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THE JOURNAL OF CORPORATE GOVERNANCE, INSURANCE AND RISK MANAGEMENT

This Journal replaces the former European Journal of Economics and Management (EJEM) first launched in 2014. The Journal is an international open-access refereed indexed journal, published twice Annually.

The aim of the Journal of Corporate Governance, Insurance and Risk Management (JCGIRM) is to publish quantitative and qualitative studies from selected areas within these disciplines and other related areas such as Banking, Accounting, Auditing, Compliance, Sustainability, Behaviour, Management and Business Economics.

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TABLE OF CONTENTS

THE PARTICIPATION OF THE SMALL SHAREHOLDER IN THE ANNUAL GENERAL MEETING: A REFLECTION OF GOOD CORPORATE GOVERNANCE?	1
Peter J Baldacchino, Amy Camilleri, Isabel Cutajar, Simon Grima, Frank H Bezzina	
SHORT TERM ANNOUNCEMENT RETURNS TO THE BIDDER	17
Kenneth Högholm, Johan Knif	
RESEARCH IN THE FIELD OF ECONOMIC CRIME IN SLOVAKIA	46
Ladislav Suhányi, Alžbeta Suhányiová, Jarmila Horváthová, Martina Mokrišová	
DETERMINANTS OF REAL PRIVATE CONSUMPTION EXPENDITURE IN LESOTHO	58
Lira Peter Sekantsi	
MODELLING FRAUD PREVENTION PROCESS	76
Darko Tomaš, Igor Todorović	
APPROACHING EUR/CHF EXCHANGE RATE VOLATILITY IN ALBANIAN MARKET	88
Ardita Todri	
ARE THERE RELATIONSHIP AMONG STRESSOR, BEHAVIOR, AND EMPLOYEE PERFORMANCE? A CASE OF CIVIL SERVANTS IN BANTUL, DIY, INDONESIA	101
Muafi, Ninik Probosari, Anis Siti Hartati	
THE IMPACT OF THE IRON AND STEEL INDUSTRY TO KARABÜK AND SHEFFIELD: A HISTORICAL BACKGROUND	109
Can Biçer, Kemal Yaman	

The Participation of the Small Shareholder in the Annual General Meeting: A Reflection of Good Corporate Governance? **

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ABSTRACT

This paper analyses the level of small shareholder (SS) participation in the Annual General Meeting (AGM), assessing how this reflects upon the corporate governance of listed entities. It focuses on SS attendance, voting and proposals (excluding those of institutional and majority shareholders), improving SS participation and the significance of such AGM proceedings to listed company corporate governance. Empirical mixed methodology research is carried out in a Maltese listed company (LC) setting by means of semi-structured interviews with seventeen LC secretaries, five stockbrokers, an online questionnaire responded by fifty-four shareholders in different LCs, as well as the analysis of company notices and documentation relating to the AGM. Results indicate that SS participation is weak. Attendance is poor, and is often spurred both by legitimate factors such as information on current financial performance and by questionable ones such as refreshments served and venue. Shareholders seem uncomfortable in asking management formal questions and even in voting by show of hands, and therefore opt for informal interaction with management and for voting by poll, the latter often rendering attendance fruitless and even unnecessary by permitting proxies. As for proposals, they could induce management's later action despite seldom, if ever, being approved, but their submission is rare and mostly frivolous, commonly hampered by a lack of financial knowledge. The study concludes that the current level of SS participation does not render the AGM a tool reflecting good corporate governance, as it does not keep in balance the interests of this shareholder with those of other stakeholders. For the sake of better direction and control, and, in particular, for more transparency and accountability, the AGM has to be less stage-managed, as well as more interactive and engaging towards such shareholder. This calls for increased management commitment, particularly *towards more investor education and guidance*.

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1. Introduction

The term 'corporate governance' has been defined as the system by which companies are directed and controlled (Cadbury Report, 1992). Corporate governance is mainly concerned with providing

structures through which objectives are set, performance is monitored and rights and responsibilities are adequately allocated among different participants in the corporation (OECD, 1999; OECD, 2004).

From a narrow perspective, corporate governance is limited to the relationship between the company and its shareholders (Solomon, 2010). In a wider context, corporate governance may be considered as a set of relationships between a company's management, its board, its shareholders and other stakeholders (OECD, 1999). While academics have defined corporate governance from varying perspectives, the existence of conflicts arising from the separation of ownership and control is a predominant feature. Discussions on corporate governance have concentrated on the relations between the directors and managers of companies and other parties, in particular focusing on the role of corporate governance to protect and advance the interest of shareholders through appointing and monitoring capable management (Walker Review, 2009).

The Annual General Meeting (AGM) represents one of the corporate governance instruments intended to assist shareholders in holding the directors of a company accountable, thus limiting the possibility of expropriation of shareholders by managers (La Porta et al., 2003). It has been the interest of various scholars to evaluate the importance of the physical meeting of shareholders on entities' corporate governance. While AGMs aim to serve as a means of overseeing the actions and decisions of companies (OECD, 2004), studies have shown that AGMs can be seen as redundant in terms of effectively exercising the agent-principal relationships (Apostolides and Boden, 2005).

Proponents of proposals that AGMs contribute little to effective corporate governance have justified their conclusions by arguing that due to little or no opportunity to influence the company's strategy, private shareholders prefer to exit rather than use their voice in AGMs (Apostolides and Boden, 2005). Nonetheless, while dominant investors have alternative routes by which to exercise governance (Stratling, 2003), small shareholders largely depend on AGMs to exercise their shareholder rights (Van der Elst, 2013).

The market instability brought about by corporate scandals such as Enron, WorldCom and Parmalat, followed by the financial crises in 2008, have led shareholders to demand more information and become more active (Ertimur et al., 2010; Gillan and Starks, 2000; Jensen and Meckling, 1976). The primary focus of activist shareholders is to put pressure on companies to continue enhancing their corporate governance practices, this with the aim of improving the companies' performance and achieving higher returns on investment. In April 2014, the European Commission submitted a proposal on tackling corporate governance shortcomings relating to European listed companies with the aim of enhancing shareholders' rights where necessary to ensure that shareholders are more engaged (European Commission, 2014).

This empirical is based in Malta, a small member state of the European Union (EU). In view of the AGM's importance to small shareholders, this paper analyses the level of small shareholder participation in the AGM of Maltese listed companies. This paper aims to analyse small shareholder attendance at AGMs, evaluate their voting rights, including their strength and effectiveness as well as examine and assess shareholder proposals put as resolutions on the agenda of the AGM. In the light of the emerged results, the paper will provide recommendations addressing the weaknesses identified among AGMs of listed companies, particularly identifying means by which small shareholders' participation at the AGM could be increased.

2. Literature review

The AGM is an integral part of a company's corporate governance system as it provides the opportunity to shareholders to exercise their ownership rights, including the opportunity to direct any questions to the Board (The Association of British Insurers, 2013). Stratling (2003) identified that AGMs serve to provide three principal functions. Firstly, AGMs aim at informing shareholders about the company's financial performance and important management decisions. Secondly, AGMs enable companies to obtain the shareholders' consent for decisions that the board of directors has no

discretion to take. Thirdly, AGMs support a forum for discussion between directors and shareholders about past performances and future business policies.

Similar to other jurisdictions, Maltese company law grants rights to shareholders at the AGM. In particular, Maltese listing rules provide each shareholder, including a proxy holder, with the right to attend the AGM and ask questions related to the items on the agenda and to have such questions answered by directors or by a competent person as the directors may delegate (Laws of Malta, 1995 and MFSA, 2014). Moreover, such listing rules allow shareholders, holding a minimum of 5% of the issued share capital, to table resolutions at the AGM.

2.1 Small Shareholders' Attendance at the AGM

Shareholder democracy can be achieved through increased participation by investors at the AGM (Van der Schee, 2011). Various scholars have determined that there may be a number of factors influencing shareholder participation. Empirical research by Stratling (2003) and Apostolides and Boden (2005) showed that participation tends to increase when the company is in financial difficulties, with the latter stating, "the more salient the current issues, the greater the AGM attendance" (p.61). Similarly, Kathurima (2011) claimed that the main determinants for shareholders' attendance at meetings depend on the agenda of the meeting and the need to enquire on the company's performance.

Numerous researchers have analysed in great detail the real significance of the AGM, particularly to different classes of investors. Van der Elst (2013) and Bottomley (2003) maintained that the AGM has become less important to large shareholders as, in practice, the company often communicates with institutional shareholders outside the AGM, for example through conferences or one-on-ones. While one-on-ones and other activism behind closed doors are targeted towards large and often institutional investors, the AGM is aimed at all shareholders, including individual and small shareholders (Van der Elst, 2013). This implies that small shareholders largely rely on AGMs to exercise their shareholder rights (Lafarre, 2014).

Recently, participation at AGMs has been increasing through technological breakthroughs (Weil, Gotshal and Manges LLP, 2002). As a measure to increase participation at AGMs, the EU Commission advocates that Member States should focus more on reducing participation barriers so that shareholders could engage in cross-border voting more easily.

2.2 Minority Shareholder Voting

Voting is an important tool, as up to a certain extent, it enables shareholders to influence corporate governance (Yermack, 2010). According to Macey (2008), it is presumed that more and better voting rights to shareholders would further improve corporate performance and accountability. Shareholders commonly vote on directors' elections, executive compensation, fundamental corporate changes, amendments and the sale of most or all corporate assets. These rights are subject to change by contractual provisions. Furthermore, they are subject to legal precincts in various aspects. Notwithstanding the importance of shareholder voting at the AGM, various scholars have discussed whether voting indeed serves the purposes assigned to it by corporate law (Lafarre, 2014).

Low attendance rates and absenteeism of shareholders at the AGM is a widely debated topic in corporate governance literature (Van der Schee, 2011). As proclaimed by economic theory, the ownership structure of the company highly influences voting turnouts (Van der Elst, 2011). In a widely dispersed ownership structure, the voting outcome will be the same irrespective of whether a small (individual) shareholder participates in the AGM (Lafarre, 2014). In this respect, by holding large voting blocks and being able to influence voting results, large shareholders tend to have more motives to participate in AGMs than small shareholders (Van der Elst, 2011).

The voting procedure can have an effect on the nature and quality of the general meeting (Apostolides, 2010). Shareholder voting models have evolved over time from one-share-one vote to a variety of voting structures, some favouring small or individual shareholders and others enhancing the control of large shareholders (Dunlavy, 2006; Pistor et al., 2003). According to Apostolides (2010), a poll by ballot is one of the safest methods for directors, as the majority of proxy votes on resolutions would be carried in favour of the Board. This view supports Hampel (1998) who argued that a show of hand is riskier and more transparent, as small shareholders can still register an interesting majority against the Board.

Maltese company law provides that a resolution put to vote shall be decided “on a show of hands unless a poll is demanded” (MJCLE, Laws of Malta.Ch 386, First Schedule, Reg 41). Such voting is “a method of dealing with non-contentious matters expeditiously and inexpensively” (Companies and Securities Advisory Committee, 2000, Para 4.108). The study of Bottomley (2003) analysed the voting tool adopted for approval of agenda items, whereby most of which were decided by show of hands, except for the election of directors and the fixing of their remuneration.

2.3 Minority Shareholder Proposals

Shareholder-initiated proposals have become an integral part of corporate governance and performance control. Shareholder proposals are a means of mitigating agency problems and thus, advocating shareholder participation (Bebchuk, 2005).

Shareholder proposals are powerful and beneficial to both investors and companies. Investors are able to communicate their concerns to the Board of Directors, while companies get an opportunity to gain insights of shareholders’ interests and concerns over particular matters (British Columbia Investment Management Corporation, 2010). Nevertheless, various scholars such as Bebchuk (2005) and De Jong et al. (2006) have generally considered shareholder proposals to be a relatively weak disciplinary mechanism whereby activist small shareholders exert little influence on management.

