11.52$, $p = 0.021$).

- the repeated qualification and the auditor type ($\chi 2(2) = 7.27$, $p = 0.026$), where non-Big Four auditors including sole practitioners were more likely to express repeated qualifications than Big Four auditors.

- repeated qualification and company type ($\chi 2(3) = 18.59$, $p < 0.001$), where international trading companies were more likely to have their qualification repeated when compared to private companies.

5. DISCUSSION

Table 6 shows that there has been an overall increasing trend in the Maltese auditors' qualification rate when incorporating previous studies.

Table 6: Trends in Maltese Auditors' Reports

Study	Years under review	Average Qualification Rate
Farrugia & Baldacchino (2005)	1997-2000	19.9%
Grech (2007)	2001-2004	20.8%
Baldacchino et al. (2014)	2005-2009	22.4%

In this study, no modifications were noted in the case of public limited liability companies. This is consistent with the findings reported by Farrugia and Baldacchino (2005) and Grech (2007) and is justifiable on the basis of the relatively small number of public companies in Malta. The Maltese stock market is a small one and listed companies are few. Given such circumstances, it would be unwise for public companies to publish their financial statements with a modified audit opinion as this could possibly lead to serious consequences within such a small market.

Since most of the registered companies in Malta are considered to be small or micro companies, it is not a surprise that the use of limitation-of-scope qualifications has remained predominant in Maltese audit reports. Such companies, as also identified by Farrugia and Baldacchino (2005), may not have the necessary resources to implement and maintain proper systems of internal control and therefore such a qualification may be inevitable.

It was also noted that the Big Four audit firms issued a lower amount of modified audit reports, and this supports the results reported by Farrugia and Baldacchino (2005).

The findings in this study also indicates a relatively large number of disagreement with management qualifications. When compared with the previous studies of Farrugia and Baldacchino (2005) and Grech (2007), there has been an increase in disagreement with management qualifications, mainly due to inappropriate accounting treatments and departures from accounting standards. This finding implies an increase in the number of companies that are not adhering to the accounting standards identified as constituting best practice and the objective of which is the presentation of true and fair financial information to users for their economic decision making.

Although a decreasing trend was observed in the use of going concern qualifications, the use of such qualification in Maltese audit reports still merits further review. Most of the auditors who expressed a qualification on the basis of going concern did not follow the requirements of the applicable auditing standards and were, at most times, unclear in their opinion. In most of the cases included in the sample, the auditor seemed to adopt a "cautious" or "safe" approach in this regard, possibly as a result of increased quality assurance checks by the regulator (the Maltese Accountancy Board) following various international auditing scandals at the turn of the century. It is clear that auditing standards only require the inclusion of an emphasis of matter paragraph in those cases where, in the auditor's judgement, the matter (going concern issues) is of such importance that it is fundamental to the users' understanding of the financial statements. The use of emphasis-of-matter paragraphs should therefore be infrequent; in the Maltese context, its use is widespread (particularly by sole practitioners) and the risk is that it may often be considered a substitute to an opinion modification.

6. CONCLUSION

This study investigated Maltese audit report modifications during the period 2005-2009 based on an analysis of the statutory audit reports in the financial statements of a representative sample of 374 Maltese companies registered with the MFSA.

The main contribution of this study is that it provides empirical evidence study that the average modification rate not only persisted in the period under review but increased to 22.4%. The study also shows that most modifications were found in private exempt and international trading non-exempt companies. Qualified reports in private exempt companies were generally limitation of scope. It was noted that the small company qualification (which has been long abolished) was still incorrectly being used in Maltese auditor's reports till 2009. Whilst the Big Four audit firms did not appear to have issues in appropriately adhering to audit reporting standards, Maltese smaller audit firms and sole practitioners were found still to be the main originators of inappropriate audit reporting. Furthermore, qualified reports in international trading companies were mainly attributable to disagreement with management commonly due to standard-related issues.

Some limitations to the above findings must be noted. Firstly, the findings are based on the presented audited financial statements lodged at the MFSA, and as evident in Table 1, a number of registered companies failed to present the financial statements for the period under study. Secondly, the study was conducted in economic, legal and political context of Malta, and so its findings and implications may not necesarily lend themselves to generalisation over other country contexts.

Despite these limitations, it is clear that the modification of audit reports has not yet sufficiently contributed to the improvement of Maltese financial reporting. This calls for action on other fronts beyond mere modification. Firstly, Maltese company law needs to be better aligned with international accounting standards, so that the current dilemma of practitioners as to where to stand with respect to the regulatory framework is resolved. Secondly, the study leads us to conclude that a number of auditors, particularly those practising in non-Big Four firms, need to sharpen their audit skills to bring them in line with the required standards. In this context, stricter enforcement of quality assurance by the Accountancy Regulator could be an appropriate first step in this direction. Thirdly, it may be opportune for the accountancy regulator to consider the removal of the statutory audit requirement for small companies given the inherent limitations of such an exercise. This leads to further considerations such as the replacement of the small audit by a review engagement.

In the light of the findings of this study, we feel that it is imperative for the profession to make sure that assurance reports are properly issued in compliance with the applicable standards and that adherence to the a solid regulatory framework is seen as "the means for achieving higher quality levels of performance for the benefit of all stakeholders" (Bezzina et al., 2013).

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Financing Indian Growth: A Case Study of Sonepat District in Haryana

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ABSTRACT

The paper is based on UGC sponsored major research project recently completed. Major finding of the project has been that the Indian financial sector has failed to assist in the growth process of the economy. Granger causality tests on quarterly data in the framework of VAR and VEC models have been used to establish the results. These results hold at the aggregate economy level and also at the sectoral level. The reasons are to be found in the working of the financial system as experienced by the demand side of loanable funds. The field study conducted under the project has brought out that not only has the system failed to contribute to economic growth but also that its functioning is highly lopsided. Primary data collected through field survey points to a biased allocation of the available funds by the banking system and a substantial presence of the informal sources of credit in the economy. While the informal real sector is the one that primarily contributes to the growth of the Indian economy the dismal reality is that its financial needs are barely served by the mainstream financial sector. This in itself explains the failure of the financial system to contribute to economic growth. Since the finance growth linkages are found to be weak/ absent, an important implication of the result is that controlling inflation in India using tight credit policies can be achieved with minimum costs to growth of the real sector.

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1. INTRODUCTION

It is normally presumed that financial system will always work for the benefit of society. This is, however, not always true. Too restrictive environment or regulatory framework may distort the functioning of the system. Excessive regulations keeping deposit rates low and the like can go against savings and investment. Often it is seen in the working of financial systems that weak and marginal borrowers are left behind even though they may have more promising project in hand. The twin problems of corruption and red-tapism can ruin the fabric of the system and make it a drag on growth. Thus, financial system in itself may not necessarily be conducive to economic growth. It must work in an efficient and unbiased way to promote growth and development.

The theoretical relationship between economic growth and financial development is symbiotic, mutually re-enforcing, and complex. While finance is an important ingredient in growth; it is in no way sufficient to the process of economic growth. For financial system to be effective in the growth process, the government must assure minimum conditions of both financial and political order, an effective legal framework, and refrain from random interferences that increase uncertainty for long run investment planning.

This paper has examined the causal relation between financial development and economic growth in India in the post-reform period using secondary data from the RBI website. The results obtained have been substantiated with primary data obtained from demand and supply side of finance through field surveys.

The field survey brings to light the importance of the formal financial sector vis-à-vis other sources of finance in the Indian economy and certain other important aspects of the working of the financial system in India. It tries to explain the intricacies in the working of the financial system as experienced by the demand side of loanable funds. The results of analyses are used for drawing policy implications on crucial issues.

1.1. Literature Review

A host of cross-section and time series studies have examined the finance growth nexus. Different methodologies varying from ordinary least squares to vector error correction models have been used in cross country as well as country specific regressions. In economics literature, the relationship between finance and economic growth is extensively studied and highly debated issue. There is a long list of economists who stress the importance of a sound financial system for economic growth. Schumpeter (1911), Gerschenkron (1962), Boyd and Prescott (1986), Gregorio and Guidotti (1995), Fry (1988), Greenwood and Jovanovic (1990), Bencivenga and Smith (1991), king and Levine (1993), Atje and Jovanovic (1993), Levine (1996, 97), Demirgiic-Kunt and Maksimovic (1996), Allen and Gale (1997), Levine and Zervos (1998)...

Together with the above view there also exists an extremely contrasting view, - the 'demand following' or passive financial development. Well-developed financial systems are not essential for economic progress. Robinson (1952), Robert Lucas (1988), Gurley and Shaw (1967), N.Stern's (1989), Meier and Sears (1984), Goaied and Sassi (2009): all subscribe to this view.

On the whole, mass of available studies of the twentieth century (cross sectional, panel, and time series) suggests that better functioning financial systems support faster economic growth. The body of available country studies suggests that while the financial system responds to the demands of the non-financial sector, well-functioning financial system have, in some cases during some time periods, importantly spurred economic growth.

Some noticeable changes in the importance of finance and causality patterns have been witnessed in the current century literature. Many recent studies indicate a supply leading financial development giving way to a demand following passive financial development while others warn against the dangers of excessive finance. Overall the size of financial sector as measured by bank credit as also developments in the stock market seems to be becoming unimportant in explaining the growth of the real sector.

It is seen that overtime simple OLS or GLS models have given way to VAR and co-integration analyses. These became more relevant with the coming up of the endogenous growth models. Overtime a shifting focus from cross-section studies to time series and panel analyses is also noted. The results of country specific studies can be more closely related to the specific conditions that prevail in a country. Another important change over the past two decades is the incorporating of an independent variable to study the impact of stock market developments on the real sector. Now most of the studies employ measures to capture role of institutions as well as markets. Emphasis on quality of finance is also noted. In sharp contrast to the earlier studies, most of the recent studies are pointing that increasing finance does not promote growth; it may well work to dampen it.

1.2. Evidence on the Indian Economy

Focusing on the studies on Indian economy, we need to note that most available studies here relate to the period before the economic reforms, or are for a period aggregating both pre and post-reform time periods. Exogeneity tests performed by Demetriades and Luintal (1996, 97) suggest that financial development and economic growth are jointly determined. Thus polices which affect financial development also affect economic growth. Bell, C and Rousseau, P.L (2000) have analyzed the Indian case in the post independence period using techniques of Vector Auto regression and Error Correction models. They found that the financial sector was instrumental not only in promoting aggregate investment and output, but also in the steady shift towards industry that has characterized India's development. Bhattacharya and Sivasubramanian (2003) examined the causal relationship between financial development and economic growth in India for the period 1970-1971 to 1998-1999, using the techniques of unit root and co-integration analyses. Their results show that for the period under consideration, M3 representing financial sector development led GDP growth. Mishra, Das and Pradhan (2009) have found evidence in support of bi-directional causality between credit market development and economic growth in India for the period 1980 to 2008.

There are a few studies that have analysed exclusively the post reform period. In Chakraborty's (2008) analysis the direction of causality for both industrial and service sectors runs from the rate of economic growth to stock market capitalization. Causality runs in both directions between bank credit and industrial growth. Pradhan (2009) has examined the causal nexus between financial development and economic growth (proxied by Index of Industrial Production) in India for 1993-2008 using a multivariate VAR model. His analysis obtains the evidence of bidirectional causality between money supply and economic growth, and bank credit and economic growth. It also finds unidirectional causality from market capitalization to economic growth.

Thus available studies on India suggest that overall in the post independence period financial development has positively contributed to economic growth. There is however no conclusive evidence on the relationship for the post reform period. In 3 out of 4 studies that have analysed the post reform period the index of industrial production is used as the indicator for economic growth. This is inappropriate as the industrial sector now accounts for less than one-fourth of the GDP. The results would therefore indicate the impact of financial development on the industrial growth rather than growth of the economy. All studies have used indicator relating to the secondary stock markets that do not add to the flow of funds to the production sector. Moreover they seem to have important methodological and interpretation errors. Bank credit going to the entire economy has been associated with sectoral growth rates which are clearly inappropriate given the changing sectoral composition of output.

In the period subsequent to the economic reforms of the early 1990s, the institutional, financial, and other economic parameters in India have undergone substantial quantitative and qualitative changes. Moreover the latest studies on the finance growth relation across globe are pointing towards a changed scenario where increasing finance does not promote growth; rather it may work to dampen it. It is therefore of great relevance to investigate whether the positive influence from financial development to economic growth continues to exist for the cotemporary Indian economy. This is precisely the subject matter of the paper.

2. METHODOLOGY

The paper has used rigorous econometric analysis substantiated by results from field surveys. The econometric analysis provides a basic direction of causal relation and short-run adjustment dynamics between financial development and economic growth. It obtains the results based on techniques of co-integration and Granger causality with the help of secondary data published by RBI. The time period used in empirical analyses is 1996 Q3 to 2010 Q1. For further insights into the issue, primary data is collected through questionnaire based survey of non-corporate borrowers, companies and financial establishments belonging to the organised formal sector as well as the informal sector like money lenders. The responses obtained from the field surveys have been subjected to basic statistical analysis like finding percentages of various response options, pie charts etc.

2.1. Econometric Analysis

In context of causal relation between finance and growth there is no a priori reason to expect either variable to be exogenous. In order to take care of possible endogeniety, any single equation model is inappropriate. The possibility of all or any of the variables of the model being endogenous is captured in a vector autoregressive (VAR) model. Each variable is considered to be affected by current and past realizations of all variables including self. Most of the recent studies in this area have used the Vector auto-regression (VAR) and Vector error correction (VECM) models. For examining the issue of causality in regression analyses, Granger Causality is widely in use.

The present study has tested for Granger causality in the framework of a VAR/ VEC model. This allows for a possibility of causality in either direction and also of bi-directional causal relationship between financial development and economic growth. Y is said to Granger-cause Z if we are able to better predict Z using histories of both Y and Z than we can do only by using the history of Z. Quarterly data is used to test for granger causality and has been obtained from Data Base on Indian Economy (DBIE) on the RBI website.

The time period for the analyses is 1996Q2 to 2010Q3 (56 observations) for which consistent and comparable time-series data is available.

Quarterly rate of growth of GDP at constant prices is used as an indicator for economic growth. Some studies have used index of industrial production to represent the growth of the real sector. This is however inappropriate because industrial sector now accounts for just around one-fifth of national income. Moreover during the entire period of analyses the share of the industrial sector in national income has been varying in between 19 to 22 percent. Its contribution to the growth in GDP has been fluctuating widely between 8 to 35 percent. Thus the industrial sector has a minor share in aggregate output and its contribution to economic growth is not only small, but also it is widely fluctuating.

The study has used two indicators for financial development, one each for financial institutions and markets, which best relate their role to economic growth. Institutional credit to the commercial sector includes bank credit to the commercial sector and financial assistance by the non-banking financial institutions. Data on financial assistance by financial institutions is available only on annual basis, so only bank credit has been used in the study. Not much is lost as the importance of these institutions has substantially declined overtime and now accounts for much less than 5% of the bank credit to the commercial sector. Bank credit includes credit to the commercial sector by RBI and other banks. RBI makes funds available to the commercial sector indirectly in form of investment in shares and bonds of the financial institutions, debentures of land mortgage banks, loans and advances to FIs, SFCs, and primary dealers, internal bills purchased and discounted, and refinance to NABARD. Other banks' credit includes loans and advances to commercial sector by the commercial and co-operative banks and their investment in shares and bonds issued by the commercial sector. Advances of NBFCs and funds advanced by venture capitalists are becoming important but consistent time series data is not available, so they are not included in the analysis.

For the markets, the indicator(s) used in various studies relate to size (MCR -Market Capitalization ratio) and/or liquidity (turnover ratio or the traded value ratio) of the secondary market. In the context of contribution to economic growth the ideal measure should relate to the resources raised from the primary market as only such resources put additional funds in the hands of productive units. New capital issues by non-government public limited companies is used as a measure of funds mobilized in the primary market. It does not include bonus issues.

Overall the study has used two indicators for financial development: bank credit to the commercial sector and new capital issues to non-governmental public enterprises; both expressed as a percentage to GDP.

Data on GDP is available on a quarterly basis. The rate of growth has been obtained as $(GDP_t - GDP_{t-1})/GDP_{t-1}$, taking increment on a quarterly basis; and expressed as percentage. Data on bank credit is available as the amount outstanding on a monthly basis. This monthly stock variable has been converted to flow for a quarter by differencing with a lag of three months. The data on bank credit to the individual sectors has been treated in the same way. Primary market data is also available on a monthly basis and has been converted to quarterly by adding up for the corresponding three months. Both financial development variables have been expressed as percentage of the gross domestic product.

In VAR models it is possible to perform hypothesis tests on an individual equation when some regressors are stationary and others non-stationary. F tests and t-tests can be performed with regard to stationary variables. Where non-stationary variables are involved in analyses one needs to examine the possibility of co-integration before differencing or de-trending the series. Causality in a co-integrated system also needs to be re-interpreted. In a co-integrated system {Yt} does not Granger cause {Zt} if lagged values of ΔYt-1 do not enter the ΔZt equation and if {Zt} does not respond to the deviation from long run equilibrium.

As causality tests can be conducted only with regard to stationary variables, all variables have been examined for stationarity. Since the tests for stationarity have low power, multiple tests are used i.e. Augmented Dickey–Fuller (ADF), Phillips-Perron (PP) and KPSS. As all variables are found to be integrated of order one, Co-integration analyses has been used to examine the presence or otherwise, of long-run equilibrium relationship between growth and finance indicators. The Johansen tests (λ_{max} and λ_{trace}) confirm the presence of co-integration. A VEC model is therefore estimated to perform the tests on granger causality.

2.2. The Field Survey

In order to complete and compliment the econometric analyses on secondary data, field surveys have been conducted for collection of primary data from demand and supply side of finance on some important aspects of the functioning of financial system and its relationship with economic growth. The survey has been conducted in the states of Delhi, Haryana, Bihar, and Rajasthan –for different income categories. Information from over 3000 respondents belonging to different segments of the real economy has been gathered. A bilingual questionnaire was prepared for the unincorporated sector. The focus of analyses has been on the extent of reliance on formal versus informal sources of finance, problems faced in obtaining institutional finance, examining bias of the banks based on income levels or other factors and reasons for going to money lenders.

Most comprehensive surveys have been conducted relating to the unincorporated sector for two main reasons. One is that the corporate sector is by and large covered under the secondary data analyses as it is expected to be obtaining finances mainly from the institutional sources. Second and more important reason is that the growth of the Indian economy is actually driven by the informal sector. According to the Report of the Committee on Unorganized Sector Statistics, National Statistical Commission, Government of India, February 2012, the unorganized or informal sector constitutes more than 90 per cent of workforce and about 50 per cent of the national product. The high levels of growth of the Indian economy during the past two decades have been accompanied by increasing informalisation. The analysis of the unincorporated sector is thus highly significant in understanding any aspect related to economic growth.

On supply side of finance a survey was attempted for the banks but the response rate was very poor. They were reluctant to share information. Few personal interviews could be conducted. Information on money lenders has been obtained for the states of Haryana, Rajasthan, and Chennai where they are very common and also open about their business even if they are not formally registered. In case of money lenders the focus is on understanding their working and importance in our financial system and to judge to what extent and in what way their business has been affected with the spread of banking system. A relevant issue for this study is to find to what extent money lenders are engaged in providing finance for productive activities.

Although most extensive survey has been conducted in NCR, results for Sonepat are presented here because supply side responses, especially from money lenders could be obtained largely in Sonepat. Although informal money lending is prevalent in major cities and towns of the country it is difficult to find money lenders available for interviews and survey. On demand side the broad pattern of responses was similar across states. Analyses have been conducted on the aggregate sample as also for different income categories.

3.1 Results of Econometric Analyses

The variables for the analysis are quarterly rate of growth of real GDP at 1999 prices (EG), bank credit to the commercial sector as percentage of GDP (BCR) and new capital issues to non-governmental public enterprises as percentage of GDP (CIR). All these are found to be integrated of order one. A co-integration analysis has therefore been carried out. Both the LR tests i.e. λ_{max} (Lambda-max test) and λ_{trace} (lambda trace test) confirm the presence of a single co-integrating vector. This suggests the existence of long run equilibrium relationship between the three variables.

A VECM is therefore estimated in variables EG, BCR, and CIR. Table 1 presents the results from the estimates of the error correction model and summary results of granger causality tests. Details of granger causality testing are presented subsequently.

Table 1: Results from Error Correction Model

Variable / Equation	EG	BCR	CIR		Eq.	ECT
1. EG	--	-0.018 (0.289)	+0.841 (0.343)		1	0.679 [0.079]
2. BCR	+5.949 (0. 002)	--	-11.52 (0.0005)		2	-4.12 [0.007]
3.CIR	+0.527 (0.0000)	+0.0275 (0.0000)	--		3	-0.45 [0.0001]

The equations 1, 2, and 3 refer to the equation with the dependent variable being EG, BCR, and CIR respectively. The +/- sign in the centre part of the table gives the direction of the sum of regression coefficients for all lags of the variable. The significance level (p-value) for Granger non-causality test is given in the parentheses below the estimated magnitudes. The right hand side panel reports the coefficient of ECT with the p-value in the parentheses.

The second row of the table shows that neither bank credit nor capital issues have been statistically significant in determining economic growth. On reverse causality both the financial development indicators are significantly affected by EG in the positive direction. This can be seen across the second column. The magnitude of the impact is much higher for bank credit ratio than the capital issues ratio. This implies that growth of the economy leads to a substantial increase in the demand for bank credit and to a small extent the amount of fresh capital that the non-governmental companies are able to raise from the primary market.

Tests are also conducted to see the mutual relation between the two aspects of financial development. It is found that while increased credit disbursement in the economy has a weak positive effect on the new capital issues in the economy; the increased quantum of capital issues lead to a substantial fall in the bank credit ratio. This implies that when the companies are successfully able to raise fresh capital through the primary market their demand for bank credit shows a substantial decline.

For the short-run dynamics, the coefficient of ECT relating to EG is insignificant indicating no adjustment to the equilibrium by growth of the real sector. The coefficient of ECT in the equations corresponding to both the financial development variables is negative and statistically significant implying a positive response of growth in bank credit and new capital issues to the fluctuations below the long-run equilibrium position. It is this negative relation that takes the economy out of the temporary dis-equilibrium phase.

The tests of granger causality suggest that economic growth has a statistically significant positive effect on both bank credit ratio and the capital issue ratio in the economy. These financial development variables however have no statistically significant impact on economic growth.

TESTS OF GRANGER NON-CAUSALITY

- **Null: BCR does not granger cause EG**

A(1,2,1) -0.027689 -0.69 [0.48826](*)

A(1,2,2) -0.016731 -0.28 [0.78266](*)

A(1,2,3) 0.026295 0.46 [0.64283](*)

a(1) 0.678926 1.76 [0.07922](*)

Test of the null hypothesis that the parameters indicated by (*) are jointly zero:

Wald test: 4.98

Asymptotic null distribution: Chi-square(4)

p-value = 0.28934

Significance levels: 10% 5%

Critical values: 7.78 9.49

Conclusions: accept accept

- **Null: CIR does not granger cause EG**

A(1,3,1) 0.446030 1.01 [0.31269](*)

A(1,3,2) 0.264740 0.37 [0.71067](*)

A(1,3,3) 0.130483 0.20 [0.84057](*)

a(1) 0.678926 1.76 [0.07922](*)

Test of the null hypothesis that the parameters indicated by (*) are jointly zero:

Wald test: 4.49

Asymptotic null distribution: Chi-square(4)

p-value = 0.34314

Significance levels: 10% 5%

Critical values: 7.78 9.49

Conclusions: accept accept

- **Null: BCR and CIR together do not granger cause EG**

A(1,2,1) -0.027689 -0.69 [0.48826](*)

A(1,3,1) 0.446030 1.01 [0.31269](*)

A(1,2,2) -0.016731 -0.28 [0.78266](*)

A(1,3,2) 0.264740 0.37 [0.71067](*)

A(1,2,3) 0.026295 0.46 [0.64283](*)

A(1,3,3) 0.130483 0.20 [0.84057](*)

a(1) 0.678926 1.76 [0.07922](*)

Test of the null hypothesis that the parameters indicated by (*) are jointly zero:

Wald test: 5.92

Asymptotic null distribution: Chi-square(7)

p-value = 0.54947

Significance levels: 10% 5%

Critical values: 12.02 14.07

Conclusions: accept accept

- **Null: EG does not granger cause BCR**

A(2,1,1) 1.091676 2.57 [0.01023](*)

A(2,1,2) 2.205841 3.29 [0.00101](*)

A(2,1,3) 2.651956 2.87 [0.00408](*)

a(2) -4.119711 -3.39 [0.00069](*)

Test of the null hypothesis that the parameters indicated by (*) are jointly zero:

Wald test: 17.10

Asymptotic null distribution: Chi-square(4)

p-value = 0.00184

Significance levels: 10% 5%

Critical values: 7.78 9.49

Conclusions: reject reject

- **Null: EG does not granger cause CIR**

A(3,1,1) 0.042775 1.06 [0.29039](*)

A(3,1,2) 0.207822 3.26 [0.00113](*)

A(3,1,3) 0.276921 3.15 [0.00163](*)

a(3) -0.450687 -3.90 [0.00010](*)

Test of the null hypothesis that the parameters indicated by (*) are jointly zero:

Wald test: 27.47

Asymptotic null distribution: Chi-square(4)

p-value = 0.00002

Significance levels: 10% 5%

Critical values: 7.78 9.49

Conclusions: reject reject

Infrastructure is one of the crucial sectors in any economy and growth of various other sectors is critically dependent on the availability of infrastructural facilities. Very limited data is however available on the extent of finance that goes to infrastructure. So, a simple correlation was obtained between ratio of incremental credit going to the infrastructural sector to GDP and rate of growth of real GDP i.e., economic growth. The correlation of economic growth with finance to other sectors was also obtained for comparison. Table 2 shows these magnitudes. It is clearly seen that correlation with economic growth is highest in case of credit going to the infrastructural sector. This does not necessarily imply causation in either direction but there are reasons to believe that increase in credit going to infrastructural industries could possibly promote growth in the economy.

Table 2: Simple Correlation of Selected Variables

Variables as ratio to GDP	**Simple correlation of the variable with economic growth**
New capital issues	-0.04993
Credit to service sector	0.673462
Credit to priority sector	0.549855
Credit to medium and large industries	0.472261
Credit to infrastructure	0.705636

The econometric analysis therefore concludes that Indian economy in the post reform period for sure is not a case of finance led growth. Growth of the industrial sector rather has led to an increased demand for finance i.e., a demand following pattern of financial development.

3.2 Results of Field Survey

A total of 808 responses were obtained out of nearly 1000 establishments approached. It has been found from the analyses of primary data that nearly two-thirds of the respondents are obtaining finance from their own funds including friends and relatives. People are generally reluctant to approach any external source for requirement of finance and try to operate at a level that they can manage with their own funds. A small percentage is dependent on institutional finance while money lending has been meeting double the requirements of finance in relation to the banks. A few respondents quoted having sold some jewellery or landed property to finance business. There has also been a small percentage that could not obtain the funds required and had to drop the expansion plans. The broad position is nearly the same for the income groups other than the high income category although the exact percentages are different.

Of the respondents with an annual declared income of more than rupees six lakhs, less than one-fifth are using institutional finance for their business. While 53% are using their own funds, the remaining 28% used the funds borrowed from their relatives and friends; mostly for short time periods. While the middle income group has a much greater reliance on own/ family funds without interest and on institutional finance in relation to the lower income group; the low income group in the paucity of own funds and access to the institutional sources falls back much more on the money lenders and are also more frequently not able to obtain the required finances. A greater percentage in relation to the middle income group is also found to be obtaining finance from relatives and known people on interest which is invariably higher than the formal borrowing interest rates.

Those belonging to the low income category are in most cases much less qualified and unable to understand the loan procedures. Most of them are unaware of the available facilities and those who are aware find it difficult to obtain institutional finance due to lack of security and time required for visits to the bank. Such establishments are often owner operated and absence of the owner creates a difficult situation of management and operation and in most cases require closure of the shop/ unit to enable the owner to visit a bank.

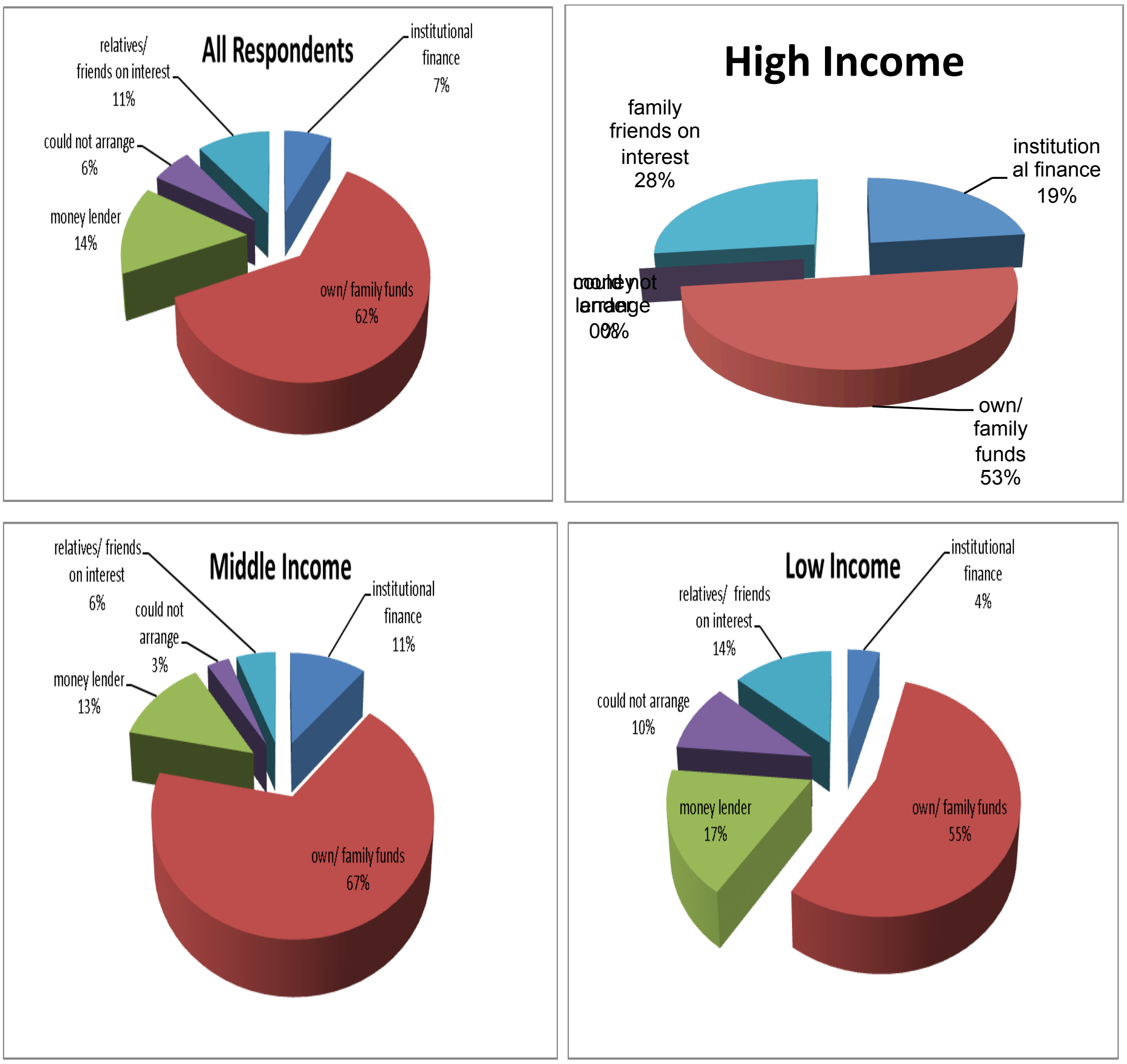

Fig.1. Distribution of Sources of Funds

Of those who did not use institutional finance more than 95% never approached the financial institutions; only in a very small percentage of cases the finance was denied to them. The quoted reason for denial has been incomplete documents or insufficient or no security. Of those who chose not to approach the formal sources of finance nearly two-thirds had own funds and were content with the level that was compatible with their financing capacity. For others, the reasons ranged from the loan process being too lengthy to heavy documentation, lots of formalities, lack of security, explicit or implicit demands for bribe or other favours etc. Nearly 6% of the respondents gave up after applying for the loan for a mix of above stated reasons.

The survey also enquired about how easy or difficult people find obtaining the institutional finance and addressed the issue of difficulties faced in obtaining the funds. Nearly 40% respondents had no idea. This clearly indicates ignorance with regard to the banking facilities available and that a large proportion of business people have not even bothered to see if they could obtain finance. The low income category has nearly 60% of the respondents quoting 'do not know' as the response. The people at low income levels in both rural and urban areas are frequently less educated, have little or no knowledge of banking facilities and no time or aptitude for approaching the financial institutions. They are simply not bothered to find out if and in what manner can bank finance be obtained. They prefer using their own funds to the extent available or approach the local money lender.

Another important aspect of bank finance that comes out from the survey is that more than two-thirds of the respondents feel that lending institutions favour those who have contacts or are ready to bribe or do unofficial favours and also those belonging to high income levels in urban areas and to particular caste or occupation in rural areas. A very insignificant proportion feels that credit is provided on merit of the case. Opinion of nearly half the respondents is based on their own experience or the experience of those known to them and the rest half is based on their perceptions.

Respondents who are from low income level need to make many visits to the financial institutions before they could get loan, whereas high income respondents who already have established businesses can easily arrange funds for their new projects, based upon their credit rating in past. They also can arrange short term and small amount loans through bank overdraft, trade credit and bill discounting facilities.

The supply side of finance

A survey was attempted for the banks but the response rate was very poor. They were reluctant to share information. Few personal interviews could be conducted. The responding managers admitted that normally it takes minimum of two to three months for a loan amount to finally reach the borrower. Rejection of a loan application is not explicitly communicated to the applicants. Some of the bank officials approached through personal contacts admitted that bribe, unofficial favours and personal contacts with the high officials of the banks greatly speeds up the process of loan disbursal.

As for allocation of funds, the banks are highly concerned about the repaying ability of the potential borrowers. Big loans are easily and quickly provided to existing customers of a good credit rating even if their reported incomes are low. The banks have a marked preference for big loans as it reduces their transaction costs and efforts. This is particularly true for the public sector banks. They do not explicitly deny a small loan but deliberately follow delaying tactics and keep calling the customer repeatedly to discourage them. A few private banks showed preference to tap up this left out market for small loans, but this does not help much. Most of the people are unable to provide income proof or the required security.

The low income borrowers face a number of practical problems. An initial capital that is required creates a stumbling block in many cases. A number of special assistance programs are launched for the underprivileged but practicality aspects are ignored and a much smaller amount than planned reaches the ultimate borrowers. Unofficial payments get involved at a number of places.

Of all the money lenders surveyed in Sonepat nearly 90% are not registered as moneylenders and are operating unofficially. Nearly 60% of these are engaged in some other productive activity and money lending is like a side business for extra earning. People belonging to traditionally moneylenders' families have taken up jobs but also continue with their traditional occupation.

It has been surprisingly found that even unregistered money lenders enter into formal contracts with the borrowers. Irrespective of the nature of agreement the approval and disbursal of loan is made within 1-2 days in more than 95% cases. The transactions are pre-dominantly in cash. Nearly one-third of total loans made have been productive loans and a somewhat smaller percentage in the nature of home loans. Maximum loans are originally short term, but some of them effectively become long term in practice. This clearly indicates that informal lending does not relate only to personal loans relating to conspicuous consumption, marriages, and other functions and ceremonies as is widely believed but also goes towards financing productive activities.

Over the years a decline in the activity of money lending has been noted due to increased competition from banks and increasing awareness among people. Yet nearly a third of the respondents reported an increase in their business. The local money lenders are at the easy reach of people and have minimum formalities. The transaction is normally materialized in 1-2 visits without many hassles and delays and the terms and conditions are also flexible. Even though maximum loans are supported by landed security or jewellery, unsecured loans are also made on a case-to-case basis. Due to these advantages of dealing with moneylenders and cumbersome and time taking banking procedures together with inherent bias in dealings, the business of money lending is still flourishing in India.

4. DISCUSSION

The response from the field survey supports the econometric finding that financial development as represented by the growth of bank credit and new capital issues by the non-government public limited companies no longer supports economic growth in India. It is apparent that finance available in the system is not being properly directed as to promote economic growth. Access to capital market is present only for the corporate sector. Unless the financial sector is transformed as to meet the requirements of external finance, growth efforts are surely going to be hampered.

Contrary to the popular belief that banking system has spread its wings in every corner of the city and is serving the needs of one and all, the harsh reality that has come out of the survey is that the system is not transparent and is highly biased toward the rich and influential. Leave aside rural areas, even high percentages of people in urban areas have limited knowledge about banking facilities and procedures. Lower and middle classes often shy away due to complex and lengthy procedures. A visit to a bank for many means a day off from their job or keeping the shop closed for at least half a day. Nearly half the respondents did not try to obtain institutional finance due to their low declared incomes even though they had the repaying capacity.

The system does disburse finance to promising and creditworthy industries but leaves much to the desired.

5. CONCLUSION

Subject to various limitations of data and otherwise the present study has been able to obtain important insights into the causal relationship between financial development and economic growth. The financial sector has been found not to be affecting the country's growth process. This result is fundamental as it makes the task of controlling inflation without affecting economic growth a whole lot easier.

Another important implication of the results obtained is that it brings out that the Indian financial system is not serving its goal of contribution to growth. Major reorganization and reorientation of the system is required. Loan procedures need to be substantially simplified and more transparency should be induced within the system. Financial inclusion is far from being achieved. One needs to go behind the veil of numbers and see what is actually happening in the society. People need to be made more aware of the facilities available for finance and their advantages. In order bring the society out of the clutches of money lenders, efforts at both ends, i.e., the potential borrower and the lender is needed.

The findings of the paper can be instrumental in tackling the problem of rampant inflation in India without having an adverse impact on growth. At the same time a substantial improvement in banking practices can be achieved with minimal efforts.

Any statistical study is often constrained by the non-availability of the data relevant to the analyses. The present study also faced such constrains. Its major limitations lie in the non-availability of consistent and reliable data on a number of parameters like venture capital, non-banking finance companies, unregulated credit markets, etc. Another limitation relates to the inferences that can be drawn from different econometric methodologies. The VAR model used in the analyses, although capable of incorporating the endogeniety of the variables and the lags, does not indicate the exact magnitudes of various relationships. Simple OLS or GLS techniques that may give such magnitudes will not be able to give otherwise satisfactory results due to endogeniety of the explanatory variables. One of the two things has to be sacrificed. Moreover most of the test results are valid asymptotically. Their reliability in small samples is open to question.

Some of the problems relating to lags in available data have been partly overcome by collecting primary data through field surveys. This too, however, has its share of problems. Results would greatly depend on the honesty of people in conducting the surveys and effectively communicating the questionnaires to the respondents. Their own understanding of the questionnaires becomes crucial in this context. To care of this problem to the extent possible majority of surveyors included students of economics. From the side of respondents, high reluctance was faced in some of the categories like the banks in responding to the questions. The indigenous businessmen and, surprisingly, moneylenders were in general more forthcoming with the answers.

The limitations pointed above are not peculiar to this study but are true for any statistical study. The only way to take care of these limitations is to interpret the results with due care keeping in mind these limitations.

One can carry on similar analysis further into many related areas. Increasing emphasis on qualitative indicators can be incorporated in such models to get further insights into the investigated relationship. Inter-regional or international comparisons can be made. The present analyses can be modified and extended in a number of ways to derive meaningful results in the interest of economic and social welfare of the country.

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Strategic change for survival: a Case of Construction Company in Slovenia

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ABSTRACT

Ready-mix concrete business as the part of the procurement chain in the construction industry is strongly influenced by the economic and social situation in Slovenia. The financial crisis has revealed all the weaknesses and forced the industry into huge transition that left behind a mass of companies at the edge of survival. The purpose of this study is to investigate and examine the most appropriate strategic change framework with some proposals for the selected organization. After the analysis of current situation a desk research was made to explore different strategic change models. In the next stage the study adopted a quantitative methodology using self-completing questionnaire to collect relevant data about customer values and requirements and a qualitative methodology conducting a focus group interview among company's management team to evaluate most important strategic change issues. New mission, vision, and core values were developed as the core strategic elements of new approach. On the basis of selected strategic model new strategy was transformed into a set of managerial projects. Conclusions of the study confirm that ready-mix concrete production is a commodity business that competes mostly on price and quality on geographically small markets. However, further analysis demonstrates additional opportunities when customers are segmented into more specific groups in view of their core businesses and specialities. In addition to regular ready-mix concrete production for general use, there is a possibility to provide individually developed concrete based solutions. All presented findings and conclusions that constitute a new strategic approach contribute to long term company stabilization, competitive advantage and overall performance.

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1. INTRODUCTION AND BACKGROUND

1.1. General

The study explores the strategic issues of a construction organisation specialized in ready-mix concrete business that has to be evaluated upon the research and analysis to provide new strategic direction and strategic change implementation proposal. Bordax is a construction company in Slovenia specialized in ready-mix concrete production and distribution. The author of this research project is its general manager with ten years experience in the field responsible for long-standing company performance. Due to the current situation in Slovenian construction industry Bordax needs new strategic approach and business direction to survive and achieve long-term success. In addition, during the economic downturn many problematic aspects flourished among the industry and forced organisations to adapt and change their business approach.

1.2. Slovenia

Slovenia is a small country located between Central Europe and the Balkans (CIA - Central Intelligence Agency, 2013). It established independence in 1991 when it separated from Yugoslavia (Prunk, et al., 2011). The new political situation forced the nation to transfer the whole industry toward European markets. The economy adapted and started to grow constantly above 4% annually. Industry was based mostly on local services and light industry such as automotive and pharmaceutical industry, as well as information and communication technology (Prunk, et al., 2011). With the highest Gross Domestic Product (GDP) among national economies in Central Europe, Slovenia enrolled European Union and NATO in 2004 (CIA - Central Intelligence Agency, 2013). Further economic growth and stable political transition resulted in the adoption of EURO as a currency in 2007 (CIA - Central Intelligence Agency, 2013).

1.3. Construction industry in Slovenia

Similar to the national economy the construction industry collapsed after Yugoslavia failure (Chamber of Commerce and Industry of Slovenia, 2011). But the industry restored fast due to underfed Slovenian infrastructure and residential segment. The national motorway building program began in 1994, housing, business and shopping centres, power plants, wastewater treatment facilities and many other infrastructure objects had to be built (Chamber of Commerce and Industry of Slovenia, 2011). After 2004 the access to international capital became even easier because of to international capital markets accessibility. However, the financing of construction projects mostly relied on the local banking system resulting in undercapitalized organisations and investors. After 2008 the value of construction put in place, shown in figure 1, reached a peak at 4,71 billion, but rapid economy decline stroke the industry and all past problems arose (Grm, Kuhelj, Matek, Pušlar, & Dolenc, 2012).

Figure 1: Real indexes of the Value of construction put in place **(Demsar, 2013)**

1.4. Construction company

Bordax is a small organisation specialized in ready-mix concrete industry that produces and distributes its main product in the central part of Slovenia. Because of technology requirements the concrete delivery is geographically limited to 50 kilometre circle around the concrete batching plant located at the edge of capital city Ljubljana. Concrete is a perishable product manufactured on demand and has to be delivered and poured at a construction site within two hours. The company with 13 employees and total revenue of 3,017,000€ in 2012 owns one concrete mixing plant with the production capacity up to 60 cubic meters of concrete per hour and seven trucks to deliver and pour concrete at construction sites.

Conservative strategy in the past by avoiding huge and high risk construction projects allowed the company to become recognizable and trusted business partner in 2012. However a collapsed market cannot provide any profitability and long-term prosperity to the whole industry, which lacks the liquid assets at very low production level. Ready-mix concrete industry fully depends on the construction sector that is currently in a deep recession. The rapid decline of the ready-mix concrete demand forces all competitors to decrease prices to sustain desired production. During the last three years of business Bordax has lost all the profitability although the production remains relatively high. Organisation management has to balance between the optimal production level, access to liquid assets, and price accepted by customers. The risk of unpaid goods sold is high as the whole construction industry lacks the financial resources to support operational cost and ongoing construction projects.

1.5. Company’s market position analysis

According to Porter (2008) the company's position and performance strongly depends on its market position and relation toward direct competitors, suppliers, customers, substitute providers, and possible new entrants. Additionally, government policies also have strong influence on the industry as whole. Most powerful entity is presented by customers due to extremely low demand. They can easily get good prices for goods without payment in advance or payment warranty. Small investors and customers are still loyal to their concrete supplier, while the negotiations for businesses above 1,000 cubic meters of concrete put the end price at the highest bargain priority for the customer. Political and lobbying network can provide many business opportunities but it may be perceived as a step over the ethical and business transparency.

Many new entrants have stepped into ready-mix concrete business recently. Theirs most common strategies were based on the lowest possible price offering to customers. After three years the whole market faces sales price decreasing spiral that cannot be controlled anymore.

Similarly to competitors, raw material suppliers for the industry lack the bargain power in procurement chain. Cement producers shrink the business and divest wherever it is possible. Bordax can choose among many raw material providers although it has to keep the control over the production avoiding too frequent replacement of essential materials such as cement and aggregates.

Concrete is most common building material in the world and there are many different implementations possible. However Slovenia has a great opportunity of untapped wood. More than 60% of national land is covered by forest while only a small part of houses is built from wood. There are no threats in a short-term period, but during next 30 years the concrete consumption will gradually decrease. Main reason lies in the values of Slovenian people. As stated in the Eurostat Statistical Book (2013) 68.7% of people in Slovenia live in houses, whereas the percentage of people living in individual houses in whole Europe stops at 34.4%. As the company's most important customer segment includes small constructors and individuals, such information presents important long-term trend of concrete consumption.

Most common tool for analyzing internal and external performance factors is analysis of strengths, weaknesses, opportunities, and threats known as SWOT analysis (ProvenModels, 2013). Avoiding huge and risky construction projects has caused more stable and sustained business growth although not so expansive as in the whole construction industry. Consequently the company market position moves more toward individual residential segment and private small investors’ projects. As the industry shrinks and product prices decline the management has to adjust the business to new environment and business conditions. Bordax SWOT analysis described in table 1 targets issues that are part of the most important objectives of this research project.

Table 1: Bordax SWOT analysis (Bordax d.o.o., 2013)

Strengths	**Weaknesses**
- Stable and sustained production quality - Stable level of production and sales regarding the industry situation - Long-term partnership and many small customers with high loyalty - Low employees' fluctuation	- Weak lobbying and political network - No experience in investments in civil engineering projects - Liquidity problems and lack of financial resources - Low business profitability and ROI
Opportunities	**Threats**
- Target a niche market on special concrete mixtures - Developing internal R&D division to implement new products - Acquire additional production plant	- Collapsed construction industry in Slovenia that is unpredictable - High level of corruption - New entrants without any experience could step into business as there are many unused facilities - Volatile supply of fly-ash as scarce raw material for concrete production - High risk to close the sales without getting payed - Many companies go bankrupt daily - Financial systems do not support industry

Although partnership and low employees' fluctuation increase business stability, there is no experience in lobbying within political and construction investors networks to achieve huge public construction projects. However, the mentioned business segment can be profitable but ready-mix concrete providers are not powerful business actors to achieve higher revenues and positive cash-flow. As the construction sector transfers rapidly toward many new small companies it is hard to predict future business performance.

2. LITERATURE REVIEW

Change has become a permanent way organisations inevitably adopt to survive and sustain. Industry consolidations, mergers and acquisitions, and global competitiveness lead organisations to different competitive pressures and more strategic alliances (Balogun & Hailey, 2008). During economic downturn a pressure toward organisational realignment increases and organisations have to change their structure, systems, and processes to readapt their business approach as the environment turns around. Importance of organisations' strategies and their changes has the crucial role for organisations' future performance and survival. The main features that influence a strategic change implementation are time that is available to implement the change and the extent of the change (Balogun J. , 2001). Two general types of change commonly and widely accepted in literature are continuous and episodic change. Balogun (2001) defines change types from the aspects of speed and scope and identifies the following four different types of strategic change: evolution, adaptation, revolution, and reconstruction (table 2).

Table 2: Types of change (Balogun, 2001)

Extent of change

Speed of change		Transformation	Realignment
	Incremental	**Evolution**: Transformational change implemented gradually through inter-related initiatives; likely to be proactive change undertaken in participation of the need for future change	**Adaptation**: Change undertaken to realign the way in which the organisation operates; implemented in a series of steps
	Big Bang	**Revolution**: Transformational change that occurs via simultaneous initiatives on many fronts; more likely to be forced and reactive because of the changing competitive conditions that the organisation is facing	**Reconstruction**: Change undertaken to realign the way in which the organisation operates with many initiatives implemented simultaneously; often forced and reactive because of a changing competitive context

Several authors explain the change of organisational culture and employees' new values and behaviour as the most important stage of strategic change that must be undertaken although it takes time **(Kotter, Leading Change: Why transformation efforts fail, 1995)**. But gradually implementing change that keeps going on for a longer period tends to become less in line with the environment and political aspect of decision making becomes more powerful than intellectual **(Johnson, 1992)**. At one moment more rapid and fundamental change must occur and such change increases the resistance while rearranged systems, structures, and processes replace the way people used to do their job **(Johnson, 1992)**. Additionally, an important role of strategic change implementation consists of the power of change managers. Often outsourced consultants provide more efficient and apolitical way to speedup the change process **(Balogun J. , 2001)**. Besides they tend to get more relevant information regarding the organisation culture and employees' willingness to transform. In fact, the change is not about changing systems and structure; it is about changing people **(Balogun J. , 2001)**. This is the reason why many theorists mostly focus on organisational culture.

2.1. Theories, Frameworks, and Models

According to Rajagopalan and Spreitzer (1997) many authors try to define and explain strategic change and its implications, but still there are many contradictory findings with wide range of understandings about strategic change. They define the strategy change as a difference in the form, quality, or state over time in an organisation alignment with the environment (Rajagopalan & Spreitzer, 1997). Julia Balogun (2001) argues that there is no simple way and general framework that will work in all cases of strategic change. Several authors agree that strategic change is the most difficult, dangerous, and doubtful process to initiate a new way of doing business (Kotter & Schlesinger, 2008; Tichy, 1982). Strategic change leadership requires a clearly defined vision with concrete objectives and achievable goals to develop strategic change program and its implementation (Macmillan & Tampoe, 2000). All mentioned aspects of the strategic change lead to many different perceptions, approaches, and theoretic models that are briefly described below.

Kurt Lewin (1951) defined change as a three step process with unfreeze, change, and freeze stages and provided ground theory for many new strategic change models that appeared later. Unfreeze stage presents preparation for change and first step out of the comfort zone toward the next stage of implementing change. This often confusing stage ends after the change process stabilization and moves into the last stage of the change process. The theoretical perspective of organisation's transition can also be explained with technical, political, and cultural ongoing dilemmas each organisation has to adopt and manage (Tichy, 1982). According to Tichy (1982) managers too often target just small components of the overall change problem and behave more tactically than strategically. They tend to use the same levers based on their past experience irrespective of the nature of the problem. During the 80s managers established their strategies through changing organisational structure mostly but they rarely succeeded. McKinsey 7S strategic model went beyond organisational strategy and structure that provided seven different influencing factors for successfully implementing strategies (Waterman, Peters, & Phillips, 1980). Although three hard elements strategy, structure, and systems were important, the model addressed also additional four soft elements such as skills, staff, style, and shared values. Burke and Litwin (1992) target organisational change from transformational and transactional sets of variables and leadership set of concerns depends on the scope of required change. For minor step-by-step adjustments a transformational layer takes most of management concerns while rapid change requires leadership to conduct the transactional change approach (Burke & Litwin, 1992). Nowadays many consultants providing support and advice in the field use Kotter's eight steps of leading change model as the most appropriate due to its simplicity and clear linear path, but leading change does not mean implementing tasks just step by step (Kotter & Schlesinger, Choosing Strategies for Change, 2008). Most concerns target resistance among company's employees and provide different managing methods to balance through the change process. The management team has to create high motivation among employees and the need of urgency to speed up change. Celebrating small wins on a change path represents a strong motivation factor, although the whole transition takes time to adapt the way people do their job. Quite a different perspective to strategic change is described by change kaleidoscope framework that was developed to help managers design a context sensitive approach which can be balanced during the change process (Balogun J. , 2001). Kaleidoscope does not provide general framework to be used in all cases as it can help managers develop necessary skills to analyze, judge, and balance their ideas toward desired objectives. There is no linear path described, but many different aspects of the process influence each other. As too many strategic change models are either too academic or too simplified for practical usage integrated approach based on five dimensions was developed by Victor and

Franckeiss (2002). They argue that both future and organisational change cannot be easily defined, so change has to be managed proactively including five dimensions of integrated strategic change process (Victor & Franckeiss, 2002). The five dimensions of change is a cyclical model that effectively puts together all the aspects of strategic change within organisation and establishes leadership and communication as most powerful and crucial aspects of strategic change (Victor & Franckeiss, 2002). Due to many failures during strategy implementation process a lot of authors try to develop strategy implementation model that goes beyond organisational structure which is preferred dimension of formulating strategic change by many managers. 5P's strategy implementation model targets purpose, principles, processes, people, and performance as five important functional stages that are further defined in a more detailed way (Pryor, Anderson, Toombs, & Humphreys, 2007). Authors argued the effectiveness of their proposal by feedback from each process stage; performance measurement system and its connectivity to many other management tools and theories such as SWOT and Balanced scorecard. All models' paradigms and specific areas must be aligned with each other to achieve maximum efficiency and effectiveness (Pryor, Anderson, Toombs, & Humphreys, 2007).

A variety of change models described different concepts and perspectives that cannot be simply put together into a more sustainable generic theory model. Timeline of theories and their occurrences pictured in figure 20 illustrates the connection between the speed and scope of environmental changes and number of different theories appearances. Due to rapid technology development and globalization organisations need to respond to the unpredictable changing environment with flexibility and continuous organisational re-adaptations.

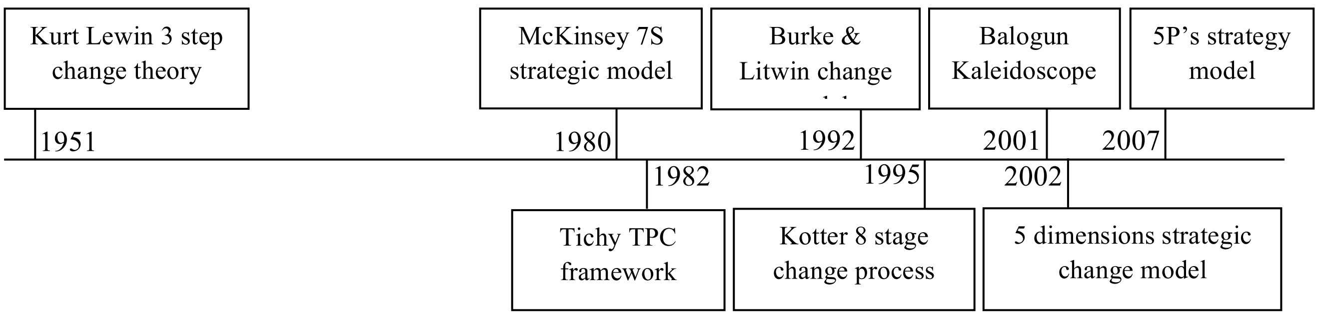

Figure 2: Timeline of strategic change theory models and frameworks

At the end of twentieth century industrial globalization forces organisations toward more rapid and frequent changes and many new theories and models appear. Due to many practical problems in managing change, theory models tend to connect academic research and practical approaches (Victor & Franckeiss, 2002). The five dimensions model by Victor & Franckeiss (2002) proves as a robust cyclical framework that can be managed. However, the main five dimensions are relatively generalized and management can evaluate them regarding the particular case. The more critical aspect should target the possibility to adapt strategic approach easily, which can turn the change process backward. The strategy re-adaptation during the change process should be carefully discussed before its implementation to avoid the case when management put a desired vision and strategy in line with already achieved strategic results. A more detailed model definition is evaluated by 5P's strategy model that can be supported by other managerial tools such as SWOT and Balanced scorecard (Pryor, Anderson, Toombs, & Humphreys, 2007). A cyclical model is developed on different organisational levels to keep the change process under strict control. Besides, the flexibility is still possible within strategic change directives led by top management. As the model is relatively complex its form can be adjusted to the particular change project according to its size and urgency.

All strategic change frameworks described in the chapter address terms of speed and extent of change as main features that influence the way strategic change is implemented. The change implementation is finished when all new systems, structures, and procedures are deeply adopted into organisational culture (Kotter & Schlesinger, Choosing Strategies for Change, 2008). Although all described models give different perspectives to strategic change they all contain important parts of organisational culture issues, for example communication, symbols, power structures, and organisational culture. Without having an idea where to go and what to do every strategic approach and direction looks fine. The vision has to be clearly transferred to achievable and shared objectives.

3. RESEARCH METHODOLOGY

The literature review and the background presented in previous chapters address profitability and liquidity as main issues influencing organisation's future survival and lead to the following research questions:

- How to stabilize financial part of the business and increase value of liquid assets?
- What are customers' priorities, values, believes, and perceptions about ready-mix concrete usage?
- Are there any new uncovered product segments or new markets to enter?
- What are the issues that make the company recognizable and increase its competitive advantage?
- What are the strategic change issues the company has to fully adopt and implement to survive?
- What measures should be taken to monitor and control the change progress?

3.1. Research strategy and design

Research strategy consists of both a cross-sectional quantitative method used in self-completion questionnaire for a representative group of customers and a focus group interview as a qualitative method of both open and close questions interview taken within the company management team. The main research objective is to evaluate the strategic change program within the company management team upon the findings of the quantitative research approach that is used to collect relevant data about customer values and behaviour.

A simple random sampling method was used to create a relevant sample of 200 respondents from the representative population of 42,852 construction companies in Slovenia. The research population was extracted from the census by Standard Classification of Activities (Statistical Office of the Republic of Slovenia, 2013). The online questionnaire was developed through the internet based tool designed at the Faculty of Social Sciences (www.1ka.si) and was accessed by individual invitation letters sent to all the respondents of the research sample. It mostly consists of closed questions that do not require many respondents' activities and decreases the time needed for fulfilment. However, some open questions can be carefully included to achieve wider customer aspect to the research topic.

Very important part of primary data research consisted of a qualitative method used after the analysis of self-completion questionnaire. Due to the nature of the literature reviewed, an open discussion moderated by researcher generated wider perspective to the research objectives. According to Bryman and Bell (2007) the focus group method is a form of group interview on a specific topic where respondents are invited in a small number by focus group moderator. Four managers with different professions and responsibilities constitute the company's management team and they were all invited to cooperate in focus group interview moderated by general manager. According to Eliot & Associated (2005) a moderator's coordination plan with all research topics and objectives has to be defined and evaluated to achieve the focus group conducting process.

4. ANALYSIS AND FINDINGS

Before focus group interview with company middle management the online questionnaire among a relevant sample of customers was conducted. While the population sample included 200 respondents, 27 of them were unreachable as their electronic mails were rejected. From 83 questionnaires received 49 are valid. Although only 23 of received questionnaires are fully filled in the gathered data is relevant to evaluate some of the findings upon the analysis. According to Baruch and Holtom (2008) average response rates of surveys collecting data from organisations are 35.7% with a standard deviation of 18.8%. However, response representativeness is more important than the response rate (Cook, Heath, & Thompson, 2000). Most of the respondents are organisations within 42.2 Construction of residential or non-residential buildings as they present 66% of respondents. Another important group of organisations presents 17% of companies specialized in a variety of different construction activities (43.99 Other specialized construction activities). Although only a small part of them frequently purchases ready-mix concrete they constitute an important customer segment that should be analyzed separately.

The most important part of primary data research includes evaluation of customer values, beliefs, and perceptions. As shown in figure 3 the most significant issues for customers at the moment of choosing a ready-mix concrete provider are price and quality of concrete.

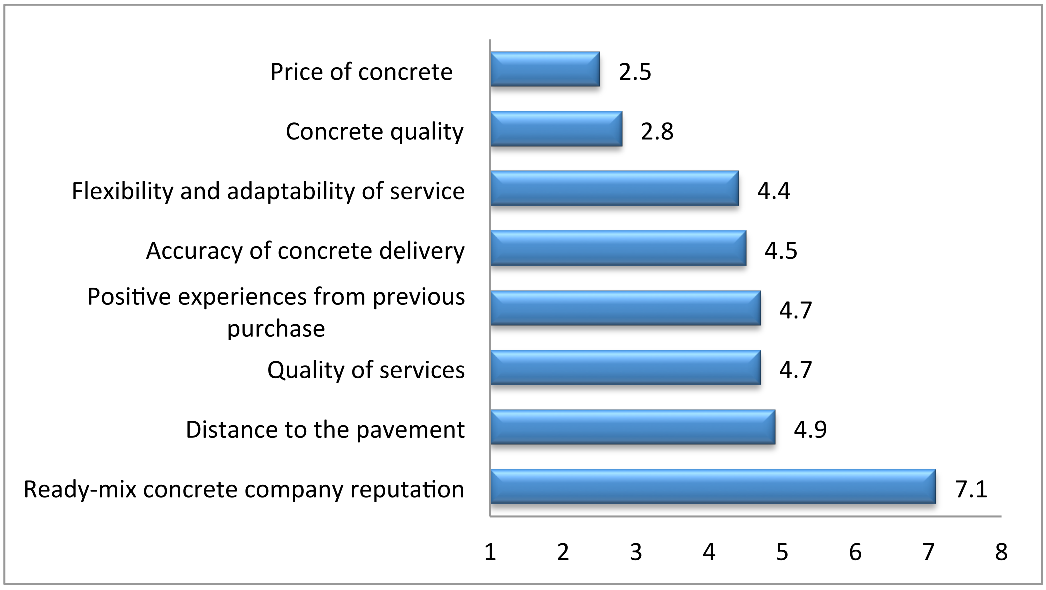

Figure 3: Customers' values

The whole construction procurement chain is based on a ratio between price and quality. As pictured in figure 25 there are noticeable differences between first two issues and all the others that put ready-mix concrete providers in subordinate position against their customers. All the other issues such as good services and concrete producer reputation are not very important when choosing a supplier. Customers certainly do not value concrete provider's reputation at all and every new competitor presents a threat to increase the downward pressure on sales prices. Customers easily change a concrete supplier without any additional costs and they are not loyal to only one ready-mix concrete supplier. While ready-mix concrete producers have to balance their production and return on sales they tend to decrease price when concrete consumption declines, sometimes even below their production costs. All findings about customer values and requirements form the survey demonstrate the features of ready-mix concrete that are similar to commodities. A commodity product is defined as a product of uniform quality with a low degree of differentiation that is easily interchangeable by substitutes of competitors' product (Lager & Blanco, 2010).

The analysis shows many similarities to the Chad Syverson (2008) Market research who argues that the combination of high transport costs and strong dependence on the local construction sector imply the ready-mix concrete market is not the national unit as it is more a collection of local geographic markets. Further, a demand for ready-mix concrete strongly depends on the construction activities only in a particular market. However, stronger competitiveness among concrete producers that results in decreased average prices of the local ready-mix concrete industry cannot contribute to the re-growth of the local construction industry (Syverson, 2008).

Companies specialized in construction activities (SIC 43.99) have quite different requirements as they put product quality at the top of their priorities (figure 4). In addition to the price of concrete the distance of the concrete plant to the pavement and accuracy of concrete delivery is also important. These companies are extremely specific and have diverse requirements. Narayandas (2005) argues that in business markets, almost every customer needs a customized product. Although the ready-mix concrete is a commodity, there are different segments of customers with different needs.

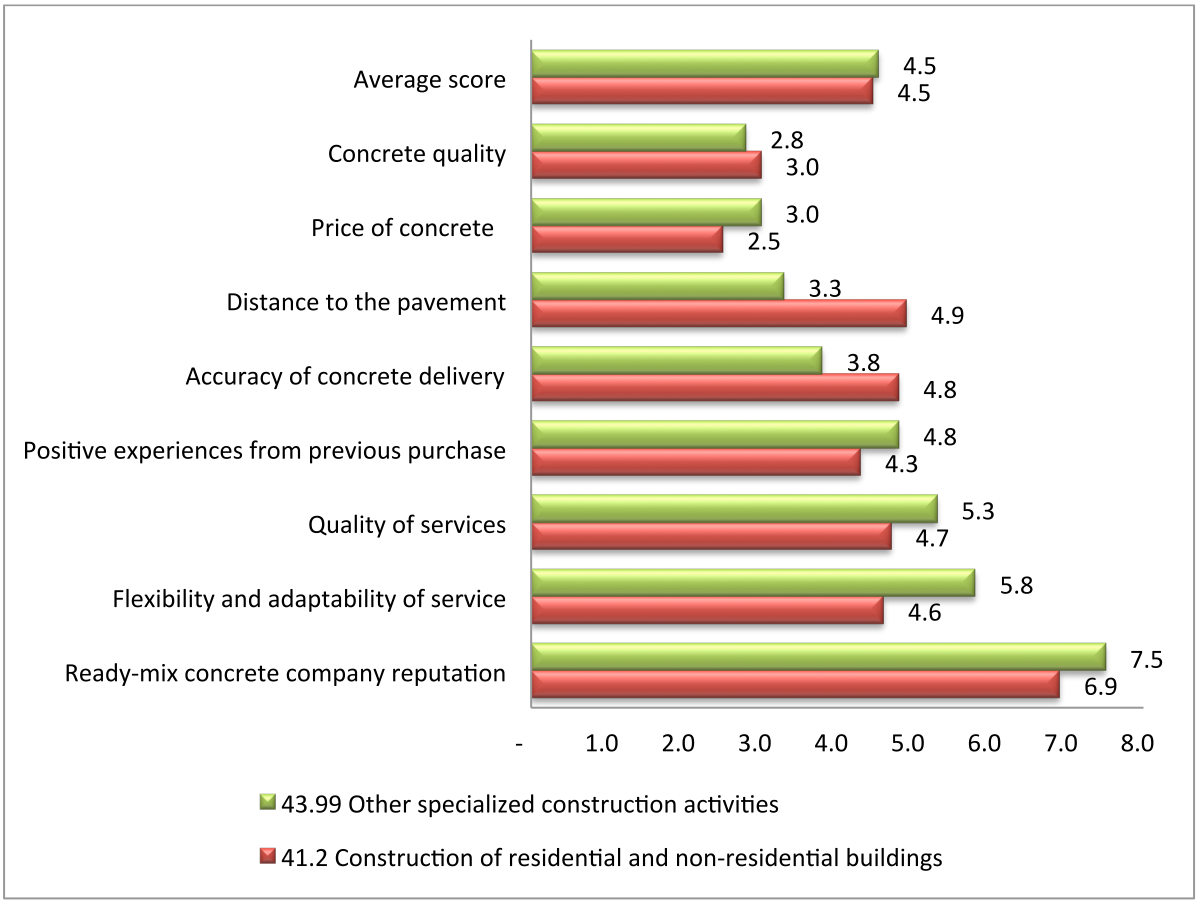

Figure 4: Comparing customers' values by different groups of Standard Classification of Activities

Concrete quality and price are still the most important issues that remain the same but in the opposite rank. A very significant issue when dealing with special concrete mixtures are on time and continuous concrete delivery to the construction pavement. Technology requirements about industrial pavements are strict about the implementation process and smooth operations to achieve high quality end product. Each delay in concrete delivery can result in top layer cracking (Bordax d.o.o., 2013).

Low negotiation power toward customer forces concrete producers taking high business risk to stay on the market hoping to survive when they let their customers delay payments without any obligation. At the same time customers, especially large constructors, have to obtain bank warranties for every public investment. During financial crisis banks tend to increase costs of their warranties and construction companies have to keep a big amount of their cash as a credit for the warranty (Renar, 2013). All those investment requirements further reduce companies' effectiveness and financial stability. Only 18% percent of ready-mix concrete is secured for the payment by bill of exchange, however it is not a highly appreciated warranty system in daily business.

Compared to the population size nearly 7°% of customers occasionally purchase special concrete mixtures. Yet, each particular product mentioned in the questionnaire requires a different marketing and technological approach. There is an opportunity that is also argued by Copher (1995) to step out from the production of concrete as a commodity and move toward providing highly sophisticated solutions.

As the next step in the primary research focus group interview was taken to upgrade the primary research. All five members of Bordax management team attended to evaluate and analyze the industrial situation, company SWOT analysis, and findings from primary data research results. It was moderated by general manager included a brief presentation of the research project, objectives, rules of conducted focus group, and the most important issues regarding the construction industry in Slovenia.

One of the important findings is customer relationship that has to be managed on the long term and must include all employees in the company. Personal relationships with contractors and customers based on the company's core values during years are one of the strongest business drivers in the industry (Syverson, 2008). All members support Syverson argument about relationship capital. Results on average are better graded from customers' perceptions than from company internal staff as they illustrate that employees should be more self-confident and trusting to the most important customers.

Members put their arguments forward quite differently depending on their professional perceptions, but most of the importance was put on product and service quality. Further, poor internal and external communication disrupts the quality because all the production and implementation is not optimized and small mistakes cause quality failures. Better educated and more experienced employees in all areas are an important factor to increase quality of the concrete especially when there are some new more sophisticated concrete solutions to implement.

5. CONCLUSIONS AND IMPLICATIONS

According to primary research findings and environmental impact there are several features influencing the strategic change model composition and its priorities. Despite the construction industry depression Bordax performance remains relatively stable. There is enough time for detailed consideration of company's vision, mission, and core values. Construction industry is in a rapid transformation and government has no vision and no investment strategy of public infrastructure for the next few years. During strategic change process the company needs high level of flexibility to adapt to possible external changes in the construction market. Besides, a strategic change model must be reliable to ensure that organisation's core values, which are delivered through business to customers, will be without any errors and mistakes. Consistency of direction and constancy of purpose are essential features of every change management team (Victor & Franckeiss, 2002). Due to the organisation size, structure, and relatively simple processes there is no need for a complex and extensive change model. The clarity and efficiency of all change procedures and policies are more important. Victor & Franckeiss (2002) argue that many change models tend to be either too simplified or just too academic. As mentioned in primary research customers are divided into more target segments. While some of them mostly prefer low price of concrete irrespective of the quality other customers demand individually developed concrete mixtures with special characteristics. Strategic change model has to provide a possibility to manage different strategic directions for particular product and market segments. In addition, change management specifically needs feedback and relevant information about the change process performance and its direction (Pryor, Anderson, Toombs, & Humphreys, 2007).

Through the evaluation of research findings The Five Dimensions Strategic Change Model by Viktor & Franckeiss (2002) appears as the most appropriate model that is suitable for this particular case. Its flexibility and cyclical form are main model benefits that provide an effective management tool for practical use. The change model is simple and transparent. However, it covers all key functions of every effective strategic change implementation.

5.1. The five dimensions of strategic change

According to Victor and Franckeiss (2002) the strategic change is defined as a cyclical progress of five dimensions that consist of all important activities and aspects to implement new strategic direction into organisation culture that result in desired business performance (figure 5).

Figure 5: General description of Bordax strategic change model

Direct dimension provides the organisation's overall direction and purpose and consists of company's vision, mission, and aspirational value statements (Victor & Franckeiss, 2002). Bordax takes the leading position as the most sophisticated ready-mix concrete producer in the market. While fully standing behind the product quality they try hard to perform all given promises to customers. There are two strategic directions within overall business strategy explained. Basic ready-mix concrete production consists of cost-effective strategy as both the process and business structure remain more or less the same while individually developed special concrete mixtures as a new special concrete production are fully developed and implemented through the differentiation strategic approach. Both strategies are interdependent because each particular change in one of the product lines influences the other's performance in a positive way.

Describe dimension translates the vision and mission into enabling strategies and operational strategies (Victor & Franckeiss, 2002). Operational strategies are tied to company's main functions defining every strategic objective more narrowly. Cost-effective strategy is concerned to balance between optimal sales price and cost of production because the basic line products are fully standardized and hardly differentiate among competitors. Marketing strategy must also balance between the product price, payment conditions and risk of business. Internal quality control has to be reorganized into research & development department to take a more proactive approach. Additionally to its basic activities researchers in laboratory have to develop new more sophisticated products with special technical requirements. In cooperation with marketing strategy and individual customers concrete based developing clusters have to be established where procurement chain is optimized to provide sophisticated solutions directly for each particular customer. Non-shrinking concrete, visible concrete, and acid-resistance concrete are no more just products, but an important part of individually developed solutions. The whole production, operational processes, and structure must adjust to new technology and organisational requirements.

Define dimension is concerned with the practical applications of the strategies to establish approach consistency (Victor & Franckeiss, 2002). Each organisation department must have established project management for each of the proposed projects or applications to monitor its progress and financial structure.

Next dimension is defined as *Deliver* where all business strategies have to be operationally defined to ensure that all the processes and procedures are implemented in view of their strategic directions and objectives (Victor & Franckeiss, 2002). Open communication that is consistent with management behaviour is crucial for the strategic change success.

Develop dimension is defined as the evaluation and monitoring stage of the change process that has to review the business strategy and take appropriate changes in the case of unwanted circumstances (Victor & Franckeiss, 2002). Ongoing analyses like SWOT analysis and frequent scan of the environment are activities that support proactive approach of risk management to keep the change ahead. Top management's most important rule is to communicate and behave strategic change approach and analyse, monitor, and lead all the projects and programs in progress. Every turn of the strategic change cycle is an opportunity for management to scan, analyze, and propose new project and programs.

5.2. Conclusions and implications

Taking into account the presented findings upon the primary research and analyses of environment there are some of the major conclusions that have to be described in addition to the strategic change model evaluated above.

- Every successful change requires a consistency of direction and a constancy of purpose in the form of strong leadership that leads the direction and transforms new behaviour deeply into organisational culture.
- Individual coaching, mentorship and outsourced consultancy are some of the possibilities every manager has to be prepared to apply at least partially for both personal growth and company's future performance.
- Mostly low educated employees in the company who are very different could easily become an obstacle when their daily jobs turn around and business becomes unstable without clearly defined processes and structure.
- Ready-mix concrete is a commodity that requires a reasonable marketing and technology approach. While standardized production requires strict implementation of low-cost strategy, individually developed concrete mixtures could achieve higher revenues with well designed differentiation strategy.
- A very important short term objective is to stabilize company's financial performance through marketing and sales strategic program including customer relationship management. Strictly defined sales conditions and payment requirements customers have to satisfy consistently are essential part of new sales approach.

New strategic approach improves company's overall performance, stabilizes financial and liquid resources, and increases its competitive advantage due to more specific and unique market position. During the research some of limitations and recommendations appeared and they are briefly described below.

- A combination of low response to the questionnaire sent and huge industry transition are reasons why some of the results are not relevant for more precisely defined conclusions. To increase reliability of presented findings the company's management should perform similar market research more frequently to measure customers' behaviour through longer time period.
- Findings related to special concrete mixtures represent a starting point for further individual developing project work with clearly defined and measured objectives on the basis of established clusters of cooperation organisations.
- While management has the responsibility and power to implement desired strategy there is a liquidity issue outside of direct influence. The lack of liquid resources strongly depends on the environmental conditions like payment culture, payment policies of the most powerful entities, and credit and financial resources health.
- Despite its limited competences the government should provide stable environment with financial and public support to the construction industry as one of the major industries in the country.

- Chamber of construction industry must evaluate all industry priorities and escalate problems construction companies face daily and proactively cooperate with all entities that have influence on development of the construction market.

There are no simple and effective solutions to return as a positive result shortly since management must strictly keep the direction toward new desired vision, motivate and positively influence all entities that are part of the new strategic change program.

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Conflict management styles among managers in Macedonian organizations

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ABSTRACT

Purpose: The purpose of this paper is to examine Macedonian managers' behavior and the strategy they most often have facing a conflict situation at work.
Design/methodology/approach: Research instrument in a form of questionnaire was used to obtain data about strategies for managing conflict. For assessing which of the five modes: competing, collaborating, compromising, avoiding and accommodating Macedonian managers' use we used Thomas-Kilmann conflict mode instrument.
Findings: The results from the study give new insights in the managerial mind, providing information about managers' approaches they have facing problems and conflict situations.
Research limitations/implications: There is a literature gap in the area of organizational behavior studies in Macedonia. The results from the survey can be used for comparing the profile of Macedonian managers with managers from other countries.
Practical implications: This study will increase the understanding of how managers' behavior is connected with conflict management styles. Also, the results from the study can be used in creating new teams and predicting behavior based on the styles used in learning and conflict resolution.
Originality/value: This research contributes to the field of organizational behavior by offering support and new findings. This study adds to the body of literature in what is considered relatively new and unexplored area of study in Macedonia. Also, this study will provide information about the behavior Macedonian managers have and clearer picture of their managerial style.

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1. INTRODUCTION

Conflicts can be seen as good and/or bad things. They are part of the organizations and if effectively managed can bring new qualities in the relationships, organizational growth and performance. One of the reasons why individuals get in conflict is lack of communication, differences in personality traits, differences in managerial style, and also differences in learning style and approaches in problem solving. The negative effect of conflicts can be higher level of stress, retention, turnover, absenteeism etc. For managers, it is important to be aware of their own processes, as well as recognizing and respecting the differences other employees have. Lot of research shows that managers spend up to 30 percent of their time to handle conflict and that is why successful conflict management is important as other functions: planning, communication, motivation, controlling (Watson and Hoffman, 1996). That is a huge investment in time, which is equivalent to lot of money. Efficient conflict management means surfacing conflicts quickly and setting them cleanly, which leads to better productivity, less stress and money spent on conflict management programs. Also, decision makings is positively affected by good conflict management and leads to innovative decisions, which are vital for organizations that aspire to be learning organizations or to compete on the basis of rapid adaptation and innovation.

When conflicts are treated badly, they can be harmful for the whole organization-a lot of time and energy can be spent for handling conflicts, lot of bad decisions can be made, procrastinate and resist changes. In conflicts situations people invest their emotions, very often negative emotions, which can be an obstacle for resolving the problem or creating new conflicts. In problematic situations personal goals can be put first, neglecting organizational goals. Conflicts are correlated with stress, low productivity, turnover, frustration etc. But, on the other hand, conflict can stimulate great changes and new reorganizations, restructuring, creating new products and services. They can be motivating, and seen as driver for finding better solutions, and can bring employees closer together. Conflicts can be seen as great learning situations, gaining new experiences and insights on personal and organizational level. It is of great importance to know conflict management styles in different cultures, in order to use the information in negotiating, creating cross-cultural teams and getting better results.

2. CONFLICT MANAGEMENT STYLES AND MANAGERS

In traditional way, conflicts were perceived as negative and as obstacles for prosperity, with a tendency of avoiding conflict situations. The modern approach toward conflicts is emphasizing that conflicts are part of human nature and inevitable for progress. In organizations conflict is observed as a creative force and carefully managed can lead to innovations and growth (Deutsch & Coleman, 2000). The dysfunctional conflict among individuals has proved to have a negative impact on organizational efficacy and performance (Zartman, 2000). Also, it has been shown that effective conflict management has a straightforward and positive impact on team cohesion. Effective conflict management can change downside effect of relationship conflict and task conflict on team cohesion to some positive impact (Alper, Tjosvold, Law, 2000).

Conflict can be defined as an incongruity of desires, goals or values between individuals or groups (Fisher, 1990). Another definition of conflict is "an expressed struggle between at least two interdependent parties who perceive incompatible goals, scarce rewards, and interference with other party in achieving their goals" (Hocker & Wilmot, 1991, p. 23).

Sometimes in conflict situations individuals perceive threats (power, emotional, physical) to their well-being or pressure to change their actions. Very often individuals in conflicts tend to respond based on the perceptions they have, rather than the objective review of the situation. There are lots of causes that can initiate a conflict, like poor communication, desire to obtain power, lack of resources, ineffective leadership, and lack of sincerity. In organizational context, for managers is important to be aware of the possibilities to prevent conflicts, and if they occur, ways to manage conflict and conflict resolution.