A recent study conducted on Maltese listed companies by Bezzina et al. (2014) revealed that the ownership concentration of such companies influenced the effectiveness of the exercise of rights in controlling decisions. In companies with a widely dispersed shareholding, shareholders were regarded as less powerful and hence were unable to exercise effective control through their participation at the AGM (Bezzina et al., 2014).

Empirical literature shows that proposal submissions do not really act as an agency control device as often management and institutional activists negotiate between themselves behind the scenes or pursue their own serving agendas (Bainbridge, 2006; Anabtawi, 2006; Crespi and Renneboog, 2010). Similarly, Ertimur et al. (2010) argued that as shareholder proposals are presented well ahead of the AGM, the Board could evaluate them, obtain management’s opinion, hear from large shareholders and eventually determine whether to implement them or put them for shareholders’ vote. Some scholars claimed that the non-binding nature of shareholder proposals yield no control benefits (Prevost and Rao, 2000; Gillan and Starks, 2000). However, various others scholars asserted that albeit their non-binding nature, submitted proposals can exert pressure on the firm being subject to the proposal. Studies show that proposals attaining the majority vote are likely to be implemented (Bizjak and Marquette, 1998; Martin and Thomas, 1999; Ertimur et al., 2010; Thomas and Cotter, 2007).

Evidently, shareholders target proposals to certain companies more than others, and there may be various contributing factors for this. Shareholders tend to become aware and more active especially when the company does not operate up to their expectations. Early studies proclaimed that proposals submitted tend to be substantially targeted to underperforming companies (Karpoff et al., 1996; Martin and Thomas, 1999). According to Cziraki et al. (2010), voting outcomes were strongest for proposals seeking changes to the Board, thereby indicating major governance concerns.

Findings by Gordon and Pound (1993) showed that shareholder proposals are likely to gain more votes during the firm's worsening economic performance period, this similarly indicating a potential quality problem with present management. Maug and Rydqvist (2001) explained that investors are wary in respect of governance issues where the benevolence of managers' judgement is less plausible. Nonetheless, the pass rates of investors' proposals are low while approvals of managements' proposals are high (Maug and Rydqvist, 2001). The study of Gillan and Starks (2000) showed that proposals sponsored by active individual investors receive significantly fewer votes than proposals sponsored by institutional investors or coordinated groups of investors.

2.4 Improving Participation

The increasing desire to improve participation at AGMs has led various researchers to identify ways how regulations can be improved. Common proposals were to allow for technology advances, with the aim of making AGM practices more effective. One of the recommendations put forward by the Australian CAMAC (Australian Government, 2012), was to embrace technology in the conduct of meetings and thereby, doing away with proxy voting and mandating direct voting without having to attend in person. Amey and Mozley (2012) stated that such an Internet voting system represents a highly efficient way of increasing participation in shareholders' meetings, doing away with physical presence and thereby saving time, costs and inconvenience of travelling while assuring effective communication. Similarly, Gonzalez et al. (2014) highlighted the importance of innovative voting procedures by enabling foreign and other shareholders to vote in real time without having to travel. Gonzalez et al. (2014) further advocated a public counting, this allowing for more transparency.

Good governance is achieved through continuous improvement. As circumstances change, companies have to seek ways to keep advancing in the worldwide corporate governance and implement the best practices for the benefit of the company, its shareholders and all other stakeholders (IFC, 2009).

3. Methodology

The findings and analysis of this study were supported by both secondary and primary data sources. Secondary data sources consisted of company notices in relation to notices of the AGM, Annual Reports and other documents published by company secretaries. This data was used to substantiate primary data sources.

A mixed methodology was adopted. Data was mainly collected through twenty-two semi-structured interviews. Seventeen interviews were held with company secretaries, aimed at ascertaining the level of shareholders' participation in their respective companies. The other five interviews were held with stockbrokers dealing with shares of the same companies. The latter's views were found relevant in view of interactions with small shareholders and their independence.

Therefore, two semi-structured interview schedules were designed: one for company secretaries and another for Maltese stockbrokers. The interview schedules consisted of both open- and close-ended questions, with the latter involving either categorical questions or five-point Likert-type items, signifying the respondents' level of agreement to a number of statements (from 1 = 'strongly agree' to 5 = 'strongly disagree').

Obtaining small shareholders' views was also essential to the study. Since the online address details of such shareholders were unavailable, the Malta Association of Small Shareholders was contacted and an on-line questionnaire was sent through their intermediation to those members of whom they had on-line details. Fifty-four shareholders, being the majority of such members, responded to this questionnaire. Descriptive statistics were used to summarise the item responses. To determine whether the responses differed across the three groups (MLCs, shareholders and stockbrokers), the Chi-squared test was used with nominal scales while the Kruskal Wallis test was used for ordinal scales.

4. Analysis of results

4.1 Small Shareholders' Participation at the AGM

In evaluating small shareholder participation in Malta, it was first essential to obtain an understanding of the shareholding structure of listed companies. As per Maltese Listing Rules (MFSA, 2014), shareholders in such companies are allowed to raise resolutions at the AGM when having a minimum of 5% of the company's issued share capital. An analysis of the shareholding structure of the listed companies interviewed showed that, on average, 72.41% of the companies' issued share capital was held by shareholders holding more than 5% of the issued share capital.

While not all shareholders may table resolution at the AGM, they have the right to ask questions. When the 17 Maltese listed company representatives (MLCs) were asked about the level of shareholder participation, 64.7% claimed that it was quite low. Furthermore, 23.5% added that shareholders tend to feel more comfortable approaching the Board informally before, during and after the AGM rather than raising questions at the formal meeting.

As for the shareholders (N = 54), only 37.0% reported that they were active at least to some extent. Most shareholders (57.4%) also indicated that they did not feel comfortable asking questions at the AGM, the majority of these (51.6%) preferring to ask questions before/after the meeting, with the remaining respondents feeling uncomfortable to ask any questions.

The three respondent groups were provided with two statements that, as revealed by the literature, show the reality of AGMs. These two statements were: (i) 'AGMs are truly an occasion where small shareholders exercise their rights'; and (ii) 'Large shareholders tend to have more motives to participate in AGMs as they are more able to influence the voting turnout'. With regards to the first statement, the Kruskal Wallis test revealed that the three groups varied significantly with respect to mean ranks ($p = 0.03$); MLCs agreed to the statement (Median (Md) = 4), while small shareholders and stockbrokers were undecided (Md = 3). However, with respect to the second statement, there was no significant difference in mean ranks ($p = 0.46$); all groups agreed (Md = 4) that large shareholders tend to have more motives to participate as they can have a greater influence on the voting turnout.

Shareholder participation in the AGM will now be assessed in more detail in the next four sections: small shareholder attendance, their voting, their proposals and how to improve their participation. The analysis will then delve into the significance of the AGM to the corporate governance of listed companies.

4.2 Small Shareholder Attendance at the AGM

The number of shareholders eligible to attend the most recent AGM and the actual attendance figures were obtained for each listed company were obtained from the 17 MLC's. The attendance of the shareholders was found poor: 13 companies had an average attendance below 20%, with two between 20-40%, and only the remaining two beyond 80%.

The shareholders were asked to indicate and justify their attendance levels at AGMs during the last five years. Results showed that the majority of the 54 respondents (38.9%) indicated that they had attended from four to six AGMs. Most respondents (94.4%) also stated that when attending they had done so to get informed about their company's performance and to exercise their voting rights. A few (13.0%) had not attended AGMs at all because they were unable to influence the voting result.

The important determinants of shareholders' attendance that emerged among all 76 respondents were 'current financial performance' (Md = 4) and 'refreshments served' (Md = 4). The agenda, venue and duration of the AGM were neither important nor unimportant (Md = 3). Kruskal Wallis tests revealed that only 'agenda of the meeting' differed significantly in mean ranks across groups ($p = 0.05$), with

brokers seeing this factor as important (Md = 4) and shareholders and MLC's as neither important nor unimportant (Md = 3).

4.3 Small Shareholder Voting

4.3.1 Voting Rights emanating from local laws and EU directives

Each and every shareholder has various rights emanating from the regulatory framework. The three independent respondent groups were asked to rate the strength of such shareholders' rights. The level of agreement differed considerably across mean ranks ($p < 0.01$), whereby companies rated shareholders' rights as strong (Md = 4), while small shareholders and stockbrokers considered rights to be rather weak to moderate (Md = 2). One of the five independent local stockbrokers commented that MLCs tend to adopt a "box-ticking exercise", whereas another claimed that the revision of the existing Shareholder Rights Directive (European Commission, 2014) would continue to improve such rights.

Whether institutional shareholders are privileged and have more power over minority shareholders is debatable. Out of the five stockbrokers interviewed, two agreed that institutional shareholders are more powerful than the minority shareholders because they have a greater say owing to the weighting of their shares. The remaining three stockbrokers stated that institutional and majority shareholders are more privileged because they have access to more information and are in a better position to analyse that information.

Greater shareholder participation may be achieved by encouraging investors to exercise their voting rights. In order to achieve this, two out of five stockbrokers emphasised the importance of increasing education among investors, claiming that "Maltese investors lack investment knowledge". Three stockbrokers agreed that the corporate governance framework should introduce incentives that encourage investors to exercise their voting rights.

4.3.2 Shareholder Voting Method

Voting at Maltese AGMs takes place either by show of hands or by poll. Evidently, the 17 listed companies investigated tend to adopt the show of hands method for most of the resolutions (58.8%) rather than the poll because it is easier and less costly.

When the MLCs were asked to give their opinion on the level of transparency of the two methods, over half of them (52.9%) stated that voting by poll is more transparent because it accurately provides the exact number of shareholder votes. They added that when voting takes place by show of hands, the votes of the investors could still not be easily determined and their respective amounts of shares are also disregarded. However, some other MLCs (17.6%) stated that the show of hands is more transparent because resolutions are approved visibly and publicly. The rest of MLCs (29.4%) claimed that both voting methods may be regarded as transparent.

Given that MLCs indicated that voting by show of hands is a common voting method by most listed companies, small shareholders were asked to indicate their preferred voting method. Interestingly, the majority of the 54 small shareholders indicated that they prefer to vote by ballot for resolutions (57.4%). Others indicated that they favour show of hands (24.1%) or they have no preference for any particular voting method (18.5%).

4.4 Proposals from Small Shareholders

Shareholder participation can be analysed further from the aspect of the proposals put forward by shareholders. Most of the 17 MLCs (88.2%) found it difficult to recall any shareholder proposals made, this being indicative of the lack of shareholder participation. Nearly all MLCs (94.1%) stated

that their companies mostly receive enquiries rather than proposals. Most (88.2%) commented that shareholders are interested in dividends or offers given by the company.

For certain MLCs (29.4%), an appreciable number of proposals emanate from substantial and majority shareholders, often also forming part of the Board, rather than small ones. According to the majority of MLCs (58.8%), proposals made by such majority shareholders are always discussed at Board level and implemented. However, most MLC's (58.8%) also claimed that once any proposal is received from minority shareholders, it is invariably evaluated by management and, if deemed "valid", it is forwarded to the Board for further consideration. Yet, only one of the 17 MLCs stated that the Board had referred such proposals by small shareholders to the AGM, and this over the preceding five years' period. Furthermore, no such referred proposal originating from small shareholders had in fact resulted in acceptance at the AGM. Notwithstanding this, the MLC noted that such proposals had resulted in the company holding further discussions with the representatives of the small shareholders in question in an effort to take the proposals on board in managing the company.