Individuals tend to use different strategies when facing a conflict, depending on the circumstances, the relationship with the other individual, the sources of conflict, previous experience, the need and wishes of the individual at the moment. A common definition is that people choose five different strategies facing a conflict: Avoiding, Accommodating, Competing, Compromising and Collaborating (Deutsch and Coleman, 2000).

One of the most popular and most frequently used instruments to measure conflict management styles is based on the Thomas-Kilmann model. Thomas and Kilmann do not suggest that all conflict is best resolved by searching for a win/win situation. Indeed, there are a number of different ways to deal with conflict and each of these modes of conflict handling can be useful under different sets of circumstances. For example, following the five conflict-handling modes identified by Thomas and Kilmann, each of the following may be appropriate under divergent circumstances:

- "two heads are better than one" (collaborating);
- "kill your enemies with kindness" (accommodating);
- "split the difference" (compromising);
- "leave well enough alone" (avoiding);
- "might makes fight" (competing).

The Thomas-Kilmann conflict mode instrument (TKI) assesses an individual's behavior in conflict situations, along two dimensions: assertiveness (the extent to which the individual attempts to satisfy his or her own concerns) and cooperativeness (the extent to which the individual attempts to satisfy other person's concerns (Thomas & Kilmann, 1974, 1976).

The extent to which a given conflict-handling mode is effective depends on the requirements of the specific conflict situation and the skill with which it is used. In this sense in any given situation a particular mode of handling conflict may be more suitable than others. Furthermore, every individual is capable of using all five conflict-handling modes; nobody can be characterized as having a single, inflexible style of dealing with conflict, although some people will be more inclined than others to use certain modes. The conflict behaviours of individuals, therefore, are a combination of their personal characteristics and the requirements of the circumstances within which they find themselves. This is important and is the purpose of the Thomas-Kilmann conflict mode instrument. In addition to the conflict-handling modes, Thomas and Kilmann developed their model further by indicating that all reactions to conflict stem from two general impulses. First, assertive behaviour, the desire to satisfy personal concerns and, second, non-assertive behaviour, the desire to satisfy the concerns of others (Figure 1).

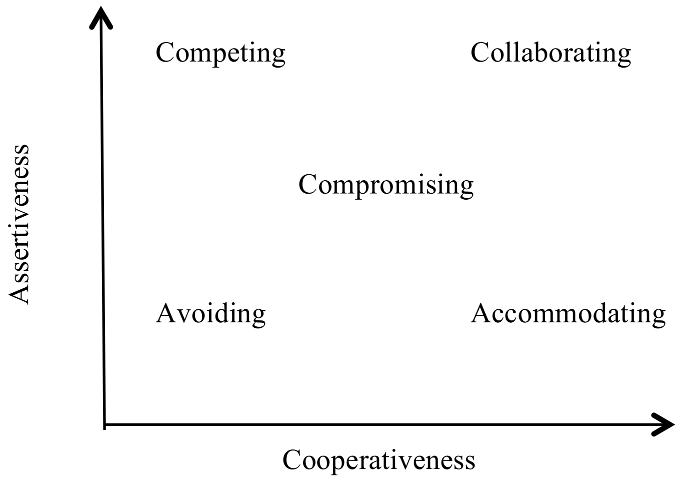

Figure 1: Conflict grid

Source: According to Thomas & Kilmann, 1976

Competing (forcing) is assertive and uncooperative—an individual pursues his own concerns at the other person's expense. In a general sense, competitively oriented people often act in an aggressive and uncooperative manner. This is a power-oriented mode in which you use whatever power seems appropriate to win your own position—your ability to argue, your rank, or economic sanctions. Competing means "standing up for your rights," defending a position which you believe is correct, or simply trying to win. The situation is often one of win-lose, with attempts to dominate being common. The use of this style is productive when the situation is urgent, and decisions have to be made fast.

Accommodating (soothing) is unassertive and cooperative—the complete opposite of competing. When accommodating, the individual neglects his own concerns to satisfy the concerns of the other person; there is an element of self-sacrifice in this mode. Accommodating might take the form of selfless generosity or charity, obeying another person's order when you would prefer not to, or yielding to another's point of view. Those people who tend towards accommodation are more concerned about pleasing others than with meeting their own needs. They tend to be non-assertive and co-operative. People who practice this style of conflict management give up their needs and wants in order to keep the peace and make others happy. Managers should use this style when the problem is more important for the others person, or they should act strategically and invest in future cooperation and collaboration with the other party.

Avoiding (withdrawal) is unassertive and uncooperative—the person neither pursues his own concerns nor those of the other individual. Thus he does not deal with the conflict. Avoiding might take the form of diplomatically sidestepping an issue, postponing an issue until a better time or simply withdrawing from a threatening situation. People who practice the avoiding style tend to behave as if they were indifferent both to their own concerns and to the concerns of others. Those who avoid conflict tend to prefer apathy, isolation and withdrawal to facing conflicts. They tend towards letting fate solve problems instead of trying to make things happen. When potential conflict situations arise the avoider might seek to distract attention from the issue, or ignore it completely. This response, depending on the conditions under which it takes place, can be seen either as evasive or as an effective and diplomatic avoidance strategy. Managers should use this style when the problem is less important, or when they assess the situation where nobody can satisfy their needs. Sometimes, conflict can be used for gathering information, letting others deal with the situation and avoid creating more problematic behavior and negative emotions.

Collaborating (problem solving) is both assertive and cooperative—the complete opposite of avoiding. Collaborating between two individuals might take the form of exploring a disagreement to learn from each other's insights, resolving some condition that would otherwise have them competing for resources. Collaborating involves an attempt to work with others to find some solution that fully satisfies their concerns. It means digging into an issue to pinpoint the underlying needs and wants of the two individuals. Collaborating between two persons might take the form of exploring a disagreement to learn from each other's insights or trying to find a creative solution to an interpersonal problem. People who have a collaborative orientation tend to be highly assertive and highly co-operative in behaviour. They seek a mutually beneficial solution, integration and win-win situations.

Compromising (sharing) is moderate in both assertiveness and cooperativeness. The objective is to find some expedient, mutually acceptable solution that partially satisfies both parties. It falls intermediate between competing and accommodating. Compromising gives up more than competing but less than accommodating. Likewise, it addresses an issue more directly than avoiding, but does not explore it in as much depth as collaborating. In some situations, compromising might mean splitting the difference between the two positions, exchanging concessions, or seeking a quick middle-ground solution. Compromising people are satisfied if people achieve moderate levels of satisfaction with agreements in conflict. Compromising people do not fully avoid the problem, nor do they fully collaborate to develop a win-win resolution. (Thomas, 1976).

Individuals can use one or more of the styles, however, most of us will feel more comfortable with one style than with others. It is the style(s) with which we feel most comfortable that we are likely to use most of the time.

3. RESEARCH METHODOLOGY

The purpose of this paper is to explore the research question: Which conflict management style Mancedonian managers use most frequently?

Based on the research problem and theory the following hypothesis is formulated:

We expected to find that Macedonian managers most frequently use compromising and collaborating as conflict management styles.

3.1. Sample

The sample group consisted 180 managers, but because of incomplete data in the analysis 173 managers were included. The sample consisted 80 female managers (46,2%) and 93 male (53,8%) managers. In this sample group 41 managers (23,7%) were younger than 30 years old, 30 managers (20,2%) were between 31 and 40 years, 68 managers (39,3%) were between 41 and 50 years, and 29 managers (16,8%) were older than 51 years. Managers in this sample had different education: 49 (28,3%) had high school diploma, 101 (58,4%) had bachelor's degree, 22 (12,7%) had master's degree and 1 manager (0,6%) had Ph.D. The managers in the sample group were managing in private (79,8%) and public (20,2%) organizations. According to the size of the organization they are managing small organizations, with less than 50 employees (94 managers – 54,3%), middle organizations (41 managers– 23,7%) and large organizations (38 managers – 22%). According the level of the position they have, 88 managers (50,9%) were first line managers, 49 managers (28,3%) were middle managers and 36 managers (20,8%) were top managers. The managers from this sample group are different according the lenght of their managerail experience: 62 managers (35,8%) have less than 5 years managerail experience, 55 managers (31,8%) have between 5 and 10 years of experience, 29 managers (16,8%) have between 11 and 15 years of experience, 13 managers (7,5%) have between 16 and 20 years of experience, 9 managers (5,2%) have between 21 and 25 years of experience and 5 managers (2,9%) have more than 25 years of managerial experience.

3.2. Data collection

An introductory email was sent to the sample population, explaining the study and inviting their participation. Following this introduction, we interviewed the participants in the study during the period September-November 2013.

3.3. Measurement of variables

The research questionnaire consisted of two parts. The first part was drawn for collecting demographic information of managers, and the second part represented the main research questions. Demographic questions were about age, gender, education, working experience, type and size of organization and level of management.

Conflict management styles

The second part was Thomas-Kilmann conflict mode instrument (TKI), consisting of 30 forced two-choice questions. This instrument has been implemented in the majority of researches on conflict management. Twelve is the maximum score that can be devoted to each special conflict mode. Participants answered each question by choosing either A or B which attributes their prevalent response to conflict.

3.4. Data analysis and Hypothesis testing

The means, standard deviations and correlations among all the variables are presented in the following tables. In Table 1 are presented means and standard deviations of conflict management styles.

Table 1: Means and standard deviations of conflict management styles

Variable	Min.	Max.	Mean	SD
Competing	0,00	12,00	4,3815	2,79828
Collaborating	2,00	11,00	5,1676	1,88652
Compromising	1,00	12,00	8,0000	2,03744
Avoiding	1,00	11,00	6,9595	1,84378
Accommodating	1,00	11,00	5,4624	1,94847

In Figure 2 can easily be seen that the most frequently used conflict management style among Macedonian managers is compromising, and the least frequently used conflict management style is competing.

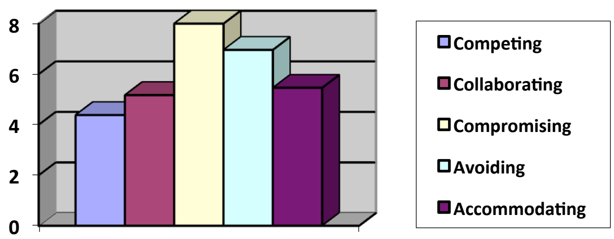

Figure 2: Conflict management styles among Macedonian managers

In Figure 2 are presented the styles of handling conflict in relation to gender. The two predominant styles of handling conflict for both men and women are compromising and avoiding.

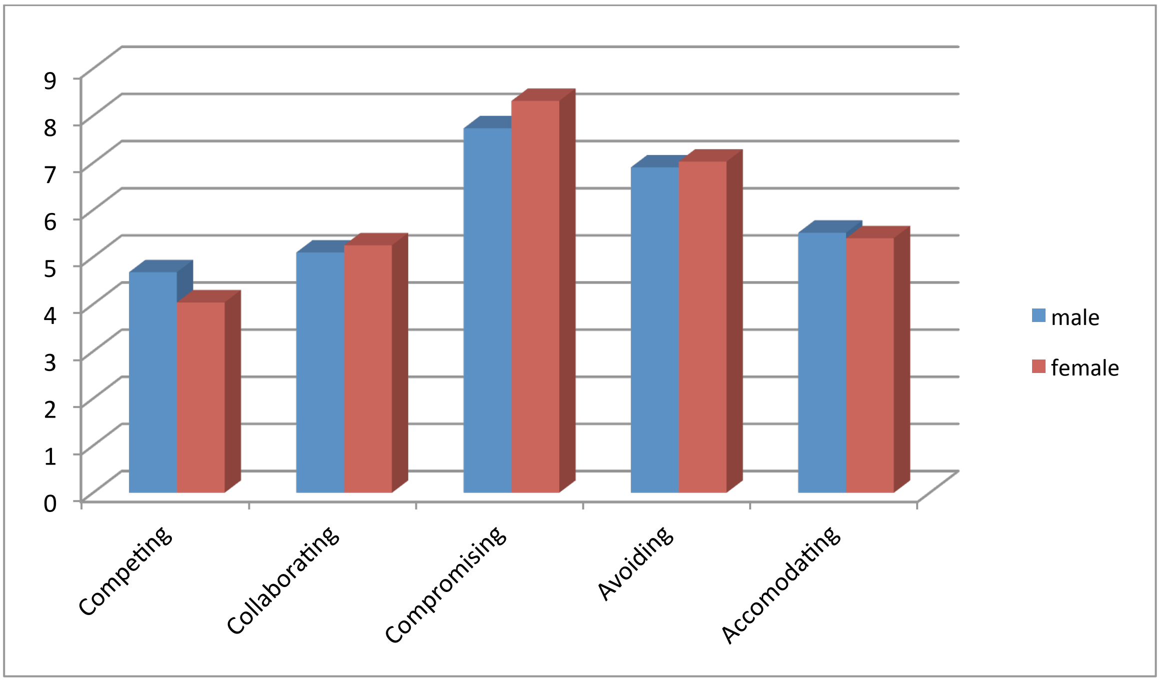

Figure 3: Styles of handling conflict in relation to gender

Based on the empirical analyses and obtained results, our researches prove the following:

- The most prevalent choice of conflict management style among Macedonian managers is compromising, followed by avoiding, accommodating and collaborating, respectively. Conversely, competing is the least common choice among Macedonian managers. We expected to find that Macedonian managers most frequently use compromising and collaborating as conflict management styles, which was confirmed by the results. Compromising is a give and take approach to conflict resolution which is likely to result in a solution of reduced effectiveness through dilution.
- We can say that this sample of Macedonian managers tend to adopt compromising style and wish to find mutually acceptable solution that satisfies both parties. This style is recommended when cooperation is important but time and other resources are limited. Very often in Macedonia, managers are facing situations when there are not enough resources and they have to manage with what they can use at the moment. This style enables managers to address an issue more directly than avoiding.
- The results show that the second preferred style is avoiding. This is uncooperative and unassertive style, which can lead to negative feelings, more problems and unresolved situations, as well as postponing the conflicts. Of the other approaches to resolving conflict identified by Thomas and Kilmann, competing is a strategy to win and not lose. There is no room here for listening to the views of the other party and developing a combined and better resolution of conflict.

- When Macedonian managers are in situations where the relationships are important for them, and they want to please others, instead fulfill their wishes and needs, they will use accommodating style. Managers using accommodating style yield their personal goals, objectives and desired outcomes to those of others. The accommodating style is most appropriate when managers realize that they are in the wrong or they are open to correction. This conflict management style is important for preserving future relations between the parties. Accommodation is a co-operative strategy, but is unassertive. It is a strategy of submission in which accommodators never get their views heard.
- The collaborating style is a win-win approach to problem solving, because this style is characterized by a high level of both assertiveness and cooperation. Collaboration offers the chance of consensus, integration of needs and the potential to yield optimal results. It brings new time, energy and ideas to resolve the dispute meaningfully. It is very much the prevailing belief in management thinking that, in the complex and fast-changing business world of the today, competitive advantage can be gained if the behavioral dynamic of organizations encourages collaboration. Collaboration is a strategy for resolving conflict that promotes assertiveness and co-operation. Assertiveness is important because it enables individuals to state their position openly. Co-operation is important because it promotes win/win solutions to conflict situations. We have the potential to develop new solutions to conflict situations by asserting our position and working towards better solutions by combining this with co-operation; adding value to each individual′s or each group′s preferred resolution. This style is rarely used by Macedonian managers and is something that should be considered enhancing. They should become more aware of the conflict management styles they use and hopefully start practicing more cooperative and more assertive styles which lead to win-win situations.
- The competing style, which is very rarely used by Macedonian managers, is a win-lose approach. It relies on an aggressive style of communication, low regard for future relationships and coercive power. Managers using this style tend to seek control over situation, because they are concerned that loss of control will result in solutions that fail to meet their needs. They should use this style in emergency situations or when their needs must come first or the issue is trivial.

4. CONCLUSION

The Macedonian managers tends towards using compromising and avoiding styles most frequently, and competing is the style used less than the others. We can conclude that using this particular styles is part of the Macedonian culture of being cooperative and unassertive in situations in order to keep the peace and supress own needs. Being „fair“ and process of „give and take“ is common for Macedonian managers.

Implications for future theory and research

This theoretical and empirical research provided an initial examination of the conflict management styles among Macedonian managers. This research has sparked numerous additional questions to be addressed by future research. Research like this is rare in Macedonia, and it would be the best to replicate the same study on other managers to provide more data about Macedonian managers, and their conflict management styles. This research should be redone with larger number of paticipants and more expansive sample groups considering different organizations and level of management. Further surveys will probably enhance the organizations and the educational system to take bigger steps in educating the managers in these topics and create greater awareness on the topic of managerial styles and ways to right style in different situations and benefit the most. Also, further study is needed to monitor the practical conflict management in actual situations and examining the ways managers communicate and make decisions.

It is also suggested to explore the root causes of manager's different behavior at workplace. Next studies should also compare the conflict management styles Macedonian managers have with managers from all around the world, and find similarities and differencies.

Implications for practice

The implications of the findings presented in this study are also important for practice. Information that will help organizations and managers start discussing the topic of conflict management styles and become aware of the importance of these styles on their behavior in every day business life.

This research provides implications for practice in several areas: discussion on the subject, new approaches to question managers styles, best ways they can use the knowledge and implement it in their work, when creating teams and making decisions. With the awareness they can have better communication with other, learn from experience and tend to be more open-minded, cooperative and assertive, as way as finding out an applicative methods for measuring the undertaken changes in conflict management styles of managers.

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Sustainable development and environmental protection in Romania

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A B S T R A C T

Environmental pollution and its devastating effects, which have made their mark on the contemporary generation, have generated the need for policies to protect the environment, but at the same time to create a framework conducive to sustainable development. Although in the literature are now numerous concerns for refining the objectives, to identify appropriate methodologies to help protect the environment and ensure sustainable development, however there is no a clear picture about the strategies of development and environmental protection, especially in Romania. The research goal is to capture the impact of pollutant factors on the environment`development, as well as measures that could mitigate the harmful effects of it. The paper presents and analyzes the economic reality of Romania, by drawing up a report on the work of environmental protection agencies, Botoșani. Its importance consist in the fact that it represents an element of strategic guidance on long-term efforts to solve the environmental development and protection issue. Also, the study tries to capture the ability of some strategies of sustainable development on amount of time horizon of 2013-2020. As can be seen in the work, Romania has a relatively large domestic market and the second largest in Central and Eastern Europe, a qualified workforce with low costs compared to Western European countries, and Romania's economic prospects have been improved following the accession to the European Union.

A R T I C L E I N F O

Keywords:

development, policies, pollution, protection, strategies

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1. INTRODUCTION

Industrialization has led to deeply changes in the rural area and in western countries for more than a century, and in Romania on the half-century, which found reflection in a strong concentration of population in urban areas, while gradually decline of the motherland, and that led to the exodus.

Worldwide, industrialization and urbanization are aware a new impetus. Mirage comfort from towns and economic and social situation better than that in the rural areas have accelerated the process of depopulation of the motherland. The agricultural community continued the process of decreasing numerical and economic and social degradation.

The essential process that shapes the economic progress is economic development and its contribution to improving the human condition, quality of life. From this point of view, economic progress is, at the same time, social progress. Thus, economic policies should be designed in the light of their impact on the environment, and environmental policies must take into account the economic implications.

Fr. Perroux J. (1991) considered, justly, that no progress would not deserve to be called economically if it would diminish the chances of flowering of the human being; conversely, no progress would not be social if you give everyone the means to a living human status.

The reason I chose this issue is due to the importance of the protection of the environment in which we are part, both in view of ensuring a healthy life, and to ensure a propitious economic environment development society.

Another aspect that motivates the choice of the theme *"Sustainable development and environmental protection in Romania"* is found in the paradoxical character that defines the process of globalization, taking into account the fact that although most of the time it can be beneficial, may result in the same time, with risk-taking both in terms of the natural environment, as well as industry and transportation.

In the literature there are different formulations of the concept of sustainable development, but underlying the elaboration of development policies in various fields of human activity.

By Allen's (1992) opinion, the sustainability expresses a use of "species and ecosystems at the levels and in ways that allow them to renew themselves for any practical purpose ... development that realizes human needs over the long term and improve quality of life". Goodland R. and Ledec G. (1988) believe that "sustainable development is a pattern of structural economic and social transformations currently available without putting our potential likely to obtain similar benefits in the future[…]sustainable development involves the use of renewable natural resources in such a way as to not be exhausted or degraded or are not diminished their usefulness for future generations[...]it also involves the exhaustion of non-renewable energy resources at a rate that ensures a great probability of the transition to renewable energy resources".

At european level it is necessary to adopt standard methods for managing air pollution, water management, soil to minimise impact on the environment and the sustainable use of resources, the main methods being the location of factories in places which minimizes the environmental impact of urban settlements and installations for waste water treatment, installation of pollution control equipment in a given period of time, or further measures to protect the environment.

In this sense, the work aims to capture the harmful effects of pollution in terms protection and sustainable development environment policies do not perform the tasks well enough, and the importance of identifying the real information of environmental problems (the quality and quantity of drinking water, surface water pollution, dangers posed by disasters/natural and anthropogenic phenomena, landslides, excess moisture, soil degradation, etc.) in order to combat them, given the fact that in the literature there is no a clear picture about the strategies of development and environmental protection, especially in Romania.

Therefore, one of the main objectives of the paper is to provide an overview of the theoretical and practical aspects of the problem of sustainable development in Romania, as well as the measures necessary for its protection.

This paper comprises five sections. In the first chapter I surprised a few theoretical aspects related to the characteristics of the natural environment, as well as some approaches in specialist literature, as then during the following two chapters to talk about economic reality in Romania and about the ability of some strategies of sustainable development on amount of time horizon of 2013-2020. In the penultimate chapter, we examined a concrete case, preparing a report on the work of Environmental Protection Agencies Botosani and which represents an element of strategic guidance on long-term efforts to resolve an environmental development and protection issue. The paper ends by presenting the conclusions and future research directions.

2. ELEMENTS OF STRATEGY – SUSTAINABLE DEVELOPMENT AND THE HORIZON OF 2013-2030

In the interests of progress and growth at all costs, man has forgotten, often that is part of the natural system, sometimes intervening over the carrying capacity. Thus, the imbalances has appeared, whose effects already feel, global concerns being increasingly emphasized in the direction of counteracting those effects.

Sustainable development can be seen as an adaptation to society and the economy at large problems that humanity faces today: climate change, water crisis, drought, desertification, depletion of resources, waste, biodiversity loss, population growth, poverty, migration, etc. To warning, counteract and eliminate their repercussions and to ensure that economic development, social progress and human development are necessary a initiating and supporting specific actions, synthesized in measurable and specific objectives, what is the subject of National Strategies for sustainable development.In order for the society to be able to adapt national strategies have been developed, with targets will result in actions that will resolve future problems our society faces today.

As of November 2008, Romania has a new National Strategy for sustainable development, the defining element of which is the connection of our country to a new philosophy of development, the European Union's own, and widely shared throughout the world to that of sustainable development.

Economic growth, as it was perceived and made it worth, affects the environment and actions, programs and meetings at the national and international level that have taken place since, in particular the 1992 World Summit in Rio de Janeiro - *United Nations Conference on Environment and Development* have been trying to limit the negative effects.

Agenda 21 is an action programme for the 21st century oriented by sustainable development. It was adopted by the States signatories to the Rio Declaration of June 1992. The main lines of action are: the fight against poverty and social exclusion, the production of sustainable goods and services, environment protection.

In 2002 took place the United Nations Summit on Sustainable Development, held in Johannesburg had as main outcomes:

- The Johannesburg Declaration on sustainable development;
- Implementation plan of the World Summit on sustainable development

The Johannesburg Summit reaffirmed sustainable development as a central element of the international agenda and gave a new boost to the practical implementation of global measures to fight against poverty and for the environment protection.

Has developed an understanding of the sustainable development`s concept, in particular by highlighting the main links between poverty, environment and use of natural resources.

Through the Johannesburg Declaration was assumed the collective responsibility for the progress and development of the three pillars of sustainable development: economic development, social development, environmental protection at the local, national, regional and global level.

The defining element of this National Strategy is fully connected to a new philosophy of development, the European Union's own and widely shared throughout the world-that of sustainable development.

It starts from the finding that, at the end of the first decade of the 21st century, after a prolonged and traumatic transition to pluralistic democracy and a market economy, Romania still has considerable gaps still to be recovered from the other Member States of the European Union, together with the learning and transposition in practice of the principles and practices of sustainable development in the context of globalization. With all the progress made in recent years, it is a reality that Romania still has an economy based on the intensive use of resources, a society and an administration still in search of a unified vision and a natural capital affected the risk of deterioration that can become irreversible.

This strategy sets out targets for the transition, in a reasonable time frame and realistic, the development model for generating high added-value, propelled by interest in knowledge and innovation, aimed at continuous improvement of the quality of life of people and the relations between them in harmony with the natural environment.

As a general guideline, the work aimed at achieving the following strategic objectives on short, medium and long-term:

Horizon of 2013: The incorporation of the principles and practices of sustainable development in all programmes and policies of the Romania`s Government as a EU Member State.

Horizon of 2020: Reaching the current average level of the European Union`s countries at the main indicators of sustainable development.

Horizon of 2030: Romania's significant near to the average of that year of EU member countries from the point of view of sustainable development indicators.

These strategic objectives will ensure at the medium and long term, a high economic growth and, consequently, a significant reduction of the economic and social gaps between Romania and the other Member States of the EU. Through synthetic indicator through which measure the process of real convergence, i.e. a per capita gross domestic product (GDP/place), the purchasing power standard (PCS), the implementation of the strategy creates the conditions that GDP/place expressed in PCS exceed, in 2013, half of the EU average in that time, to come closer to 80% of the EU average in the year 2020 and to be slightly higher than the average level in the year 2030.

Shall ensure the fulfilment of the obligations assumed by Romania as a Member State of the European Union pursuant to the Treaty of accession and the effective implementation of the principles and objectives of the Lisbon Strategy and the renewed Sustainable Development Strategy of the EU.

The objectives arising from the strategies, plans and national programmes of development by Marinescu (2003), the Strategy sets out the main directions for action for appropriating and applying the principles of sustainable development in the next period:

• Rational Correlation of development objectives, including investment programmes in cross-sectoral profile and regionally, with potential and the ability to support natural capital.

• The accelerated modernization of education and training systems and public health, taking into account the unfavourable demographic developments and their impact on the labour market.

• The use of best available technology, in terms of ecological, economical and investment decisions of public funds at national, regional and local, and the stimulation of such decision on the part of private capital; the introduction of criteria for eco-effective in all production activities or services.

• Predict the effects of climate change and the development of adaptation solutions over the long term, and the plans for measures of comes closest cross-sectoral, including portfolios of alternative solutions for crisis situations resulting from natural or human-induced phenomena.

• The need to identify additional sources of funding, in terms of sustainability, for the development of major projects and programmes, in particular in the fields of infrastructure, energy, environmental protection, food safety, education, health and social services.

• Insurance security and safety food through harnessing the comparative advantages of Romania in respect of the development of agricultural production, including organic products. Correlation of quantitative and qualitative growth of agricultural production to ensure food for people and animals with the requirements to increase the production of biofuels without compromising the requirements relating to the maintenance and enhancement of soil fertility, biodiversity and protection of the environment.

• Protecting and exploiting the cultural and natural heritage. Connection to European rules and standards relating to the quality of life to be accompanied by revitalization, in modernity, of traditional modes of live, especially in mountain areas and wet ones.

The objectives aims the maintenance, consolidation, expansion and adaptation of the structural pattern and functional capacity of natural capital as the foundation for maintaining and enhancing its capacity to support social development pressure and economic growth and the predictable impact of climate change.

3. REALITY IN ROMANIA`S DEVELOPMENT

Newly industrialized countries are countries with a large industrial sector, developing in parallel with a traditional sector considerably. A significant proportion of the population still lives in rural areas and work in traditional economic sectors based on agriculture. In the cities, modern industry, with a work force of elite workers category, is sitting next to a considerable informal sector, ranging from the street complex up to small workshops and factories. The average level of income per capita is much lower than in the developed industrial countries, and the standard of living is usually much lower, there is a middle class, a little big, but growing. Also lacks social protection in developed countries. Most of these countries, except Brazil, tend to rely heavily on foreign trade.

The main difficulties that can arise are:

- *overvalued exchange rates*, due to excessive the guidelines inside and excessive reliance on foreign capital;

- *fragile private sectors*, which leads to a series of economic effects such as encouraging private capital drain in periods of great difficulty, determines the investment of the private sector to move in particular projects with rapid recovery (due to uncertainty over the long-term perspective of business), and creates the possibility of a bigger turmoil has promoted policy in connection with the business;

- *rapid economic growth* based largely on financing through credits (internal and external) simultaneously with a insufficient development of financial institutions. This means that, where recorded a slowdown in export growth or a recession, they could increase quickly transforming into a severe external debt or in a domestic financial crisis;

- *vulnerability to world conditions* such as increased international trade, protectionist trends and interest rates.

The economic development of a country takes place in two stages, namely:

a) it is necessary to shift from poverty to a decent standard of living in a decentralised way. It requires that each family to make money income to cover the needs of food, clothing, housing, health care, education without regard to origin, culture, gender, race, etc. These needs will depend on size of course, man-to-man, so the level of development of the society, but also by the level of development of the individual.

b) it is necessary to switch to a complement of standard of living. This involves meeting other needs, in the field of culture, education, transportation, Informatics, health services, tourism, sports, leasure, repairs, etc., as well as improving the social climate, political, labor, family.

The first and maybe the most important objective of the economic development of Romania is to organize a mass production of consumer goods and infrastructure, which ensures raising the living standards of all the inhabitants of the country.

Thus the desired economic and social system in Romania is considering:

- the existence of a dominant, powerful private properties that generate a strong private capital that can be invested in competitive goods-producing technologies on any market that will bring profits for entrepreneurs, income for the workforce and revenue to the State budget.

- free enterprise and competition in a free market, they will resist what businesses will have managerial skills, and the ability of the scientific knowledge needed to become more competitive through the quality of their work and the goods or services that it creates. Development does not imply an equal society members but rather their differentiation on grounds of competence.

Achievement of the objectives involve: gaining the endorsement of the majority of citizens; obtaining external support in order to achieve these objectives; improvement of the situation in the world economic circuit; alleviating social discrepancies.

Politics has a decisive role in achieving these desiderata that is why it is necessary: ensuring priority treatment for science, health, and advanced research; increasing the use of economic resources; promoting adequate economic policies in order to achieve sustained and sustainable economic growth; the creation of a system which ensures the effectiveness of the economic, social and ecological maximum of all activities in the economy.

As regards agriculture, Romania could receive substantial income from the export of agricultural products, due to natural conditions with which it is equipped. A short distance after the retail trade are agriculture and the food industry are closely related. Agricultural production has started to decline steadily (with some exceptions) after 1990, and vegetable production, and of the main causes underlying the low agricultural yields are: i) lack the facilities and modern technologies; ii) reliance on natural conditions; iii) poor infrastructure development.

Among the indicators that characterise Romania's economic growth in the years after the Revolution and not only it can find *the inflation*. Inflation is a serious imbalance in the economy of any country, represented by a general increase in prices and the simultaneous decrease of the purchasing power of the national currency. Inflation in Romania had an increasing trend in the early 1990s after the effort failed to stabilize her, that after the year 2000 to fall. Inflation in Romania is on a declining trend.

Negative oscillations have been before and the increase/decrease it was due mainly to the following factors: the increase in administered prices at a rate higher than that projected, mainly on account of higher rent set by the unanticipated local governments; volatile prices of some food products (vegetables and fruits); the international oil price trends, reflected in an increase in fuel prices, partly offset by the appreciation of the *lion*, the Romania's national currency.

End of 2011 or beginning of 2012 rather find Romania in a delicate economic condition with street demonstrations which are due to poor management of funds from the economy, not all signs of recovery, with companies that restrict the activity or closed their doors, as well as with salaries, pensions.

I consider that the current state of the economy is not only due to the poor management of 2000 onwards, but also measures taken over the years immediately after the Revolution, as follows:

- *through its activities it has polluted the environment and people's health was affected*

The environment is the support and the fountain of life. To pollute and destroy is tantamount to undermining the human existence. Therefore, the World Health Organization concluded that "maintaining health and well-being require a conducive and harmonious environment in which all physical factors, psychological, social and aesthetic have their well-defined place. The environment will be, in this situation, to be treated as a resource in order to improve the living conditions and well-being ".

- *it coached and encouraged waste and has exhausted its known reserves, without taking into account of renewable or non-renewable nature of their*

Waste of resources on which the classic type of economic growth and development has led to severe criticism of the subject on the part of scientists, international organizations with direct implications on human health, in particular.

- *can speak and the gap between third world compared to that of the rich*

The analysts of sustainable development issue, could not put aside the third world problems. On the contrary, they were and are concerned about one of the biggest paradoxes they experience the world today-the great disparity between the rich and the poor.

Romania to fulfill its commitments, leading to a growing confidence in the Romanian economy, should aim at addressing the following issues: strengthening the financial and banking system, as well as capital market development, simplification of the tax system, the revival of investment, privatization.

It should produce fundamental changes in the internal structure of the economy, in the forms of management, in economic behaviour and attitudes in people. Privatization is not an end in itself, but a necessary process of restructuring the company's background, a means of increasing the efficiency of resource use and to stimulate competition and economic performance.

In anticipation of the coming years, the private sector will hold a share of 75-80% in the gross domestic product, while the public sector will have to adapt to the competitive system. This process must be conducted in strict compliance with the law and with complete transparency.

4. ENVIRONMENTAL PROTECTION AGENCY, BOTOȘANI-INSTITUTIONAL COMPONENT OF SUSTAINABLE DEVELOPMENT (CASE STUDY)

Botoşani county is located in geographically in the north-eastern part of Romania, having as neighbors Ukraine, Republic of Moldova, respectively. Being between the rivers Siret and Prut River to the West, forming the border with the Republic of Moldova, Romania, Botoşani county borders with just two counties of Moldova, namely: Suceava County to the West, and to the South with the Iasi County. Including within the boundaries of its territory of 4965 km2 belonging to the northern part of the Moldavian Plateau, Botoşani County ranks 29th, share in total national territory was 2.1%.

Botosani relief belong to two major units of the Moldavian Plateau: Plateau of Suceava in the West (about 21%) and Moldavian Plain in the rest of the territory (about 79%). Overall, the relief takes the form of high peaks and hills in the West and Northwest with average altitudes around 400 m and in the form of a plain bottom with average altitude of 150 m in the rest.

4.1. Organizational structure

Environmental protection agency Botoşani was founded on 1 august 1990 and is a public institution with legal personality, subordinated to the national agency to fulfil its responsibilities to the county level, for the Environment Protection, with the status of a decentralized public service, financed from the state budget.

4.2. The main pollutants of environmental factors (air pollution, soil and water)

4.2.1. Air pollution

Environmental protection agency (EPA) Botosani oversees air quality through a structured monitoring network: gaseous pollutants, by 4 points in the workflow, in the Botosani (EPA, SC ELECTROCONTACT and WWTP) and in the frontier zone - Darabani (weather station); particulate matter in two points in 24-hour stream located in the city of Botoşani (EPA Botoşani and SC STORSACK RO. Botosani Ltd); sedimentable powders in the 5 points in the monthly flow located throughout the County, Botoşani (EPA Botoşani, weather station Botosani, Waste water treatment plant Darbani, Săveni cleaning station, Waste water treatment plant Bucecea) quality of rainfall in 3 points, one of which in the border area with the Republic of Ukraine (EPA Botoşani Treatment station Dorohoi, weather station Darabani); nitrogen oxides, at a single point (Darabani), with "automatically Monitor for NOx".

Among the atmospheric pollutants are:

- *sulphur dioxide* is a colourless, non-flammable, bitter with a sharp odour that irritates the eyes and respiratory tract.

- *ozone* gas very highly reactive oxidant, strong odor. High concentrations of ozone can cause reduced respiratory function.

- *carbon monoxide* is a colourless, odourless, tasteless, is formed mainly by incomplete combustion of fossil fuels; in high concentrations is lethal (at concentrations of approximately 100 mg/m3) by reducing transport capacity of oxygen in the blood, with consequences on the respiratory system and the cardiovascular system.

- *nitrogen dioxide*, very reactive gas, no color or odor.

Exposure to high concentrations can be fatal, and at low concentrations affect lung tissue. The population exposed to this type of pollutants may have difficulty breathing, respiratory irritations, dysfunction of the lungs.

For the beginning of the year there were no reported values of the indices to pick up signs of concern:

Table 1: Indices values (http://www.apmbotosani.ro/)

No. Crt.	Air pollutant	Botoşani		Suceava	
		hour 01^{00}	hour 16^{00}	hour 01^{00}	hour 16^{00}
1	Nitrogen dioxide	21,01	11.59	293,74	1,57
2	Sulphur dioxide	3,66	3,31	0,40	3,07
3	Ozone	28,63	73,19	35,19	78,75

Currently is running a project financed by the European Union for the prevention of natural disasters caused by floods and air pollution.

This project represents a comprehensive network to monitor air quality for 34 EPA in the country (ex: Botoşani has an EPA and an urban station; Suceava station has another one, an industrial urban 1 and a SMEP; Iasi, an EPA; Bacau an EPA, an urban station, two industrial stations 1 and 2). Every EPA is to monitor and operate with the control system of air quality including the individual control of each workstation which instruments belonging to them.

The complete network of this project consists in 94 stations, of which 82 are equipped with meteorological sensors. Data are transmitted from the workstation to the EPA headquarters to which they belong and the EPA data, 34 are transmitted to Headquarters in Bucharest, where they are processed, verified and released via the Internet.

4.2.2. Soil pollution

Due to repeated drought and irrational use of arable farm land and soil quality has decreased, thus, in Botosani county, meet the following unfavourable aspects:

✓ Nitrogen is the main nutrition elements involved in the processes of growth and development of plants. Poor nitrogen supply was found on 25% of the total agricultural area. Geomorphological conditions of Botosani, with a significant proportion of the land in the slope, erosion affects significantly so long as organic and nitrogen dynamics of mineral forms of nitrogen in the soil.

✓ Landslides affecting 15% of the total agricultural area, of which the assets of 9.1%. Extension of landslides in recent years, is due to the lack of a programme of improvements to land, through the levelling, drainage works, or afforestation schemes are designed to protect these lands.

✓ Soil acidity can be caused or worsened by inadequate agricultural technologies, as it is every year use of high doses of fertilizers with physiological acid reaction. Acid reaction with soils occupy large areas in the Western and North-western part of the county. Strong-moderate acidic soils can be found on the 5.9% of total agricultural area. There are a total of 11 municipalities in which the share of acidic soils is much higher than the average county (e.g. Dersca, vf. Field, Corni, Vorona, Curteşti, Suharău, Cristineşti).

✓ Alkaline soils (pH greater than 8.4) totaled 4.7 percent of the area studied.In some municipalities, the share of alcalizate soil is higher than the county average (over 10% alcalizate soils): Vlăsineşti, Ştefăneşti, Dângeni, Spear, Coţuşca, Gorbăneşti.

✓ Excess moisture from the ground affect the nature of agricultural soils 12,6%. Drainage and drainage works executed prior to 1989 on a portion of these lands no longer work only partially, or are completely degraded.

✓ In terms of ensuring agricultural soils with humus, data analysis shows that 30% of these are weak and very poorly provided with hummus. The most important cause of low humus content consists of moderate to strong erosion or excessive if it is found on the slopes with inclination.

✓ Very weak and feeble assurance with mobile phosphorus is found on the 44% of the area under study. Agricultural research have established that the losses of harvest in the case of weak supply and especially very poor soils with phosphorus. As a result, this deficiency in phosphorus is an important limiting factor for agricultural production in Botoşani County.

✓ Ensuring agricultural soils with potassium is good throughout the County, only 7% of agricultural soils are poorly stocked and medium.

Forests

At present, forests are threatened by a drop of control degradation and transformation to other areas considered. An expansion of agriculture, excessive grazing, cutting an uncontrolled, combating of fires and damage due to air pollution.

Forest damage and the loss of their leading to soil erosion, reduced biological diversity and wild life habitats, degradation of the catchment areas and reduce the amount of firewood, timber and other goods necessary for human development. They reduce the number of trees that can retain carbon dioxide, which is a greenhouse gas.

Table 2: Forestry (http://www.apmbotosani.ro/)

County	**Total area (ha)**	**Background forest (ha)**	**% of total area**
Botoşani	498569	54635	10,10%

Table 3: The area occupied with woods on the property categories (http://www.apmbotosani.ro/)

RNP	**Administrative territories**	**Legal entities (units of worship, schools)**	**Individuals**	**TOTAL FF**
45.232 ha	14 ha	508 ha	8881 ha	54.635 ha

Table 4: The area occupied with woods on the functional groups (http://www.apmbotosani.ro/)

Functional group	Property category				
	RNP	**Administrative territorial units**	**Legal persons**	**Individuals**	**TOTAL FF**
I	7667 ha	-	139 ha	510 ha	8316 ha
II	37565 ha	14 ha	369 ha	8371 ha	46319 ha
TOTAL	45232 ha	14 ha	508 ha	8881 ha	54635 ha

4.2.3. Water pollution

Rivers

Botoşani county territory is limited to the eastern extremity of the Prut River, the main river Başeu tributaries that join in the Stefanesti locality and the Jijia River, which join in the Iasi County. In turn, Jijia River tributaries the rivers and Miletin Sitna.

The Prut River basin occupies 88% of the area of the County, and 12% is occupied by the Siret River basin, located in the western part of the County. The distribution on the river basins are presented as follows:

B.H. Prut – 4382 kmp;

B.H. Siret – 603 kmp.

The hydrographic network is encoded length 2054 km.

The main sources of water from the Botosani territory are made up of the rivers Prut and Siret. Small watercourses in the County have variable flows in the spring-summer season, while their quality does not fall within the confines of that pathogenetic germ. Collections with complex existing role on these courses ensure permanent water sources, water resources of the County being supplemented by groundwater.

Lakes

On the Botosani territory there are about 150 lakes, mostly mixed fisheries, as well as sources of water supply for potabil for an important number of localities.

Bucecea Lake has a volume of 8,73 mil mc and ensure the supply of drinking water for cities of Botosani and Dorohoi and areas adjacent. It also ensures the transit of the surplus period flows bypass the Sitna-Siret (in accumulating Cătămărăşti) to compensate for the shortage of water in the Jijia River basin.

Lake Cliff, with a total volume of 1285 mil mc and a volume of 450 million cubic meters, providing drinking-water supply for villages and Ştefăneşti and Truşeşti, in perspective, Santa and Dângeni, but also produces electricity from an installed power of 65 mil kWh.

Negreni Lake, situated on the river Negreni locality Negreni, ensure safe drinking water for the city of Săveni installed at a flow rate of 43 l/s. Net volume is 10,30 mil mc. We can remember and other lakes with fish use, such as: Iezer, Cătămărăşti, White Horse, Mileanca, Dracşani.

Table 5: Water resources accumulated in the Botoșani county (Direction Of The Romanian Waters "Prut" Iasi)

The name lake reservoir	**Total volume (mii. mc)**	**Useful volume (mil. mc)**
Stânca - Costeşti	1.400.000	450.000
Cal -Alb	16.280	4.950
Negreni	25.600	8.800
Hăneşti	6.400	4.200
Mileanca	14.350	5.100
Iezer	14.100	3.600
Căt ămărăşti	17.950	7.520
Dracşani	10.710	8.210

A special situation is the rural areas from which it is made water-supply system, but there is no sewage system-purge. In these localities, wastewater-of all kinds-are discharged into the natural receptors diffuse without prior treatment.

Most of the urban waste water treatment plants have been completed in more than 25 years, they are in an advanced degree of physical and moral wear and tear (especially), also having the ability to purge debts increased by insufficient waste water resulting from the development of settlements or economic targets connected to the sewage system and, in general, does not have the technological profile required for cleaning the whole range of pollutants discharged into the sewer pipe network.

Most municipal wastewater treatment stations not carried out qualitative parameters regulated, spilling into the receiving water flow rates relatively high purified water insufficiently. Together with municipal waste waters, on the quality of water courses have a special role is busy by industrial pollution sources.

Thanks to loads of pollutants in a variety (suspensions, organic substances, petroleum products, detergents, ammonia, metal ions, azotiţi, etc.) of neepurate or insufficient wastewater purified water impacts the surface is appreciably and manifests itself through negative effects on aquatic biotopes and biogenesis through adjustments to physical, chemical and bacteriological causes them and determines in most situations change the quality of the receiver class or increasing values of some indicators within the same category of quality.

4.3. Proposals for sustainable development

The national strategy for *Sustainable Development* at horizon years 2013-2020-2030, renewed in 2006 (*2013-organic incorporation of the principles and practices of sustainable development into the programmes and policies of the Government of Romania*).

Since 2009 began the process of re-evaluation of programmatic documents, strategies and national programmes, sectoral and regional authorities to make them agree with the principles and practices of sustainable development and with the evolution of EU regulations.

4.4. Local action plan for the environment (LAPE)

LAPE represents short-term strategy, medium and long term in order to solve environmental problems in the county's approach to sustainable development principles and is fully in line with the National Action Plan for Environmental Protection and concerns mainly: supply of drinking water to the population, the soil condition, land fund, biodiversity, air quality in the urban environment, waste and their impact on the environment, etc.

4.4.1. Supply of drinking water to the population

In the Botoşani County supply of drinking water to the population is through centralized water distribution in 68 villages, 4 of these being urban townships, and the measures to be taken for improving them shall take into account:

Measures: i) rehabilitating, expanding the sewerage systems in urban environments and water supply in the other towns in the County; ii) capacity expansion, modernization/refurbishment of existing treatment stations and construction of new stations in rural space; iii) enforcement of defenses against flooding; iv) improving the system for monitoring water quality by identifying and attracting new sources of funding;

4.4.2. Soil condition

Due to repeated drought and irrational use of arable farm land and soil quality has declined, favoring emergence: landslides, the erosion of it, excess moisture or acidity excess etc.

Measures: i) the elimination of illegal waste deposits; ii) provision of necessary facilities for storage in accordance with the law of household waste (organic deposits area achievement of household waste and the related transfer stations); iii) closure of existing deposits which do not comply with E.U. standards

The Land Fund

Total county: 498.569 ha. The forests are threatened by a drop of control degradation and transformation to other mixed with an expansion of agriculture.

Measures: i) appropriate management of forests; ii) harvesting activities supervision/catching and/or purchase and marketing of the plants and animals of the wild flora and fauna; iii) elaborate and implement specific programmes for the public awareness on the need to protect and conserve the natural values of the forests and the ways of making tourism.

The biodiversity

Natural habitats are forest, meadows, and marshes, cliffs of sweet waters. Forest habitats are aggregated 57215 hectares which represents 11.5% of the County's territory, a percentage that is below the country average (27%).

Measures: i) provision of appropriate management of protected natural areas by creating administrative structure of national parks and the award in the custody of natural resources; ii) enumeration of the species of fauna and flora of Community interest, as well as habitats of Community interest; inventory of special areas of conservation and special protection areas the areas; iii) ecological reconstruction of ecosystems and habitats damaged etc.

4.4.3. Air quality in urban areas

In the absence of industries with high pollution, the main factors for Botoşani County polluters could be: road traffic, heating systems and living spaces, street sanitation insufficient. Green spaces and recreation can be the antidote for a cleaner environment.

Measures: i) introducing clean technology by businesses, the installation of effective systems of pollution atmosphere retention; ii) support for carrying out bypass roads of municipalities and towns and promoting alternative transportation systems; iii) transposition of E.U. requirements and implementation of the legislative.

4.4.4. Waste and their impact on the environment

In the Botoşani county the municipal *waste* are not collected selectively in order to exploit recyclables (paper, cardboard, glass, metals, plastics) than in a very small extent. Landfill can contaminate soil and groundwater through leaching of toxic substances contained therein.

Household residues have a significant impact on the population and being important vectors in the spread of infection.

Measures: i) increasing the rate of collection of waste both in urban and in rural areas; ii) development of the system of separate collection of waste through retrofitting; iii) proper management of waste; iv) ecological reconstruction of areas that have been affected by the storage of waste.

5. CONCLUSION

In a world in motion and transformation, registering economic growth, as well as episodes of financial collapse (the current financial crisis), the existence of policies and tools to help control pollution and adverse effects, comes as a necessity in order to meet the conditions imposed by certain environmental standards.

The large amount of foreign investment and increased foreign reserves allowed the cover in a good measure of external deficits, up to a certain point and keeping the indebtedness under the 50% level. Also notice the restriction of activity of large industrial polluters and start of the gradual replacement of them with the small and medium-sized enterprises, as well as small scale use of pesticides and fertilizers. As a result, the level of air pollution has dropped due to the closure of polluters or their modernisation.

Furthermore, the availability of external financing programs targeted directly for environmental protection and nature (LIFE, ECOLINKS, REC), as well as the creation of national environmental fund for the support and implementation of priority projects included in the national plan of action for environmental protection are some opportunities for development.

On the other hand, the low productivity of the soils in the surrounding areas of industrial targets, the disappearance of some species of plants and animals in the absence of special programmes for their protection and continued uncontrolled global deforestation with effects on air pollution, soil erosion is threatening regional development.

Romania's current situation shows weak points as well as sustainable development: pollution of surface water and groundwater as a result of uncontrolled discharges of economic agents, as well as due to poor sewerage infrastructure development especially in rural areas, and centralised systems non-existent water supply in rural areas and in some urban areas, as well as the existence of areas of land affected by natural phenomena of degradation.

Moreover, the widening current account deficit and rising inflation make a negative contribution to the Romanian economy. The increased dependence of foreign capital, raising interest rates and depreciation of the national currency generate negative effects on people and companies that have borrowed in foreign currency. Worsening political tensions, minority Government's position and concern for new elections this year have removed politics from the continuation of reforms and strategies for recovery of macroeconomic imbalances.

As future research directions, I consider that there are various development opportunities of this paper. The analysis may be extended to a larger number of measures and strategies for environmental protection and sustainable development in Romania. Furthermore, the model can be extended to other countries facing similar situations or contrary, quite different, in order to develop a comparative analysis.

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Debt crisis and fiscal consolidation in Spain

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ABSTRACT

This paper analyses the start of the debt crisis in Europe and in Spain, which increased inflation, unemployment and public debt. Although Spanish banking system was considered one of the best, the growing debt brought Spain into one of the worst affected countries in financial crisis. Because of this, Spain was faced to the fiscal consolidation as the imperative for further development. The strength of the crisis in Spain can be seen from main economic indicators. Budget deficit in Spain was almost 12% just two years after it went into surplus for the first time in 30 year period. Public debt has started to rise from 2007 and in 2013 it overcomes 90% of GDP. The rate of unemployment also started to rise from 2007 and in 2013 it is higher than 25%. This paper analyses also Phillips curve in Spain using the actual data after the start of fiscal consolidation.

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1. INTORDUCTION

The global financial crisis started in different periods in different countries, but 2007/2008 can be considered as the start of this crisis at the global level. It resulted in the threat of total collapse of large financial institutions, the bailout of banks by national governments, and large falls in stock markets around the world. The crisis led to global recession that lasted on average for 5 years and in some countries it still has not ended. In European countries the crisis has been manifested as the debt crisis. The crisis made it difficult or even impossible for some European countries to repay or refinance their government debt without the assistance of third parties like the European Central Bank or International Monetary Fund. One of these countries is Spain, which had a comparatively low debt level prior to the crisis. The debt of Spain was largely avoided by the ballooning tax revenue from the housing bubble, but when the bubble burst, Spain spent large amounts of money on bank bailouts. This with the combination of economic downturn increased the country's deficit and debt levels and led to a substantial downgrading of its credit rating.

2. DEBT CRISIS

2.1. The European debt crisis

The European debt crisis is a crisis occurred at the end of the 2009 in Europe, specifically among some EU countries. It has deepened also on the rest of Europe in the 2010 and 2011. The debt crisis is a crisis on the demand side. Macroeconomic equilibrium may crash due to shocks on the supply side and the demand side shocks. These shocks affect negatively. The consequences of mentioned phenomenon are increasing inflation, increasing unemployment, public debt and deficit. The shocks on the demand side are changes in demand caused by changes in output and prices in the same direction. Adverse demand shocks lead to less demand (less C and I), which then lead to less production and to more unemployment. The crisis can be divided into two sectors of the financial crisis. Sovereign debt crisis relates to the budget deficits that occurred by insufficient tax revenue and excessive consumption in several European countries such as Greece, Portugal, Italy and Spain.

The financial crisis which started in the United States deepened on the states that have use the same problematic way of crediting as U.S., such as Iceland and Ireland. European banks hold assets in U.S. banks. Here we can see the link between Europe and US. After attempting to rescue banks affected by the above-mentioned problem, state budget deficits went very high. If we look in the long run, the debt crisis has affected the appearance of net capital inflows to developed countries, i.e. countries creditors and led to a reduction in indirect investment in the world economy. During the crisis, there was a significant increase in unemployment. Some sectors are affected more, some less. Industrial and construction sector suffered the biggest losses, which was not surprising since it is well known that exactly these sectors are the most vulnerable to changes in the economy. A lot of companies went bankrupt, and this trend is still on. In order to illustrate better trends in the economy caused by the mentioned crisis, we will use the example of Spain, which is classified in so-called "peripheral" European countries among with Greece, Portugal and Ireland.

2.2. The European debt crisis in Spain

The current financial crisis in Spain had its starting point in 2008 in the world financial crisis and continued during the European debt crisis. The financial crisis in Spain as part of the global economic crisis began because of the large long-term debts. This led to the fall of the real estate market which followed the bankruptcy of large companies and financial institutions, and therefore unemployment has risen. Then Spain declared the recession. Even though the Spanish government tried to cover debts and exit the crisis without any European supports through for example an increase in the Value Added Tax from 19% to 21% or cutting the government expenditures, data shows that Spain’s government debts showed a significantly increasing trend over the period from 1980 to 2012. Spanish banking system was considered one of the best in all of the Western economies. Bank Santander is Spain's largest bank, which has helped the UK government with the problem of the banking sector and it was thought that the Bank could solve the liquidity problem arising during the crisis.

As the debt grew, when financial bubble burst, it brought Spain into one of the worst affected countries in financial crisis. Spain was slow to react to the action that caused the crisis, but with time increased efforts to introduce reforms and austerity measures. The government has taken measures to reduce the deficit in a way that reduced the salaries of civil servants by about 5 percent, eliminated certain benefits, etc. They also had a reform of the labor market. As Spain has one of the highest unemployment rates in Europe, these reforms are of great importance. Rising unemployment in the U.S. and Spain have had a significant share of the overall increase in global unemployment. One of the worrying facts is that almost 50 percent of young people are unemployed. Therefore, a reform of the labor market is mostly oriented on decreasing unemployment among young people. To summarize the accumulated imbalances in Spanish economy led to a deterioration of the labor market due to rigidity and inefficiency. Financial sector solvency deteriorates due to its exposure to the real estate sector. There is a lack of control in public accounts, as a consequence of inefficient expansive budgets. Because of the above mentioned situation there was a high need of austerity measures such as: increase taxes, reduce government expenditures, increase exports and there is a need of improving competitiveness.

3. FISCAL CONSOLIDATION

Large number of countries face severe fiscal consolidation requirements. At a time when the recovery is still fragile and monetary policy already extended, difficult trade-offs arise between short-term growth and consolidation.[4] Fiscal consolidation adjustment is defined as a period in which the budget deficit as percentage of GDP declines. Talking about the types of fiscal adjustment, there are two types. It is possible to cut spending or raise taxes. Reducing expenditure refers to government spending and social security expenditures, salaries of public sector employees, reducing public investment and on the transfers. In this context, often is raised a question whether fiscal adjustment cause the recession. Just for this reason, opinions regarding undertaking programs of fiscal consolidation aimed at stabilizing the economy are much divided. The goals of fiscal consolidation are here for firming market economy, training government for returning external debts and for the recovery of the public finance.

For most countries, present consolidation plans envisage some mix of spending restraint and revenue-raising measures. According to some research, the likelihood of sustaining consolidation efforts until debt

[4] OECD (2010): Fiscal consolidation: requirements, timing, instruments and institutional arrangements, OECD Economic Outlook, Vol. 2010/2

sustainability is reached is higher when governments tackle politically sensitive areas, such as social transfers.[5] Other empirical studies done on a large number of historical consolidation episodes indicate that there are a number of policy and other factors that are associated with fiscal consolidation efforts and influence their outcome like size of consolidation, reaching debt sustainability and monetary policy.[6]

The programs of fiscal consolidation may lead to a fall in GDP growth and unemployment rates. There may be a reduction in budgetary flexibility which can make difficult the use of the appropriate pro-cyclical fiscal policy. Eurozone countries, particularly peripheral members such as Spain are also in the process of fiscal adjustment. Reduce government spending, and increased rates of certain types of taxes, such as value added tax, which in Spain is 21 percent. In general, one has to be aware of the risks of using austerity measures, since the ones released in Spain can easily turn the plate and lead to even higher unemployment and a decrease in GDP. Furthermore, wages in Spain were cut in order to create jobs. Meanwhile, taxes were increased, as we saw previously, what lead to a higher inflation rate. This again had a negative effect on the wages. The only option to improve this situation is to create and establish demand for labor in the labor market. Fiscal reforms that need to be taken are attaining and/or maintaining public debt below 60 percent of GDP while attempting to achieve budget surplus, increase budget control, establish a cap to expenditure growth and maintaining an expenditure ceiling in public administration, increase taxes for households and budget cuts to public services. The toll of the crisis on public finances has contributed to larger needs for fiscal consolidation in most countries, but in many countries this only aggravated existing imbalances. Opinions about fiscal consolidation are various. Some economist are for and some against it. In the short run, fiscal consolidation programs that rely on spending reductions have expansionary "non-Keynesian" effects that may offset the contractionary Keynesian reduction in aggregate demand.[7] In some cases, "non-Keynesian" effects may be strong enough to make fiscal consolidation programs expansionary even in the short term is one of the ways of thinking.

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4. ANALYSIS OF MAIN ECONOMIC INDICATORS

When the state with government revenues cannot finance public expenditures, it can sell its own assets or to finance debt by borrowing. Most often government borrows by issuing government securities in the domestic or international financial markets to finance the deficit, i.e. the lack of income over expenditure. Here are presented changes in deficit and public debt of Eurozone member states. Those are one of the key economic indicators. Public debt and deficit are presented in relative to GDP. Fiscal restrictions are arising from the Maastricht convergence criteria, which represents some kind of rules for all members. They have been set because of the fear that an excessive deficit and public debt of member states could affect the increase of interest rates of other Eurozone members. The limits of public debt and deficits had been set. There are four criteria usually called Euro convergence criteria.[8] One is related with a reduction of excessive public debt (60 percent) and budget deficit (up 3 percent). Among public debt and deficit there are other economic indicators which we will analyze here in the case of Spanish economy. Those indicators are changes in real GDP per years and changes in rate of unemployment. Also there will be mentioned the Phillips curve as link between inflation and unemployment.

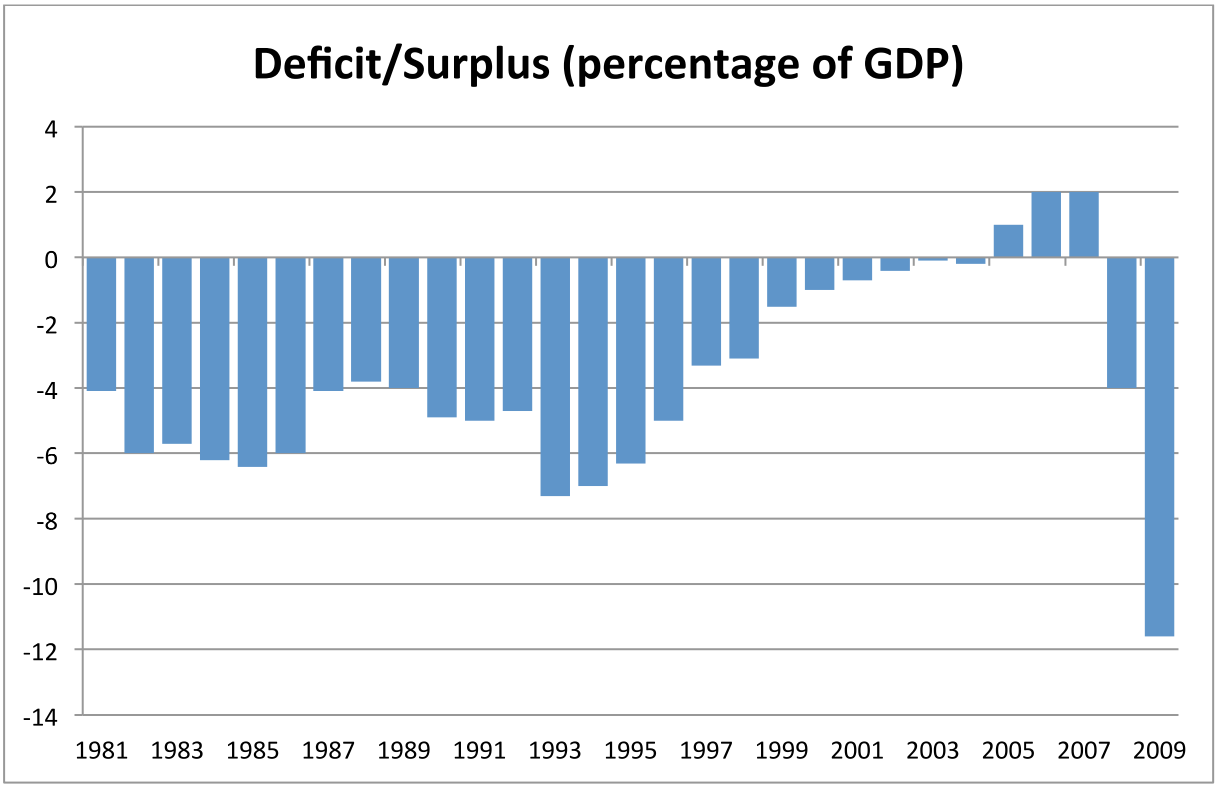

Chart 1: Budget deficit of Spain through years

Source: Eurostat

[8] Hubbard, G., Kane, T. (2013) Balance: The Economics of Great Powers From Ancient Rome to Modern America, Simon & Schuster, pp. 204

The budget deficit is a flow variable that shows the difference between revenues and expenditures, or the amount of net debt in a calendar year. Deficit is formed and measured by movements during the period. The economic and financial crisis has significantly affected on the public finance in Spain. The chart shows that in Spain in the 2007 has been present surplus of 1.9% of GDP, and 2009 we observe a significant decline, a deficit of 11.4% of GDP. In 2009 Spain has entered The Excessive Deficit Procedure. A country enters in mentioned procedure based on decision of EU Council. A Council recommends to a Member State which are the steps they should do to reduce the deficit in a given time period. Spain has been given a deadline for the execution of corrections budget balance of 7 years, which indicates the intensity of the crisis that the country has been affected. Therefore, it is reasonable to expect that Spanish deficit cannot be corrected in a short period of time.

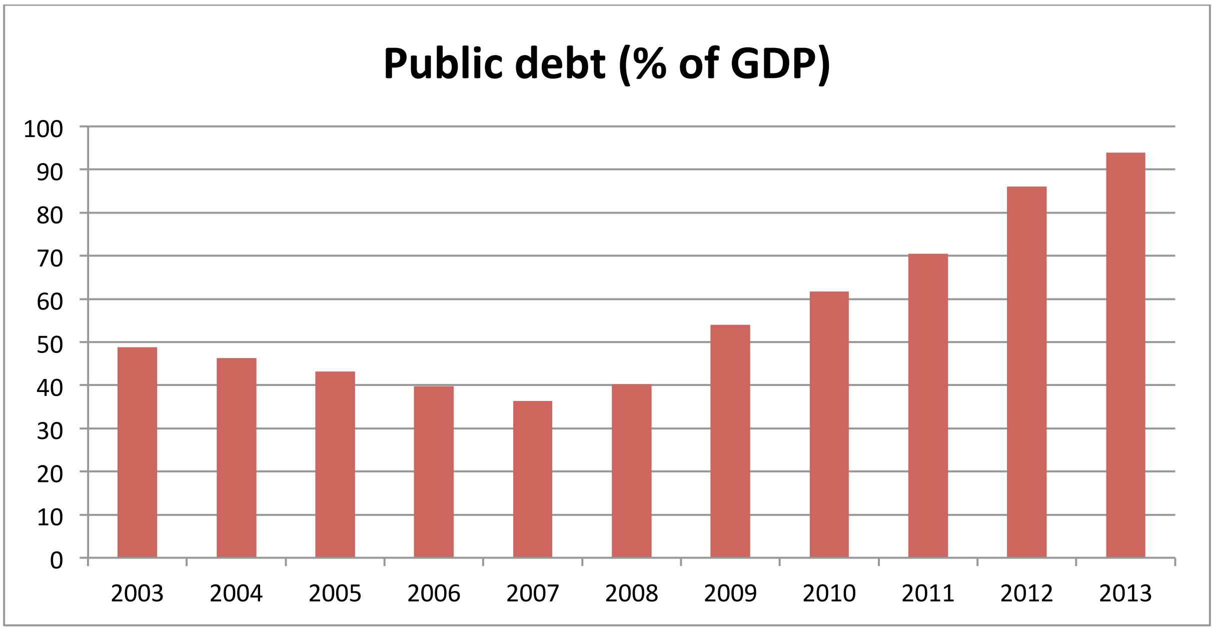

Chart 2: Public debt in Spain over the years

Source: Eurostat

Spanish public debt in 2009 was approximately 54% of GDP. We can see a significant increase in public debt in the 2009 compared to 2007. There is an increase of 18%. Public debt in Spain reached record level of 93,9% in 2013. In 201. public debt was 86%, while in 2013 it increased to 93.9% of GDP. Catalonia is the most indebted region with a debt of 22% of its regional GDP.

5. STRUCTURAL AND CYCLICAL DEFICIT

To be able to estimate whether the fiscal rules that have been set for the EU Member States are adequate, we must determinate whether the fiscal policies of EU member states are correctly oriented. In order to determine whether the fiscal policy of a country is properly focused on stabilization, the deficit must be distinguished between the structural and the cyclical. The structural deficit is the part of the national budget, which is the result of discretionary decisions of fiscal policy, while the cyclical deficit that part of the balance that is the result of an automatic action of the fiscal system, and automatic stabilizers.[9] Difference between actual and structural deficits is noticable in all EU member states, and that difference is equal to cyclical deficit. To it is actually proof that the automatic stabilizers operate in the right way given the limitations. Whether fiscal policy is expansionary or restrictive it is seen only by the impact of discretionary measures. From the above mentioned, it can be concluded that the assessment of the character of fiscal policy is determined on the basis of the structural deficit. This deficit is necessary to control and to reduce as much possible. It is generally considered that the deficit reference value of 3% of GDP refers to the cyclical deficit that occurs under the influence of automatic stabilizers. So the structural deficit is one that really needs to be balanced. Generally it can be said that discretionary fiscal policy measures are not really desirable and it is better if the fiscal policy is coordinated through the action of the automatic stabilizers.

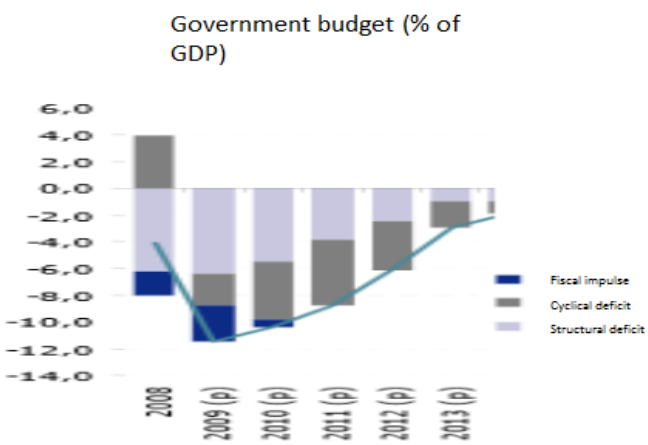

Chart 3: Cyclical and Structural deficit over the years of crisis

Source: BBVA

The deterioration of the fiscal balance was mainly due to discretionary fiscal policy. Closing 2009 with a deficit of around 11.5%, discretionary policies and structural adjustment have placed structural deficit at 10% (9 pp more than 2007). The fiscal contraction has led to an additional deficit accumulated between

[9] Coricelli, F., Ercolani, V. (2002) Cyclical and Structural Deficits on the Road to Accession: Fiscal Rules for an Enlarged European Union, CEPR Discussion Paper No. 3672

2007 and 2009 of 4.2 % of GDP. In the last years we can see a decrease in structural deficit what we can consider as positive step towards economic recovery.

Here are some projections how to maintain public debt at recommended level, around 60% of GDP and lower if the budget balance would not significantly deviate from the level of -1%, through a certain number of years of fiscal consolidation.

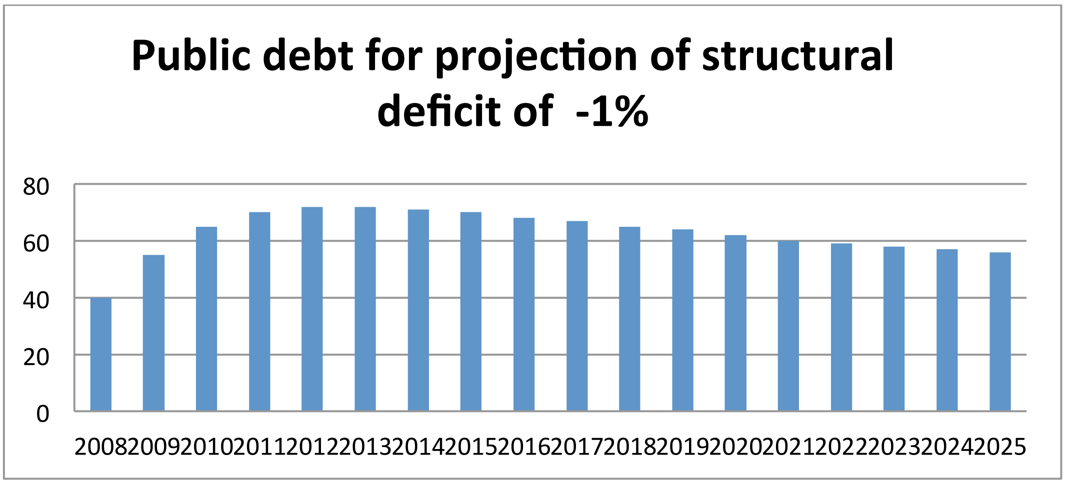

Chart 4: Public debt for projection of structural deficit of (-)1%

Source: Eurostat, BBVA

Next chart shows the budget deficit or surplus as the percentage of gross domestic product from 2003 to 2013.

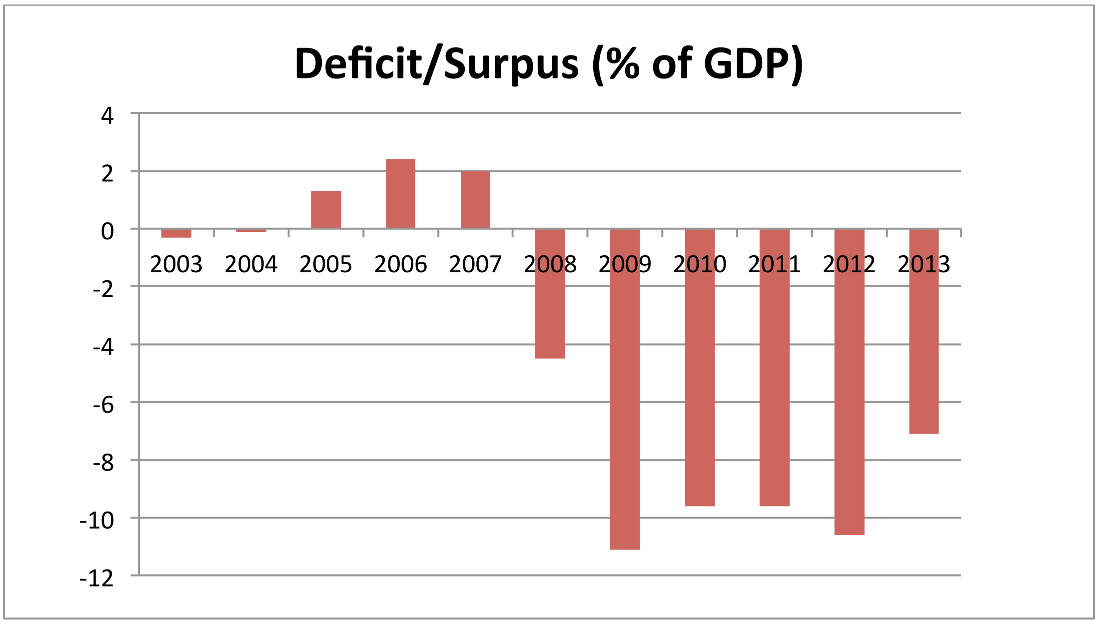

Chart 5: Budget deficit/surplus over the years

Source: Eurostat

In period from 1993 to 1997 we could observe a fiscal consolidation measures, as is the case in the present time. In 1993 the deficit was 7.4% of GDP, while in the 1997, after the implementation of fiscal consolidation, it is 3.4%, which represents an adjustment of 4 points of GDP. If we look at the deficit in 2009, as already stated it is 11.6%, and the adjustment should be 8.6 GDP points, to obtain the recommended level, the 3% of GDP. As we can see in above chart recommended level was not achieved yet. The increase of the public deficit started in 2009., while it currently accounts for 7,1%. Despite, the trade deficit decreased, but still not enough in order to cover the public deficit.

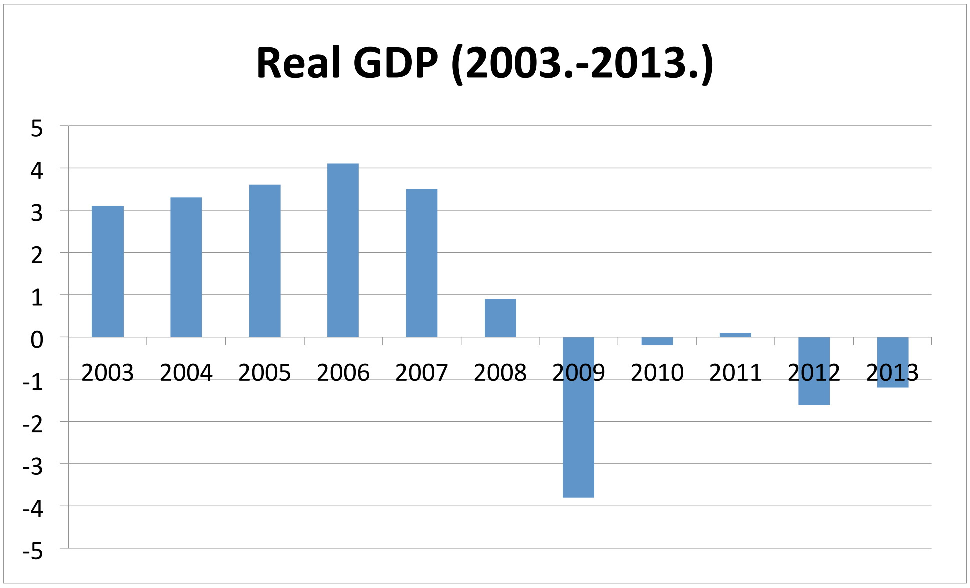

Chart 6: The percentage change of GDP

Source: Eurostat

As we can notice, during the period of 2009 Spain suffered the highest losses. The figure shows the percentage change in GDP in the year of crisis.

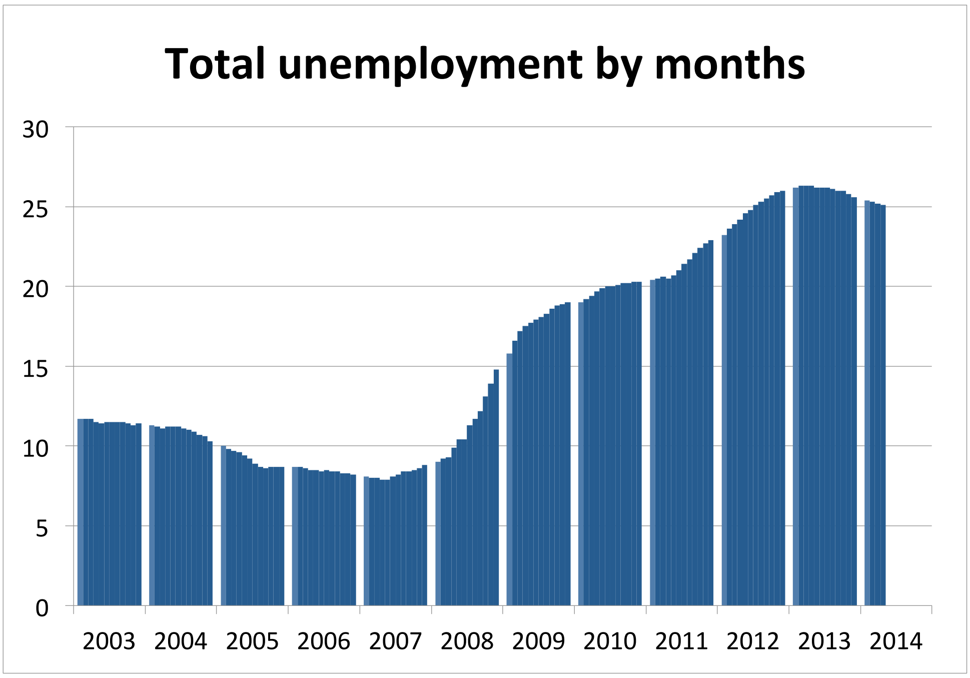

Chart 7: Unemployment rate (by months, %)

Source: Eurostat

The financial crisis caused a slowdown of economic growth. This is particularly manifested in the reduction in aggregate demand and hence to that in reducing the rate of employment. In addition, an increase of various forms of insecure employment was caused by a decrease in economic activity. A significant reduction in the number of employees is the most visible in sectors that are based on production, construction and exports. Reduced demand for labor force is even more articulated for certain groups in the labor market such as young, old, unskilled workers, women and immigrants. For those groups it is considered that in times of economic crisis, it is even more difficult to find a job and more easy to remain without it. They become discouraged workers. In 2009 Spain had higher unemployment than France and Italy together. According to the CIA World Factbook data, Spain has a population of 46,754,784, making it the 27th country in the world by population, and the number of unemployed stood at 4.9 million. Since then the rate of unemployment has been increasing. In 2013 the rate of unemployment in Spain was 26,1%. The rate of unemployment of young people is around 50% which is very demotivating. One of the important reforms in Spain was labor market reform. One of the goals was an attempt to improve efficiency and reduce labor market duality by decreasing dismissal costs. The deregulation of contracts will increase internal flexibility and the collective bargaining reform. In the Spanish case (the opt-out clause) will enable greater speed of responsiveness to environmental changes and foster adaptability and competitiveness of Spanish firms.

6. THE PHILLIPS CURVE

The Phillips curve shows the short-run relationship between inflation and unemployment. It shows the short-run combinations of unemployment and inflation that arise as shifts in the aggregate demand curve move the economy along the short-run aggregate supply curve.[10] The correlation between inflation rate and unemployment rate is negative, which means that the increase in one leads to the decrease in the other and vice versa. As more people work, output increases, spending also increases, as well as demand. As the consequence, the price of goods and services increase. The greater the aggregate demand for goods and services, the greater is the economy's output, and the higher is the overall price level. A higher level of output results in a lower level of unemployment. If we observe the Phillips curve in case of Spain we can notice a constant increase of unemployment that is not always followed by low inflation. After 2009 the unemployment rate is increasing but the inflation also. In 2011 the rate of unemployment was 21,8% and inflation was higher than previous years (3,1%). Here we can see that the concept of stable Phillips curve broke. The same has happened in the in the early '70s. During the '70s and '80s, the economy experienced high inflation and high unemployment simultaneously. In other showed years Phillips curve is stable. The most recent data show that the high rate of unemployment of 26% is followed by low inflation of 1,5%. If we observe the data by months, we can see that unemployment is increasing while inflation is decreasing where we can confirm verity of Phillips curve.