On their part, all five stockbrokers also confirmed that, notwithstanding the fact that shareholders' proposals may not be approved and thus not influence the outcome of the AGM, they might still have an impact on future decisions. However, they added that the reluctance of small shareholders to put forward such proposals could be due to the fact that they did not wish to be or to be seen to be "frivolous". Most of the stockbrokers (60.0%) pointed out that the major determinant of such proposals was the level of investor education in financial matters. They emphasised that, in fact, at present small shareholders are not adequately equipped to support or otherwise the Board in its decision making. In their view, the participation of small shareholders is still primarily held back by the latter's common lack of financial knowledge. One of the stockbrokers even highlighted the free-rider problem, whereby individual small shareholders do not bother to know more, and simply decide to rely rather on the initiatives of a few other investors for any proposals to be made.

Both MLCs and stockbrokers were also asked whether proposals from small shareholders can be considered as weak owing to the lack of influence that such shareholders can exert on management. Only 3 out of 17 MLCs (17.6%) agreed that shareholder proposals are weak because of this. In contrast, three out of five (60.0%) of stockbrokers agreed that, besides the question of influence of the lack of financial knowledge referred to earlier, small shareholder proposals are also weak because of their minimal or no influence which they could exert on management. Yet, the two stockbrokers in disagreement stated that the weaknesses in shareholder proposals were little related to the influence which shareholders could exert.

4.5 Improving Participation

As for matters that may improve shareholder participation, the majority of the 17 MLCs (64.7%) agreed that an e-voting system would facilitate the counting process. However, they were concerned about the ability of shareholders to use electronic systems. The rest of the MLCs stated that they did not feel it necessary to adopt an e-voting system.

A similar question asked stockbrokers to give their opinion about the adequacy of the voting system currently adopted by MLCs. All five stockbrokers stated that the voting system was adequate. However, most (80.0%) added that the voting system could be improved by technology as this renders the system less costly and also leads to more precise results than the show of hands.

When asked about the adequacy of the voting process for approval of resolutions, MLCs agreed more strongly than brokers and shareholders ($p < 0.01$). Yet, when respondents were required to rate whether technology can aid in the voting process at AGMs to improve transparency, all three groups agreed ($Md = 4$) and the difference across groups was not statistically significant ($p = 0.66$).

Despite such consensus, both stockbrokers and MLCs agreed more strongly than shareholders that a virtual meeting is not a full substitute for a physical meeting ($p = 0.04$).

4.6 The Significance of the AGM in the Corporate Governance of MLCs

The AGM is a tool reflecting good corporate governance and thus, transparency and accountability. MLCs, stockbrokers and shareholders indicated the extent to which these two principles are reflected at AGMs. As for transparency, MLCs reported this to a higher extent (Md = 5) than stockbrokers and shareholders (Md = 3), and this difference was statistically significant ($p < 0.01$). As for accountability, again MLCs reported this to a higher extent (Md = 5) than stockbrokers (Md = 4) and shareholders (Md = 3), and this difference was statistically significant ($p < 0.01$).

Two stockbrokers raised several comments about the importance of the AGM in providing information and regular updates to shareholders, particularly in view of the separation of control that exists between management and shareholders. A broker claimed that “a strong forum addresses information asymmetry”. Similarly, one stockbroker commented that the presentation of information at the AGM as well as disclosures should be clear and useful to shareholders in making their investment decisions.

When asked whether directors are accountable to shareholders at the AGM, stockbrokers disagreed that the AGM is effective with respect to such accountability (Md = 2). One broker commented that the Chairman of a few of listed companies in Malta is as yet also the CEO, with a duality that in practice “runs the show”. He further argued that directors are less likely to be accountable to shareholders given that normally they do not even address shareholders at the AGM.

Stockbrokers and MLCs strongly agreed (Md = 5) that the AGM allows shareholders sufficient time to ask questions to the Board, while shareholders agreed to a lower extent (Md = 4), with this difference reaching statistical significance ($p < 0.01$). As regards to the statements presented to respondents that (i) the AGM provides information to shareholders on the company’s operation and (ii) generates a discussion between directors and shareholders, stockbrokers and MLCs strongly agreed (Md = 5) while shareholders agreed (Md = 4), with the Kruskal Wallis tests reaching statistical significance at $p < 0.01$.

MLCs and small shareholders were also asked whether the main purposes of the AGM are being attained in Maltese AGMs. A significantly higher proportion ($p < 0.01$ using exact test, since some cells had expected counts less than 5) of MLCs (76.5%) and stock brokers (80.0%) than shareholders (22.2%) stated that these purposes are being attained, this again pointing to the relatively more positive attitude towards the AGM being taken by MLCs as in contrast to the small shareholders.

5. Discussion

Given the weak participation of small shareholders in the AGM, two moot points emerge: firstly, what makes it so weak and secondly, given such weakness, whether the meeting is an adequate reflection of good corporate governance.

5.1 Participation by Small Shareholders – What makes it weak?

Results showed that the majority of small shareholders did not consider themselves as active participants in the AGM. Research findings identified various factors contributing to weak small shareholder participation.

5.1.1 Poor attendance

Results showed that the attendance of shareholders at AGMs of the interviewed MLCs was poor when compared with the total number of shareholders in their respective listed companies. This was also

apparent in international AGMs as research by Stratling (2003) and Hodges et al.(2004) also showed poor attendance at the AGM. Results revealed that small shareholders were passive investors who felt demotivated to attend AGMs owing to their inability to influence the voting turnout.

In conformity with the view of Apostolides and Boden (2005) and Kathurima (2011), research findings showed that prominent agenda issues as well as the company's performance tend to be the factors that mostly motivate shareholders to attend. Results also indicated that refreshments offered by companies could have a significant impact on shareholders' attendance at AGMs. The provision of refreshments seems to be highly valued by small investors, for whom such events serve as an outing. Findings showed that small shareholders regard these as an informal setting in which to ask and discuss questions with the directors – questions which they lack the confidence to place in the formal meeting.

5.1.2 A box-ticking exercise

In contrast to MLCs responses, stockbrokers and small shareholders regarded shareholder's rights to be rather weak. Results have shown that small shareholders prefer to vote by ballot as they feel uncomfortable showing hands, especially where they are investors in more than one company and directors may be up for election in different companies. Much of this may be attributable to the fact that, in the context of a small country, shareholders and directors are more likely to know each other.

Results have also shown that small shareholders were reluctant to ask questions during the AGM and therefore, when attending the AGM they would only participate by ticking the boxes on the ballot. Like all other shareholders, small shareholders have the right to vote and ask questions at the AGM. However, brokers acknowledged that institutional and majority shareholders have access to more information than small shareholders, giving them better ability to raise queries and analyse information. This leads one to question whether the rights of small shareholders are in fact strong enough to address their participation passivity at AGMs. Both stockbrokers and small shareholders argued that shareholders' rights could be improved in this regard. The new European-wide directive (European Commission, 2007) which addresses the key principles of accountability and transparency, is another milestone in shareholders' rights. As proclaimed by ACCA (2015, p.5), "Recent global developments in corporate governance include a new focus on the implementation and the quality of response rather than simple 'box ticking'".

5.1.3 Rare and weak proposals hampered by a lack of financial knowledge

Proposals forwarded by shareholders at the AGM are both rare and weak, and there may be a number of factors contributing to this. One clearly emerging factor is the poor financial background of small investors rendering them unaware of the risks which they are exposed to and hardly capable of making informed financial decisions, even hindering them to the extent that they do not understand the AGM agenda. The strong indications, particularly as given by stockbrokers, are that this directly contributes to shareholders being less likely to put forward AGM proposals and also to the probability that even when they do so, these are in fact not taken seriously. For shareholder proposals to make any impact, they commonly have to be backed by sound financial knowledge. More education to this effect is therefore imperative if one is to have valid and increased shareholder proposals. As perceived to date, it is as yet justifiable to consider proposals as a weak disciplinary mechanism, as claimed by Bebchuk (2006). Yet, while there are diverging views on the power of such proposals, for the small shareholder these clearly have the potential of being a main participation ingredient facilitating a better balance among the corporate players.

MLCs do currently endeavour to increase investors' financial skills through a few investor education programmes and conferences held jointly with the Malta Association of Small Shareholders. Additionally, media and stockbrokers do provide educational investment material on their website.

Yet, evidently, more needs to be done with the specific aim to overcome shareholder apathy towards reading and learning such skills. Furthermore, for the longer term, new investor generations may be introduced earlier to the fundamental aspects of finance and stock market dynamics. As ultimate aim, the necessary background is to be provided, rendering it more difficult for small shareholders to have their resolutions by-passed, as such, proposals will then have the real potential of sending significant messages to their company, even if not approved at the AGM itself. After all, it is in the interest of the company itself that the small shareholders do not continue to rely on institutional investors or a few active retail shareholders to speak up and try to bring change on their behalf.

Of course, the lower the level of investor knowledge, the greater the need for the MLCs also to ensure that general communication with them is clear and effective. Therefore, on their part, directors and others in contact with investors are also to ensure that their communication skills are sharp and may themselves have to undergo regular training, including induction courses and professional development programmes.

5.2 The AGM: Enough for Good Corporate Governance?

5.2.1 A Forum for Director/Shareholder Interaction?

In light of the weak participation by small shareholders at the AGM, one asks whether the functions of the AGM as defined by Startling (2003) are being applied for the sake of good corporate governance, particularly in supporting a forum for discussion between directors and shareholders both about past performance and future business prospects.

Directors are to hold themselves accountable to shareholders, and this is hardly, if at all, possible without shareholder participation and involvement. Accountability cannot be served merely with the CEO or Chairman's speech, and the rest of the directors being uninvolved and silent for most of the meeting. As this seems to be commonly occurring, the inference is that AGMs are stage-managed and not serving as a platform for shareholders to exercise their ownership rights, including that of deriving from the directors the appropriate information concerning their stewardship. For this climate to be dispelled, time is to be allowed not only for genuine questions but also for the transmission of all needed information, such as the profile of all candidates, old and new, presenting themselves for director election. As for the transfer of information on the company's financial performance, it is important that the information provided during the AGM is not too technical for investors to understand. Such transmission has to be clear, simple and concise and, insofar as is possible, complete. This would help to transform the AGM from mostly being, as at present, a set of procedures for having management-backed resolutions rubber-stamped, focusing on the fulfilment of the financial reporting legal requirements to one with meaningful and potentially far-reaching interactive discussions. Such transformation is a sine qua non if the small shareholders' interest to attend and participate in the AGM is to be rekindled and for the AGM to become a more significant reflection of corporate governance than at present.

5.2.2 Exploiting Technology – A Way Forward?

The study points to a general need to exploit technology further to improve the AGM. This includes the use of electronic voting as long as shareholders are adept at using the new systems. In addition, more webcasting of the AGMs would permit those shareholders unable to attend to follow the meeting and thus with the opportunity of being kept informed as well.

Technological devices could be used to increase shareholder engagement in decision-making. Listed companies could invest in an electronic polling system whereby the shareholder can select a simple

'yes' or 'no'. Such a polling system can become a simple and effective means for shareholders to convey their opinion, and for management to take more account of shareholders' opinions. This again brings to the fore the importance of shareholder education in bringing about change.

6. Conclusion

In summary, this study indicates that the level of small shareholder participation at AGMs of listed companies is low, with poor shareholder attendance being a major factor leading to this. Yet, even when attending, small shareholders do not feel confident in raising questions or bringing forth proposals during the AGM, and this is mainly due to limited meaningful information being transmitted to them, this being commonly aggravated by their lack of financial knowledge. The resulting inability of the AGM to create an effective forum for discussion between directors and shareholders casts serious doubt on whether the AGM actually reflects good corporate governance, as it does not keep in balance the interests of the small shareholder with those of the other stakeholders, including themselves, management and major shareholders.