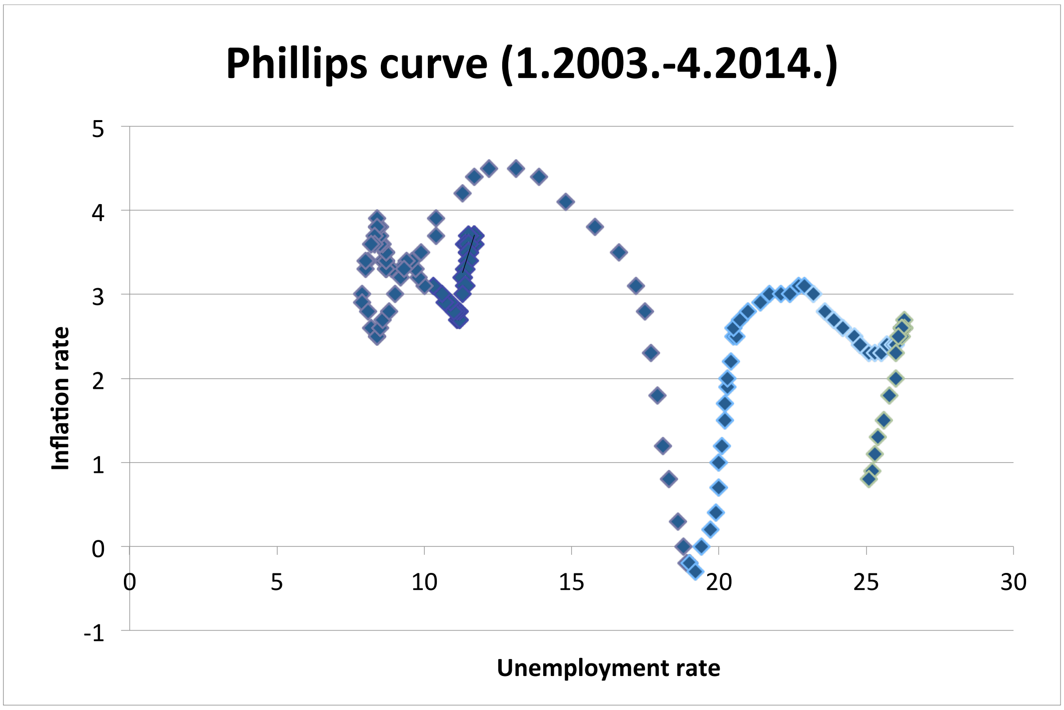

Chart 8: Phillips curve (by months)

Source: Eurostat

[10] Blanchard, O.; Johnson, D.R. (2012) Macroeconomics, 6th edition, Pearson
Mankiw, G. (2012) Macroeconomics, 8th edition, Worth Publishers

7. CONCLUSION

The financial crisis has it origin in the USA, but it has soon expanded on the rest of the world. In Europe it occurred in the form of so-called debt crisis, the crisis on the demand side. Very steep decline in production, consumption and investment are just some of the consequences. The European debt crisis that has hit most countries in Europe had a particularly negative impact on the Spanish economy as we could see through the whole work.

Public debt has been experienced high jump if we observe the 2007 to 2009, when it was 54% of GDP. In later years we cannot notice decrease but on the contrary, there was an increase of public debt in Spain. Although Spain has taken measures of fiscal consolidation, public debt 2013 climbs to a record 93.9% of GDP. This information is some kind of alarm for the implementation of further reforms that would avoid the Greek, whose debt exceeded the above public debt of Spain. Many companies have declared bankruptcy or went bankrupt. Sectors particularly affected by the crisis are construction, finance and banking.

Unemployment increased to a record number of 26% and it is particularly affected the younger population, 50% of unemployment among young people. There have been taken many actions with the purpose to decrease the current high unemployment rate, to stimulate GDP growth and stimulate deficit and public debt reduction. One of the recommendations of the European Commission and Germany as the leading force of the European Union is the implementation of fiscal consolidation, which can leave both positive and negative effects on the economy. Many scenarios show that the Spanish economy will recover successfully implementing the above fiscal adjustment. Spain has taken the proposed measures, but according to the latest estimations, it was found that the results still have not reached the desired goals, such as a deficit of 3% of GDP.

The conclusion is that Spain should continue with reforms. Further research should concentrate on the effects of reforms conducted in Spain and on their influence on economic indicators. An interesting analysis could be done comparing trends before the crisis, in the crisis and after the crisis.

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The knowledge economy in China and public-private partnerships of universities

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ABSTRACT

Since 1995 China officially adopted the Strategy of Revitalizing China through Science and Education to advance towards the knowledge economy. Our paper aims to access China's progress using international indices of economic and innovation development (Knowledge Economy Index, Global Competitiveness Index, and Human Development Index). We also explore six types of public-private partnerships in innovation activities of the Chinese universities. They are: technology contracts, technology transfer, university-owned enterprises, joint research centers, independent colleges, and university-based science parks. For each partnership we study the role it played in intensification of research and education with an emphasis on government participation mechanisms. Based on the analysis of the official statistics the authors find that the progress of China to the knowledge economy is evident. China's government played a leading role in the construction of the knowledge economy providing legislation basis and financing. Public-private partnerships in innovation activities in the universities in China significantly contributed to the technological development of the country and the country's transition towards the knowledge economy. Studying successful experience of the public private-partnerships in the Chinese universities is a first step to possible adaptation of this mechanism in other countries, including Russia.

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1. INTRODUCTION

The knowledge (or knowledge-based) economy was first defined by OECD in 1996 as an 'economy which is directly based on the production, distribution and use of knowledge and information' (OECD, 1996, p. 7). According to the World Bank the four pillars that are critical for a country to be able to fully participate in the knowledge economy are: 1) economic incentive and institutional regime; 2) educated and skilled workforce; 3) effective innovation system; and 4) modern and adequate information infrastructure (Chen and Dahlman, 2005)[11]. Indeed, an educated and trained population is needed to create and share the knowledge while ICT is required to facilitate the communication. The growth of knowledge is most rapid when institutional conditions are favorable and innovation systems are in place.

One of the countries that made a significant progress towards the knowledge economy in the past twenty years is China. In 1995 during the all-China conference on science and technology a Strategy of Revitalizing China Though Science and Education was announced and transfer from 'Made in China' model to 'Made and created in China' model (Bai, 2011) began. Among the pillars of the knowledge

[11] Lately many researchers consider health care to be one of the pillars of the knowledge economy.

economy education was chosen to act a main driver of innovation changes (Li, 2003). Reforms of the education sector assumed enhancement of the quality of educational programs; compliance of the programs with international standards, and development of universities as innovation and R&D centers.

The success of the government-backed reforms improved the country's position in the international rankings that directly measure or include the knowledge economy component. In 2012 China was ranked no. 84 (score 4.37) in the Knowledge Economy Index of the World Bank as opposed to its rank no. 100 (score 3.99) seventeen years earlier, in 1995 (Knowledge economy index, 2012). It also rose up 15 places in the Global Competitiveness Index of the World Economic Forum since 2003 (the first year GCI based on a new methodology was calculated for) and in 2012-2013 was ranked no. 29 among 144 countries (Schwab, 2012). In the Human Development Index of the United Nations Development program China's position improved from rank 111 in 1995 (out of 174, HDI=0.594) to rank 101 in 2012 (out of 186, HDI=0.699) (Human Development Report, 2013). The overall position of China below top 100 is due to the fact that despite significant progress the education coverage with 7.5 mean years of schooling remains below the worldwide average. Nevertheless, the improvement in education level has been evident.

The Strategy of Revitalizing China through Science and Education assumed that the country will re-orient from adopting foreign technologies to producing its own. Chinese universities, universities' R&D and innovation activities were to play a major role in the transition. In particular, the government encouraged development of public-partnerships (PPPs) in innovation sphere of educational organizations with a set of objectives linked to the accelerated transfer to the knowledge economy. These were: enhancement of the quality of research; intensification of R&D and training; and development of close ties between universities and industry. **The aim of paper** is to study the effect of the public-private partnerships in innovation activities of the universities on China's progress towards the knowledge economy with an emphasis on mechanisms of government participation.

The research is part of a broader research program 'Economics and Sociology of Science and Education' carried out at the Institute of Economics and Industrial Engineering of the Russian Academy of Sciences. The focus of the research program is on the role of different institutions (universities, research institutes, the Russian Academy of Sciences, public-private partnerships) in the development of science and technology in different countries. Successful functioning of public-private partnerships in the innovation activities of the Chinese universities stimulated the authors to study PPPs in more detail to further consider adaptation of the PPP mechanism in the Russian universities.

In section 2 we present literature review on the topic. In section 3 we describe the methodology chosen to address the research topic and three empirical questions. Section 4 presents the results and discussion. Section 5 concludes.

2. LITERATURE REVIEW

Since the official introduction of the knowledge economy concept in 1996 by OECD there were a number of studies published on the topic. One of the first studies on the new economy was done by Teece (1998) who drew attention to different types of knowledge and the role of ICT. Dunning (2000) studied the relationship between knowledge economy and globalization and effects of both on regions and countries. In 2002 Smith (Smith, 2002) introduced a notion of codified knowledge, and a concept of knowledge-intensive industries. The work by Jaffe and Trajtenberg (2002) discussed patents as indicators of the codified knowledge in the knowledge-based economy.

In 2005 Chen and Dahlman (2005) presented the knowledge economy framework, the four pillars, the Knowledge Assessment Methodology, and the Knowledge Economy Index. Further discussion of the KEI methodology and its robustness continued in (Saisana and Munda, 2008). Porter and Schwab presented a similar theoretical background for the Global Competitiveness Index in the 2008-2009 Global Competitiveness Report (Porter and Schwab, 2009).

A number of studies looked specifically at China's progress towards the knowledge economy. Li Tieying, former President of the Chinese Academy of Social Sciences and ideologist of the China's knowledge economy, gave a full account of the economic reforms since 1978 to 2004 in (Li, 2010a; 2010b). Another comprehensive study of the Chinese economy from 1978 until 2000 was published by Dahlman and Aubert in 2001 (Dahlman and Aubert, 2001). The study was part of the World Bank Institute Development Series and was structured around the four pillars with special sections dedicated to strengthening institutional framework, investment in human capital, building the ICT infrastructure and raising the technological level of the economy. A more recent study by Ramesh (2012) around the same topics concluded that China's evidence of transition towards the knowledge economy is undeniable and is confirmed by such activities as establishment of science parks, high technology development zones, incentivisation of research, and advances in education.

For the purpose of our research we distinguish between six types of public-private partnerships in innovation activities of institutions of higher educations. They are: 1) technology contracts; 2) technology transfer and licensing; 3) university-owned enterprises; 4) joint research centers; 5) independent universities; 6) university science parks (technoparks)[12]. The body of literature on these five types of PPPs includes the works of Wu (2010) (summary of higher education innovation in China); Xue (2006) (overview of the roles of universities in science and technology sector and technology transfer); Wang and Zhoe (2008) (university-owned enterprises); Tao (2005), Zhang and Adamson (2011) (independent

[12] Innovation activities are defined broadly. They include not not only activities connected with implementation of R&D to create a new, improved product or process but also all activities related to implementation of new forms and methods of education and training.

universities and colleges); Van Essen (2007), and Jin (2013) (science parks). The general attitudes towards the mechanism of the PPP are very positive and its positive impact on the China's knowledge economy is acknowledged.

The focus of our paper is on education and innovation pillar of the knowledge economy, in particular on the effect of the public-private partnerships of the Chinese universities on science and technology and education sectors. The study is continuation of the previous studies on the topic of the knowledge economy in China (Untura, 2009) and public-private partnerships in the Chinese universities (Kaneva, 2014; Kaneva, Untura, 2014) conducted by the authors and on a more general topic of the role of universities as innovation centers (Kuleshov, Untura, Evseenko, 2012; Untura 2013). Finally, while the authors recognize the importance of ICT and institutional regime pillars of the knowledge economy (Untura and Evseenko, 2011), the discussion of these components is beyond the scope of the paper.

3. METHODOLOGY AND EMPIRICAL QUESTIONS

The methods used in our study are the following:
1) Analysis of the global rankings (Knowledge Economy Index, Global Competitiveness Index, Human Development Index) that reflect China's progress towards the knowledge economy.
2) Systemic analysis of the role of the government in the creation of the knowledge economy in China. The analysis includes literature review and composition of table of government objective and measures in support of the knowledge economy in higher education sector.
3) Quantitative and qualitative assessment of the effect of the public-private partnerships in the innovation activities of the Chinese universities on the development of the knowledge-based economy in China.
The following hypothesis (empirical questions) will be tested in our study.
Hypothesis 1. China made a significant progress towards the knowledge economy in the past two decades[13].
Hypothesis 2. The government played a leading role in China's progress towards the knowledge economy.
Hypothesis 3. A public partnership model between universities and private enterprises was used to intensify innovation activities and create a permanent link between science and industry.

4. RESULTS AND DISCUSSION

To measure a country's performance towards knowledge economy in time or to benchmark its performance against other countries several composite indices can be used. Of particular relevance are

[13] China began its economic reforms in 1978, however international indices only allow for comparison only since 1995.

three indices: the Knowledge Economy Index (KEI) of the World Bank, the Global Competitiveness Index (GCI) of the World Economic Forum and the Human Development Index (HDI) of the United Nations Development Program.

Based on the analysis of the three indices we find strong evidence in support of Hypothesis 1 (see Table 1). Knowledge Economy Index directly estimates relative position of a country versus other countries with regard to the knowledge economy. Despite its still low position China moved up 16 places in the ranking from 1995 to 2012. Also the value of the 'Innovation' component of the index in 2012 was 5.99 and is comparable to the countries in the 50th-60th range.

Table 1: Indices of economic and innovation development for the selected countries and country rankings

Countries	Knowledge Economy Index (KEI)		Global Competitiveness Index (GCI)		Human Development Index (HDI)	
	2012 (out of 144)	1995 (out of 142)	2012 (out of 144)	2003 (out of 102)	2012 (out of 186)	1995 (out of 174)
Sweden	1	4	4	3	7	10
Norway	5	3	15	9	1	3
Germany	8	14	6	13	5	19
United States	12	1	7	2	3	14
Japan	22	17	10	11	10	8
Russia	55	59	67	70	55	72
Brazil	60	71	48	54	85	62
China	84	100	29	44	101	106
India	110	106	59	56	136	N/A

Note: based on: (Knowledge Economy Index, 2012; Schwab, 2012; Sala-i-Martin, 2003; Human Development Report, 1998).

China scores high on the Global Competitiveness Index scale and has also improved its position since 2003 (a first year when an index based on a new methodology was published). In 2012 China's ranks in the 12th Pillar (Innovations) were as following: university-industry collaboration in R&D – rank 35; quality of scientific research institutions – rank 44; patents application per 1 mln people – rank 46. Some problems remain: in availability of the latest technologies (9th Pillar Technological readiness) China ranks only 107 and in the quality of overall infrastructure (2nd Pillar Infrastructure) it ranks 69. Nevertheless, in CGI China ranks higher than its BRICS partners – Russia, India, and Brazil.

China has the lowest position in the Human Development Index among the three indices presented. The major drawback to its better performance is an education component. Despite large-scale reforms of the education sector and government policy to increase share of population with tertiary education today the indicator 'mean years of schooling' in China is only 7.5 years. However, school enrolment ratio for tertiary education has been rising rapidly in China. In 2000 the value of the indicator was 8% and in 2012 it rose to 27% (School enrolment, 2014). We can expect a significant increase of the education component and overall HDI for China in the next few years.

From the beginning of the economic reforms in 1978, declaration of the strategy of the revitalization of science and education in 1995 and the following reforms of the tertiary education sector (Programs 211 and 985 in 1995 and 1998 respectively) the government played a leading role in the country's progress towards knowledge economy. It has undertaken a variety of measures from creating high-profile universities to establishment of technology parks and creative zones. In (Kaneva, Untura, 2014) the authors performed a detailed analysis of the objectives, tasks and mechanisms of the government participation in the private public partnerships in innovation activities of the universities (see Table 2). This analysis serves as a good illustration of the set of goals pursued in relation to China's progress towards the knowledge economy.

To strengthen the education pillar of the knowledge economy (Pillar 2) the government of China called for the overall increase in the education level with an emphasis on tertiary education and training. To meet the increased demand for seats in the universities the government of China promoted the development of independent universities and colleges. These institutions trained professionals in accordance with modern requirements of the industry in order to facilitate adaptation of foreign and introduction of new domestic technologies.

To improve technological readiness and enhance China's innovation capacity (Pillar 3) the government began developing universities as major research centers. This policy was in line with the current organization of science in the United States where universities act as major centers of research (Kochetkov, 2013). The government substantially increased financing of R&D in universities, which in 2009 employed 12% of the total R&D personnel. R&D expenditure in universities more than doubled from 2006 to 2010 (from CNY 276.8 to CNY 597.3 bn) leading to tripling of the number of patents in the same period (from 12043 to 37490 patents) (China Statistical Yearbook, 2012). In 2011 Thomas Reuters agency reported that China topped the United States and Japan to become top patent filer (Yee, 2011).

To accelerate rapid adaptation of the modern cutting-edge foreign technologies and creation of new technologies and (Pillar 3) the government supported the creation of the joint research centers between the leading universities and foreign multinational companies. In 1999 the government laid grounds for successful partnerships by enacting a decree on the rules of patenting for SMEs that allowed universities to retain rights on inventions that resulted from works financed by the state. The decree also improved the economic and institutional regime of the country (Pillar 1). One example of successful partnership is a joint research center of Tsinghua University and Panasonic Company. Tsinghua University together with Ziguang company developed a model of scanner based on the Taiwanese model and in 1998 started selling the product successfully (Wu, 2010).

To develop infrastructure, including the ICT infrastructure (Pillar 4), the government initiated creation of the university-based science parks and special economic zones. Successful functioning of a science park in some cases led to the economic development of the territories. One example is Zhongcuancun Science Park created by a joint effort of Peking University and Tsinghua University. Today it is a modern science and technology hub that houses such renowned high tech firms as Lenovo, Founder, Ziguang, and Tongfang. In 2008 Zhongcuancun had 170 000 employees and 6100 patents granted; its industrial output exceeded USD 147 bn (Park, 2012).

Table 2: Types of public-private partnerships in innovation activities of higher education institutions in China and objectives pursued by the government

Type of public-private partnership	Description	Goals/objectives pursued by the government
Technology contracts (TCs)	TC type 1: technology development Joint research: firm sets research task and together with university employees finds solution TC type 2&3: technical services and technical consultancy Provision of information about different technologies and organization of training in different technical disciplines	-partial financing of universities by private companies -development of applied science in universities and close ties between science and industry -creation of new jobs for university graduates -transfer of tacit knowledge from science to industry
Technology transfer and licensing (TT)	TT type 1: transfer of patents TT type 2: patent licensing TT type 3: non-patent technology transfer	Transition from 'Made in China' to 'Made and created in China' strategy via: 1) development of universities as major research centers 2) enhancement of China's reputation at the international scientific arena (through increase of patenting activity).
University-owned enterprises	Enterprises-1. Universities' factories and print shops that existed in the 1980s Enterprises-2. Joint ventures between universities and private companies Enterprises-3. Firms founded by university departments for development of special technologies Main reason for establishment of university-owned enterprises was decrease in government financing of universities in the 1980s	From 1991 to 2000 the government promoted creation of university-owned enterprises and granted them a series of tax preferences in order to: 1) attract additional financing to higher education institutions 2) utilize special knowledge of university researches in industry through employment of professors as experts for private companies 3) accelerate development of applied research via intensification of collaboration between universities and industry From 2001 on the basis of the decree of the Ministry of Education of China the government set the goal to change management structure of enterprises in order to improve quality of their operations
Joint research centers	Research centers founded by Chinese universities, domestic industrial enterprises and multinational corporations	-accelerated commercialization of domestic technologies -attraction of necessary financing to R&D of higher education institutions -provision of jobs for university graduates -acquisition of management skills by university personnel -adaptation of foreign and creation of own domestic technologies
Independent universities (colleges)	Higher education institutions founded by state universities with attraction of financing from	-increase of population education level and share of population with tertiary education (long-term goal within a framework of transition to the knowledge

	private companies. Independent universities function on the basis of 7 independencies	economy) -development of vocational training programs based on requirements and demands of industrial enterprises -creation of new professions, educational and vocational programs in accordance with requirements of private companies and investors to graduates' skills and qualifications -utilization of entrepreneurial skills of private sector in management of independent colleges
3) University-based science parks (technoparks)	Physical place that supports university-industry and government collaboration with the intent of creating high technology economic development and advancing knowledge	-accelerated commercialization of technologies developed by universities through foundations of start-ups aimed at technology implementation -technology transfer from universities to private companies - development of entrepreneurial skills of university graduates -job placement of students returning from abroad -attraction of venture capital with assistance from foreign university graduates -increase of investor attractiveness of territories where science parks are located -development of innovation infrastructure of territories

Today the government continues to strongly support the development of the knowledge economy. China's official "Report on the implementation of the central and local budgets for 2013 and the draft central and local budgets for 2014" indicates that expenditures on science and technology, expenditure on education, and expenditure on health care from the government budget continue to rise (Report on execution, 2014). Figure 1 illustrates the dynamics for the years 2012-2014.

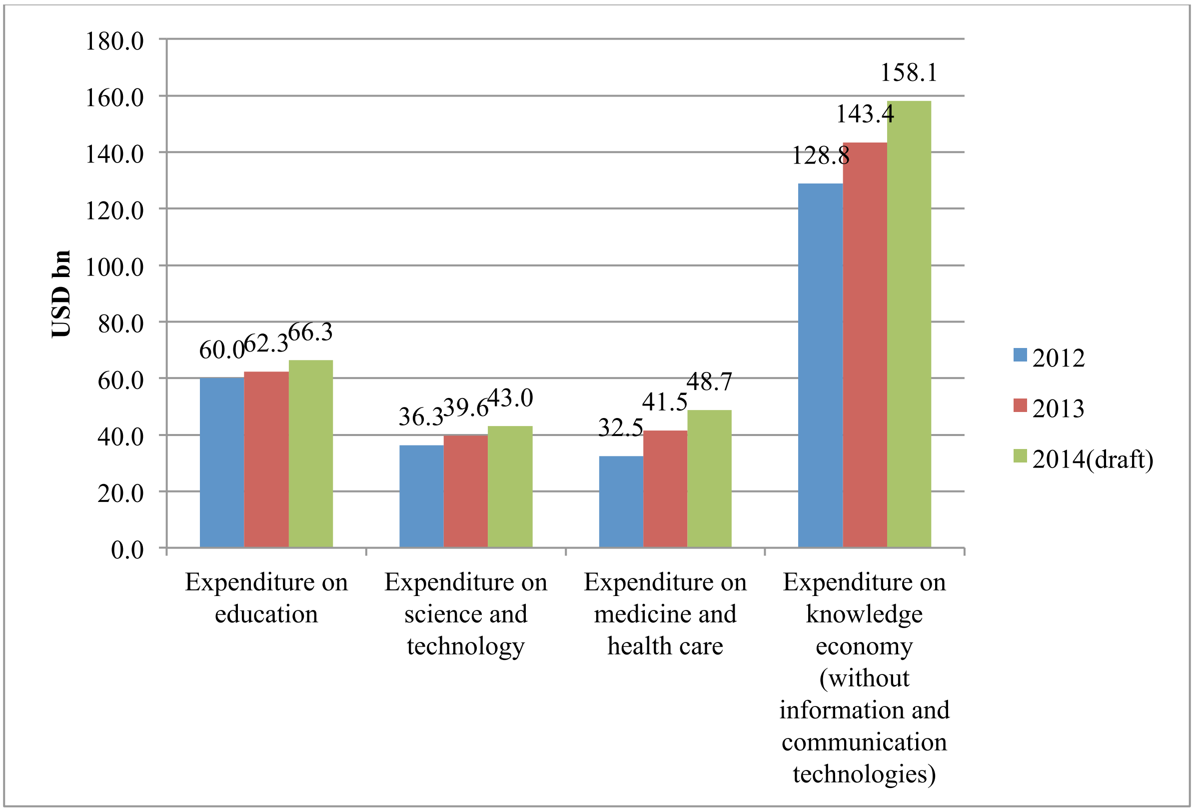

Figure 1: Expenditure on the knowledge economy from the budget in China, bn USD

Note: For the values for 2013 and 2014 an average exchange rate of CHY for the period January 1, 2013 to June 10, 2014 was used (1USD=6.23CNY); for the values for 2012 the official annual exchange rate was used (1USD=6.31 CNY).

Here we use the extended definition of the knowledge economy and include health care as an additional pillar. Expenditure on the knowledge economy are sum of expenditure on education, science and technology, and health care and do not include expenditure on ICT.

Source: (Report on the execution, 2014).

In conclusion, we find strong support for *Hypothesis 2.* The government is directly involved in building the knowledge economy in China. It simultaneously targets the four knowledge economy pillars and successfully develops them. The involvement of government ranges from legislation acts (as in case of joint research centers) to direct financing of activities (e.g. university R&D).

We now turn to Hypothesis 3 and will explore how public-private partnerships in innovation activities in the universities in China (Table 2) intensified the country's innovation activities in the past two decades. Each of the six types of partnership is discussed separately.

Technology contracts

Technology contracts are arrangements between a university and a private company and can take form of technology development (solution of a research task set by the company by the university employees), provision of technical services and technical consultancy. From six types of PPPs technology contracts are major source of financing with funds of the private companies going into research and development activities of the universities. The money is spent on enhancing research capabilities of the universities and development of applied science research. Technology contracts also act as a mechanism of tacit knowledge transfer from science to industry.

Technology transfer and licensing

Technology transfer mechanism as a form of PPP between universities and industry can take three district forms: transfer of patents, patent licensing, and non-patent technology transfer. From the point of view of realization of the government strategy of intensification of science and technology and progress towards the knowledge economy, the most important form of technology transfer was patenting of the scientific results. In the beginning of the 21 century the China lagged behind developed countries in licensing and patenting. In 2001 China had 1653 patents granted while Japan had 125704 patents and South Korea had 35900 patents granted (Xue, 2006). The government channeled financing into R&D activities of the universities, and expenditure on R&D in universities more than doubled from 2006 to 2010 (CNY 597.3 bn in 2010). The results were impressive. Today China has a reputation of major patent filer with 217000 patents granted in 2012. In 2010 the share of the universities in the total patents was 47% (Rossiya i Strany Mira, 2012).

With the bulk of new technologies created within the university the technology transfer today functions as technology commercialization mechanism in China. The new technologies form basis of the China's technological platforms and lessen the country's dependence on the foreign technologies.

University-owned enterprises

University-owned enterprises or university-affiliated enterprises are a unique Chinese form of public-private partnership. There is no formal definition of a university-owned enterprise and the concept embraces all enterprises that are created and, in one way or another, controlled by universities.

The process of development of university-affiliated enterprises was divided into three stages. First stage covered a period from the 1980s to the 1990s. A distinctive feature of the first period was a spontaneous development of firms in the form of 1) joint commercial entities between universities and outside enterprises; 2) technology development companies created by universities and university departments; and 3) university-owned factories. In the UNESCO study (In Search of the Triple Helix, 2011) the spontaneous development is explained by the absence of a market to buy or sell technologies during the 1980s. University-affiliated enterprises acted as one of mechanisms for exchange and implementation of technologies. In 1989 sales of the university-owned enterprises in China reached CNY 470 mln (Xue, 2006).

During the second stage (1991-2000) the government recognized the importance of the university-owned enterprises in the development of science and technology in China and promoted their establishment by giving them tax preferences. The government also created favorable working conditions for the university employees allowing them to simultaneously hold positions in the private firms and universities and participate in venture projects. Creation of the enabling environment resulted in the increase of the number of firms up to 5451 in 2000 with volume of sales reaching CNY 48.4 bn (Jin, 2013). By 2000 market for technologies was already in place in China and there was less need for the university-owned enterprises from the point of view of the government. During the period (2000-present) under pressure from the government some university-owned enterprises spun-off while others were forced to discontinue their existence. By 2009 the number of university-affiliated fell to 3643 but the volume of sales increased to CHY 141.2 bn.

Joint research centers

Emergence and proliferation of joint research centers as a form of PPP between universities and private companies are linked to the two official measures: Action Scheme for Invigorating Education in the 21st century launched by the Ministry of Education in 1999 and the decree on the Rules of Patenting for SMEs (similar to Bayh-Dole Act of the USA). Joint research centers have been proliferating since the late 1990s with joint research centers with multinational corporations among them. In 2011 Tsinghua University had 40 international research centers (Tsinghua university, 2009).

Major contribution of the Chinese universities into these research alliances is talented and highly qualified research personnel. Through the collaboration with private companies universities develop new ideas and the personnel acquire management skills. Recent graduates have opportunities to further advance their knowledge and practical skills by interning for the private firms. Creation and commercialization of new technologies that take place within joint research centers further promote the knowledge economy.

We must note, however, that Chinese universities vary in their prestige, quality of educational programs, and the level of qualification of their faculty. So far the most prestigious universities have been involved in research collaboration (Zhejiang University, Shanghai Tong University, Tsinghua University, etc.). Provincial universities are involved to a lesser degree. In order to further advance towards the knowledge economy China needs to raise the level of education and research in provincial university including via establishment of joint research centers.

Independent universities

Independent universities or colleges[14] represent another form of PPP that is unique for China. Independent colleges are financed by private companies but degrees are awarded by the state universities that act as parent institutions. Creation of first independent universities was initiated by institutions of higher education and not by any government legislation. City College of Zhejiang University in Hangzhou created in 1999 by a municipal government of Hangzhou, Zhejiang University, and Zhejiang Telecom Group, was the first independent college in China. Since 1999 the number of independent universities grew rapidly. In 2010 there were 323 independent universities in China (Baocun, 2012).

From 1999 to 2002 independent colleges developed without any intervention from the government. After observing this process for a few years, at the end of 2002 the Ministry of Education officially approved the existence of independent universities that were defined as 'secondary undergraduate institutions, which are established according to new mechanisms and new models by state-owned colleges or universities' (Zhang and Adamson, 2011, p. 252).

The government viewed independent universities as a mechanism of improvement the overall education level in China and provision of additional places in tertiary education in response to the increased demand for education. The government planned to use independent universities to raise a share of population with tertiary education. An increase in the number of educational programs and institutions of higher education, including independent colleges, led to growth of the share of population aged 18-22 studying at universities from 12.5% in 2000 to 30% in 2010 (China Statistical Yearbook, 2012).

Government established a focus of independent institutions: they had to concentrate on educational programs of a practical character (polytechnic), while state universities could continue to concentrate on educational program in fundamental sciences. It was assumed that the development of independent colleges would promote accumulation of practical knowledge by students and that this practical

[14] Majority of independent universities offer only bachelor's degree programs and therefore are colleges according to the definition of higher education institutions in the US and Western Europe.

knowledge would comply with the requirements of potential employees and the level of technological progress in China. Finally, the government aimed at using entrepreneurial skills of the private sector in management of independent colleges.

Today the experience of creation of independent universities as a form of public-private partnership could be considered successful. Independent universities rarely face financial difficulties and the quality of education is considered to be high. Also, since businesses can influence curriculum of independent institutions and tailor it to needs and requirements of the modern production, they willingly hire graduates of independent universities.

University science parks (technoparks)

Process of creation of technoparks began in China during the last decade of the 20th century. China's first university-based science park—Northeast University Science Park—was established in 1989 (Xue, 2006). The Chinese government was inspired by the success of Cambridge and Stanford science parks and played an active role in the process of creation of science parks. In 2000 a national certification program of university-based science parks began. In 2010 there were 86 university-based science parks in China with 4346 companies established on the premises of science parks (in 2002 there were 720 such companies) (Jin, 2013).

A model of a university-based science park in China and its main goals generally repeated the agenda of the Western science parks. Among the goals were: company spin-offs; collaboration between universities and private companies; and commercialization of research results at local and international markets. However, Chinese technoparks also possess a unique country-specific feature in relation to the knowledge economy. Science parks became places of employment for the students returning from abroad. Many highly qualified scientists with doctoral degrees in basic and applied sciences from Western universities and high potential for new knowledge generation founded high-tech companies in science parks. Recognizing the potential of the returning graduates the government monitors the process of attraction of foreign-university graduates to science parks (Van Essen, 2007).

During the past decade the Chinese university-based science parks received various grants from the government and participated in a series of innovation projects. Despite the fact that some science parks failed to develop in accordance with the government of objectives, others (with Zhongcuancun Science Park among them) became growth poles for the accelerated innovative development of the territories.

Based on the study of the six private public partnerships in innovation activities of the universities in China we find support for *Hypothesis 3* and confirm that PPPs has played an important role in the creation of the knowledge economy in China.

5. CONCLUSION

The study explored China's progress towards the knowledge economy with an emphasis on education and innovation pillars. According to the international rankings that reflect countries' progress towards the knowledge-based society ― Knowledge Economy Index, Global Competitiveness Index and Human Development Index ― advancement of China is evident. In 2012 China was placed higher than its BRICs partners (Russia, India, and Brazil) in the Global Competitiveness Index ranking.

The government has played the leading role in the creation of the knowledge economy over the past 20 years and continues to do so today. With its new economic model 'Made and Created in China' that replaced the old 'Made in China' model the government has enacted new legislation in science and education sectors, intensified R&D activities, technology transfer and commercialization, and initiated reforms of the education sector aiming at greater share of people with tertiary education. In 2013 total expenditure on education and science accounted for 4.46% of the total budgetary expenditure and further growth of the share to 5.1% is projected for 2014[15].

Public-private partnerships positively impacted the construction of the China's knowledge economy. While some of PPPs mechanisms contributed to innovation development during some period of time (as in case of university-owned enterprises functioning as technology transfer mechanisms up to 2000) others had a long lasting effect (i.e. increase in tertiary enrolment through independent universities).

However, several problems with regard to the creation of knowledge economy remain and should be addressed. Of particular importance is an uneven development of the country with the capital and large cities having advanced much more than provincial towns and rural settlements. This calls for special attention from the government. Development and financial support of provincial universities can lay foundation for rising average education level which still remains low in comparison to the developed countries.

The study has important policy implications. First, China's experience demonstrates that government has to lead the reforms of science and education sector to further advance towards the knowledge economy. Second, other countries, including Russia, can seriously consider adapting public-private partnership mechanisms to develop innovation activities of the universities. In their future work the

[15] Authors' calculations based on (Report on execution, 2014).

authors plan to explore how some of the country specific public-private partnerships can be implemented in Russia.

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Connection between retail internationalization and management strategies

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ABSTRACT

In past ten years the world of retailing has changed dramatically due to changes to consumer consumption, product saturation and most of all to technology improvements. Retailers have to operate in environment that fluctuates among different challenges that global economy puts on their way of doing business. Also global economy and internationalization of business reduced dependence on home markets and mood swing of domestic consumers. Needless to say attractiveness of foreign-new markets and its possibilities of growth. But unfamiliar and unpredictable territory has its treats and risk. In our paper we are focused on analysis of the strategies that retailers have as option when their wont to internationalize their business. Analysis of theoretical aspects of retail internationalization, and also of motives that shift retailers operations and attention from domestic toward unfamiliar markets are also given. The question for new analysis or research is put is there the best entry strategy for retailers or is it a mix of skill, experience and luck?

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1. INTRODUCTION

The world of retailing is changing dramatically in past ten years. Changes in consumer behaviour, rapid technology improvements, new media, society networking, and products saturation lead to seeking new markets that can sustain costs of keeping up with competition. Also many retailers perceive global expansion as a crucial indicator of their growth. But global expansion or internationalization must have base in management strategy or be the strategy itself. If it is a part of management strategy then must be incorporated or involved with aim to obtain globally sustainable competitive advantage. If it is a strategy itself than can also be attempt of overall market survival. Today most successful retailers see global expansion as a crucial platform for growth. (A.T. Kearney, 2013)

Many scholars see retail internationalization and its performance as an important area of their research. (Chan, et al., 2011.) But despite their attempts international retailing with all his advantages and disadvantages is still under-researched. According to Alexander and Myers (2000) the choice of an appropriate internationalization strategy is crucial for retailers in sense of resource commitment, expansion and future performance and for most for maintaining the company's own image. Also internationalization and new markets open new prospects for growth that are for various reasons

limited on home market. It is noted that is very important the first country that retailers choose for their growth ie first country influences the future performance and internationalization due to its learning opportunities. First market entry shapes future operations because it reflects retailer's ability for moving and adapting its management team and financial resources to new environment.
Economic attractiveness is considered as an important motivation for internationalization and element for country analysis. Economic state of country reflects on its retail market development and shapes its growth prospects and opportunities for profit.

It is also noted, that retailers when choosing country reflect between the market size and its growth potential and countries with larger population. (Chan, at al., 2011)

Decision to go global, to move from domestic market where everything is known and "comfortable" lead to disruptive elements beyond the management control. Globalization adds complexity to every aspect of doing business and creating greater risk exposure. (Deloitte, 2013). Specific nature of retail industry that is directed to satisfy the needs of end customers imposes nothing easy in global expansion strategy. Needless to emphasize that every market is unique and imposes different challenges i.e. requires unique strategy.
Merchandising, marketing, store operations, real estate, human resources, reporting requirements, tax-policy all must be re-evaluated in light of a new consumer culture. (Deloitte, 2013). Also macroeconomic aspects like currency fluctuations or political instability add uncertainty in success of foreign market expansion. Therefore it is crucial that managers decide what role global expansion will have in their overall strategy and performance.

2. INTERNATIONALIZATION OF RETAIL

Retail trade companies traditionally focused on the domestic (local) market. In the early eighties of the last century in the practice of retailers entered the term internationalization of business. The entry of foreign retailers into the country enriches the offer, but in it, and creates additional competition. In this way, local retailers are encouraged to improve their market performance. Internationalization as one of the strongest trends in retail industry can take two directions: internationalization of supply and internationalization of sale. (Knezevic, 2007) The internationalization of supply means procurement from foreign markets, to establish own procurement centers abroad or establishing different partner's agreements with domestic companies.

Internationalization sale marks the opening of retail units abroad. The degree of internationalization is measured by the number of operating countries and percentage of retail revenue from foreign operations. Significance of internationalization for retailers is evident from Table 1.

Table 1: Top Ten Retailers World Wide, 2011

Top 250 Rank	Name of company	Country of origin	Number Country of operations	% Retail revenue from foreign operations
1	Wall-Mart	USA	28	28,4
2	Carrefour	France	33	56,7
3	Tesco	UK	13	34,5
4	Metro	Germany	33	61,1
5	Kroger	USA	1	0,0
6	Costco	USA	9	27,0
7	Schwartz	Germany	26	55,8
8	Aldi	Germany	17	57,1
9	Walgreen	USA	2	1,5
10	The Home Depot	USA	5	11,4

Source: Deloitte, 2013

As if can been seen from the Table 1 European retail companies operate in much more countries than USA companies except Wall-Mart which has so sophisticated logistics and supply chain established that costs operating abroad do not burden its gross margin.

According to annual Deloitte analysis of Global powers of retailing in 2011 the worlds 10 largest retailers operate in the 16,7 (average) countries, and top 250 retailers are operating in 9,0 (Deloitte, 2013). Revenue from foreign operations accounted for nearly one-third of total top 10 retail revenue. And also European retailers are more operating abroad than USA companies. That is partly due to the fact that USA retail market is much larger and it is easier to obtain cost reduction of economy of scale in logistics, distribution, also number of consumer is bigger so retail margins can be much lower.

2.1. Purpose of going global

There can be defined goals and motives of retail internationalization. Goals of operating abroad are: increasing of market share, conquest of new consumers and economy of scale i.e. question of volume which always in center of every retailer’s attention (in order to cut costs especially the procurement costs). Motives for international expansion are: saturation of domestic market – impossibility for retailers for further expansion that pushes them out from domestic toward foreign markets i.e. PUSH factors. PUSH factor are in center of retailers so called PUSH strategy. The second motive is foreign markets potential which attracts retails or pulls them from domestic toward foreign retail market and consumers. That is known as PULL factors of retailers PULL strategy. (Knezevic, 2007). PUSH and PULL factors are shown in Table 2.