For the sake of better direction and control, and, in particular, for more transparency and accountability, the study recommends that directors strive more towards ensuring that AGMs are not stage-managed, going beyond the simple routines of gathering votes and formal approval of resolutions towards serious interaction between themselves, management and all shareholders, possibly involving the better use of technology. On their part, in order to effect fruitfully such interaction, small shareholders have to combat their passivity and attain a stronger sense of ownership in their company. For most of them, a main way towards effecting this is to stop relying on institutional or main shareholders to speak up and bring change. As a pre-requisite for this, they need to commit themselves towards acquiring the minimum level of financial knowledge. For this purpose, the study recommends that they participate much more in educational activities, particularly, though not only, those that may be tailor-made for them by company management.

The study has its limitations. In their response to what occurs at the AGM, MLCs may have been somewhat influenced by what their company expects to be occurring. Furthermore, the proportion of small shareholders responding to the questionnaire was relatively low, being largely limited by on-line accessibility. Following this study, further research may therefore attempt to place added focus on the perspectives of small shareholders themselves, such as by securing direct listed company support, such as listed company authorisations to attend the various AGMs and thus establishing face-to-face contact with such shareholders.

To conclude, Baldacchino et al. (in press) envisage the creation of powerful means to align all corporate stakeholders towards a major common goal – that of improving the corporate governance performance of the company. Clearly, enabling a more meaningful participation for the small shareholder in the AGM should be an important preliminary step in the process of achieving such stakeholder alignment towards corporate governance improvement.

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Short term announcement returns to the bidder**

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ABSTRACT

In this paper we investigate the short term abnormal return to the bidding firm's shareholders in takeover transactions in Finland during the time period from January 2000 to December 2013. Specific features of the market for corporate acquisitions in Finland are that almost all of the transactions are friendly acquisitions and usually aim for 100 % of the target company. We estimate the abnormal return around 314 individual takeover announcements and investigate determinants of the abnormal returns. Our results show that the takeover announcement on average yields a positive abnormal return to the bidding firm's shareholders, thus, support the value creating hypothesis. The announcement effect on the announcement day is 1.4 % and statistically significant. Both pre-event and post-event abnormal returns are statistically insignificant, although there is sign of a negative revaluation in the post-event period. Among the takeover characteristics, we document a significant impact on the bidder's abnormal return on the announcement day for small deals yielding a higher abnormal return, but a positive relationship between the announcement effect and the relative size of the deal, cross-border deals giving a smaller abnormal return, and indication of diversification deals giving a higher abnormal return to the bidder's shareholders.

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1. INTRODUCTION

Corporate acquisition is a fast way for a company to grow compared to organic growth. Most bidding companies motivate this way to grow by the potential synergies that the acquisition creates, hence, one should expect the acquisition not only to create growth but also to create value for the acquiring firm's shareholders. However, empirical evidence from the takeover market report that bidding firm's shareholders mostly earn small and insignificant returns, while target firm's shareholders earn large and significant returns in takeover transactions.¹ The returns are heavily skewed in favor of the target firm also after adjusting for differences in firm size. Bradley, Desai and Kim (1988) reported a 90/10 split of the

¹ For an overview of the wealth effects of takeover transactions, see, e.g., Jensen and Ruback (1983), Jarrell, Brickley and Netter (1988), Agrawal and Jaffe (2000), Bruner (2004), and Martynova and Renneboog (2008).

value-weighted takeover gain in their US sample, while Högfeldt and Högholm (2000) observed a similar distribution in a sample of Swedish takeovers.

Several hypotheses have emerged trying to explain these empirical findings. Some suggest that takeovers do create value, but that the target firm's shareholders for some reason obtain a larger share of the gain. Grossman and Hart's (1980) free riding problem is one explanation. In the extreme case the free riding hypothesis suggests that target shareholders capture the entire gain. Alternatively, e.g., competition among bidders (Fishman (1980)), takeover defense measures (Harris (1990)), or target ownership structure (Högfeldt and Högholm (2000)) may also explain the skewed distribution in favor of the target firm's shareholders.

Another line of thought suggests that takeovers do not create any additional value, but is more of a redistribution of wealth from shareholders in the bidding firm to shareholders in the target firm. Hence, takeovers occur because of management incentives or mistakes, i.e., takeovers occur because management of bidding firms wishes to grow (e.g., Morck, Shleifer and Vishny (1990)), or they overestimate the value of the target firm (e.g., Roll (1986)). Alternatively, the management of the bidding firm takes advantage of a temporary misvaluation of the firm, hence, taking advantage of a window of opportunity to make an acquisition (e.g., Jensen (2004)).

The purpose of this study is to investigate the short-term abnormal return to the bidding firm's shareholders in takeover transactions made by Finnish stock market listed companies during the time period from January 2000 to December 2013. To our knowledge there are very few studies looking at the Finnish takeover market, and none looking at the market during the last 15 years. Specific features of the market for corporate acquisitions in Finland are that almost all of the transactions are friendly acquisitions and usually aim for 100 % of the target company. We estimate the abnormal return around 314 individual takeover announcements and investigate determinants of the abnormal returns. Our results show that the takeover announcement on average yields a positive abnormal return to the bidding firm's shareholders, thus, support the value creating hypothesis. The announcement effect on the announcement day is 1.4 % and statistically significant. Both pre-event and post-event abnormal returns are statistically insignificant, although there is sign of a negative revaluation in the post-event period. Among the takeover characteristics, we document a significant impact on the bidder's abnormal return on the announcement day for *small deals* yielding a higher abnormal return, but a positive relationship between the announcement effect and the relative size

of the deal, *cross-border deals* giving a smaller abnormal return, and an indication of *diversification deals* giving a higher abnormal return to the bidder's shareholders.

The remainder of the paper is organized as follows. Section 2 summarizes the literature review on the motivations for takeovers and the determinants of the share price reaction to the takeover announcement. Section 3 describes the methodology and the data, while the empirical results are presented in Section 4. Section 5 concludes the study.

2. MOTIVES FOR TAKEOVERS

Three major takeover motives have been advanced in the literature implying gains for both the bidder and the target, or negative return to the bidder. These are the synergy motive, the agency motive and the hubris hypothesis.

The *synergy motive* assumes that managers maximize shareholders' wealth and would engage in takeover activities only if it results in gains to the shareholders. Among the synergy motives, the first set of motives is consistent with the assumption that additional value is created by takeovers. The second set of motives cast doubt on whether any additional value is created by takeovers, or if the resulting gains to shareholders' is at the expense of other stakeholders (e.g., employees, customers, suppliers, tax payers).

According to the inefficient management motive, more efficient firms will acquire less efficient firms and realize gains by improving their efficiency; this implies excess managerial capabilities in the acquiring firm (e.g., Bradley, Desai and Kim (1988)). The operating synergy motive postulates, e.g., economics of scale and that takeovers help achieve levels of activities at which they can be obtained (e.g., Williamson (1975)). The financial synergy motive hypothesizes complementarities between merging firms, not in managerial capabilities, but in the availability of investment opportunities and internal cash flows. A merged firm will have lower cost of capital due to lower cost of internal funds as well as possible risk reduction, savings in flotation costs, and improvements in capital allocation (e.g., Levy and Sarnat (1970), Galai and Masulis (1976), Prescott and Visscher (1980)).

The theory of strategic alignment to changing environments motivates takeovers to take place as a response to environmental changes. External acquisitions of needed capabilities allow firms to adapt more quickly to changes, than by developing capabilities internally (e.g., Summer (1980)). The undervaluation theory states that takeovers occur when the market value of the target firm for some reason does not reflect its true or potential value, or its value in the hands of an alternative management. Firms can acquire assets for

expansion more cheaply by buying the stock of existing firms than by buying or building the assets, when the target's stock price is below the replacement cost of its assets (e.g., Chappell and Cheng (1984)). In line with the undervaluation hypothesis, the information or signaling theory attempts to explain why target shares seem to be permanently revalued upward in a takeover whether or not it is successful. The information hypothesis states that the takeover sends a signal to the market that the target shares are undervalued, or alternatively, the offer signals information to target management which inspires them to implement a more efficient strategy on their own (e.g., Dodd and Ruback (1977), Bradley, Desai and Kim (1988)).

All of the above presented motives suggest that additional value is created in takeovers. The remaining three motives argue that the gains accruing to target and bidder shareholders are merely wealth redistribution from other stakeholders in the respective firms. The market power hypothesis states that shareholder's wealth increases at the expense of customers (or suppliers), due to increased concentration leading to collusion and monopoly effects (e.g., Eckbo (1992)). Redistribution of wealth is also the case if takeovers are motivated by tax considerations. In this case, shareholders gain at the expense of tax payers (e.g., Auerbach and Reishaus (1987)). Finally, according to the redistribution hypothesis, shareholders' gain can also accrue from bondholders due to unexpectedly increased leverage (e.g., Dennis and McConnell (1986)), or from employees, who are deprived of their benefits (e.g., Shleifer and Summers (1988)).

According to the synergy motives, there should always be a positive gain in takeovers for all shareholders, stemming from efficiency improvements or from other stakeholders. Therefore, it follows that the measured gain to both target and bidder shareholders is expected to be positive. The division of the gain between target firm and acquiring firm shareholders may, though, not be equally distributed, but may be skewed in favor of the target due to a number of reasons. Grossman and Hart (1980) argue that due to potential free riding by the target firm's atomistic shareholders, the smallest tender offer price the shareholders will accept is the full improvement value after a successful takeover by the bidder. Hence, the extreme case of the free riding problem suggests that the target captures the entire gain, and consequently, there is no incentive to make takeover bids at all. Fishman (1988), among others, offers bidder competition as one reason for a larger target share of the takeover gain. On the other hand, Harris (1990) argues that takeover defense measures, taken by the target firm's management, force the bidder to pay out a large share of the gain to target shareholders. Another reason for a larger target share of the gain is an upward-sloping supply curve as a result of heterogeneity in beliefs and differences in tax status, as suggested by, e.g., Stulz, Walking and Song (1990). Finally, one line of thought suggests that if the target has some bargaining power, mainly

because it can resist the bidder, target shareholders may be able to extract a larger fraction of the takeover gain in an explicit or implicit negotiation with the bidder (e.g., Israel (1992), Högfeldt and Högholm (2000)).

According to the *agency theory* (Jensen and Meckling (1976), Jensen (1986)) it has been suggested that some takeovers are primarily motivated by the self-interest of the acquirer management. Several reasons have been advanced to explain this divergence. Among them are diversification of management's personal portfolio (Amihud and Lev (1981), use of free cash flow to increase the size of the firm (Jensen (1986)), and acquiring assets that increase the firm's dependence on the management ((Shleifer and Vishny (1989)). The basic idea in most of these explanations is that acquisitions result in an extraction of value from the acquirer shareholders by acquirer management.

The important aspect of the above argument is that the target firm has been identified by the acquirer management as one that is most suited to increase its own welfare. Therefore, target shareholders, realizing their value to the acquirer management, will attempt to obtain some of this value. To the extent that target shareholders have some bargaining power, they will succeed in doing so, and the value they obtain will increase with the amount that the acquirer management can appropriate. Therefore, the more severe the agency problem, the higher is the target's gain. Since greater appropriation by acquirer management also results in lower (or a negative) total gain, the observed gain to acquirer shareholder's should be small (compared to target shareholder's gain) or negative.

Roll (1986) hypothesizes that managers commit errors of over optimism in evaluating takeover opportunities due to excessive *pride or hubris*. Hence, the takeover premium is a random error, a mistake by the bidder. The hubris hypothesis assumes market efficiency. Stock prices reflect all information; redeployment of productive resources cannot bring gains, and management cannot be improved through reshuffling or combinations across firms. Roll (1986) claims that the hubris hypothesis thus serves as a benchmark for comparison and is the null hypothesis against which other hypotheses should be compared. Further, the hypothesis does not require conscious pursuit of self-interest by managers. Managers may have good intentions, but can make mistakes in judgment.

Since the takeover gain, according to the hubris hypothesis, is presumed to be close to zero, the payment to target shareholders represents a transfer between the target and the acquirer. It follows that the higher the

target gain, the lower the bidder gain, and that the total gain is close to zero (e.g., Berkovitch and Narayanan (1993), Malmendier and Tate (2005)).

2.1. The effect of deal characteristics on bidder gains

All of the above presented motives suggest that target shareholders experience a gain in takeovers. On the basis of the presented motives, however, the effect for the acquirer firm's shareholders is not clear. This is also evident in the presented empirical results across different stock markets, where some find positive, some negative and some insignificant bidder returns. The takeover literature has also shown that the characteristics of the deal will affect takeover returns, and, hence, the gain to the shareholders.²

The *size of the target* company may affect the bidder's gain. The larger the target company, the larger a potential synergy gain to be split among the parties. However, the larger the target company, the better its negotiation power, and the more difficult the post-integration process. The empirical evidence regarding the relationship is mixed. Kane (2000) and Moeller, Schlingemann and Stulz (2004) argue that large transactions result in value creation for the shareholders. On the other hand, Bradley and Sundaram (2004) show that the announcement effect is more negative with increased target size. As argued by Hansen (1987), a possible revaluation loss will be larger for the bidder the larger the target company. Al-Sharkas (2003) and Travlos (1987) show a negative correlation between bidder abnormal return and relative size. Likewise, Tang (2015) show that acquisitions of small targets generate a larger gain than a combination of similar sized firms. On the other hand, e.g., Asquith, Bruner and Mullins (1983), show that the bidder's gain increases with the relative size of the target company to the bidder. In this paper we measure the size of the target with the value of the transaction. The relative size is defined as the transaction value to the book value of the bidder prior to the announcement (according to the last quarterly report preceding the announcement).

Cross-border takeovers may open up an opportunity for the bidder to exploit market imperfections and to expand their business into new, international markets (e.g., Moeller and Schlingemann (2005)). Since these effects are unavailable in domestic takeovers, one may expect a higher wealth effect in cross-border deals. Martynova and Renneboog (2008b) argue that takeover gains may be caused by improvements in

² For an overview of the empirical evidence, see, e.g., Jensen and Ruback (1983), Agrawal and Jaffe (2000), Bruner (2004), Martynova and Renneboog (2008a).

governance of the bidder and the target firm. However, if there are large institutional differences in the bidder's and the target's countries, there may also be difficulties in the post-takeover process to utilize the perceived synergies. If the market anticipates such difficulties it may discount the expected gain. Conn, Cosh, Geust and Hughes (2005) and Moeller and Schlingemann (2005) present evidence consistent with this hypothesis. Mixed results are documented with respect to cross-border acquisitions. However, we expect to find a more positive announcement effect to a cross-border deal. Moeller and Schlingemann (2005) also find a larger positive bidder return if the target is originated in a country with a legal environment offering good shareholder protection. Hence, we also expect a larger positive bidder return for transactions where the target firm is from the US or the UK.

Conglomerate takeovers (diversification) may create operational and financial synergies, which may lower the financial risk, and, hence, the probability that the company goes bankrupt. This may also lower the cost of debt for the company (Agrawal, Jaffe and Mandelker (1992)). Diversification is also associated with a number of disadvantages stemming from the agency problem between managers and shareholders (e.g., Doukas, Holmen and Travos (2002), Schafstein and Stein (2000)), which may lead to lower takeover returns to bidders engaging in conglomerate takeovers. Mixed results have been documented for the value creation to the bidder's shareholders in conglomerate acquisitions. We expect, however, a more positive announcement response to a focused takeover compared to an announcement of a conglomerate takeover.

The *legal status* of the target company may also affect the takeover gain. A takeover involving a privately held target company may result in a higher return to the bidder's shareholders than a corresponding transaction involving a publicly traded target company (e.g., Moeller, Schlingemann and Stulz (2004), Faccio, McConnell and Stolin (2006)). One reason can be a required illiquidity premium, another that the bidder may have a better negotiation power buying a private company compared to launching a public tender offer. The probability of the bid to succeed is also higher in a private transaction. However, buying a private firm can also be considered being more risky, since there is less information available about the target firm. We expect a more positive announcement effect in a takeover transaction involving a privately held target company.

Martynova and Renneboog (2009) suggest that the *method of payment* may affect the short term market reaction to a takeover announcement. All cash bids are expected to generate a higher return to the shareholders than all-equity bids. The explanation is that asymmetric information implies that the bidder uses shares as a mean of payment when the share is overvalued, and uses cash when it is undervalued

(Myers and Majluf (1984)). Several studies have confirmed that the market reaction to announcements of equity offerings is significantly negative (e.g., Moeller, Schlingemann and Stulz (2004), Moeller and Schlingemann (2005), Martynova and Renneboog (2011)). In line with previous studies we expect a more positive announcement effect when the bid is an all-cash offering.

Partial acquisitions (acquisition of less than 100 percent of the target equity) may lead to a higher announcement day return to the bidder than acquisitions aiming for full control. The bidder may use partial acquisitions as an instrument to transfer wealth from the target's minority shareholders to themselves by, e.g., using pyramid control chains (La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002)). This value extraction is expected to occur more frequently in countries where the minority shareholders are less protected.³

3. METHODOLOGY AND DATA

We study the short-term announcement effect to the bidder's shareholders and investigate several factors that may affect the stock market reaction to the takeover announcement. We measure the announcement effect as the sum of the daily average abnormal returns⁴ (CAAR) over different windows around the announcement day⁵, with a total event window of 41 days, 20 days prior to and 20 days after the event day. We also study alternative event windows before and after the announcement day to capture any effect of a price run-up before the event, or a possible value readjustment after the announcement day. The daily abnormal return (AR) is calculated as the difference between the actual return and the expected return. The expected return is calculated using the market adjusted model, the market model, and the market model with adjusted beta (the estimated beta adjusted for mean reversion (Blume (1979))). We use the value-

³ Other proposed takeover characteristics that may affect the short-term value creation to the bidder are, e.g., *value vs. growth* (Lakonishok, Shleifer and Vishny (1994), Sudarsanam and Mahate (2003)); *friendly vs. hostile* (Goergen and Renneboog (2004)); *tender offers vs. mergers* (Rau and Vermaelen (1998)); *target ownership structure* (Högfeldt and Högholm (2000), Martynova and Renneboog (2008a)); *bidder toehold* (Stulz, Walking and Song (1990), Hamza (2011)); *investor protection* (La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002), Goergen, Martynova and Renneboog (2005), Martynova and Renneboog (2008b)); *partial acquisitions* (La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002)); *takeover waves* (Martynova and Renneboog (2011)).

⁴ The returns are continuously compounded returns.

⁵ The event day (announcement day) is defined as the day when the information of the takeover was announced for the first time (or the day after if the announcement occurred after the closing of the trading day or on a non-trading day).

weighted OMX Helsinki cap⁶ as a proxy for the market portfolio. To estimate the parameters in the market model we use a window of 241 days, starting 300 days and ending 60 days prior to the event day. Our estimates of the abnormal returns are robust with respect to the different choices of the estimation model of the expected returns. Changing the estimation model does not materially change the results, hence, in the remainder of the paper we only report the results using the market model in estimating the expected returns.

To further study the market reaction to the takeover announcement, we regress the bidder's short term abnormal return on several explanatory factors with respect to the characteristics of the acquisition. The key characteristics we use are the size and the relative size of the transaction, the origin of the target company, the legal status of the target company, the strategic scope of the transaction (focus or diversification), and the mean of payments.

We study a sample of takeovers made by Finnish stock market listed companies during the time period from January 2000 to December 2013. The information about the acquisition is collected from the Thomson ONE Banker Database and corresponding stock exchange releases. There are a total of 1703 acquisitions during the time period where the bidder is publicly traded. We further restrict the sample to acquisitions where the bidder acquire a majority stake in the target (more than 50% ownership), leaving us with 1108 observations. We also eliminate transactions that may be considered too small to yield an observable stock market reaction to the announcement. We set the transaction value limit to 10 million USD, leaving us with a final sample of 314 transactions.

We collect information about the characteristics of the acquisition from the Thomson ONE Banker database, from stock exchange releases and from companies' homepages. In several acquisitions, when the target firm is privately held, there is a lack of reliable information mostly regarding the term of payments. Some bidders disclose all the details about the bid, but since this is not mandatory for small transactions of privately held targets, there are bidders that do not disclose all details regarding the characteristics of the bid.

Table 1 presents the total sample of 314 takeovers by deal characteristics over the time period January, 2000 – December 2013. The takeover activity was largest in year 2000 (49 transactions) and in the years

⁶ We use the restricted version of the market index (OMXHelsinki cap) which restricts the weight of any individual company to a maximum of ten percent in the index. This is due to the large weight of some companies in the unrestricted market index, e.g., the weight of Nokia was about 60 percent in the index in year 2000.

preceding the financial crises (2005-2007). The mean transaction value is 237 million USD (median 50 million USD). Diversification was the dominant takeover strategy for the bidders in our sample. About 63

Table 1 Descriptive statistics of takeovers in Finland.

The table provides information about the characteristics of 314 takeovers with a Finnish acquirer that took place during the time period Jan 2000-Dec 2013. The table provides information about the distribution of takeovers over the sample period, and the distribution of the takeovers partitioned over different characteristics of the acquisition. *Value* is the value of the bid in million USD, *diversification* is when the target operates in a different industry than the bidder according to their industry classification (SIC-code), *public target* is a target company that is publicly traded, *cross-border bid* is a bid where the target company is of foreign origin, deals classified on the *terms of payment* (cash, equity, mixed bids and deals with undisclosed terms), and finally, if the bidder *acquire 100%* of the target or a smaller amount.