Table 2: Motives for international expansion

PUSH factors	PULL factors
Terms and conditions (legal framework, the state of economy, competition) on the domestic market	Terms and conditions (stable government and economy, infrastructure, demographic structure) on the international market
Domestic market saturation (receptive power in decline)	Market size
Trade forms saturation	Competition level
Pressure on margins	Greater margins
New business technologies	New business technologies
Universal products	Economy of scale

Source: Knezevic, 2007

Many scholars agree that location is key factor for retailers' success, ie selecting location involves choice of markets. Due to that selection a location is also motive for retailers' abroad expansion. Market selection is under influence of: cultural proximity, geographical proximity and the stage of development of retailing. (Siebers, 2012) Logic for choosing a store location is the same when considering international expansion. Consideration of political, economic, social and cultural factors is in collision with customer characteristics, accessibility, competition, prestige and cost of retail evaluation when internationalizing.

Retail internationalization is also shaped by firms' characteristics. Firms' characteristics include international experience, resource commitment and competitive advantages. Key driver for retail internationalization is knowledge specially collected previous experience or retailers know how which include management perception of foreign operations and also attitudes, behavior, educational background and experience. (Siebers, 2012)

Psychic distance is more and more related with retailers' internationalization as a factor developed in recent scholars' studies. It is noted that psychic distance is correlated with cultural and business distance. It is also noted that perceived distance between home and foreign market has more influence on retailers' performance than real psychic distance. (Siebers, 2012) Example for that statement is Carrefour's bad performance in the USA and their success on the Taiwan market. Also organizational changes, leadership, and innovative ideas may be important for successful retail internationalization. (Siebers, 2012) Understanding of any kind of distances, cultural, organizational, operational, psychic, improves the outcome of internationalization, and as firms enters more and more foreign markets and learns from that experience and collects it knowledge the performance will be more successful.

Table 3. shows that the world's most successful retailers are the one with strong self-brand or/and are selling strong product brand (like Starbucks and Ikea) or have extremely low margins ie prices which is best seen in fast moving consumer goods category (Wall-Mart, Carrefour). (Levy, Weitz, 2004).

Table 3: Core competitive advantages for global retailers

Core advantage	Global retailer
Low cost, efficient operations	Wal-Mart, Carrefour
Strong private brands	Royal Ahold, Ikea, Starbucks
Fashion reputation	The Gap, Zara, H&M
Category dominance	Office Depot, Home Depot
Image	Disney, Warner Brothers

Source: Levy, Weitz, 2004

Global market success those retailers owe to:

- Globally sustainable competitive advantage,
- Adaptability,
- Global Culture,
- Deep pockets.

These four characteristics are common to all retailers who have successfully exploited international growth opportunities. Globally sustainable competitive advantage provides foundation that can be easily transferred into non domestic market and new consumers Adaptability supplements globally sustainable competitive advantage and allows recognition of cultural differences and adaptation of their core strategy to the needs of local markets.

Global culture is a potential not just to adapt to new situations but to truly thing globally and organize and encourage rapid development of local management structure toward its globality. No venture is cheap entering or going global needs time and money and also is very hard for retailers to generate short-term profits. (Levy, Weitz, 2004)

Globally successful retailers have also a potential for:

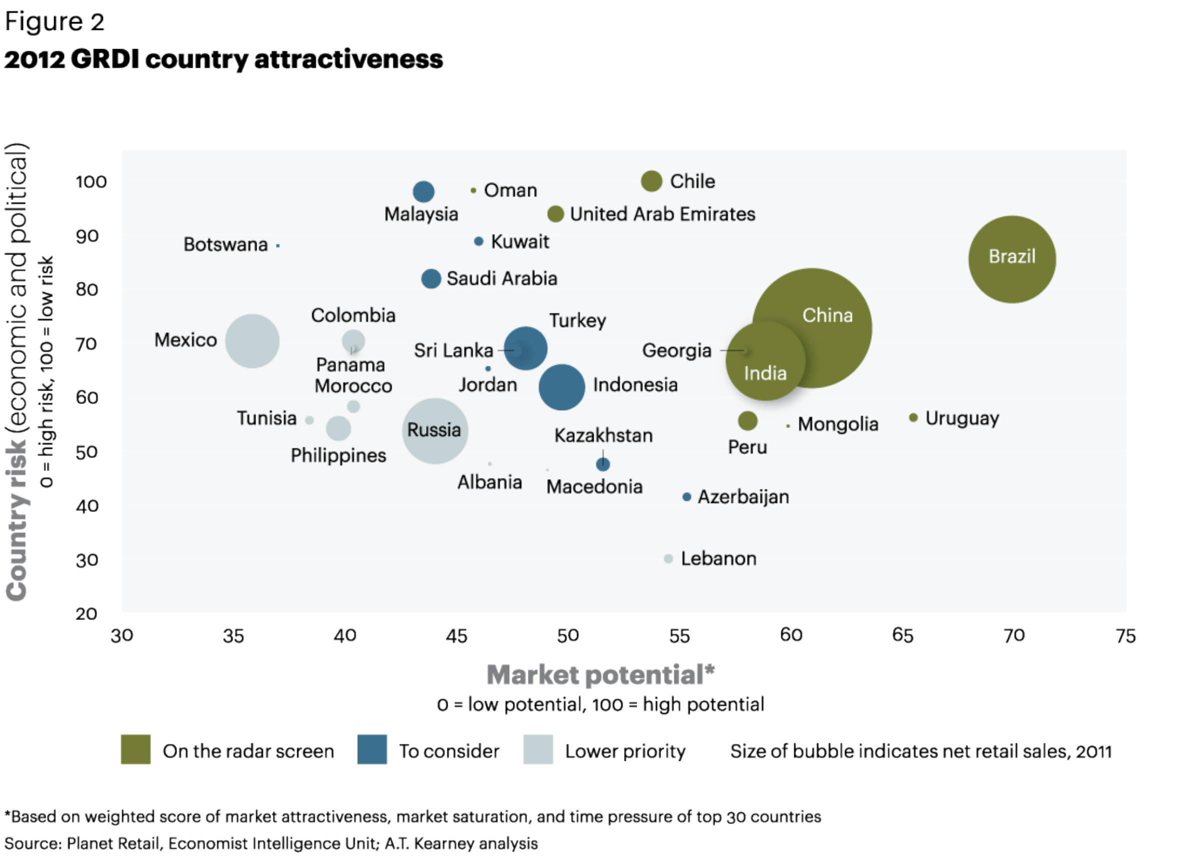
- Applying latest technology trends in inventory management,
- Logistics costs at global level while satisfying all local markets specificities,
- Enjoy economy of scale due to global procurement,
- Standardizing and unifying packaging thus facilities business control. (Segetlija, 2008)

Committed retailers trough their internationalization process make four major transfers to the host market, like transfers of the firms' business culture and business model, and its operational techniques. (Dawson, 2007)

3. MANAGEMENT STRATEGIES AND RETAIL INTERNATIONALIZATION

Retailers have to decide what method or strategy is required to succeed on non domestic market ie what will allow them to best adapt to new/local market conditions and consumer expatiations. Consultant company A.T. Kearney developed the Global Retail Development Index (GRDI). GRDI ranks annually top 30 development countries for retail investment. (A.T. Kearney, 2013). It can be seen on Picture 1, the idea of GRDI is to rank countries on a 0-to-100-point scale—the higher the ranking, the more urgency there is to enter a country.

Figure 1: GRDI country attractiveness



Source: entirely taken from A.T. Kearney, 2013

GRDI for 2012 showed that countries known as BRIC nations (Brazil, Russia, India, China) are still in pick of retailer attractiveness also new markets have emerged. This new pulling markets are Georgia, Oman, Azerbaijan and Mongolia who owe their attractiveness to concentration of wealth so retailers of luxury and specialty goods are targeting them.

It is needed to point out that retailers who want to go global must in their operations and communication with consumer include multi channeling. Modern retail or global retail players have to take in consideration that today's consumer shop not only in physical stores but trough different media, e-commerce and mobile commerce. An effective entering strategy should align these elements while maintaining the operational and organizational flexibility of receptive market.

All this imposes that retail entrepreneurs must consider several key issues that could block successful globalization (Deloitte, 2012):

- Payback expectations,
- Ensuring brand integrity,

- Capability assessment,
- The growing power of local competitors,
- The need for strategic localization,
- No perfect entry strategy,
- Market potential.

No market is the same, no return effects are the same, in some cases it will take some time before positive results follow as expected. Entering a new country can move focus from retailer as brand due to the new value chain activities. Retailers also have to unite their internal capabilities and resources with operations in new environment ie have to asses their corporate global leadership capabilities. Local competitors are in advantage because they have know-how of domestic markets but also develop and adapt fastly to new formats and product categories, so new entree must estimate. If they don't adapt to local consumer culture, traditions, habits and only focus on demographic aspects of new market retailers could fail to succeed on going global. The choice of entry strategy is combination of variables: speed/control and risk/reward. When entering a new market retailers can choose among: strategic alliances, acquisitions, licensing, franchising, joint ventures. Estimating market potentional has to include several elements like size and economic growth of a country, legal restrictions etc. or can be taken into consideration different developed Indexes like mentioned GRDI.

3.1. Management planning in a global retail environment

Mangers involved in retail industry must shift their "field of battle" from traditional bricks-and-mortar retail store to the increasing number of channels available for connection with customers. As earlier mentioned increasing number of channels impose several factor that have to be considered when going global (Berman, Evans, 2010):

- Institutional factors,
- Consumer factors,
- Store location factors,
- Operations factors,
- Merchandising factors,
- Pricing factors,
- Image and promotion factors.

New types of retailing have emerged from all countries this encourages retailers to seek new market segments, make adjustments in their retail mix and adopt multi segment strategies. (Dunne, Lusch, 2005)

4. CONCLUSION

Growing number of retailers, mainly in developed countries, try to reduce their dependence on domestic market and behaviour of domestic consumer and move to less saturated or attractive foreign markets. Never the less, must be pointed out that internationalization can gain significant benefits for retailer like less saturated market and more spending consumers but also can be often risky and requires investment of resources, time and money.

When the firm has made decision to enter international market there are variety of options. These options vary with cost, risk and the degree of control which can be exercised over them.
Management strategies when entering the global retail are numerous and imply a varying degree of risk and of commitment from international firm. The implementation of international strategy is a process achieved in several steps. Entering international market is a challenge for every company. The management strategy is a summary of how the company will achieve its goals, meet the expectations of its customers, and sustain a competitive advantage in the marketplace.

We can say that retailers will be successful in operating abroad if they don't enter absolutely unfamiliar markets which include unfamiliar ways of doing business that require new retail forms and structures incompatible with the set strategy. When retailers seek to enter new markets they transfer their comparative advantages and incorporated it into foreign market trends. Retailers that record global business successes are the ones who successfully transfer their core strengths into new cultures and new markets.

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Distinctiveness of self-initiative expatriates

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ABSTRACT

Existence of global rivalry between corporations causes the need for expatriation as one of potential sources of international competitive advantage. Expatriation is standard practice of multinational corporations to accomplish their missions. In this paper focus is put on self-initiated expatriates who represent contemporary trend among global working force. Their importance and uniqueness is elaborated broadly. Special emphasis is put on comparison between traditional and self-initiated expatriates. The most important differences between those two categories are analyzed as well as different motives that lead and encourage them to successfully finish their international assignments.

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1. INTRODUCTION

Self-initiated expatriates are defined as individuals who, on their own initiative, decide to look for a job outside their country. Self-initiated expatriates are conceptualized as "free" agents who go beyond the organizational and national limits (Inkson et al., 1997). According to Lee (2005), self-initiated expatriate is every person who is employed on the contractual basis and is not reallocated abroad by organization. Generally, the term self-initiated expatriate is used in a positive context. They are considered as persons who contribute improvement and transfer of knowledge and skills on the local population (Savad, 2004).

Today, managerial literature distinct three types of international mobility; expatriation, self-initiative expatriation and migrations. Expatriation is a procedure of sending employees on an international mission by organization, while a self-initiated expatriation is departure on an international mission on their own initiative. The difference is reflected on defining a career, in case of expatriates the career is considered as an organized process of collaboration between individuals and organization, while in case of a self-initiated expatriate and migrants a career is individual responsibility (Jokinen et al., 2008).

There are several main characteristics of self-initiated expatriates. Self-initiated expatriates choose on their own the country where they are going to move, exclusively by their personal motives. Mostly they come from developed countries such as USA, Australia, EU, New Zealand, while their destinations are Japan, France, Italy, United Arab Emirates and Saudi Arabia. Men and women are equally represented and they are characterized by a high level of education and qualifications and having know-how, social skills and motivation. They occupy the positions of top management, head of department and middle management, and they mostly work in multinational companies and medium-sized companies. Self-initiated expatriates go on international missions on short or long term, and they are willing to change the country several times. Their international mobility is their privilege which they use for professional development. They don't have a defined period for staying on an international mission, and if they get a better chance they will move in other country (Al Ariss and Crowley-Henry, 2013).

This paper is consisted of two parts. First part gives detail comparison of traditional and self-initiated expatriates, while the second elaborates the uniqueness of self-initiated expatriates. Conclusion summarizes previously explained theory and points out the most important thesis.

2. COMPARATION OF TRADITIONAL AND SELF-INITIATED EXPATRIATES

Traditional expatriate is defined as a person who temporarily leaves its country on a longer period of time (a few years) because of an international assignment in a foreign subsidiary of an organization in which he is employed. He or she returns to the home country after the expiration of the contract or after fulfilling an international assignment (Guzzo, 1997). Self-initiated expatriate is defined as a person who voluntarily moves abroad on his own initiative, independently of any employer and without organizational help, and he finds a job in a local firm abroad (Crowley-Henry, 2007).

The concept of self-initiated expatriates is much easier to understand through the comparison with traditional expatriates. Self-initiated and traditional expatriates can be observed as two sides of the coin, confronted with almost the same challenges of acculturation, but they differ from each other in few aspects.

Table 1: Comparison of traditional and self-initiated expatriate

Characteristics	Traditional expatriate	Self-initiated expatriate
Age	Older generation (above 40 y.)	Younger generation (above 25 y.)
Sex	Mostly men	Mostly women
Expatriation is initiated by	Organization	Individually
Length of stay	Defined by a contract	Undefined
Type of organization	International	International or local
Motives	Career	Combination of different motives
Mobility	Little, connected exclusively by one organization	Highly mobile, they change organizations and countries

For a traditional expatriate having international experience is usually a condition for their promotion within the corporation. Development of their career is closely tied to the parent company. On the other side, an international experience for self-initiated expatriates is part of their own personal career plan which doesn't have in advance structured development path. International experience is contributing to their development and experience accumulation which is required in international careers and ensures acceleration of future possibilities (Jokinen et al., 2008). Self-initiated expatriates are interpreting their international experience as a valuable competitive advantage on an international labor market; meanwhile traditional expatriates understand it as a possibility for acquiring necessary knowledge and personal promotion within the organization (Banai and Harry, 2004).

Self-initiated expatriates do not have time-defined international experience. They independently plan their stay, and it isn't determined in advance by certain period of time. In case of a traditional expatriate, time period is defined by a contract (4 or 5 years) or by completing international assignment. Further difference is reflected in fact that self-initiated expatriates decide independently about repatriation, while traditional expatriates don't have the rights to decide because their repatriation is determined by organization (Suutari and Brewster, 2000).

Traditional expatriates work in international organizations, while self-initiated expatriates can work both in international or local organization. Traditional expatriates are employees of parent company in their home country, while self-initiated expatriates are employed as local employees in companies in foreign country. Unlike traditional expatriates who have full compensational packet, self-initiated expatriates have additional difficulties (Biemann and Anddresen, 2010). Compensational packages of self-initiated expatriates are more likely local employees and don't include accommodation costs or costs for moving their families (Howe-Walsh and Schyns, 2010).

Self-initiated expatriates are motivated with several motives. Most important motives are: desire to work abroad, researching, new life style, financial motivation and acquiring experience for career management (Richardson and McKenna, 2006).

Mobility among different organization of traditional expatriates is limited. They rarely change organization and their promotion is exclusively in one organization. On the other side self-initiated expatriates are extremely mobile, and they are used to change organizations and countries (Thorn, 2009). Self-initiative expatriates, according the definition of their career, belong to "boundary less career" concept, which is defined as a career that takes place through multiple international missions (Arthur and Rousseau, 1996).

3. UNIQUENESS OF SELF-INITIATED EXPATRIATES

Uniqueness of self-initiated expatriates gives a brief insight in key items for understanding this group of individuals. Key items are motivation, the impact of family, competences and the problem of repatriation.

Self-initiated expatriate makes the decision for leaving abroad as a matter of personal choice and determination so he or she has stronger motives than the traditional expatriates. They are motivated by combination of various motives that have different proportion of importance for every individual (Inkson et al., 1997).

For each person exists equation that consists of a mixture of motivating factors. It is unique for every individual and the importance of every factor will be converted as the life and career develops.

Motives of self-initiated expatriates can be grouped in five basic categories:

1. Economic factors
2. Factors related to professional development (career)
3. Factors related to the lifestyle
4. Cultural factors
5. Family factors (Carr et al., 2005).

Research had shown that self-initiated expatriates are not primary motivated by economic factors because they are willing to move to other country even for lower wages. The importance of this motive depends from individual to individual and from country to country (Suutari and Brewster, 2000).

Factors related to professional development are representing person's motivation for professional development, career progress, learning new competences and realization of international experience (Thorn, 2008). Self-initiated expatriates are usually motivated by career possibilities. Their international experience is focused on developing transferable knowledge and skills across organizational and national borders today known as ”boundary less career” concept. Self-initiated expatriates will seriously consider going abroad if there is a chance for career development (Suutari and Mäkelä, 2007).

Perceived differences in lifestyle of people in their country and foreign country can be motive for mobility. Most frequent motives are climate and infrastructure of country that improves living conditions. Self-initiated expatriates will choose a country by desirable characteristics (Thorn, 2008).

For many people, the desire for learning about the world and new cultures, and experiencing life in a new culture presents a strong motive for leaving their country. The desire for learning about new cultures can have a great impact on accepting international assignments. Self-initiated expatriates are choosing cultures which are similar to theirs, if there is such a possibility (Shenkar, 2001).

The family has an important role in decisions of self-initiated expatriates. Some authors consider family as a key component for making the decision because the family will either support self-initiated expatiate or try to stop them. This type of motivation is complex. Therefore, the family of self-initiated expatriate is becoming the focal interest of many researchers (Anderson, 2001).

Recent study (Tharenou, 2008) suggests introduction of the term “significant other” that besides the term family (and extended one) includes spouses, children, close friends and coworkers. “Significant other” considers a person who is extremely important to self-initiative expatriate, who he or she wants to impress, whose opinion they respects, he or she even identifies with that person. In case of self-initiated expatriates, the impact of a family will probably be positive and the decision for going abroad is a result of a consensus within a family (Thorn, 2008). The literature shows that self-initiative expatriates are extremely globally mobile and most of them are married so their spouses follow them abroad (Palthe, 2004). It is obviously that spouse is a great source of support and encouragement for self-initiative expatriate (Lauring and Selmer, 2010).

In literature, a spouse is an advantage for a man, but a disadvantage for a woman. A study on women self-initiative expatriates in Australian companies had identifies problematic issues between couples, especially where one spouse needed to leave the position in company. In a situation when a female spouse is underemployed in a country, there is a great probability that she is going to adjust to the supporting role, while in case of a male spouse the situation is quite different. These facts make a huge pressure on female self-expatriate and cause dissatisfaction and distractions at work (Selmer and Leung, 2003).

There are several reasons why male spouses have difficulties in tolerating transformation than female. Firstly, they have problems with staying at home and taking care of the offspring. Female spouses quickly make social network and connect with local people, while male do not. Inadequate financial independence and career possibilities can negatively influence on male spouses.

The presence of children or older dependent household member has an extreme influence on mobility of self-initiated expatriates (Linehan, 2002). Also, self-initiated expatriates hardly choose having children due to permanent reallocation (Ackers, 2003).

In order to successfully work in a multicultural situation, self-initiated expatriates need to have intercultural competences and competences related to their career (Stone, 2006). Intercultural competences is multidimensional concept in which different factors can be successfully combined for efficient functioning in different cultures (Arasaratnam and Doerfel, 2005). Also, these competences provide suitable communication in intercultural situations based on intercultural knowledge, skills and behavior (Deardorff, 2009).

Intercultural competences are divided into three categories:

1. Knowledge/awareness
2. Skills/ personality traits
3. Attitudes/ behavior (Earley and Ang, 2003).

Individual needs to have certain skills to be efficient in an international environment. Also, there are several personality traits that are important for an individual living abroad: cultural empathy, open-mind, emotional stability, social initiative, flexibility and adjustment. They are important for appropriate cultural adaptation and success (Van der Zee and Van Oudenhoven, 2001).

There are seven basic attitudes and behaviors that are crucial for efficient intercultural communication. They are expressing respect, empathy, tolerance of ambiguity etc. It's important that individual adjusts the behavior and attitudes to the culture where he or she lives, so that he or she could show his knowledge and skills and that the competences related to the career can be expressed.

Repatriation is a process of returning expatriate in his country as the contract expires or the mission ends (Rahimić and Podrug, 2013). Self-initiated repatriation is defined as independent decision of self-initiated expatriate to return in his country, without any help of organization (King, 2000). According to Allen and Griffeth (2000), there are three factors influencing impact influencing repatriation decision:

1. Push factors
2. Pull factors
3. Shocks.

Push factors are consisted of career position, lifestyle, family support and national identity and dissatisfaction with foreign country (Harvey, 2009). Pull factors are called factors of domestication, and are consisted of domestication in a foreign country, career domestication and domestication in local community. If self-initiated expatriates domesticate in a foreign country, it encourages them to stay there. In career domestication, a self-initiated expatriate will resign repatriation if it means reducing the value of their career. Regarding domestication in local community, if self-initiated expatriate has to break social activities and relationships with friends and family they won't come back. Shocks are situations that can happen from once a day to once in a few years, and give a great impact on changing attitude of self-initiated expatriate. A shock can shake a self-initiative expatriate to estimate if the life in a foreign country fulfills the values, goals and plans, and if it doesn't, it can provoke dissatisfaction, and cause repatriation.

Studies show that the main reason for self-initiative repatriation is characterized by combination of weak pull factors of foreign country and strong pull factors of home country, while shocks represent just a trigger for implementing the decision (Tharenou and Caulfield, 2010). Also, studies had shown that the governments can encourage repatriation by promoting inflows of high-quality workforce with an international experience (Forstenlechner, 2010).

5. CONCLUSION

In global world economy with fast technological progress, demand for globally moveable and flexible individuals is growing extremely fast. On the other side, more individuals are deciding to move from their home country. Self-initiated expatriates are defined as individuals who are, on their own, decided to look for a job outside their country, without initiative of any organization or a state. In lot of countries there is lack of quality and adequate employees, so there is a rise in demand for intercultural competences of employees who are flexible and that have different range of skills. Self-initiated expatriates represent strategic valuable resource for organizations that have plans to expand on global markets.

Professional literature differentiates migrants from self-initiated expatriate and traditional expatriate, in that way showing certain uniqueness regarding these groups. A great number of researchers show that self-initiated expatriates have certain characteristics that they share, such as adventurism, impatience, cultural globalism etc. Further on, their motivation is made of different motives that have different ponders for every individual regarding their personal preferences. The impact of the family is especially important. Decision about choice of the country is made according to the family's preferences. Self-initiative expatriates have intercultural and many other competences that help them to adjust to different cultures and jobs. There are many other particularities and advantages of self-initiated expatriate that should be subject of future academic interests.

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Measuring the Quality of Corporate Governance – A Review of Corporate Governance Indices

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ABSTRACT

The aim of this paper is to provide an insight in to the world of corporate governance quality as well as to shed light on efforts in measuring the quality of corporate governance through an overview of relevant academic and commercial corporate governance indices by. As the paper will show, measuring the quality of corporate governance is still a relatively new concept. The construction of the index for measuring the quality of corporate governance still comes down to simplification of standards or criteria which mainly revolve around three dimensions - compliance, performance and accountability. In contrast to the level of compliance with good governance standards, scientific assessment of the quality of corporate governance remains a mystery.

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1. INTRODUCTION

Corporate governance can be defined as a form of "management of management" or *meta-management*, since it embodies the set of relations between the management, board, shareholders and stakeholders of a firm; it defines the framework for setting goals and determining the means to achieve those goals, as well as for monitoring the performance and efficiency of the firm (Tipurić, 2008).

One of the main challenges of corporate governance research is related to defining a measure of good corporate governance, i.e. identifying corporate governance mechanisms that lead to financial performance and social legitimacy, or the realization of the set goals (Judge, 2010; Aguilera et. al., 2008).

In order to analyse the influence that corporate governance has on the success of the firm, a number of researchers and practitioners used one particular variable of corporate governance in their studies, whereas others tried to create a composite measure or an index of corporate governance.

The idea behind the development of corporate governance indices refers to the comparison/benchmarking of a firm's corporate governance characteristics with those governance provisions that the authors consider to be examples of best practice.

There are three possible reasons for the development and use of a corporate governance index. Indices supplement the regulatory governance framework and provide incentives for firms to adopt better corporate governance practices. In addition, firms with developed corporate governance evaluation systems have the possibility of differentiating themselves from other competitors in the market and gaining strategic advantage. Finally, corporate governance index as a composite measure of quality of corporate governance processes might be one of the relevant indicators of firm's potential to access new capital sources and to minimize capital costs in relation to its peers.

The aim of this paper is to provide an insight into the phenomenon of corporate governance quality and its determinants as well as to present relevant academic and commercial corporate governance. This will help us in understanding which aspects of corporate governance have the strongest effect on the overall governance quality and will also provide us with a better understanding of current corporate governance methodologies and related research.

2. QUALITY OF CORPORATE GOVERNANCE

Sound corporate governance depends on the balance between internal and external mechanisms which ensure the efficiency of governance and help in solving natural problems and potential conflicts that arise from corporate structures. In that manner, it should create the conditions in which the behaviour and actions of top managers is aligned with the interests of the firm, its shareholders and key stakeholders and it should also ensure that poor managers are replaced with better ones. In other words, corporate governance helps to prevent and overcome the imbalance between different interests and demands of the firm and it also helps to reduce the negative effects of opportunistic behaviour of important stakeholders (especially the top management) which may endanger the efficient functioning of a firm.

It is believed that effectiveness and quality of governance systems depend on the application of corporate governance principles and performance standards in such a way that following these principles may affect solving issues arising from corporate structures, e.g. conflict of interest, control and transparency increase for shareholders (Mousavi, Moridipour, 2013). According to Beeks and Brown (2006), the quality of corporate governance increases when the firm meets the common standards of corporate governance. Thus, a firm with a high quality of corporate governance is the one which possesses and meets the usual standards of corporate governance set by the government (Lokman et al., 2012). That is, an effective governance system should ensure compliance with applicable laws and regulations, and in addition, allow firms to avoid costly litigation. On the other hand and form a firm's point of view, "good governance" represents quality in terms of responding to the firm's guiding principles and strategic directions: does the firm do what is right, reliably and responsibly, in order to ensure the desired effect in the context of an integrated surveillance system for business control.

A body of literature in corporate governance shows that one of the main questions in discussing the quality of corporate governance refers to why firms within the same contractual environment voluntarily choose to present different firm-level corporate governance quality (perceived as governance practices recommended by market agents) (Leal et. al., 2007).
Klapper and Love (2004) indicate that there are three main potential determinants of firm-level corporate governance quality: the "utility" of corporate governance, the nature of the firm's operations, and the size of the firm.

Firstly, because the main goal of corporate governance is to reduce the firm's cost of capital by improving investors' confidence, we should expect that firms with greater need to access new capital in the future (firms with better potential growth opportunities) would perceive a greater "utility" in adopting better corporate governance practices, in relation to firms with poor prospects for raising capital from external investors.

With regard to the nature of firms' operations, it is believed that firms with greater tangible assets would find it harder to divert or steal investors' resources, given that these assets would be more easily monitored and hard to be channelled to other uses (Leal et. al., 2007). As a result, firms with greater possession of intangible assets would have more incentives for adopting better corporate governance practices, because they would have to signal investors that they have no intention of squandering their resources.

The size of the firm represents the third important originator of firm-level corporate governance. According to Klapper & Love (2004), the firm's size influences corporate governance quality ambiguously. For example, larger firms could face greater agency costs due to greater free cash flow, leading them to voluntarily adopt better corporate governance practices in order to mitigate this problem. On the other hand, small firms are expected to have more growth potential and a greater growth rate which implies the need for more external capital. The need for financing could lead small firms to embrace better governance practices. Thus, both would have different incentives to voluntarily achieve better corporate governance standards.

Growth opportunities and the need for external financing along with ownership concentration were also identified as important determinants of corporate governance quality by Durnev and Kim (2005). These authors also stated that firms with better governance practices are valued higher by markets; and adopting better governance practices is more relevant in countries characterized by weaker legal protection of investors. Consequently, they conducted empirical tests and found evidence confirming the stated hypotheses.

Corporate governance also affects the liquidity of the stock market, because poor governance increases the information asymmetry between insiders (e.g. managers, majority shareholders and informed traders) and external liquidity providers, which can lead to poor financial and operational transparency (Cheung et. al., 2010). The establishment of appropriate corporate governance is thus a fundamental task in achieving the optimal use of resources, improving accountability, transparency and fulfilment of the rights of all stakeholders of the firm.

In addition to recognizing the relevance of good corporate governance, question of measuring its quality arises. Apart from being able to distinguish “good” from “poor” corporate governance, it is essential to take a step further and establish measures that will enable us to discuss firms’ differences and compare different firms across the entire spectrum of corporate governance quality.

Many researchers in the field of corporate governance have suggested a number of different indices to measure the quality of corporate governance, whereas a unified formula for calculating the index does not yet exist. Some of the existing indices of corporate governance quality will be shown below.

3. REVIEW OF CORPORATE GOVERNANCE INDICES

Despite the common belief in the importance of governance mechanisms for resolving agency problems, the empirical literature on individual governance mechanisms has not consistently established a relation between governance and performance which stems from the fact that governance mechanisms are numerous and interaction effects are quite probable. In other words, examining the effect of only one dimension of a firm’s governance system on performance is quite constraining. That is, without a doubt, a factor contributing to the attention aimed at governance indices, which combine various dimensions of governance into one number. Moreover, another coercive reason for the success of governance indices is the simplicity of having a single number for capturing the multidimensionality of corporate governance.

Corporate governance indices vary considerably with regard to which dimensions of firms' corporate governance are considered sufficiently important to be included. The initial foray into creating these indices was academic inquiry. In the following sections, we provide an overview of significant indices currently in use by academics and commercial vendors (specialized rating agencies).

3.1. Gompers, Ishii and Metrick's G-Index

Gompers, Ishii and Metrick (2003) (hereinafter GIM) constructed an index on the basis of 24 governance provisions that, according to the authors, reflect the balance of power between shareholders (owners) and managers. The G-Index was constructed from data on the governance characteristics for more than 1,000 public companies amassed by the Investor Responsibility Research Center (IRRC) and published in 2003.

The governance provisions were grouped into five dimensions as follows:

1) "**Delay**" - consists of four provisions for delaying hostile takeover bidders[16].
2) **"Voting"** - deals with shareholder voting rights[17].
3) **"Protection"** - refers to six provisions protecting directors and officers from legal liability or compensating them for termination[18].
4) **"State"** - refers to incorporation in a state with one of six state takeover laws[19].
5) **"Other"** - other takeover defences[20].

In order to develop the G-Index the authors adopted the following methodology: they assigned one point for each provision that they viewed as restricting shareholder rights. In other words, GIM equally weighted the governance features tracked by IRRC in developing their measure of corporate governance quality. Thus, the G-Index varies from 1 to 24 where the highest score refers to the highest

[16] A classified (staggered) board, the presence of blank check preferred stock, restrictions on shareholders' ability to call special meetings, and restrictions on shareholders' ability to act by written consent.

[17] Presence of cumulative voting, confidential voting, supermajority voting requirements for certain business combinations, dual class stock, and limitations to shareholders' ability to alter the bylaws or certificate of incorporation.

[18] Limited liability provisions, indemnification provisions in charters or bylaws, indemnification contracts, golden parachutes, severance contracts not conditioned on control changes, and compensation plans with changes-in-control provisions.

[19] Anti-greenmail, business combination freeze, control share acquisition, fair price, other constituencies, and redemption rights statutes.

[20] Anti-greenmail provisions, fair price provisions, other constituent provisions, poison pills, silver parachutes, and pension parachutes.

management power, or the weakest shareholder rights protection; the lowest score instead represents the lowest management power.

GIM examined the relation between the firms' governance quality and several measures of performance: stock returns; Tobin's Q and three accounting measures (net profit margin, return on equity, and sales growth). The examination focused on a comparison between the highest and lowest G-Index portfolios, which the authors called the "Dictatorship" (firms with the weakest shareholder protection) and "Democracy" (firms with the strongest shareholder protection) portfolios. GIM found that firms with weaker shareholder rights (implying a higher index) were less profitable both in terms of stock returns and Tobin's Q. In particular, an investment strategy of buying the Democracy portfolio stocks and selling the Dictatorship portfolio stocks would have earned abnormal returns of 8.5% a year during the 1990s. (Bhagat et. al., 2008).

Despite the documented negative correlation between the 24 provisions included in the index, GIM did not conclude that they have demonstrated causation and firm-performance due to potential endogeneity problems. In other words, governance provisions adopted by a company might be endogenous and it is thus difficult to assess whether poor performance is caused by bad governance provisions or vice versa. As a result, GIM called for further research in order to properly address the endogeneity issue, as well as to give a more definitive interpretation on the causality of the relationship between corporate governance and performance.

3.2. Bebchuk, Cohen and Ferell's E-Index

A question that remained unresolved throughout the GIM's research was which arrangements among the 24 governance provisions included in the G-Index have the most value for shareholders. To answer this question, Bebchuk, Cohen and Ferrell (hereafter BCF) constructed a competing governance index in order to identify the IRRC provisions that really affect shareholder value.

BCF presented an index based on six provisions: staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, and supermajority requirements for mergers and charter amendments. Of the six provisions, four set constitutional limits on shareholder voting power, which is the main power they possess. These four provisions are: staggered boards, limits to shareholder amendments of the bylaws, supermajority requirements for mergers, and supermajority requirements for charter amendments and they limit the extent to which shareholders can impose their will on management. Two other provisions are the most well-known and salient measures taken in preparation for a hostile offer: poison pills and golden parachute arrangements. The BCF index is called the "Entrenchment Index" or "E-Index“ (Bebchuk et. al., 2009).

In developing the E-index, BCF followed GIM's methodology, allotting equal weight (one point) to the presence of any of the six provisions. Examining the relation between the E-Index and industry-adjusted Tobin's Q and stock returns, they confirmed the correlation between governance and future performance found in GIM's study. They also confirmed, with a few more years of available data (1990-2003), that a portfolio of low entrenchment/good governance (GIM's Democracy) firms outperformed a portfolio of high entrenchment/poor governance (GIM's Dictatorship). However, the negative correlation between the E-Index and firm valuation did not establish the direction of causation. Despite the endogeneity problems, the BCF study has important policy implications, because they identified the governance provisions that really matter for shareholder value by showing the substantial relevance of only 6 provisions (the entrenching ones). As highlighted by Bebchuck et. al., the quality of governance could be evaluated more precisely by focusing only on the most relevant governance provisions, rather than considering broader indices which might include provisions that do not matter at all.

3.3. Brown and Caylor's Gov-Score Index

Through their research, Lawrence Brown and Marcus Caylor (2006) developed a more comprehensive index of corporate governance, compared with the previously described E-Index and G-Index, using the data provided by the ISS (Institutional Shareholder Services Inc.).

Their Gov-Score index consists of 51 provisions divided into the following 8 groups[21]:

1) **Audit** – consists of four factors regarding the overall audit process of the firm as well as the powers and accountability of the audit committee.
2) **Board of Directors** – consists of seventeen factors analysing the board of directors as a mechanism of corporate governance.
3) **Charter/bylaws** – consists of seven factors regarding shareholders' rights.
4) **Director education** - represented with one factor: participation of directors in ISS-accredited director education program.
5) **Executive and director compensation** – consists of ten factors dealing with the compensation system in a firm.
6) **Ownership** – consists of four factors dealing with directors' ownership.
7) **Progressive practices** – consists of seven factors which represent progressive corporate governance practices.

[21] *See more* Bhagat, S., Bolton, B. J., Romano, R. (2008), The Promise and Peril of Corporate Governance Indices", Columbia Law Review, 108 (8), pp. 1871 - 1872.

8) **State of incorporation** – consists also of one factor: incorporation in state with no takeover statutes.

Brown and Caylor used a point system that is the opposite of GIM and BCF, assigning one point to "acceptable," as opposed to "unacceptable," corporate governance practices. Consequently, a higher Gov-Score signifies higher quality corporate governance, in contrast to G-Index and E-Index values (Brown and Caylor, 2006). When compared to the G and E indices, the Gov-Score index has the potential advantage, noted by its authors, of providing a superior measure of firms' governance quality because it includes a broader set of corporate governance arrangements than takeover defences, which make up the bulk of the G and E indices and because it is derived from a larger database than the other two indices (over 2,000 firms). The main disadvantage lies in the fact that it was derived from only one year of data (2003) in contrast to the multiple years of data used for the other two indices. However, using 2003 data is valuable because it analyses firms' corporate governance in the *post Enron* environment.

One of the biggest differences between the Gov-Score and the BCF and GIM's approach lies in the relationship between takeover defences and firm performance. The results by Brown and Caylor show that the board as well as the compensation system of a firm play a much greater role than defensive tactics which represent the foundation of the other two indices. Brown and Caylor were also wary not to impute causality to their findings but nevertheless concluded that using a smaller index that consists of multiple governance provisions is preferable to focusing purely on takeover defences when measuring the quality of corporate governance.

On the other end of the corporate governance quality spectrum, there are the commercial indices of corporate governance. Bebchuk and Hamdani (2009) suggest that the use of commercial indices is becoming an increasingly prevalent practice in many businesses, especially in the financial industry. The attractiveness of these indicators stems from the fact that they were constructed by experts and practitioners in the field who generally have greater financial resources and data availability in comparison with the average academic researcher. Nevertheless, when used in a variety of studies examining the relationship between corporate governance and firm performance such indices do not generate consistent and robust results.

Studies have shown that a large number of these indicators is not effective enough in predicting the future performance of the company (Daines et. al., 2010), which in return influences the strengthening of scepticism among the scientific and professional community and places the mentioned indexes under a magnifying glass. Below is the most exciting commercial index of corporate governance.

In the following sections, we provide an overview of the most well-known commercial indices of corporate governance.

3.3. Standard and Poor's GAMMA: Governance, Management, Accountability Metrics and Analysis

Standard and Poor's began to develop its corporate governance benchmark methodology in the late 1990s in the aftermath of the financial crises that had hit Russia and East Asia. While there are multiple approaches to evaluating corporate governance, the present GAMMA methodology takes a financial perspective with regard to the point of view of long-term equity investors.

GAMMA score wishes to evaluate the effectiveness of individual firm governance practices as a system of interaction between the management, board, shareholders and other stakeholders who build firm value and aim to ensure fair distribution of its earnings. Individual governance practices are thus measured against Standard & Poor's corporate governance criteria developed on a myriad of international corporate governance codes, academic and practitioner research and S&P's own research in conducting corporate governance analysis.

The components of the GAMMA scorecard are as follows (S&P, 2008; S&P, 2008a):

1) **Ownership Influences**
2) **Shareholders' Rights**
3) **Transparency, Audit and Enterprise Risk Management**
4) **Board Effectiveness, Strategic Process and Compensation Practicess.**

Each of the components is defined through a set of criteria and key analytical issues (corporate governance provisions) and the final GAMMA score is articulated on a scale of GAMMA-1 (lowest) to GAMMA-10 (highest). In that manner, a company in the GAMMA-10 and GAMMA-9 scoring category has, in S&P's opinion, few weaknesses in any of the four major areas of the analysis, whereas a company in the GAMMA-2 and GAMMA-1 category has significant weaknesses in most of the major areas of analysis (S&P, 2008). As is the case with most other commercial indices, a detailed methodology for creating the index is not publicly available.

3.4. ISS Governance QuickScore as a Measure of Corporate Governance

The ISS corporate governance evaluation methodology was first presented in 2013 by the Institutional Shareholder Services as a quantitatively-driven data solution created to identify governance risks within portfolio companies (ISS, 2013). In 2014 an enhanced methodology (QuickScore 2.0) was presented and it is characterized with global coverage totalling 4,100 companies in 25 markets divided into ten regions, including the largest 3,000 U.S. companies and the largest 250 Canadian companies by market cap, as well as UK, Europe, Japan and Asia Pacific companies in the MSCI EAFE Index (ISS, 2014).

The methodology is based on examining best governance practices across various factors. ISS identified 40-80 of the most crucial corporate governance factors by which to measure governance-related risk and each factor is categorized into one of the subcategories within each QuickScore pillar, whereas the number of factors analysed in each region varies. Each factor and the rationale for inclusion, plus factor applicability by market, are discussed in the QuickScore Factor documentation.[22]

The pillars of the QuickScore methodology are as follows:

1) **Board Structure**
2) **Compensation/Remuneration**
3) **Shareholder Rights**
4) **Audit Practices.**

The methodology uses a numeric, decile-based score which indicates a firm's governance risk relative to their index or region. A score of 1 indicates relatively lower governance risk, and, vice versa, a score of 10 indicates relatively higher governance risk. For each factor, ISS analyses the correlation with 16 commonly utilized performance and risk factors grouped into 4 measures: Market (2 factors), Profitability (9 factors), Risk (2 factors), and Valuation (3 factors).

According to the ISS, QuickScore 2.0 delivers robust and timely insight, with event-driven data updates that capture changes to a firm's governance structure that are identified through public disclosures and integrated into a company's QuickScore on an ongoing basis and the companies within the QuickScore coverage universe can review, verify and provide feedback on the data used.

[22] Available at: http://www.issgovernance.com/file/files/ISSGovernanceQuickScoreTechDoc.pdf. (accessed May 31, 2014)

3.5. ISS Corporate Governance Quotient

As a measure of corporate governance, the ISS Corporate Governance Quotient (hereinafter ISS CGI) is the predecessor of the aforementioned ISS Governance QuickScore indicator and also represents the basis for the FTSE ISS Corporate Governance Index; the FTSE ISS CGI was developed on the basis of 61 variables included in the ISS Corporate Governance Quotient.

The ISS CGQ was created in 2002, but from 2007 it is no longer in use as a commercial index of corporate governance. However, due to its importance for the other two indices mentioned above, it will be briefly explained.

The ISS Corporate Governance assessment focused on the following eight dimensions:

1) **Board Structure and Composition**
2) **Audit Issues**
3) **Charter and Bylaw Provisions**
4) **Laws of the State of Incorporation**
5) **Executive and Director Compensation**
6) **Qualitative Factors**
7) **Director and Officer Stock Ownership**
8) **Director Education**

The ISS assessment system compared the firm's corporate governance practices with the corresponding market index as well as with one of the 23 S&P's industry groupings. All of the companies were assigned two scores – one relative to the relevant market index (S&P 500, Mid-Cap 400, Small-Cap 600) and one relative to the appropriate peer (competitors) group. Each CGQ was a comparative score on a scale of 1 to 100 and represented a percentile rank among the relevant competitors' group (Barrett et. al., 2004).

It is also important to note that the ISS looked at many of the factors in combination "under the premise that corporate governance is enhanced when selected combinations" of practices are adopted.

3.6. FTSE ISS Corporate Governance Index

The FTSE ISS Corporate Governance Index initiative started in 2004 when the FTSE, as one of the global leaders in index provision decided to engage with the ISS in a joint corporate governance ratings and index project.

The FTSE ISS Corporate Governance Index Rating System measures a firm's corporate governance performance against a specified set of governance indicators derived from the 61 variables of the ISS Corporate Governance Quotient System and divided into five core governance segments. Each of the five dimensions takes up a certain proportion of the overall index:

1) **Structure and Independence of the Board (44%)**
2) **Equity Structure (21%)**
3) **Compensation Systems for Executive and Non-Executive Directors (17%)**
4) **Executive and Non-Executive Stock Ownership (9%)**
5) **Independence and Integrity of the Audit Process (9%)**

Each company is evaluated in relation to its peers with regard to each of its five segments. Companies are then ranked by their total scores, within each segment, and allocated a number between one and five. Five is associated with a high rating, and one is associated with lower corporate governance rating.

The abovementioned FTSE ISS CGI Ratings are a component feature within the overall FTSE ISS CGI Series entitled The FTSE Global Equity Index Series (FSE GEIS). The following six FTTSE ISS indices were designed as a part of phase one: 1) **FTSE ISS Developed CGI;** 2) **FTSE ISS UK CGI;** 3) **FTSE ISS Japan CGI**; 4) **FTSE ISS US CGI;** 5) **FTSE ISS Europe CGI;** and **6) FTSE ISS Euro CGI**. The constituents of the FTSE GEIS were divided into local or regional review universes, which together form the FTSE ISS Developed CG Index**.** Each stock was classified by its FTSE ICB Supersector and ranked within each Supersector with regard to its corporate governance score. After the stocks were ranked, the cumulative investable market capitalisation was used to select each index constituent. Constituents representing the top 80 percent by investable market capitalisation of each Supersector were included in the index constituents, whereas the remaining bottom 20 percent were excluded from the index (ISS, 2005). The index is a consistent yardstick for measuring the quality of governance practices in almost 2,200 companies across 24 markets.

3.7. IFC Scorecard of Corporate Governance Standards

The IFC Scorecard of Corporate Governance Standards was developed as a part of the IFC (International Finance Corporation) corporate governance evaluation methodology entitled „The Corporate Governance Development Framework" which covers most emerging markets around the world, including Africa, Latin America and the Caribbean, Asia, Middle East, Europe and Central Asia and represent assets of more than $850 billion in total. The corporate governance scorecard methodology is closely related to specific (national) codes of corporate governance and as such contains all the crucial provisions of the same. It is used to translate the relevant dimensions of the code into the context of a firm and it evaluates how a firm's corporate practices meet certain criteria. Each of the corporate governance provisions is weighed differently depending on the national context and most of the grading systems are developed in accordance with the German scorecard model[23] following the OECD Principles of Corporate Governance (IFC, 2014).

The main steps in developing the scorecard model refer to: defining a large number of indicators used to evaluate corporate governance and selecting and customizing specific indicators. After the selection, if necessary, different ponders are assigned to a given category of indicators or to an observed indicator. Given the fact that the OECD principles are the starting point of most scorecard models, the commonly analysed and assessed dimensions of the corporate governance phenomenon are as follows:

1) **Rights of Shareholders**
2) **Protection and Equitable Treatment of Shareholders**
3) **Role of Stakeholders in Corporate Governance**
4) **Disclosure and Transparency**
5) **Responsibilities of the Board**

If we wish to sum up the IFC, we can say that the scorecard models are used in order to compare corporate performance with the current codes of corporate governance. Most countries today have at least one code of corporate governance, while some developed economies have several codes. In that context, one should consider the fact that the scorecard models depend on the ownership structure of the company, i.e. the system of corporate governance as well as the fact that the majority of codes are aimed at companies listed on the stock exchanges. However, there are codes and initiatives that deal with state-owned enterprises and small and medium-sized family businesses as well as codes that are aimed at a specific industry.

In terms of implementation, local codes of corporate governance are often considered the best choice for companies and their application is one of the main objectives in using the scorecard models. Feedback and experience gained from the use of scorecard models provide valuable input to the assessment of governance quality. On the other hand, international principles can provide a suitable measure of quality in situations where local or national principles do not yet exist.

[23] The general method of the scorecard used in Germany is also used, after suitable local adaptations, in Croatia, Bulgaria, Macedonia, Bosnia and Herzegovina, Montenegro, Serbia, Indonesia, and the Philippines. *See more* at: http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Global+Corporate+Governance+Forum/Corporate+Governance+Codes+and+Scorecards/ (03 June, 2014)

3.8. The SEECGAN Index of Corporate Governance

The *SEECGAN Index of Corporate Governance* (hereinafter SEECGAN Index) was created and presented in 2014 as a result of the joint efforts of the members of the South East Europe Corporate Governance Academic Network. The SEECGAN Index is designed and adapted with regard to the situation and the specificities of the business environment in the selected countries of the South Eastern Europe (Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Slovenia and Macedonia).

The seven segments of the Index are as follows:

1) **Structure and Governance of Boards**
2) **Transparency and Disclosure of Information**
3) **Shareholders' Rights**
4) **Corporate Social Responsibility**
5) **Audit and Internal Control**
6) **Corporate Risk Management**
7) **Compensation / Remuneration**

These seven segments are represented by a total set of 98 questions that must be answered in the affirmative (YES) or negative (NO), depending on the governance practices in analysed firms. Affirmative answers imply good corporate governance practices and vice versa. A ponder is assigned to each answer, wherein the minimum value of the weight equals 1, and the maximum value of the weight equals 3. The maximum score for each segment is 10 (best possible practice), and the minimum is one (worst possible practice). The overall SEECGAN Index score is the average value of all seven segments with 1 being the lowest value, and 10 being the maximum index value.

It should be noted that the analysis of the quality of corporate governance practices in the selected South East Europe countries is currently in progress and the initial results will be available during 2014.

4. CONCLUDING REMARKS

Measuring the quality of corporate governance is still a relatively new concept. Every country / region is in a different phase of establishing of a democratic, market framework and a system of corporate governance. Although efforts to improve corporate governance by establishing international standards started over two decades ago, most of the developing countries are still at the beginning of implementation of the corporate governance framework. Many indices, including the OECD Principles of Corporate Governance, have not answered all the relevant questions of the phenomenon. The main weakness of the existing guidelines arises from the fact that the rules do not apply to all companies, as well as to all markets equally.

To be effective, the existing guidelines should be capable of measuring the quality of corporate governance in all types of markets. The basic classification of corporate governance indices identifies academic and commercial indices of corporate governance. These two groups of indicators differ significantly in several important dimensions.

First of all, commercial indices of corporate governance, as opposed to academic, when determining the relative importance of each criterion, apply different weights for each provision based on authors' discretion, and the results of quantitative analysis in terms of the importance of the factors mentioned above.

Second, academic indices dominantly deal with takeover defences, while some commercial indices are not concerned with these issues or they allocate much less weight in comparison with internal governance mechanisms such as boards and top management compensation / remuneration systems.

Third, most of the commercial indices allow comparisons with respect to the relevant industry and other businesses, while academic indexes are mostly absolute scales, independent of the practices of comparable firms.

Finally, the advantage of commercial indices of commercial advantage stems from the fact that they continually adapt to market demands, while academic indexes are immutable in that context.

There are two key criticisms of the existing indices of quality of corporate governance: there is no theoretical justification for the composition of existing indicators (which variables to include and which not), as well as there is no rationale for the weights assigned to different variables included in the index. Due to the limitations of the complex corporate governance indices, some authors propose a return to simpler measures of corporate governance in order to avoid problems associated with measurement and errors, and errors related to index framing (Schnyder, 2012; Bhagat et. al., 2008). However, the claim that we should use simpler measures of corporate governance may seem as a step backwards. Even if we try to strengthen the predictive power of the model by using a single variable, it is very likely that using simpler measures, in contrast to complex indices, will lead us to missing potentially important relationships between different governance stakeholders.

A review of the literature in the field of corporate governance shows that most existing studies analyse the following characteristics of corporate governance: board structure, shareholder rights, transparency and disclosure of information and the structure and effectiveness of the board. It is also important to point out that the annual reports cannot alone be used to compute the index of corporate governance. Each method of calculating the index of corporate governance is different; it varies from one author to another, from country to country and from region to region due to the structure of corporate governance, business values and culture. Also, the presence of measurement errors in the evaluation process also leads to the data heterogeneity which further promotes the need to develop a universal index of corporate governance quality.

In short, the construction of the index for measuring the quality of corporate governance comes down to simplification of standards or criteria which mainly revolve around three dimensions - compliance, performance and accountability. In contrast to the level of compliance with good governance standards, scientific assessment of the quality of corporate governance remains a mystery.

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Investing in microfinance under different institutional configurations[24]

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ABSTRACT

The peculiarities of microfinance and prospects of its implementation in the institutional structure of a social and economic system in general and transitional economies systems in particular are considered. Special attention is paid to the problems of investing in microfinance activity under globalization and different institutional configurations.

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1. INTRODUCTION

Microfinance as a specific type of economic institution and a relatively recently emerged and rapidly enlarging sector of financial-economic activity is focused on the needs of small-scale enterprises and individuals (individual entrepreneurs or simply physical entities) in financial resources, without which their effective operation is either impossible or extremely difficult (Yerznkyan, Vardanyan, 2006). There are lots of microfinance organizations everywhere. Such is, for example, the Russian Microfinance Center (RMC), the leading Microfinance think-tank, service provider, and advocate in the Russian Federation. Since its establishment in 2002, the RMC, a not-for-profit fund under Article 118 of the Russian Civil Code, has become the number one provider of microfinance consulting services, research, and training in Russia, as well as the sole national-level advocate and resource center for Microfinance Institutions (MFIs). Performance of the RMC as well as other MFIs worldwide, however, is largely depends on the specificity of the social-economic system and its institutional configuration (Yerznkyan, Vardanyan, 2012).

As it is well-known, the dominant sources of financing the large corporations are either equity, as it is practiced in the Anglo-Saxon world (forming a market-based system or model), or debt, which is

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typical for Germany (and more or less for other European countries) and Japan (where prevails a bank-based system or model of corporate business financing). However, in the case of the small enterprises and individuals, these sources of financing are not available. The reason is quite obvious: the lack of joint-stock form of business enterprise denies opportunities to raise additional funds through the emission of stocks and getting the loans that are unattractive – with regard to their relationally high transactions costs – to banks. The result is a situation of unmet demand for financial products of microscopic scale. One of the possible answers on the expected question who and how can ensure the availability of getting such loans is microfinance.

It should be mentioned that microfinance is nowadays a well-established specific system of financial activity, both in developed and developing countries. In contrast to the traditional banking, microfinance institutions use innovative methods in order to overcome the obstacles faced by people with low incomes, such as lack of security and customer stories. What about microfinance in economies in transition, including Russia, Armenia, former Yugoslavia and so on? What problems, and primarily institutional by nature, impede their growth and development?

The paper is organized as follows. In section we consider the main characteristics of the institutional configurations of a market system. The problems of the globalization and the changing face of the investor we study in section 3. In section 4 and 5 we represent the case and story of microfinance as well as the problems of investing in microfinance. In section 6 we give some concluding remarks.

2.INSTITUTIONAL CONFIGURATIONS OF A MARKET/CAPITALIST SYSTEM

Throughout the history of a market-based business has primarily focused on its economic activity not being preoccupied by goals and aspirations of communities, individuals, environmental concerns, and social objectives. There were exceptions to this, of course, though mostly of a regulatory or a philanthropic nature. A business exists to maximize value for its stockholders, and 'maximizing stock value' is best achieved by focusing on maximizing short-term profits which in turn raises the capitalization of a business, thus leading to a greater value of the stocks held by stockholders. This is a simple and powerful paradigm which has always seemed to exist in capitalistic society. The short-term pursuit of profits for stockholders at the expense of all other stakeholders and the narrowing of business perspective have intensified accumulation of enormous wealth. This is particularly true over the last few decades, involving a tiny segment of the world's population and leading to a widening gap between the rich and the poor. The reckless search for profit for the sake of profit has led to failures and distortions in the modern financial system, epitomized by the Global financial crisis. This kind of pursuit of profit has increased societal costs for the next several generations. The consequence is loss of trust and even questioning of globalization and capitalism itself.

The business as an institution can be attributed to capitalist society. Therefore, before going on to discuss the larger purpose of business as an institution, we first need to understand what capitalism, or market system, is *per se* and which models of capitalism exist in the modern world, In addition we should also consider what are the main drivers of globalization and what is their impact on the world economy?

However, stemming from the (new) institutional economics vision that various national economies differ due to their institutional setting and constitutional order (North, 1990), it can be argued that there are a variety of types of economic institutions and systems as well as models of capitalism. However, there is no consensus on capitalism and how it should be used as an analytical category. There is a good deal of historical cases over which it is applied, varying in time, geography, politics and culture (Scott, 2005). A number of definitions of capitalism have been suggested by many eminent philosophers and economists from Adam Smith to the present day.

Economists usually put emphasis on the market mechanism, degree of government control over markets (*laissez faire*), and property rights. There is a general agreement that capitalism encourages economic growth. The extent, to which different markets are 'free', as well as the rules determining what may and may not be private property, is a matter of politics and policy. Many states have what are termed 'mixed economies' (Stilwell, 2002).

Capitalism is regarded as an economic system distinguished by certain characteristics whose development is conditioned by yet other elements. The basic characteristics are: (1) private ownership of the means of production, (2) a social class structure of private owners and free wage-earners, which is organized to facilitate expanding accumulation of profit by private owners; and (3) the production of commodities for sale. Conditioning elements are: (a) a certain division of labor; (b) institutional arrangements to insure a dependable supply of wage labor; (c) a degree of social productivity sufficient to permit sustained investment; (d) commercial organization of the market – including banks – whose scope is adequate to the productivity of the community; (e) a political process whereby economic power can become translated into governmental policy; (f) a legal structure that is protective of private property; and (g) a certain toleration – at the least – of new ways of making a living (Weinberg, 2003).

Here are a few remarks about American Capitalism. Since its early years the American economy has undergone many transformations. Historians often call the period between 1870 and the early 1900s the Gilded Age. This was an era of rapid industrialization, *laissez-faire* capitalism, and no income tax. Captains of industry like John D. Rockefeller and Andrew Carnegie made fortunes. Many Americans praised the new class of industrial millionaires and enthusiastically embraced Spencer's 'Social Darwinism'[25] to justify *laissez-faire*, or unrestricted, capitalism. Spencer based his concept of social evolution on individual competition. Some social Darwinists argue that governments should not interfere with human competition by attempting to regulate the economy or cure social ills such as poverty. Instead, they advocate a *laissez-faire* political economic system which favors competition and self-interest in social and business affairs.

There are three major varieties of capitalism existing in developed countries. The Anglo-Saxon investor capitalism which exists in its most undiluted form in the United States; the social-market capitalism (Rhine Capitalism), epitomized by Germany, which also prevails to some extent in most of the other large countries of continental Western Europe; and the producer-oriented capitalism which provided such an impressive engine of growth for the Japanese economy throughout much of the postwar era.

These three different varieties of capitalism are defined primarily by the nature of the relationships between corporations and their major stakeholders, particularly with employees and their communities on the one hand and stockholders and their agents on the other. Another important factor is the manner in which the interactions among firms and between firms and governments are organized. In Anglo-Saxon style market economies such relationships are generally characterized by formal contracting, arms-length transactions, and market-mediated competition. More organic forms of capitalism, represented in different variants by Germany and Japan, depend much more heavily on non-market relationships, defined by law (formal institutions) or custom (informal norms), to shape the organization of their economies.

There were large differences among the various types of capitalism in the organization of relationships between corporations and those who provided their financing during the early postwar (World War II) decades. In the US, stockholders of large companies were widely dispersed and fragmented: no one entity owned a significant share of the stock. As a result, shareholders tended to be passive owners; the separation of ownership from control had been noted as a defining (Berle, Means, 1932).

[25] British philosopher Herbert Spencer applied Darwin's theory of evolution to the development of human society.

3. GLOBALIZATION AND THE CHANGING FACE OF INVESTOR

Economic ‘globalization’ is a historical process, the result of human innovation and technological progress. It refers to the increasing integration of economies around the world, particularly through the movement of goods, services, and capital across borders. The term sometimes also refers to the movement of people (labor) and knowledge (technology) across international borders. There are also broader cultural, political, and environmental dimensions of globalization. Perhaps more importantly, globalization implies that information and knowledge get dispersed and shared. Innovators can draw on ideas that have been successfully implemented in one jurisdiction and tailor them to suit their own jurisdiction. Just as important, they can avoid the ideas that have a clear track record of failure. It is remarkable that Joseph Stiglitz, a frequent critic of globalization, has nonetheless observed that globalization “has reduced the sense of isolation felt in much of the developing world and has given many people in the developing world access to knowledge well beyond the reach of even the wealthiest in any country a century ago” (Stiglitz, 2003, p. 4).

There have been several drivers of globalization over the last several decades. One such driver has been technological advances which have significantly lowered the costs of transportation and communication and dramatically lowered the costs of data processing and information storage. Developments over the last few decades in electronics, in particular the microchip revolution, have materialized electronic mail, the Internet, and the World Wide Web.

A second driver of globalization has been trade liberalization and other forms of economic liberalization which have led to reduced trade protection and to a more liberal world trading system. 1946 General Agreement on Tariffs and Trade (GATT) and later the World Trade Organization (WTO) are prominent examples of trade liberalization policy. Other aspects of liberalization have led to increases in the movement of capital, labor and knowledge across national borders.

A third driver of globalization has been changes in institutions, whereby organizations have a wider reach, due, in part, to technological changes and to the more wide-ranging horizons of their managers, who have been empowered by advances in communications. Thus, corporations which had mainly been focused on a local market have extended their range in terms of markets and production facilities to a national, multinational, international, or even global reach. These changes in industrial structure have led to increases in the power, profits, and productivity of those firms which can choose among many nations for their sources of materials, production facilities, and markets, quickly adjusting to changing market conditions.

A fourth driver for globalization has been the global agreement on ideology. The former division between market economies in the West and socialist economies in the East has been replaced by a near-universal reliance on the market system. This convergence of beliefs in the value of a market economy has led to a world that is no longer divided into market-oriented and socialist economies.

A fifth driver for globalization has been cultural developments, with a move to a globalized and homogenized media, the arts, and popular culture and with the widespread use of the English language for global communication.

Globalization has significant impacts on all economies of the world. Globalization, for example, has produced big gains for the EU in the past. 20% of improvement in EU living standards over the post-war period was due to deeper economic integration at the world level. Globalization is a major source of EU productivity gains through better specialization, economies of scale, technological content of imports, greater competition and the spur to innovation (Globalization…, 2006).

Much has changed, however, since the beginning of the new millennium. The American economy has undergone several economic and political trials during the past decade. The US sub-prime mortgage crisis which has spiraled into "the largest financial shock since the Great Depression" caused global recession. Most recently the economic and structural problems and fiscal difficulties within the Eurozone caused fears about its countries´ sustainable development and raised uncertainty about the future of the Eurozone. These difficulties strengthened forces opposed to globalization, which in the minds of many was equated with investor capitalism and greedy, irresponsible pursuit for short-term profits.

With these trends of globalization in mind, let us now consider the changing face of investor. It is important because of globalization, political changes, as well as recent economic and societal trends, catalyzed societal call for responsible business behavior, which has reached unprecedented momentum during the past few years, particularly after the global financial crisis. The search for meaning beyond profit reflects rising economic thinking of integrating social aspects into mainstream economic models. The economic model based on the parity of people, planet and profit represents the next stage of human development. Responsibility is part of human nature, so it should complement business activities and financial considerations.

The concept of social responsibility in economic relations or the concept of corporate social responsibility (CSR)[26] as a pattern of corporate behavior which requires companies to be guided not by their narrow financial objectives aimed at the profit maximization is not new. In a certain sense, they have existed for many centuries. The same is true of sustainable investing, the history of which stretches over centuries. Religious investors from the Jewish, Christian, and Islamic faiths and many indigenous cultures have long married morals and money, giving careful consideration to the way economic actions affected others around them and shunning investments that violated their traditions' core beliefs. In the American colonies, Quakers and Methodists often refused to make investments that might have benefited the slave trade, for example, and the earliest formalized ethical investment policies avoided so-called 'sin' stocks – companies involved in alcohol, tobacco, or gambling. Indeed, the first fund to incorporate such sin-stock screening was the Pioneer Fund, opened in 1928 and screened since 1950 to meet the needs of Christian investors seeking to avoid involvement in precisely such industries of 'vice'. The Fund continues to exclude the tobacco, alcohol, and gambling industries from its portfolio to this day. Sustainable investing in its present-day form, however, arose in the aftermath of the social and cultural upheaval of the 1960s The rapid growth of the civil-rights, feminist, consumer, and environmentalist movements and protests against the Vietnam War, raised public awareness about a host of social, environmental, and economic problems and corporate responsibility for them. Religious organizations and institutional investors remained very much at the forefront of these concerns about CSR.

There are a number of definitions for the CSR concept. For example, it can be classified as a contribution of the business and civil society to the sustainable development of the economy, and refer to the well-known economic, social and environmental responsibilities of CSR companies (Kakabadse et al., 2005). What is important to underline, that a socially responsible company takes steps in the interests of its stakeholders that are not dictated by direct commercial needs and market requirement (Baron, 2001). Financial or investment social responsibility is primarily addressed by the concept of Sustainable and Responsible Investment (SRI) – a generic term covering any type of investment

[26] The idea of CSR is full of contradictions. The reason is not only it does not fit into the traditional notions of a market economy, where private firms maximize profit, governments provide public goods and regulate the private sector, and philanthropy becomes the domain of altruistic individuals rather than 'heartless' legal entities. For some more reasons see: (Yerznkyan, 2012).

process that combines investors' financial objectives with their concerns about Environmental, Social and Governance (ESG) issues. The SRI methodology constantly evolves and develops reflecting diversity of various investors' approaches and methods in evaluating and integrating the SRI criteria into investment management.

The recent academic research develops further the idea of integrating social, environmental and community goals into mainstream business activities. The concept of Shared Value can be seen as a next stage in this field. Shared value focuses companies on the right kind of profits – profits that create societal benefits rather than diminish them. The concept of shared value can be defined as policies and operating practices which enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates. Shared value creation focuses on identifying and expanding the connections between societal and economic progress (Porter, Kramer, 2011).

Impact Investing is a growing area where investors look to both adopt SRI strategies and evaluate their outcomes. The onus is placed on monitoring and measuring the end results of strategies in portfolio construction with the ex-post assessment of SRI strategies as important as the rationale for strategy selection. One important example of Impact Investing is microfinance investing, where the investment strategies are increasingly assessed for social and environmental impacts.

Investments in microfinance represent an area where the goals and objectives of investors are not limited to the utilitarian features of an investment, such as a risk and return characteristics, but rather enriched with new dimensions - ethical, societal and religious values. The microfinance industry, with its history, track record, achievements and setbacks, can be considered as an example of paramount importance for exploring the ways of integrating traditional investment concepts with people's aspirations and concerns about environmental, social and ethical aspects.

4. MICROFINANCE: THE CASE AND THE STORY

Microfinance is described as the provision of a range of financial products and services, including credit, savings, insurance, remittances, entrepreneurial training to poor, low-income people. Traditionally, banks have not considered the poor population to be viable and reliable consumers of banking services. The poor need to have access to finance, especially to credit to set up and run their tiny businesses to escape poverty and to build assets. Microfinance Institutions (MFIs) – providers of formal financial services to this clientele – facilitate access to the financing, filling in the gaps in the supply of financial services. MFIs vary in scope, size, structure, mission and objectives. MFIs may or may not be regulated, depending on their status and the legislation in the particular country. Often the MFIs provide the technical assistance alongside the provision of a range of financial products and services to their clientele. Business models of MFIs differ from the conventional banking model in that microfinance has developed and employs innovative lending techniques to overcome the obstacles which low-income borrowers are facing such as lack of guarantee and absence of client credit history.

Microfinance plays an important role in the economic development of countries. Through financial inclusion microfinance contributes to economic growth. And of more importance is the fact that microfinance enables growth to be more inclusive, more pro-poor. Microfinance has proved to be a powerful tool, though not a panacea, in combating poverty. Financial inclusion opens new opportunities for entrepreneurially active but 'non-banked' people, strengthens entrepreneurial spirit and empowers the most vulnerable parts of the population, particularly women in developing countries.

Before presenting the microfinance industry's current challenges and opportunities we would like to briefly discuss the idea of microfinance and provide an insight into the historical development of the concept of microfinance and microfinance industry from the past to the present day.

Nearly one half of the world's population lives on $2 a day or less, often unable to meet even their most basic human needs. The majority of these poorest are women and children. Malnutrition, lack of healthcare, substandard housing, and illiteracy result in desperation, disease, and daily suffering. Lacking stable job opportunities, the world's poor are largely self-employed. Their unpredictable day-to-day existence forms a vicious cycle of poverty which leaves little room for hope or opportunity. When proper nutrition or healthcare is out of reach, children grow up at greater risk of contracting life-threatening or disabling diseases. If a family can't afford to educate their children, they have few avenues for a better life than that of their parents. And if a mother can't afford to buy property or livestock, there are few opportunities for her to build assets that will last over time.

What's holding them back? Beyond obvious employment challenges, most people in the developing world - that is, the majority of the world's population - do not have access to formal financial services. According to the Consultative Group to Assist the Poor (CGAP) more than 3 billion poor people worldwide seek access to basic financial services essential to managing their precarious lives. Financial services for the poor cannot solve all the problems caused by poverty. However they can help put resources and power into the hands of the working poor and low-income people themselves, letting them make those everyday decisions and find their own ways to emerge from poverty.

Microfinance offers poor people access to basic financial services such as loans, savings, money transfer services and micro- insurance. People living in poverty, like everyone else, need a diverse range of financial services to run their businesses, build assets, smooth consumption, and manage risks.

Poor people usually address their need for financial services through a variety of financial relationships, mostly informal. Credit is available from informal moneylenders, so called "loan sharks", but usually at a very high cost to borrowers with annual interest rates, often from 300 to 3,000 percent. Under this system, virtually all of a borrower's financial gains are passed directly to the money lender. Individuals are unable to realize the rewards of their own hard work. Savings services are available through a variety of informal relationships like savings clubs, rotating savings and credit associations, and other mutual savings societies. But these tend to be unreliable and somewhat insecure. Traditionally, banks have not considered poor people to be a viable market.

How does microfinance work? The most common microfinance product is a microcredit loan — usually less than $150 (depending on the country and loan cycle; microcredit loans in Mexico, for instance, tend to be larger than in India due to regional economic differences). These small loans are enough for hardworking micro-entrepreneurs, particularly women, to start or expand small businesses such as growing fruit and vegetables, running small shops, or buying wholesale products to sell in a market. Income from these businesses provides better food, housing, healthcare, and education for entire families. Most importantly, additional income benefits children and raises hope for a better future for them.

The global repayment rate for micro-credit loans is higher than 97 percent, which allows MFIs to re-lend these funds to even more clients. By giving the world's poor a hand up, not a handout, microfinance can help break the cycle of poverty in as little as a single generation.

Over the past 10 years or so, microfinance has rapidly evolved and expanded from the relatively narrow field of micro-enterprise credit to the more comprehensive concept of microfinance to the enormous challenge of building inclusive financial systems.

The ideas and aspirations behind microfinance are not new. Small, informal savings and credit groups have operated for centuries across the world, from Ghana to Mexico to India and beyond. In Europe, as early as the 15th century, the Catholic Church founded pawn shops as an alternative to usurious moneylenders. These pawn shops spread throughout the urban areas in Europe throughout the 15th century. Formal credit and savings institutions for the poor have also been around for generations, offering financial services for customers who were traditionally neglected by commercial banks. The Irish Loan Fund system, started in the early 1700s, is an early (and long-lived) example. By the 1840s, this system had about 300 funds throughout Ireland.

In the 1800s, Europe saw the emergence of larger and more formal savings and credit institutions which focused primarily on the rural and urban poor. The financial cooperative was developed in Germany. The concept of the financial cooperative was developed by Friedrich Wilhelm Raiffeisen and his supporters in Germany. From 1865, the cooperative movement expanded rapidly within Germany and other countries in Europe, North America, and eventually developing countries.

Many of today's financial cooperatives in Africa, Latin America, and Asia find their roots in this European movement. Another early example is the Indonesian People's Credit Banks (BPRs) that opened in 1895 and became the largest microfinance system in Indonesia, with close to 9,000 branches.

Between the 1950s and 1970s, governments and donors focused on providing agricultural credit to small and marginalized farmers in hopes of raising productivity and incomes. These efforts to expand access to agricultural credit used state-owned development finance institutions, or farmers' cooperatives in some cases, to make loans to customers at below-market interest rates. These subsidized schemes were rarely successful. Rural development banks were unable to cover their costs with subsidized interest rates. Customers had poor repayment discipline, because they saw their loans as gifts from the government. Consequently, these institutions' capital base eroded and, in some cases, disappeared. Worst of all, these funds did not always reach the poor. Instead, they often ended up in the hands of more influential and better-off farmers.

Meanwhile, the 1970s saw the birth of micro-credit. Programs in Bangladesh, Brazil, and a few other countries began lending to poor women entrepreneurs. Early micro-enterprise credit was based on solidarity group lending in which every member of a group guaranteed the repayment of all members. Examples of early pioneers include Grameen Bank in Bangladesh, which started out as an experiment by Prof. Muhammad Yunus; ACCION International, which began in Latin America and then spread to the United States and Africa; and the Self-Employed Women's association Bank in India, which is a bank owned by a women's trade union. These institutions continue to thrive today and have inspired countless others to replicate their success.

In the 1980s, micro-credit programs throughout the world improved on the original methodologies and defied conventional wisdom about financing for the poor. Firstly, well-managed programs showed that poor people, especially women, paid their loans more reliably than better-off people with loans from commercial banks. Secondly, they demonstrated that poor people are willing and able to pay interest rates which allow microfinance institutions (MFIs) to cover their costs. MFIs that cover their costs can become viable businesses that attract deposits, commercial loans, and investment capital. They can reach huge numbers of poor clients without being limited by a scarce and uncertain supply of subsidized funds from governments and donor agencies. Bank Rakayat Indonesia (BRI) is a dramatic example of what can happen when MFIs focus on collecting loans and covering costs. BRI's village-level branch system now serves more than 30 million low-income savers and borrowers.

In the early 1990s, the term 'microfinance' rather than 'micro-credit' began to be used to refer to a range of financial services for the poor, including credit, savings, insurance, and money transfers.

Two main models of credit that have evolved and are used for financing microfinance are group lending and individual lending. The group lending methodology is based on solidarity pattern when the credit risk of a single borrower is proportionately distributed on all members of the group. As the practice shows this group lending models works the best in case of relatively small amounts of micro-credit. In individual lending model the financing of a micro-borrower is based on a thorough examination of the cash flow of borrower.

To reach ever larger numbers of poor clients, MFIs and their networks increasingly began to pursue a strategy of commercialization, thus transforming themselves into for-profit corporations which could attract more capital and become more permanent features of the financial system. An emphasis on creating and growing strong institutions (as opposed to channeling credit to specific groups) is a core element of this recent history.

The period of fast growth in the past years later changed into a phase of "cooling down" aggressive lending from many MFIs in different countries. The global financial crisis also brought in credit risk and liquidity constraints to the microfinance sector in recent years. The clients of MFIs – micro-borrowers- suffered from rising costs of food in addition to painful macroeconomic adjustments in some countries. This lowered micro-entrepreneurs' repayment capacity, which negatively impacted the delinquency of loans. In spite of this the bad loans levels at MFIs globally stayed within manageable limits and were far below the levels at commercial banks in developing and emerging countries. In spite of some deterioration in portfolio quality of the microfinance institutions, the financial and operational indicators on average remained at acceptable levels. During this time many MFIs reviewed their business plans, diversified their funding sources and improved efficiency levels. Microfinance is evolving and our expectation of it has to evolve as well.

5. INVESTING IN MICROFINANCE

It should be mentioned that microfinance is currently not only a phenomenon existing in developing countries (where microfinance has proved to be an effective tool both in poverty reduction through the support of income generating activities mostly in the poorest countries) but is also an important component of a broader micro-, small and medium-size enterprises segment which is a basis for development and growth of the middle-class in more developed countries. Microfinance exists and should also be considered by policymakers as a viable tool in advanced countries, especially in light of economic difficulties currently persistent in Europe and the U.S. Microfinance can serve as an effective economic tool for mitigating social issues such as high unemployment, integration difficulties for migrants and for cultivating entrepreneurial spirit and unleashing creative potential within socially vulnerable segments of population in developed countries.

To sustain the growth of microfinance services MFIs are employing strategies to diversify their funding sources by using a growing range of financial instruments, in order to optimize their capital structure, aligning this with interests of various local and international investors.

Mainstreaming of microfinance, its increased access to capital markets and a wide range of financial instruments available in the market pose both opportunities and threats to MFIs and their investors. Awareness of risks, including counterparty, country, foreign exchange, reputational risks and specifics of risk mitigation in microfinance are crucial for investing in microfinance.

And we need to remember that commercial microfinance is a business activity based on economic efficiency and not an activity based on donation and aid. Microfinance is a vivid case of social entrepreneurship.

With increasing demand for microfinance services and the entrance of various public and private actors in the field, microfinance has evolved to become a financial services market with a size of more than US$ 250 billion. Today microfinance serves the needs of around 150 million micro- and small enterprises. MFIs worldwide have accumulated assets of US$ 50 to 60 billion and about US$ 25 billion in deposits. The World Bank estimates that there will still be 1 billion people living below US$ 1.25 per day in 2015, which means that there will be a need for microfinance for many years to come.

During the last decade with the emerging of numerous specialized microfinance investment funds microfinance has transformed to become a recognized asset class. This was a major transformation not only in the minds of MFIs but also in bankers and asset managers' perceptions about the industry.

According to Consultative Group to Assist the Poor (CGAP) and the Microfinance Information Exchange (MIX) foreign investment in microfinance r, including both debt and equity, reached US$13 billion as of the end of 2010. The growth has been driven by both public institutions and private and institutional investors. More than half of all cross-border investment in microfinance is provided through financial intermediaries. Various Microfinance Investment Vehicles (MIVs) have grown in number, scale, and product offering. MicroRate (a rating agency specialized in microfinance) has estimated the total assets of MIVs as of December 31, 2010 to be US$ 7 billion.

MIVs raise funds from public, institutional and private investors to finance MFIs worldwide. MIVs can take the form of collective investment schemes or other dedicated investment vehicles. MIVs provide financing to MFIs through both debt and equity investments.

Why is microfinance suitable for responsible investors? Microfinance asset class provides investors with an opportunity to participate in stimulating economic growth and improving living conditions by providing credit to low-income households and entrepreneurs in emerging and frontier markets (EFM). Investing in microfinance provides investors with a solid financial return in addition to strong social and ethical impact.

Investing in microfinance can generate strong financial returns for investors, while providing diversification from today's highly interdependent global markets. In addition, EFM often exhibit higher and more stable economic growth projections than advanced markets. Moreover, investing in microfinance which addresses the elementary needs of people – food, healthcare and education – is a partial guarantee of independence from market speculation.

Three characteristics of microfinance are particularly attractive for institutional investors: the social value of microfinance, its perceived attractive risk-adjusted returns, and its potential de-correlation from other asset classes.

Several academic studies have demonstrated that microfinance investment returns are apparently not correlated to mainstream investment indices (see for example: Krauss, Walter, 2008).

Philanthropic activity, donations and activities of public donors, and development financial institutions cannot alone provide solutions to the challenges our world faces today – private investment is increasingly engaging in the development of an effective route to social and environmental progress. Therefore there is a great need for increased deployment of capital from private investors particularly in the microfinance asset class. In spite of availability of many various dedicated private investors participating currently in microfinance, there is still only limited understanding of the business model of microfinance and the opportunities it can offer among a wider circle of professional investors.

Microfinance asset class, being the most advanced niche in the broader impact investing field, offers a new approach in the way that it reduces the imbalance in the distribution of wealth between the rich and the poor parts of the world. In general the microfinance investments can be seen as an area of respectful business cooperation between the rich and the poor, based not on donation and philanthropy but on economic efficiency and mutual economic interests.

Despite some evidence that in the short run tensions can arise between simultaneously achieving the financial and social goals, in the long run these two objectives do not contradict each other: doing right by all stakeholders is the only long-term sustainable business solution. And this is the essence of the double bottom line in microfinance: a social promise to benefiting clients combined with a financial commitment to operating profitably.

Somewhat affected by the global crisis and some negative events in countries like India, Nicaragua and Bosnia and Herzegovina the microfinance industry still continues to show its resilience to shocks and de-correlation. The damaging effects of financial, energy and food crises globally underlined the important social mission of microfinance institutions in providing sustainable delivery of financial services to millions of people worldwide.