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
<i>Total number</i>	49	19	24	14	15	33	36	31	26	13	15	13	16	10	314
% of all	15.61 %	6.05 %	7.64 %	4.46 %	4.78 %	10.51 %	11.46 %	9.87 %	8.28 %	4.14 %	4.78 %	4.14 %	5.10 %	3.18 %	100 %
<i>Value – avg.</i>	317	467	163	63	165	208	122	367	247	260	113	139	262	278	237
<i>Value – max.</i>	4940	3309	1135	186	1735	1482	1191	7954	3188	2404	1128	590	3735	2221	7954
<i>Value – min.</i>	10	10	13	12	11	10	11	10	12	11	13	12	11	13	10
<i>Diversification</i>	29	7	14	8	12	17	28	25	18	7	9	7	12	5	198
% of all	59.18 %	36.84 %	58.33 %	57.14 %	80.00 %	51.52 %	77.78 %	80.65 %	69.23 %	53.85 %	60.00 %	53.85 %	75.00 %	50.00 %	63.06 %
<i>Non-diversification</i>	20	12	10	6	3	16	8	6	8	6	6	6	4	5	116
% of all	40.82 %	63.16 %	41.67 %	42.86 %	20.00 %	48.48 %	22.22 %	19.35 %	30.77 %	46.15 %	40.00 %	46.15 %	25.00 %	50.00 %	36.94 %
<i>Public target</i>	11	4	6	2	1	5	6	7	4	4	0	1	0	0	51
% of all	22.45 %	21.05 %	25.00 %	14.29 %	6.67 %	15.15 %	16.67 %	22.58 %	15.38 %	30.77 %	0.00 %	7.69 %	0.00 %	0.00 %	16.24 %
<i>Non-public target</i>	38	15	18	12	14	28	30	24	22	9	15	12	16	10	263
% of all	77.55 %	78.95 %	75.00 %	85.71 %	93.33 %	84.85 %	83.33 %	77.42 %	84.62 %	69.23 %	100.00 %	92.31 %	100.00 %	100.00 %	83.76 %
<i>Cross-border</i>	31	12	15	8	9	20	20	18	24	7	8	10	11	5	198
% of all	63.27 %	63.16 %	62.50 %	57.14 %	60.00 %	60.61 %	55.56 %	58.06 %	92.31 %	53.85 %	53.33 %	76.92 %	68.75 %	50.00 %	63.06 %
<i>Domestic</i>	18	7	9	6	6	13	16	13	2	6	7	3	5	5	116
% of all	36.73 %	36.84 %	37.50 %	42.86 %	40.00 %	39.39 %	44.44 %	41.94 %	7.69 %	46.15 %	46.67 %	23.08 %	31.25 %	50.00 %	36.94 %

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Cash only	10	4	7	3	2	15	10	11	12	5	4	5	6	1	95
% of all	20.41 %	21.05 %	29.17 %	21.43 %	13.33 %	45.45 %	27.78 %	35.48 %	46.15 %	38.46 %	26.67 %	38.46 %	37.50 %	10.00 %	30.25 %
Stock only	13	5	4	3	2	2	0	1	1	4	1	1	0	1	38
% of all	26.53 %	26.32 %	16.67 %	21.43 %	13.33 %	6.06 %	0.00 %	3.23 %	3.85 %	30.77 %	6.67 %	7.69 %	0.00 %	10.00 %	12.10 %
Combined	5	2	1	0	3	2	5	2	1	1	1	2	2	1	28
% of all	10.20 %	10.53 %	4.17 %	0.00 %	20.00 %	6.06 %	13.89 %	6.45 %	3.85 %	7.69 %	6.67 %	15.38 %	12.50 %	10.00 %	8.92 %
Unknown	21	8	12	8	8	14	21	17	12	3	9	5	8	7	153
% of all	42.86 %	42.11 %	50.00 %	57.14 %	53.33 %	42.42 %	58.33 %	54.84 %	46.15 %	23.08 %	60.00 %	38.46 %	50.00 %	70.00 %	48.73 %
100 % acquired	39	17	18	11	12	29	30	24	21	9	13	11	16	9	259
% of all	79.59 %	89.47 %	75.00 %	78.57 %	80.00 %	87.88 %	83.33 %	77.42 %	80.77 %	69.23 %	86.67 %	84.62 %	100.00 %	90.00 %	82.48 %
<100 % acquired	10	2	6	3	3	4	6	7	5	4	2	2	0	1	55
% of all	20.41 %	10.53 %	25.00 %	21.43 %	20.00 %	12.12 %	16.67 %	22.58 %	19.23 %	30.77 %	13.33 %	15.38 %	0.00 %	10.00 %	17.52 %

percent of the bids were for a target company operating in a different industry than the bidder (according to their industry classification). A large proportion of the bids are for privately held target firms (84 percent). The relative number of cross-border bids is 63 percent, with year 2008 as an extreme year with 24 cross-border bids out of a total of 26 bids during that year. This is consistent with the number of cross-border bids (60 percent) for a sample of 53 Finnish bidders during the time period 1993-2001 (Martynova and Renneboog (2011)). Most of the cross-border transactions are for target companies in Sweden (43 transactions). A total of 38 acquisitions are made in countries with the highest shareholder protection (27 transactions in the US and 11 transactions in the UK). The terms of payment are undisclosed in 153 transactions (almost 49 percent). Of the bids for which the payment method is disclosed, the majority is cash bids (30 percent). Of the remaining bids, 38 are all equity bids (12 percent), while 28 bids (9 percent) are a mix of cash and equity. Only about 18 percent (55 transactions) of the bids were partial bids aiming for less than 100 % ownership.

4. RESULTS

In this section we first present the results from the univariate analysis of the bidder's cumulative average abnormal return (CAAR) in takeover transactions in Finland during the time period from January 2000 to December 2013. Secondly, we analyze the determinants of the abnormal return to the takeover announcement.

Table 2, Panel A shows the descriptive statistics for the abnormal return on the announcement day, the cumulative abnormal return for a seven day event window around the announcement day, and the size related variables used in the analysis. The table shows that the announcement of a takeover bid on average yields a positive abnormal return to the bidder's shareholders on the announcement day ($T = 0$). Using the market model⁷, the average abnormal return (AAR) is about 1.40 percent on the event day. For a longer event windows, seven days centered at the announcement day, the cumulative average abnormal return (CAAR) increases to about 2.14 percent. We also document several extreme cases with both large positive and large negative abnormal returns. The mean transaction value is about 237 million USD (median 50 million), while the relative transaction value (transaction value to the size of the bidder) is about 0.29

⁷ We choose to only report the results using the market model to calculate the abnormal return. Our results are robust to the choice of estimation model of the benchmark returns. The results using the market adjusted model or the market model with adjusted beta are available upon request.

(median 0.06). Table 2, Panel B shows the correlation between the variables. There seems to be a negative relationship between the announcement effect and the transaction value. An opposite relationship is evident between the announcement effect and the relative deal value, measured as the value of the transaction to the value of the bidder prior to the announcement.

Table 2 Descriptive statistics for 314 takeover transactions

Panel A reports the descriptive statistics for 314 takeover transactions during the time period Jan 2000-Dec 2013. The average abnormal return (AAR) and the cumulative average abnormal return (CAAR) for a seven day event window is calculated using the market model to estimate the expected return. The market return is calculated using the value-weighted total return index OMX Helsinki cap. The market model parameters are estimated over a period of 241 days starting 300 days before the announcement. *TV* is the transaction value of the deal in million USD, *Relative TV* is the relative transaction value of the deal to the value of the bidder. Panel B of Table 2 presents the correlation between the variables. Statistical significance is denoted by */**/** (10%/5%/1%).

Panel A: Descriptive statistics

	AAR (%)	CAAR (%)	TV	Relative TV
Mean	1.40	2.14	237.38	0.29
Median	1.00	2.00	50.68	0.06
Min	-19.84	-29.43	10.04	0.00
Max	69.13	50.96	7953.59	14.07
Std dev	6.02	7.47	702.92	1.01

Panel B: Correlation

	AAR	CAAR	LOG(TV)	Relative DV
AAR	1	0.597***	-0.127**	0.591***
CAR		1	-0.100*	0.418***
LOG(TV)			1	0.023
Relative TV				1

Table 3 reports the cumulative abnormal return around the announcement for different event windows ranging from 20 days before to 20 days after the takeover announcement. We document a statistically significant cumulative average abnormal return (CAAR) of about 2 percent for all event windows centered at the announcement day. This result is comparable to the result (CAAR of 2.16 percent for an eleven day event window) reported in Martynova and Renneboog (2011) for a sample of Finnish bidders during the time period 1993-2001.

We do not document any evidence of a price run-up in the pre-event period (20 days to 1 day before the announcement). None of the pre-event windows exhibits a significant CAAR. We do, however, see indications of a delayed market reaction to the announcement with a positive CAAR of 0.57 percent in the

event window one day to three days after the announcement. For the longer post-event windows the CAARs are not statistically significant, although there seems to be some price reversal in the longest event window, mainly from days 14 to 20, as is also evident from Figure 1.

Table 3 Cumulative average abnormal returns (CAARs) for the bidding firms

The table reports cumulative average abnormal returns for the bidding firms in 314 takeover transactions during the time period Jan 2000-Dec 2013 over different event windows. The expected return is calculated using the market model. The market return is calculated using the value-weighted total return index OMX Helsinki cap. Statistical significance is denoted by */**/** (10%/5%/1%).

Event window	Market adjusted model			
	(%)	(p-value)	Max (%)	Min (%)
[-20. +20]	1.973***	0.009	64.54	-45.29
[-10. +10]	2.083***	0.001	66.33	-46.76
[-5. +5]	2.207***	0.000	54.22	-27.74
[-3. +3]	2.140***	0.000	50.96	-29.43
[-1. +1]	1.888***	0.000	67.25	-23.61
[T=0]	1.398***	0.000	69.13	-19.84
[-20. -1]	0.516	0.366	68.79	-32.64
[-10. -1]	0.231	0.574	36.51	-26.03
[-5. -1]	0.306	0.346	39.17	-24.58
[-3. -1]	0.196	0.467	37.13	-25.86
[+1. +20]	0.060	0.909	52.81	-35.32
[+1. +10]	0.453	0.291	21.67	-45.80
[+1. +5]	0.502	0.142	20.65	-34.74
[+1. +3]	0.566**	0.030	15.17	-22.35

Overall, the results show that short term bidder returns are positive and statistically significant. The returns accumulate mostly during a seven day event window centered at the event day, with the majority of the market reaction to the bid occurring at the announcement day. Hence, the announcement is on average a value creating event for the bidder's shareholders, indicating that the main motive for the transaction is to

create value to the shareholders.⁸ This is also evident from Table 4, in which we report the number of announcements that yields a positive and a negative market reaction, respectively. Out of the 314 announcements, 202 had a positive abnormal return on the announcement day. However, we cannot rule out that some of the acquisitions are driven by hubris or agency motives, since 112 announcements yielded a negative abnormal announcement day return.

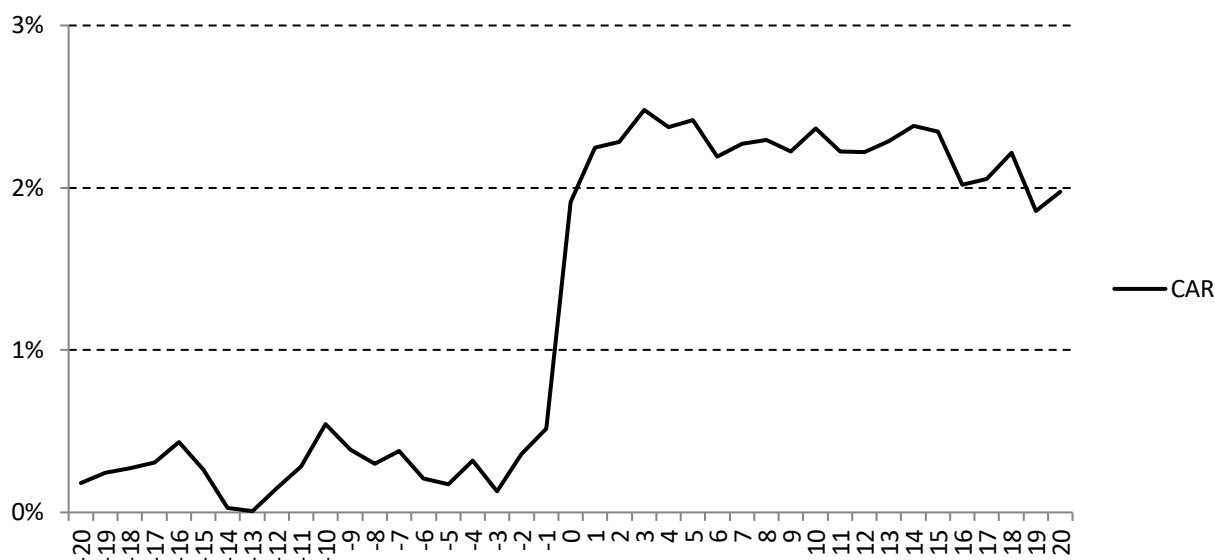


Figure 1 The cumulative abnormal return (CAARs) for the bidding firms. The figure shows the cumulative average abnormal return for the bidding firm in 314 takeover transactions in Finland during the time period Jan 2000-Dec 2013 for an event window of 41 days. The abnormal return is calculated using the market model. The market return is based on the value-weighted total return index OMX Helsinki Cap. The market model parameters are estimated over a period of 241 days starting 300 days before the announcement.

Table 4 Number of positive and negative stock market reactions. The table reports the number of events with positive and negative abnormal returns in 314 takeover transactions in Finland during the time period Jan 2000-Dec 2013. The abnormal returns are calculated using the market model, where the market return is based on the value-weighted total return index OMX Helsinki cap.

	Event day [T=0]		CAR [-3,+3]	
	Number	%	Number	%
Positive	202	64.3	205	65.3

⁸ In addition, the average abnormal return for the sample of publicly traded target firms was 38.4 percent on the announcement day.

Negative	112	35.7	109	34.7
Total	314	100	314	100

Our results are robust to the choice of estimation model of the benchmark returns and to the length of the event window. In the remainder of the paper we report the results on the announcement day and for an event window of seven days centered at the announcement day using the market model returns as the benchmark returns. Using a longer event window and/or the two alternative estimation models does not materially change the results.⁹

Table 5 Average abnormal (AAR) and cumulative average abnormal return (CAAR) for the bidding firm by different characteristics of the acquisition

The table reports the average abnormal return and the cumulative average abnormal returns for the bidding firm in 314 takeover transactions in Finland during the time period Jan 2000-Dec 2013 over a seven day event window and for different characteristics of the acquisition. The abnormal returns are calculated using the market model, where the market return is based on the value-weighted total return index OMX Helsinki cap. The acquisition characteristics are the size of the bid, the origin of the target company (cross-border or domestic), the bid being for a publicly traded or privately held company, the bid being for a company within the same industry or for an unrelated company (based upon the SIC-code), the terms of payment; cash or equity, and the bid being non-partial or not. Statistical significance are denoted by */**/** (10%/5%/1%).

	AAR [t=0]			CAAR [-3:3]			Nobs
	(%)	(p-value)	Nobs	(%)	(p-value)	Nobs	
Whole sample	1.40 %***	0.00	314	Whole sample	2.14 %***	0.00	314
Large transactions	0.83 %**	0.02	157	Large transactions	2.04 %***	0.00	157
Small transactions	1.97 %***	0.00	157	Small transactions	2.28 %***	0.00	157
Difference	-1.14 %*	0.09		Difference	-0.24 %	0.78	
Cross border	0.80 %***	0.01	198	Cross border	1.51 %***	0.00	198
Domestic	2.42 %***	0.00	116	Domestic	3.26 %***	0.00	116
Difference	-1.62 %**	0.02		Difference	-1.75 %**	0.04	
US/UK target	1.74 %**	0.04	38	US/UK target	3.05 %**	0.03	38
Other	1.33 %***	0.00	276	Other	2.02 %***	0.00	276
Difference	0.41 %	0.69		Difference	1.03 %	0.46	
Diversification	1.80 %***	0.00	198	Diversification	2.55 %***	0.00	198
Non-diversification	0.71 %*	0.06	116	Non-diversification	1.49 %**	0.03	116
Difference	1.09 %	0.12		Difference	1.06 %	0.22	
Public target	0.63 %	0.43	51	Public target	0.87 %	0.43	51

⁹ The results for alternative event windows and using the market adjusted model or the market model with adjusted beta are available upon request.

Non-public target	1.55 % ^{***}	0.00	263	Non-public target	2.41 % ^{***}	0.00	263
Difference	-0.92 %	0.32		Difference	-1.54 %	0.18	
Cash only	1.19 % ^{***}	0.00	95	Cash only	2.50 % ^{***}	0.00	95
Other payments	1.49 % ^{***}	0.00	219	Other payments	2.01 % ^{***}	0.00	219
Difference	-0.29 %	0.69		Difference	0.49 %	0.59	
Stock only	3.96 % [*]	0.08	38	Stock only	4.11 % [*]	0.07	38
Other payments	1.05 % ^{***}	0.00	276	Other payments	1.89 % ^{***}	0.00	276
Difference	2.91 % ^{***}	0.00		Difference	2.22 % ^{***}	0.00	
100 % acquired	1.59 % ^{***}	0.00	259	100 % acquired	2.27 % ^{***}	0.00	259
Less acquired	0.51 %	0.46	55	Less acquired	1.65 % ^{**}	0.04	55
Difference	1.08 %	0.23		Difference	0.62 %	0.58	

Table 5 reports the market reaction to takeover announcements by deal characteristics. Both large (above median) and small transactions yield a statistically significant abnormal return on the announcement day as well as during the seven day event window. However, large transactions, defined as transactions larger than the median transaction value, seem to yield a lower positive announcement reaction than small transactions on the event day (0.83 versus 1.97 percent). The difference is statistically significant (prob-value 0.09). The difference is, however, insignificant between the two groups during the seven day event window.

Most of the bids made by Finnish bidders are for a foreign target company. Overall, the bidder experience a positive announcement effect for both cross-border and domestic bids, but the announcement effect is significantly lower for bidders engaging in cross-border transactions (0.80 versus 2.42 percent). The same difference is also found in the seven day event window. Bidders making acquisitions in the US or in the UK have a higher announcement effect, and the measured stock market reaction to this type of acquisition is close to the reaction for a domestic acquisition.

Most of the acquisitions made by Finnish bidders are for a target company operating in an unrelated industry, i.e., a diversification takeover. In contrast to our expectations, the announcement of a diversification takeover yields a higher return than an announcement of a related takeover (1.80 versus 0.71 percent on the event day, 2.55 versus 1.49 percent during the seven day event window). The difference is, however, not significant on conventional significance levels.

The announcement of an acquisition of a private target yields a statistically significant abnormal return of 1.55 percent, whereas the announcement of an acquisition of a public target yields a small positive (insignificant) return of 0.63 percent. The same is evident for the seven day event window, i.e., a significant abnormal return in an acquisition of a private target and an insignificant abnormal return in an acquisition of a public target.

We document a statistically significant difference in the announcement effect of stock only versus other types of bids. The announcement effect is significantly higher for stock only bids at the announcement day (3.96 versus 1.05 percent).. Contrary to our expectations there is no difference in the announcement effect of cash versus non-cash bids, but a statistically significant higher announcement effect for all equity bids versus other bids. The results may, though, be affected by the fact that in almost 49 percent of the bids the terms of payment is not disclosed, hence, there may be quite a large number of acquisitions that are misclassified.

Finally, in Table 5, we also report the announcement effect for non-partial versus partial bids. The market response to the announcement is on average slightly positive to both acquisition types, and no significant difference in the response can be detected.

The univariate tests show that there is a difference in the market response to an announcement based upon the characteristics of the bid. In Table 6 we report the results from an OLS-regression of the market reaction using the bid characteristics as explanatory variables. We also add a control variable to the regression, capturing the effect of the sixth takeover wave. For example, Jensen (2004) and Moeller et al. (2005) argue that there is a positive correlation between the sentiment on the stock market and takeover activity, and that bidders in times of high stock market valuation tend to bid more aggressively and, hence, increase the bid premium. As a consequence, the gain that accrues to the bidder's shareholders decreases. Alexandridis, Mavrovitis and Travlos (2012) defined the sixth takeover wave as the time period between June 2003 and December 2007. However, in Finland the activity on the takeover market did not increase until the beginning of 2005. The increased activity continued until the end of year 2008. To control for a potential effect of this increased activity, we define the sixth takeover wave as the time period between January 2005 and December 2008, and include a dummy variable taking the value 1 if the takeover is announced during that time period. A total of 126 announcements were recorded during this time period.

In the analysis of the market response on the announcement day we see that most of the results from the regression analysis are consistent with the findings in the univariate analysis. Looking at the full model in Table 6, we see that there is a significant negative relationship between the bidder's abnormal return and the size of the deal, indicating that the market expects that the bidding firm may face large post-acquisition integration costs which will reduce the takeover synergy (Martynova and Renneboog (2011)), or that the acquisition is mainly driven by agency motives or by over optimism. However, looking at the relative size of deal to the value of the bidder we document a statistically significant positive relationship. Hence, the results suggest that the larger the deal is to the value of the bidder, the more likely it is that the transaction is driven by value creation, and that the bidder's shareholders also capture some part of this gain.

Lower bidder announcement returns are observed for cross-border acquisitions, relative to domestic acquisitions (significant in the seven day event window). The results are consistent with findings reported in Conn et al. (2005) and in Moeller and Schlingemann (2005), indicating that the bidding firm may have difficulties in the post-takeover process to utilize the perceived synergies. However, if the target company is from the US or the UK we observe a statistically significant larger announcement effect.

Table 6 Determinants of the cumulative abnormal return (CAR)

The table reports the results of the OLS regression of the cumulative abnormal return for the bidders in 314 takeover transactions in Finland during the time period Jan 2000-Dec 2013. *LOG(Transaction value)* is the value of the bid in million USD, *relative deal value* is the relative value of the deal to the value of the bidder, *cross-border* is a dummy variable taking the value 1 when the target company is of foreign origin, *USUK target* is a dummy variable taking the value 1 when the target company is from the US or the UK, *public target* is a dummy variable taking the value 1 when the target company is publicly traded, *diversification* is a dummy variable taking the value 1 when the target operates in a different industry than the bidder according to their industry classification (SIC-code), *acquiring 100 % of shares* is a dummy variable taking the value of 1 if the bidder acquires all shares, *cash only* is a dummy variable taking the value 1 when the acquisition is paid for in cash, *stock only* is a dummy variable taking the value 1 when the acquisition is paid for in stock and *sixth wave* is a dummy variable taking the value 1 if the acquisition takes place during the time period January 2005 to December 2008. All regressions contain White's heteroskedastic-consistent standard errors. Statistical significance are denoted by */**/** (10%/5%/1%).

Dependent variable	AR [0]						CAR [-3:3]					
	(1)		(2)		(3)		(1)		(2)		(3)	
	<i>coeff.</i>	<i>p-value</i>	<i>coeff.</i>	<i>p-value</i>	<i>coeff.</i>	<i>p-value</i>	<i>coeff.</i>	<i>p-value</i>	<i>coeff.</i>	<i>p-value</i>	<i>coeff.</i>	<i>p-value</i>
Intercept	0.010	0.27	0.012	0.23	0.019***	0.00	0.025*	0.05	0.029**	0.03	0.029***	0.00
LOG(Transaction value)	-0.006***	0.01	-0.006***	0.01	-0.006***	0.01	-0.005	0.13	-0.005	0.14	-0.006*	0.09
Relative deal value	0.035***	0.00	0.035***	0.00	0.036***	0.00	0.031***	0.00	0.031***	0.00	0.031***	0.00
Cross-border	-0.009	0.16	-0.009	0.17	-0.009	0.18	-0.015*	0.06	-0.013*	0.09	-0.015*	0.07
USUK target	0.015*	0.05	0.014*	0.05	0.015*	0.07	0.023*	0.06	0.023**	0.04	0.028*	0.07
Public target	-0.003	0.70	-0.003	0.70			-0.013	0.28	-0.011	0.35		
Diversification	0.008	0.16	0.009	0.14			0.009	0.24	0.008	0.26		
Acquiring 100 % of shares	0.002	0.80	0.002	0.82			-0.004	0.65	-0.005	0.58		
Cash only	0.002	0.68			0.001	0.78	0.011	0.19			0.009	0.28
Stock only	-0.025	0.86			-0.004	0.74	-0.003	0.85			-0.007	0.68
Sixth wave	0.004	0.46					0.001	0.84				
F-stat.	18.84***	0.00	26.99***	0.00	30.99***	0.00	8.05***	0.00	11.22***	0.00	13.06***	0.00

Adjusted R ²	0.363	0.368	0.365	0.184	0.186	0.188
Number of acquisitions	314	314	314	314	314	314

There are indications of the market perceiving diversification announcements to be good news, rewarding the bid with a higher positive (not significant) abnormal return than a corresponding announcement of a focused acquisition. Hence, the investors consider the positive effect of risk reduction being larger than the negative effect of the agency problem.