By calling for more transparency on the performance of MFIs to provide the responsible delivery of financial services to the micro-clients, to improve the quality of microfinance products and services, to enhance their client protection and social performance, we should not forget about the need for responsible behavior at the level of all actors, especially at the level of investors. Investors can play an important role in participating in the industry initiatives (such as for example, the Smart Campaign's Client Protection Principles) committed to improve transparency, client protection, customer service and business ethics, responsible pricing and not coercive collection practices. In accelerating commitment of client protection and social performance management by supporting such strategies at the level of MFIs, they can create the right incentives by funding providers who have strong social missions and objectives, and turn down providers with inadequate practices. Investors can also play a role by avoiding investments in saturated markets, contributing to mitigating the risks of potential over-indebtedness. Investors and investment management companies specialized in microfinance can also add great value by innovating: finding new and better ways of making investments in microfinance, developing investment instruments, introducing local currency financing fund products and enhancing risk management solutions for responsible investors.

6. CONCLUSION

The global financial crisis highlighted the need to aim to achieve positive social effects alongside financial return – a shift from a pure profit-maximization paradigm. This also reflects the increasing interest of various investors in making investments in businesses which pursue social, ethical and environmental development objectives in addition to financial goals. Recent regulatory changes in the EU and worldwide in addition to increased exposure to emerging markets will significantly impact the asset management industry in terms of investment decisions and distribution strategies. And the microfinance asset class, due to its transparent, social and investable nature, is an attractive niche for asset managers, advisers and distributors, who strive to offer innovative fund products to satisfy the growing needs of private and institutional investors.

Microfinance has emerged as a leading impact asset class that can provide investors risk-adjusted financial returns combined with solid social impact. The microfinance asset class has its own investment frameworks, risk management, benchmarks and a growing array of dedicated stakeholders. Microfinance investment funds have been recognized to be scalable, financially sustainable and internationally replicable investment structures which can offer investors financial returns as well as social values. Understanding the whole microfinance fund value chain, microfinance fund objectives, structures, policies, as well as investment processes, portfolio and risk management practices are important for microfinance investors to make informed investment decisions.

Microfinance correlates strongly with the goals of inclusive development and creating shared value and has already proved to be one of the most effective techniques to promote sustainable and responsible finance.

After the period of rapid growth in the past and recent set-backs, the microfinance industry is entering a new stage of its development – a stage of more sustainable and responsible growth.

Microfinance academics and practitioners constantly seek ways to develop tools and systems for social performance measurement to clearly demonstrate credibility of microfinance impact, thus increasing efficiencies along the value chain.

A high degree of confidence exists that the stakeholders of microfinance will be capable of addressing the different challenges microfinance currently faces by adopting best practice solutions to mitigate risk of over-indebtedness, to better protect clients and to enhance transparency.

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Shareholder and management features in the context of behavioral characteristics, effects and life cycle

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ABSTRACT

Prerequisites of agent's limited rationality are defined, when their choice is influenced by preferences, last events, emotional characteristics. An impact of behavioral characteristics on making decision in case of limited rationality of the agent is considered. For example, overconfidence managers encourage an increase in debt in capital structure of the company and overinvestment. The conflicts of interests for the Russian companies with ownership concentration are analyzed. Moreover ownership concentration – is a necessary measure of shareholders protection, not always have a negative effect on financial economic results. Behavioral features and agency problems vary at life cycles of the company. The algorithm of transition from one life stage to another in accordance with determined risks, agency problems and drivers is developed. The challenge to stimulate managers for increase of productivity and their decisions is determined. This article presents investigation a motivation and an encouragement of management; defined behavioral characteristics in the way of incentives; behavioral stereotypes in stimulation methods are presented.

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1. INTRODUCTION

People are a unique resource that affects the long-term potential of the company. According to the assumptions of the theory of capital structure, decision-makers are rational, but in the 60s of XX century there was an introduction about the assumption of agents' rationality, i.e. features, characteristics and preferences that influence the formation of control strategies.

According to traditional notions the consumer is rational. He maximizes the utility and minimizes costs. The utility is determined by the amount set and its benefits. So the consumer has a rational behavior. In this aspect, we consider the theory of expected utility, according to which we estimate the probability of the events with the greatest utility. But the consumer can not perceive all the things and events around him rationally as it is influenced by external factors and the internal psychological characteristics: his character, memories and experiences. That means that the assumptions about the rationality of the individual impugn the theory of the expected utility.

Not always the consumer maximizes his utility and takes into account the uncertainty. In the face of uncertainty, i.e. uncertainty about the risks he thinks about his previous empirical experience. Irrational perception of information, subjective views and preferences of the individual often lead to irrational behavior. This also applies to accessibility of the same information for all investors in its sameness of treatment and understanding, as well as the presence of the same goals.

Also, the individual does not always maximize his expected utility. He does not adequately perceive events that are subjective. It is a particular evident when decision-making enhances, increases the uncertainty and the complexity of the decision.

Investors do not take into account the expected utility. They often do not correctly assess probabilities of outcomes, attributing the greatest weight to the least likely events. This is the influence of their psychological characteristics, limited information and the impact of previous experience. They also tend to the results, where the probability of loss is zero. Investors see outcomes according to losses and gains, but not its general welfare. Usually they cannot decide how to act in a particular situation, and use abstractions, also based on past empirical estimates. According to psychological and emotional characteristics, the individual seems to take rational decisions. He has special internal characteristics and preferences. And even if there are factors that refute his preferences, the investor does not immediately recognize them. They react strongly to the appearance of new information that leads to imbalance in the market, causing a sharp fall of the share price, if, in their opinion, the information is bad.

Sometimes investors are too optimistic about their abilities and knowledge. They are more inclined to take risks in the areas in which they are more aware.

At the same time, investors do not use the instrument of probability theory in making financial decisions and expect the probability of events occurrence. And even if they use mathematical methods, the sample is not always complete and representative. Also the decisions are affected by the view of providing information. Individuals tend to overestimate or underestimate the information according to their own views, they may miss important information, but consider meaningful information, which, in their opinion, is decisive. Investors and financial participants often build incorrect logical sequence about the impact of various factors and events on each other.

It has been observed that while choosing something the individual receives the influence from the surrounding people, so-called effect of the crowd. This can lead to the fact that an individual will not consider his own private interests, but the interests of community. The theory of informational cascades, according to which, the investor, the financial manager makes choice based on decisions of more successful investors or other market participants.

To overcome the above problems associated with the psychological aspects of decision-making the new direction – the theory of prospects authored by D. Kahneman and A. Tversky was created

(Kahneman D., Tversky A., 1979). They made the following assumptions: the decision of individuals should be treated by stages. In the first stage, they should assess the posed problem on choosing the solution, dividing it into perspective. Further, they advise to build forecasting function values, attributing to each perspective of its probability, which is determined on the basis of subjective and psychological characteristics of the individual. Probability is underestimated. So they rely on this function and its probability and maximize it. Thus, they make assumptions about the greater importance of individual non-absolute utility, not about the relative, which is based on his psychological perception. He pays attention to the changes in terms of utility losses and winnings. In this case, the amount of losses is overestimated and the value of winning is underestimated. A definite point (defined benefit) is chosen to estimate losses and gains. The author also notes that individuals have different perceptions of the usefulness changes relative to this point. Smaller decrease in utility is more important for him than the bigger one. They found out that the loss is experienced much stronger than a huge resulting gain. Therefore, investors tend to make those financial decisions, where the probability of loss is equal to zero. This effect is the loss of aversion. But this theory has some problems, for example, if to consider small amount of possible prospects, identifying them with the theory of probability is not acceptable, and if the amount is large-it is quite possible.

Behavioral finance theory takes into account the irrational behavior of investors on financial markets in the face of uncertainty, due to different psychological characteristics. It examines the interaction of psychological characteristics and activities of investors.

Investors are not fully rational agents. They subjectively perceive information. They often use the information that is, in their opinion, the most important, but miss actual important information. They follow their beliefs. They perceive the same information differently if it is shown in a different way. Investors build forecasts based on previous data. Financial decision-making also occurs as a result of various shapes of the request. For example, investments that have more benefits, shares or bonds, but without clarification about the investment horizon.

Motivation in bringing the various combinations of capital sources is not unique and does not depend only on one parameter, which is proved by the results of inspections, when both theories were not rejected and new behavioral factors were introduced.

2. THE CONFLICT INFLUENCE OF MANAGERS-SHAREHOLDERS

Differences in the preferences of shareholders and managers seem to be an objectively conditioned phenomenon in decision of persons with different ownership sizes and forms of participation in the distribution of income, as well as the difference in the distribution of responsibilities and rights in making important strategic decisions for the company.

Prerequisites of capital structure agency models is the use of equity, in case of corporate contradictions debt, in the form of loans, were involved. Complication activity and increased access to various sources of capital determines the need to identify the strengths and weaknesses of the application of various financing methods.

Most agency models of capital structure are manager-shareholder's conflict on the assignment of the company's funds, increase of benefits, payments and preferences for managers. As a consequence of conflicts, so-called agency costs of equity arise, it is related to the implementation costs on monitoring and management incentives. According to the model of M. Jensen and W. Meckling such a conflict can be minimized by giving the stake, leveling preferences with the owners (convergence of interests), contributing to maximize efforts for increasing the company's value, rather than spending the firm's assets in personal purposes (Jensen M., Meckling W.,1976).

Another mechanism for reducing the conflict of agents-principals is the debt financing, which indirectly increases the proportion of the voting shares of managers, who are the owners. However, if there is a conflict between shareholders and creditors, that increase another type of agency costs - the cost of debt. They arise with the lenders guarantees, a higher rate of required income by debt financing sources, reduction of investments in projects because of the substantial debt payments. It is necessary to identify the optimal ratio of equity cost and the debt cost.

For Russian companies, a conflict between the interest of manager (risk attitudes, experience, reputation, age, remuneration is estimated, who alone makes decisions that not always increase the welfare of the company and shareholders, is not prevalent. Management, as a rule, is a major owner, exercising control and strategic decision, and it is not considered as a opportunistically configured hired manager. Russian companies, unlike other foreign firms, are characterized by different inter-company relationships, managers run their own company and at the same time they appear as large owners, or majority shareholders directly manage the actions. In terms of high concentration of ownership and insignificant management role in the company, the impact of large shareholders, the conflict of interests of shareholders - managers have less impact on the funding strategy and the company's performance, and they do not exhaustively characterize intra-relationships (Yerznkyan B.H., Krasilnikova E.V., Nikonova A.A., 2010).

Dominating owners do not attract, moreover, can not notify the minority on strategic decisions on the company's restructuring, on changes in capital structure; they may be aimed at carrying out its own dividend policy. Majority shareholders directly control the cash flows of the company, that allows to use or assign the resources of the company by his own preferences, with the withdrawal of "insider rents." Minority owners, mainly interested in increasing short-term revenues that contribute to the formation of higher dividend payments, as well as in increasing the market value of the shares.

For example, the impact of behavioral characteristics on investment: managers consider themselves to be good professionals, overestimate their performance, identifying shares to be undervalued; overestimate the possibility of getting a return from the investment projects, which leads to the increase of debt financing (Graham J., Harvey C., 2001).

In the case when the director has a share in the company, the trend of increasing of financing debt is extended greater if to compare it with the owner-manager. It can be assumed that the presence of a shareholder-director has a predominant influence on the formation of capital structure of modern companies. "Presumptuous founders of the companies prefer to occupy the post of chairman of the board of directors or the company is characterized by the high control action of the General Director from the Board of Directors, so that presumption of a chairman has a greater effect on the company's capital structure (Dolgopyatova T., 2007 and 2011).

Concentration of capital is a necessary measure for shareholder's protection, but it is not a rational choice in the classical representation of investor's behavior, because it limits the ability to spread risk by diversifying the investments. It is assumed that the concentration of capital gives a positive signal to investors about the shareholder's confidence, especially if a large pack of shares belongs to managers. However, these signals are not stable, since the ownership's term is long, and it is not always associated with the current situation.

Various agency conflicts, availability and appropriateness of certain sources of raising capital are associated with the stages of companies' development. Changing the corporate strategic goals and objectives, as well as types of conflicts and contradictions are caused by the laws of development, accelerated dynamics and changes in cycle stages of organization, that is demonstrated by the studies of some agency models theory of capital structure (Diamond D., 1989). Existing life-cycle theory advantageously carries out analysis of the dynamics of organizational and managerial characteristics, without considering the financial and economic characteristics for each stage of the operation and the growth of the company.

3. OWNERSHIP AND CONTROL CONFIGURATION

A new trend in the corporate sector is competition's growth, the development of the market environment and the mechanisms of control of the stock market to stimulate the transition to professional management.

- However, the retreat of the owner from management occurs differently - in companies belonging to the holding structure and largely dependent on market signals, as opposed to independent firms; there is a significant delegating of the hired management that does not have the company's shares. Integration, unification of business groups helps to reduce opportunistic behavior by connecting the ownership and control.

- If the rights of shareholders are not protected, the risk of delegated rights of management is rather small.

- In this situation the amount of investment is less attracted and ownership's interests do not always convergence the interests of the company and management.

- The companies with significant concentration are characterized by a combination of old and new managers; with an average concentration – old or new managers; for a low one - only old.

The connection of ownership and management, with the participation of management in decision-making is a significant characteristic of Russian companies, as it solves a number of problems caused by opportunistic behavior of economic agents and the weakness of the legal framework.

Management configuration and ownership is also a characteristic of companies' development stages, which manifests itself on the early stages of the life cycle, as well as in the final, ultimately, affects the further strategy of the company, in particular the involvement of various funding sources. Modern processes of integration, the complexity of technology, business, market and institutional environment lead to the separation of ownership and management, attracting hired managers. Behavioral factors determine the number of delegation features of functions for different types of businesses. Personal characteristics of the founder and managers, the development of their priorities, tendency to risk usually is not taken into account for the study of the life cycle of the company and for decision-making in the face of declining the role of the individual entrepreneur. Not only the organization's objectives, the significant terms of innovation and commercial activities are important for the development of the company, but also the preferences of top management and the interests of stakeholders at various stages.

Thus, it is assumed that there are prove and sound problems for each stage of development, such as difficulties in obtaining funding in the initial stages or overconfidence of the owner to transfer the right of management to professional managers. It is recommended to focus on critical situations beyond normal limits and features.

4. LIFE CYCLE STAGES

Life cycle stages were determined on the basis of the work of Dickinson, which determines the identity of life cycle stages of the organization not as a scientific approach, but as a result of empirical tests, taking into account only the signs of cash flows from operating, financial and investment, without using any agency relationship factors or other internal options to facilitate the assignment of the most adequate steps (Dickinson V, 2011). In addition, the application of the deduction to the empirical testing of the array of companies and partitioning the steps can not reliably characterize each stage, its features as the part of the "life" processes in the company. Every stage has special features that reduce the relevance of the findings about the relationship between stages. So, each new stage of company's development has an accumulated effect of the previous stages, which necessitates the complex research of organizations at different stages, not in isolation within each cycle. On the early stages of development, in accordance with the author's conclusions, there is a funding from external investors (or convertible debt), then - the retained earnings, and at the last stage companies attract new owners or long-term loans to finance the following projects. With a low level of retained earnings on the certain stage, growth rates are low, but if there is the increase of retained earnings, asset growth increase, leverage reaches its maximum threshold, and then falls (Byungmo K., Jungwon S., 2009).

At the initial stage there are bad financial resources, a difficulty in attracting funding, a lack of cash flow, an inadequate system of financial planning - a normal and adequate criterion for this stage, it is recommended to focus on previously designated "narrow" places and potential threats. It was noted that internal conflicts are associated with the distribution of organizational roles and responsibilities that are rather abnormal, it was defined as pathologies that necessitate solutions. Possible reasons are: wrongly chosen staff of the company, the unwillingness to work in a team. The threat of incorrect organization is the most significant at this stage of the development.

At the growth stage of the objective there are problems associated with the growth of a high quality, the resource allocation system. Organizational characteristics include a lack of adequate monitoring and control system. At the stage of maturity a poor provision of financial resources was revealed, but there are significant problems associated with the delegation rights, the centralization of power hampers, the distribution of responsibilities that determines the possibilities of appearance over common problems.

It requires a systematic approach that takes into account the interaction of agency problems, ownership structure, governance, the formation of capital structure; and - methods of decision-making, the gradual formation of Russian companies capital structure depends on the availability of agency conflicts.

5. RUSSIAN COMPANIES IN LIFE CYCLE ORGANIZATION

For the head of the company of Russian organizations - it is important to identify possible contradictions in the development of the company. As we have already defined a significant omission of many works that examine different companies and assign one or another particular stage of development. But the object of study for the correctness of the findings need to identify a dynamic system of organization's development, induction method is used by most scientists in this area, but it is not adequate, since the individual organizations, determined at various stages, do not contribute to the relevant general theoretical conclusions about the characteristics of stages, possible threats, as agency conflicts, economic and financial risks and it is the most appropriate sources of raising the capital.

For Russian companies, the determining factor is the impact of the external environment: competition, barriers and industry development, institutional characteristics. For domestic organizations the duration of their activity and history is lower, which allows to hypothesize the existence of so far only three stages: birth, growth, booming. Certainly there are many downturn companies, but mainly emerging market countries determine the growth and development possibility opposed to companies in developed markets, which have already suspended all main stages, but the stage of decline is typical for such firms.

The author suggests that the main driver and mechanism of the transition from one stage to another (for Russian companies) is dominant owner's preferences (external action is also considered, it rather affects companies in the transforming economy than in developed one), as it was proofed by the results of empirical research (Shirokova G., 2007). In addition, there are differences in the characteristics of the stages for the companies with the dominance of foreign owners, which confirms the hypothesis about the "owner" type, his interests as a significant development features for organizations with highly concentrated ownership, especially Russian. Moreover, the author suggests that nascent desire and preferences regarding the growth of the company's owner are realized with a help of internal resources (another option to take decisions - the choice not to expand the organization); during the growth stage they need external financing for the transition to a new stage of development. It corresponds with the findings of the Russian authors about the dilemma of the property owners, the need formalization of management for attracting a strategic investors or the separation of management from ownership for IPO (Shirokova G., 2007).

However, they determined that if the property owner makes a decision not to enhance in the formalization, not to delegate the rights to management, the growth rate is slowing down, which tends to decline. This conclusion corresponds to the representation of I. Adizes about the different roles which we assume to be different on different stages of development of the company, focusing on the key challenges and problems of growth.

It may be noted that the main drivers of change and evolution, the transition from one stage to the other are internal factors. However, a sustainable path of development can be influenced by the external environment that requires a full survey of the environment.

Joint dynamic system and characteristics of the development stages, including ownership structure, structure and composition of the Board Directors, is the company's financial architecture. Analysis of the financial architecture of the organization - is the only one of the parameters, identifying and evaluating possible admissible cycles of the company. On the one hand, the financial architecture changes, due to the development, the need of organization, on the other hand, its components themselves characterize the lifecycle. So, the data parameter can be considered only as one of the criteria for identifying the stage.

The ownership structure is an indicator of the distribution control in the company, which determines intercompany relationships and conflicts of interest on the impact of financial and economic policies, in particular to raise the capital.

In the context of the designated financial impact in scientific works they are determined both empirically and theoretically by the result of the influence of various types of dominant owners on the performance of the company, the formation of capital structure. And only a few studies connect structure and the configuration of the property with the development stage of the company. But even in such studies a combination of factors was not assessed, only the individual parameters (Dolgopyatova T., 2007 and 2011; Stepanova A., Balkina E., 2013). However, it is still difficult to clearly assess the effects of the influence of ownership concentration, which often determines the possibility of agency conflicts between the dominant owners as well as between majority and minority shareholders. On the one hand, the concentration of ownership helps to reduce the information asymmetry and to make timely decisions under monitoring of shareholder, on the other hand, to abuse corporate control, a limit of qualified management for shaping the policies (Jensen M., Meckling W.,1976). Other studies have determined the concentration of ownership due to different life cycles and company indicators, revealing a U-shaped dependence on the stage of maturity and opposite in the growth stage, and while downturn, the concentration improves the features (Stepanova A., Balkina E., 2013).

Authors verify the hypothesis that there is a mutual control when there are two major property owners, which leads to reduce the probability of opportunism and the positive impact of concentration (Dolgopyatova T., 2007 and 2011). In addition, on the base of theoretical assumptions of Greiner about possible organizational obstacles in the development of the company, we can assume a positive effect of ownership concentration at the developing stage company, the birth stage, as a way to overcome the threats and the growing risk with the presence of a common goal and convergence of interests of large and small owners. The hypothesis on reducing the risk of appearance of agency conflicts when the presence of several large owners was empirically was confirmed by the author.

For small organizations with further development at the stages of rapid growth the "owner's trap", reluctance to delegate its powers to the hired professional management, the desire to exercise control over its decisions is possible, which is common for Russian internal (agency) relationship. Manifestations of conflicts of interest during the presence of two major shareholders on key growth stage, in author's opinion, is less significant at this stage of development. For large companies with significant development the risk of contradictions of large owners in future strategies, the struggle for control is typical.

Thus, identifying possible threats appearance of agency conflicts, it is necessary to take into account the size of the company. For a small organization contradictions which are normal for a large one, appear with a certain lag, or they are original, so it requires a different approach and analysis based on the size or significant industry-specific.

At the stage of maturity in small companies, the owner has a desire to receive a benefit from its activities and the effort, the so-called "investor's trap", in large ones, on the contrary, the majority shareholders after contradictions in the redistribution of control and ownership are focused on the implementation of mutual monitoring, but the dissonance (gap) of preferences with minorities increases. While extending the share owned by one majority shareholder and his benefits that exceed the received cash flows from discrimination, his opportunism and abuse reduces.

Moreover, there is the least predictability of transition from maturity to decline stage, when the company is in the prime of different scenarios of further development: modifications, innovations that help to develop the growth stage in this direction or the standardization of activities that naturally lead to the downturn.

Growth stage, in addition to maintaining the current rate of growth, investments in working capital, requires substantial investment to the fixed assets. It was found that the companies that are in the process of growth have a higher sensitivity of investments (elasticity) to the cash flow (Alti A., 2003). Young companies should have a small share of borrowed funds, and at the stage of booming provide dispersed shareholding structure to avoid the crisis associated with the subjective decisions of the manager-owner (Ivashkovskaya I., Konstantinov G., Filonovich S., 2004).

At the stage of maturity operating cash flow becomes positive, required investments are focused on maintaining current operations, investment cash flows increase. A positive relationship of dividends and investments was empirically confirmed. At this stage of development the uncertainty decreases, monitoring increases. There is a control of risk, Q-Tobin, which characterizes the long-term aspect of the company that is more applicable to the construction of models, than the rate of cash flow - on the growth stage.

The approach to the analysis of the company as a dynamic system is being studied, while the basic fundamental studies were missed from the survey of prior periods, it was assumed that the organization was at the stage of booming and maturity. In addition, the examination of the company during turning points seems to be interesting, when there is an inevitable transition to a new stage and identity of the internal and external driving forces.

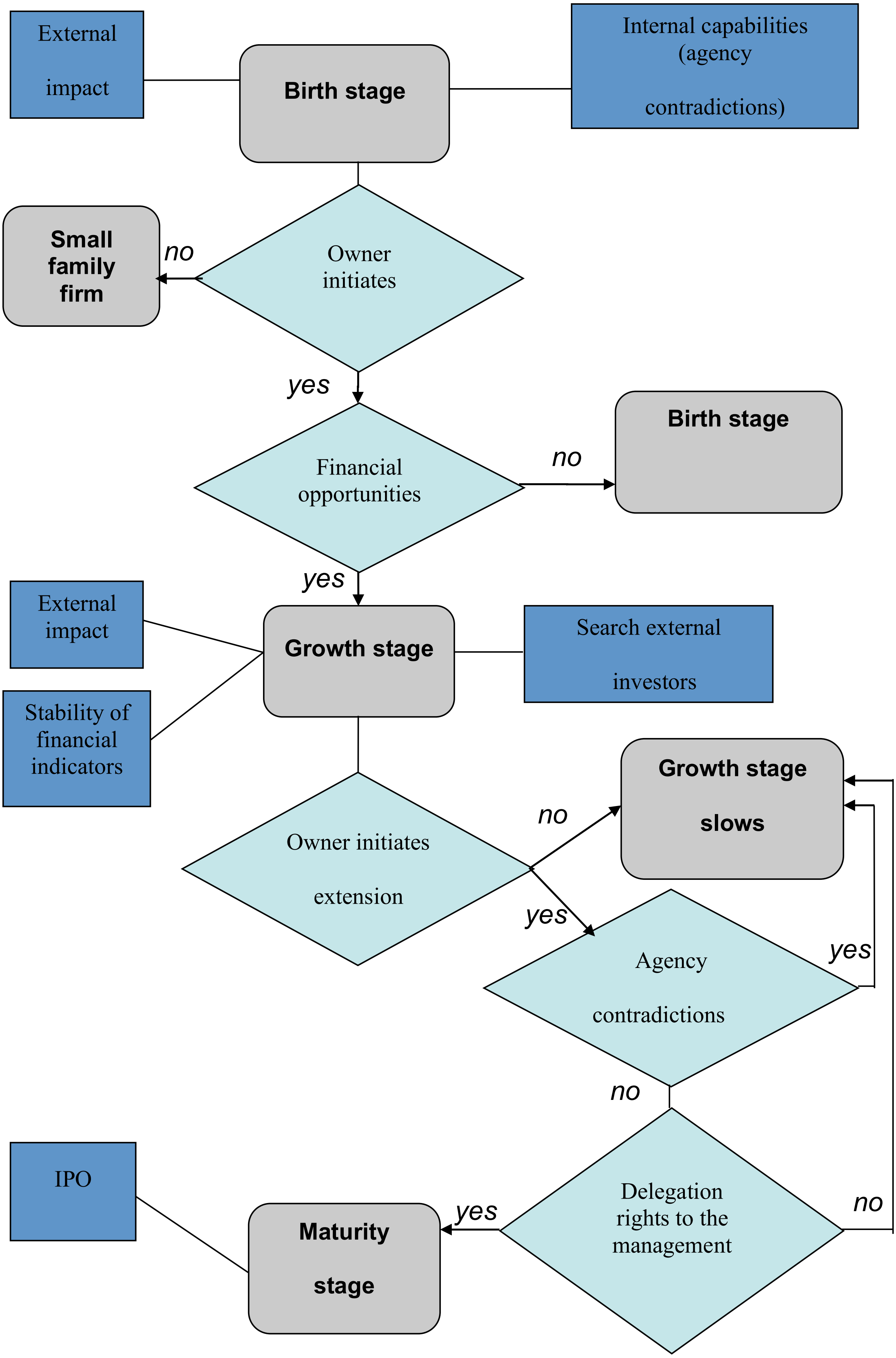
External impact
Birth stage
Internal capabilities (agency contradictions)
Small family firm
no
Owner initiates
yes
Financial opportunities
no
Birth stage
yes
External impact
Growth stage
Search external investors
Stability of financial indicators
Growth stage slows
no
Owner initiates extension
yes
Agency contradictions
yes
no
IPO
Maturity stage
yes
Delegation rights to the management
no

Figure 1. Algorithm of transition from one life stage to another

Essential challenges in life cycle organization:

- Indirectly in theories of capital structure and in theory of information asymmetry.
- Various objects of study of the life cycle (organizational characteristics, personal qualities of owners, company's organization, decision-making methods, the financial parameters: sales, cash flow, retained earnings, capital structure).
- Inductive approach reduces the relevance of the results.
- Each new stage accumulates the effects of previous ones (the research of organizations is not isolated within a single cycle, but in the dynamics).
- Various criteria for the identification of stages and its length (without focuses on concentrated capital).
- Different drivers of transition from stage to stage.
- Various agency problems at each stage of development.
- Uneven steps for small and large companies.
- Distinctive features of development for privatized and new created companies.
- Delegating functions for hired management as the transition factor to a new stage of life cycle is not always conducive for qualitative growth, and the combination of ownership and management do not leads to the limited development.
- Influence of environmental and institutional features during the stages of development.
- The object of studying is a dynamical system of development organization.

6. MANAGEMENT MOTIVATION

The question of how to encourage managers and other employees to improve performance of the organization as a whole, their actions in particular is rather important. May the company's management establish an effective model that takes into account the behavior and preferences of the employees of the firm? What are the stereotypes in methods of stimulation and should we devote a considerable attention to motivation, because preferences may change and that will require additional ways to promote transformation.

There will be several ways to harmonize insider's interests (managers and directors) with the interests of investors. Typically, they are divided into two types, external and internal. External mechanisms include, for example, the market of corporate control and manufactured product, production factor markets. Examples of internal mechanisms – the system of material incentives for managers, insider ownership and ownership concentration.

There are some standard approaches to stimulate the executives to qualitatively perform its functions (Pustynnikova Y.M., 2003):

1. Managers' compensation is calculated on the base of their qualifications, positions. The goals, set by the owner, shall not be considered for the motivation of managers.

2. Management remuneration depends on the achieved results and objectives, set by the owner. The value of performance indicators is estimated, on which managers can affect.

3. The stimulation of managers as the owners happens with the provision of different options for companies share.

According to the classical theory, bonus share options are given to reduce the abuses by managers and to align their interests with the shareholders. However, an opportunistic solution of the problem may lead the manager to other incentives for his own goals, such as expanding its capabilities and something else, that is not connected with the value maximization. Evaluation of managers' work by trends in the level of corporation shares prices is also possible. It is important to bear in mind that developments are affected by internal and external factors; and changes in the price of shares may occur not only in a result of actions taken by managers and management decisions. One of the most important ways to solve agency problems appears in forming a system of contracts, involving the interests of all participants in the agency's relationship. Main objective of the contracts system – risk allocation between the parties and ensuring, as far as it is possible, to generate income, in accordance with risk. Sometimes owners are taking on some risk, reserving the right of decision in a particular range of issues. In this case, the role of the financial manager is reduced. In some cases, all the risk is transferred to managers and theoretically they should have the right for any residual income. If the owner transfers all risk to the manager director, they should provide shareholders with a fixed income, taking into account alternative investments. Managers provide the required income of the capital and the level of rates on alternative investments, taking residual income for themselves.

Owners can also encourage managers to make high-quality work with a variety of incentives (higher premiums, share options – then the manager will try to increase the value of a corporation and the domestic price of the option); different regulators (secret rating system, and measures to counteract the erosion of capital, improving the performance of the Board of Directors); punishment (dismissal, the threat of corporation takeover). At the same time ways to encourage management with options, during the downturn, is not resultive. For favorable results of management decisions, measured by the the proportion of earnings per share, the owners provide managers with premium shares. Stimulation of both tangible and intangible, should take into account and limit opportunistic behavior of managers, which occurs upon the separation of ownership and control of management.

Financing through long-term and short-term liabilities of the company decreases with increasing of managerial capacity (ability), measured through the payment of the CEO, the ratio of CEO profitability of assets, the number of years in office, the ratio of the number of years in office to the age. The increase of 1% payout of CEO leads to low long-term debt by 11%, and short-term - by 38% (Adizes I., 2004). However, this does not overlook the internal preferences that are also very important and effective.

We should create such incentives that are oriented on long-term outcome, at the same time it "ties" the manager to the company that would become for him not just a place to work, but a special place. A component of monetary motivation is important, but not for all manager and directors. Money is a measure of an adequate assessment, the measure of respect to the person as a whole. It was noted that significant failure is the standardization of motivational and incentive mechanisms, in particular if they are strictly formalized, and in case of individual preferences it can not be circumvented. Corporate culture of Western-style has the influence on some employees/managers and has the opposite effect, it does not unite the community and affects subordination, and people do not share the preferences of activities that should strengthen mutual support and guidance for the company. Many traditions, according to the survey, are not taken seriously (for example, the tradition of congratulations on the birthday and actually, singing songs by the person causes discomfort and tension rather than enhancing the reputation and the role in the company, so that his colleagues did not forgot the holiday).

To identify priorities, we should conduct surveys, observe the behavior. A psychologist, whose purpose – reveal preferences, can be perceived as an invasion to the personal space, for many workers, the outsider who clarify their preferences, is associated with some upcoming threat by virtue of having, apparently, some problems if sided interference was needed. Most acceptable situation is when information about revealed preferences and aims is not declared by the owner. If the reputation is the most important thing for the person, and someone want to encourage him, it is better not do this explicitly, so that he would not understand that his preferences are well known, that those who build ways to stimulate and promote the intangible know about his dreams, weaknesses (if the person is vain the best reward for him – a regular praise).

Anyone who is really significant for the company needs an individual approach. However, there is no organization that is able to satisfy all career ambitions of their employees, but if the basic interests of the key agents were not implemented, these stakeholders would prefer another firm. Thus, we should build the capacity of staff, providing attempts to implement features.

Motivation can be external or internal, the significance of which is underestimated. There is an example, when a successful motivation (motivation from the outside) of the owner is a magnet that collects people together, but when the action is over, people are still fragmented. In fact, each of these people acted and will act with their inner motives. Indeed, there is nothing that affects like an internal attitude. Some people want to raise the status in the eyes of colleagues, that does not require a significant investment, but to enhance their activities. Positive emotions also improve the productivity of their activity, there is a desire to "go beyond". Surprisingly, such obvious incentives are not seen, as most people are accustomed only to material incentives. Another important understanding perspective is when the manager sees examples of execution and implementation of other desired capabilities.

There are many stereotypes and failures in stimulating (Sprenger R., 2004):

- Managers are focused only on receiving cash payment bonuses (for example – managers of large investment banks such as Lehman Brothers corrected reports to inflate the results and to obtain significant bonuses).
- The owners pay attention usually only to the first revealed stimulus of the manager, ignoring others.
- Successful manager is always successful in all cases (behavioral halo effect – success in any single case marks the success of this employee in other cases).
- If the results are nonpositive, then in the future they will be the same (effect of failure, contrast).
- If there is no result, it is necessary to motivate more; motivation is not always valid.
- Monetary incentives quick stale; dissatisfied managers constantly feel unsatisfied (as the way of obtaining privileges).

- Welfare and education can change the position, make a person more prone to criticism (however, when the status increases, it sometimes leads to the effect of overconfidence).
- Short-term incentive effect ("How much does the company earn on me, if it can spend such large amount on incentives for such efforts?").

The example of guaranteed premiums: managers were fully transferred on salaries, increasing them by the average monthly premium for the results of the work but awards were abolished. Six months later, company's executives noted that the managerial staff stopped working effectively, and returned the original conditions. In addition, the irrationality and unpredictability of agents determines that the existing postulates and axioms distort the results and simplify the reality, there is the impact of behavioral effects, both for investors, managers and owners.

7. EXAMPLES OF THE OCCURRING EFFECTS FOR INVESTORS:

The effect of "wasted money"

This effect displays a reluctance to take and withdraw funds from any project that does not bring significant benefits. Also, it is typical for large and successful companies that have reached maturity cycle, and who already have new significant competitors, in this case, such organizations do not need to diversify their activities, to seek new ways of development and growth factors. This effect is manifested in trading. For example, in case of a significant funds investment to the company's share, by which the market is fully analyzed, the company's activities, which have predicted the growth forecast, but the expectations failed. A trader regrets about the time spent on analysis, he suggests that a detailed analysis is realistic at the moment, but it might be in the future, so he refuses to close it. It is easier to keep an open mind, than to admit a wrong decision and accept the loss. The example of the unwillingness to withdraw money from an unprofitable project is the construction of a water channel Tennessee-Tombigbee Waterway Project in the United States, the analysis of project profitability showed the only viable option - to close the project, but on the contrary, Congress has increased funding, arguing that tax revenues will otherwise be considered wasted.

The effect "method of information inflow"

If the investors believe in the truthfulness of the information, they tend to perceive it as the truth and to rely on the original information. If they are not confident in the information – they rely on the secondary information. This effect refers to unconfident investors, that are not seeking to change, they perceive bad news, that mismatched with their notions about the company, and react to them late or in a limited extent. Furthermore, this effect is manifested in deals, connected with acquisitions and integrations. So, they initially show the primary information, which will interest the customer. The remaining components of the treaty are provided with more complete information.

The effect of "subliminal accounting"

It is manifested in the fact that the same loss in different situations affects decision-making. A typical example is associated with a loss of money or an object whose value is equivalent to that amount. In the first case, an individual often buys an object and in the second – he does not. Also, for example, the investor has a specific portfolio, the yield of the whole portfolio is negative, while the yield of individual company is high, the growth of which, he did not even expect. The portfolio will not be reformed. The same situation is seen with the dividend income and exchange difference.

The effect of "Tom Sawyer"

This tendency can be manifested in trading (buying shares), employee motivation (to conduct and to report - the most difficult task that can be performed only by the nicest staff), free training (you get an invaluable experience). It is widely spread in common marketing for promoting products: hired buyers stimulate to purchase, praising their goods.

The effect of "addiction to certainty" taking into account the effect of specular reflection

The investors, who have recently appeared on the market, rather rely on wins, than to get the loss, so they do not cover losing positions. They prefer certainty when choosing outcomes, guaranteeing a profit. At the same time, they seek a way to avoid any certainty in the case of loss, even if the unlikely chance of success will lead to additional costs.

The effect of "isolation"

It lies in the fact that the choice varies depending on how the probabilities are presented. The effect of isolation means that investors tend to consider the possibility and the costs, separately.

The effect is related to the "fact that people do not learn from their mistakes"

Firstly, due to the fact that the bureaucracy does not imply interest in the analysis and initiative. Secondly, a lot of top managers are focused on achieving success, in this case they use the experience of the market leaders, repeating their actions, which is not always successful for this particular company by virtue of its various features.

The effect of the "crowd"

Investor behavior is different if he acts alone, without consulting and focusing on the actions of the majority. Example: Californian "Gold Rush." It also assumes that significant price changes are associated with the action of crowd effect, it is especially evident in the stability of companies, banks during the crisis.

The effect of "Peak-end"

If the stock market is dominated by negative expectations and forecasts, confirmed by analytical studies, with the appearance of positive news investors will be skeptical to positive dynamics since it was influenced by negative background.

Below are the behavioral effects, that should be noted while stimulating management/employee:

The effect of "optimism and faith in the desired"

Some owners believe that managers, will necessarily act in the interests of shareholders, if you just give them bonuses, while they often do not taken into account the fact that the permanent benefits tend to be addictive.

The effects of "certainty"

Managers would be most preferable to know how and under what conditions, if they can get, both tangible and intangible rewards.

The effects of "illusion of control"

Thrifty owners have the impression that if they regularly check accounts - they control the activities of managers. As a rule, many of the facts are hidden, or not taken into account or hide income and expenses.

It is also important to make it clear to the manager that he is unique, significant for the company, and his features are possible to exercise in this particular company (to avoid the transition to a competing firm); that he develops the company.

The effects of "resilience of opinions"

Owners sometimes mistakenly believe that monetary incentives are the strongest.

The effect of a "failure"

Sometimes ways to stimulate are selected incorrectly, that affects the activities and effectiveness of the company and it forces owners to refuse non-standard policy incentives. However, it should be simply adjusted, based on the personal preferences, determination what is important for the manager.

The effect of "deviation to positive result"

Rules are important for owners, and the need to assess the quality of decisions by the circumstances of the time when it was taken, for example, the financial crisis or enhancing the company's assets, which reduces the free cash flows.

The method of "receiving the information"

Owners should first submit to manager's positive information related to their future prospects, tangible and intangible, and then - the requirements and conditions of the project, a new job.

The effect of "subconscious accounting"

Many owners have a perception that if they pay premiums, they manage the money of the company and if they somehow encourage managers or use other methods of motivation, they attract their own resources (own reputation, for example).

The "Anchor" effect

The role of memory is important: the manager remembers that he was awarded, what bonus he has received, and how he had used it - this is an additional incentive for him in the future to improve the results.

Thus, a system of incentives and promotion should take into account the material motivation, social motivation and corporate motivation. Each manager is focused on achieving the specific result, the company's goals for successful implementation of the interests of managers, as well as the company should choose the most appropriate behavioral effects of exposure. In addition, there is a transition to behavioral economics, expediency of behavioral characteristics of stakeholder: investors, suppliers, owners, managers; the need for a course of behavioral and experimental economics in the educational process increases.

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