In the univariate analysis there were some indications of a lower bidder abnormal return when the target company is publicly listed. We also documented a positive announcement effect for stock only bids versus other types of bids. However, in the multivariate setting these differences disappear, indicating that the results may be driven by size related issues instead. There is no difference in the announcement effect whether the bidder acquire 100 percent of the target or a smaller amount. The control variable for the sixth takeover wave is also insignificant.

Finally, in Table 6, we also report the results from different specifications of the model. In model specification two we exclude the term of payments variables and the takeover wave dummy, and in specification three we exclude the public target, diversification, non-partial and the takeover wave dummy. The alternative specifications do not change the estimated coefficients for the size related variables or the target origin related variables.

5. CONCLUSIONS

In this study, we analyze the short term market reactions to takeover announcements in a sample of 314 acquisitions made by a stock market listed Finnish company during the time period from January 2000 to December 2013. The acquisitions of Finnish companies during the studied period were characterized by a diversification strategy involving a foreign target company. The acquisition was typically friendly, and aimed for the entire capital of the target company. We document, on average, a significant positive stock market reaction to the announcement. The announcement effect is statistically significant yielding an average abnormal return of 1.4 percent on the announcement day. This result is consistent with the assumption that most of the acquisitions are motivated by synergy. Neither the pre-event nor the post-event abnormal returns are statistically significant, although there is sign of a negative price revaluation in the post-event period.

We also investigate the relationship between the market reaction to the announcement and deal characteristics. We document a significant, negative relationship between deal size and the abnormal return on the announcement day. However, looking at the size of the deal in relation to the size of the bidder we find a reversed relationship, i.e., the larger the relative size of the deal, the more positive the announcement effect. The market reaction is more favorable to an acquisition of a domestic target company, indicating that the market believes that the acquirer may face substantial post-acquisition integration costs in cross-border transactions. If the target company is from the US or from the UK the negative cross-border effect is smaller. We also document that an acquisition motivated by diversification may yield a higher abnormal return to the bidder shareholders than an acquisition of a target firm within the same industry. Hence, the decrease in the financial risk seems to be more important than a potential increase in the agency costs. We do not find any significant relationship between the announcement effect and legal status of the target, the terms of payment, full acquisition of the target, or the sixth takeover wave.

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Research in the field of economic crime in Slovakia

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ABSTRACT

Consequences of the crime influence the life of the whole society, it permeates to all areas of social life, as well as it penetrates into the lives of ordinary citizens of Slovakia. One of the most significant crimes is the economic crime. The relevance and the seriousness of the economic crime are expressed by its immediate threat of economic life and of the prosperity of society. The relevance of this issue is underlined by the fact that in the recent years there is an increase of new and more dangerous forms of crime.

The aim of this paper is to examine the overall number of economic crime and the damages caused by these criminal activities in Slovakia during the last ten years. The emphasis will be put on the analysis of the number of business entities influenced by the economic crime, on the analysis of economic crime by the sectors of national economy and by the forms of economic crime in Slovakia. We will analyse the most common ways of committing tax frauds and accounting frauds, that distorts the business environment and it represents also a significant threat to the public finances. The complex accounting and tax issues enable the defrauders to commit accounting frauds and tax frauds; this is because of the deficiencies in the legislation, inefficient control processes and complexity of management. After that we analyse the number of Slovak companies with the owner from a tax haven. Within the analysis of secondary data in this paper appropriate mathematical and statistical methods will be used. Based on the evaluation of the results of research, conclusions and suggestions will be drawn.

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1. INTRODUCTION

In every society there are social norms that are obligatory for each person. The person is obliged to a certain form of social behaviour, while respecting the general, socially accepted and recognized rules. When these rules are not followed, it is punished by the society. Therefore, these social norms are an important regulator of social relations and processes. Preserving these norms creates the conditions for the existence of social life. When inability to accept and preserve the most important and especially the legal norms, there is committed a crime, delinquency.

Within the characteristics of the nowadays crime (especially to that it is organized, intellectualized and sophisticated) can be listed another characteristic, it is the internationalization tending to its globalization. From the massive point of view the crime penetrates across national borders and the criminal groups operate on a large territory regardless of their administrative division. Crime can be

distinguished in two types: the obvious crime, which is registered the state and the latent crime – the so called hidden crime, which is not recognized by the legal authorities because of variety of reasons and which is in the result several times bigger than the obvious crime. The best-known types of crime are the property crimes, violent crimes, organized crimes and economic crimes.

Economic crime can affect each market entity, regardless of whether it is aimed or not at achieving profit in its core activities. Especially for businesses could represent far-reaching and destructive consequences, which can even cause an existential threat or complete disappearance of the subject depending on the specific circumstances. The economic crime does not only cause material damage, it damages also suppliers, customers and other business partners; it can damage the image of the business entity and the morale of its employees. The economic crime in Slovakia is more and more frequent and its forms are more and more diverse. It is constantly developing and seeking new ways to “stay alive”. There is a paradox in that the more control mechanisms are implemented the higher is the rate of detection of fraud. This is why in the countries with more sophisticated tools of dealing with the economic crime the rate of economic crime is higher.

2. LITERATURE REVIEW

The contemporary society understands the criminality as a summary of the behaviour that is defined by the Criminal Law as a criminal offense. Thus, the criminality is the incidence of crime expressed as the summary of crimes committed in a particular society for a certain period (respectively in a certain interval). (Madliak, 1998)

In the current European context, the issue of the crime of fraud is explained on different ways. According to Molín (2011) the fraudulence is a delinquent conduct that is aimed to bring an undue advantage to the detriment of another.

According to ISA 240, the definition of fraud is that it is “*an intentional act by one or more individuals among management, those charged with governance, employees, or third parties, involving the use of deception to obtain an unjust or illegal advantage*” (International Federation of Accountants, 2009).

According Koprlová (2008), in the specialized Anglo-American terminology the mostly term is “Fraud”, but in German speaking countries there are starting to prefer the term “Dolus-Proceeding”. In both cases it always means the same thing: economic criminal activities are crimes that arise in economic life in the context of violation of the existing trust rules. Economic life means that such crimes are committed in connection to the economic activities carried out. This does not necessarily mean that they occur only in the context of the business activities, as the economic activities are carried out also by other entities such as non-profit organizations. Based on the definition of the American Institute for Internal Auditors by “Fraud” we mean the fraudulent and illegal activities related to intentional mislead or misconception.

Modern economic crime – as it says also Jozef Čentéš (2011) – has a wide diapason. In the classical dimension it's a matter of criminal acts threatening or violating market economy and economic discipline, crimes against currency and tax crimes, and so on. The common denominator of committing these crimes is that the perpetrators are abusing resources of the economic system and their conduct is motivated by profit.

In the widest meaning of the word – thus not in the legal meaning of the word – under the term 'Economic Crime' we mean all the legal and illegal practices under which the persons responsible for businesses – in particular their owners, managers, secretaries and other persons authorized to represent business entity – are causing damage to: people, nature, state, society, science, culture or to other legal subjects, in order to achieve, increase or safeguard profits (Suhányiová, Suhányi, Majiroš, 2015).

3. ANALYSIS OF THE ECONOMIC CRIME IN SLOVAKIA

Slovakia is located in the Central Europe; it is a multiparty state with a unicameral Parliament and the President. It has an area of 49,036 km², and about 5.41 million of inhabitants. It has borders with Czech Republic, Austria, Poland, Ukraine and Hungary. The capital is Bratislava. Slovakia is a member of NATO, OECD and UNO. It joined the EU in 2004. Since 2009 it is member of the European Monetary Union – Eurozone and the official currency became to be the Euro, which replaced the previous Slovak Crown. The International Code of Slovakia is "SK".

According to the Statistical Office of the Slovak Republic, the Criminality is a summary of the crimes committed by criminally responsible individuals – either intentionally or negligently – at a certain place per a certain period (generally in the country per year). Total Criminality includes all crimes discovered by the police committed by individuals and groups of persons. Data on criminality involves accomplished crimes and attempted crimes. Total Criminality is divided into the following three groups (Statistical Office of the Slovak Republic, 2015):

1. General Criminality

- Property Crimes: thefts, as well as damages to property
- Violent Crimes: murder, robbery, intentional bodily harm, dangerous threats, kidnapping, extortion, torture and so on
- Moral Crimes: rape, sexual abuse, child pornography or soliciting
- Other General Crimes: hooliganism, illegal production of narcotics and psychotropic substances, as well as obstruction of an official decision

2. Economic Criminality

3. *Residual Criminality*: malpractice, bodily harm by negligence, traffic accidents, animal cruelty and so on.

Economic Criminality is a specific type of criminality, causing economic damages to the country, companies and individuals. These include (according to the Criminal Code) the crimes that are:

- endangering the market economy (e.g. unauthorized trading, illegal employment, the misuse of participation in the economic competition, etc.)
- against the economic discipline (e.g. misrepresentation of financial and commercial records, harming the financial interests of the European Communities, insider trade, machinations in public procurement and public auction, consumer detriment, unfair commercial practices against consumers, etc.)
- against currency and the tax crimes (e.g. falsification and unauthorized production of money, insurance and tax evasion, non-payment of taxes and insurance, obstruction of tax administration, etc.)
- against industrial rights or copyright.

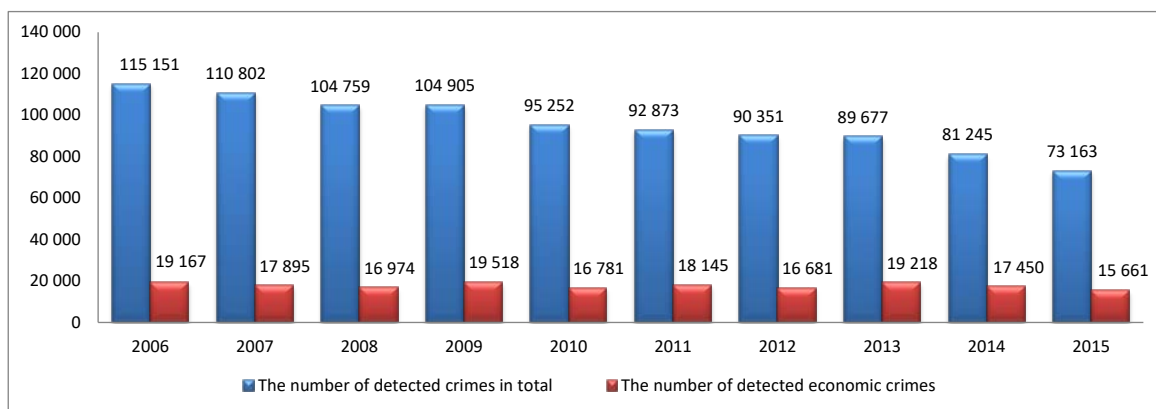


Figure 1: The total number of detected crimes and the number of economic crimes in Slovakia (self-elaboration based on the data from the Statistical Office of the Slovak Republic, 2016)

While the number of detected crimes decreases each year during the examined period, the number of detected economic crimes has a fluctuating tendency. The highest number of detected economic crimes was in the year 2009 and on the other hand the lowest was in the last year of the examined period, in 2015. The share of the detected economic crimes in the total number of detected crimes during the examined period is growing from year to year. While in 2006 the economic crimes accounted about 16.6% of the total number of detected crimes, in 2015 this share increased already to the level of 21.4% (Figure 1).

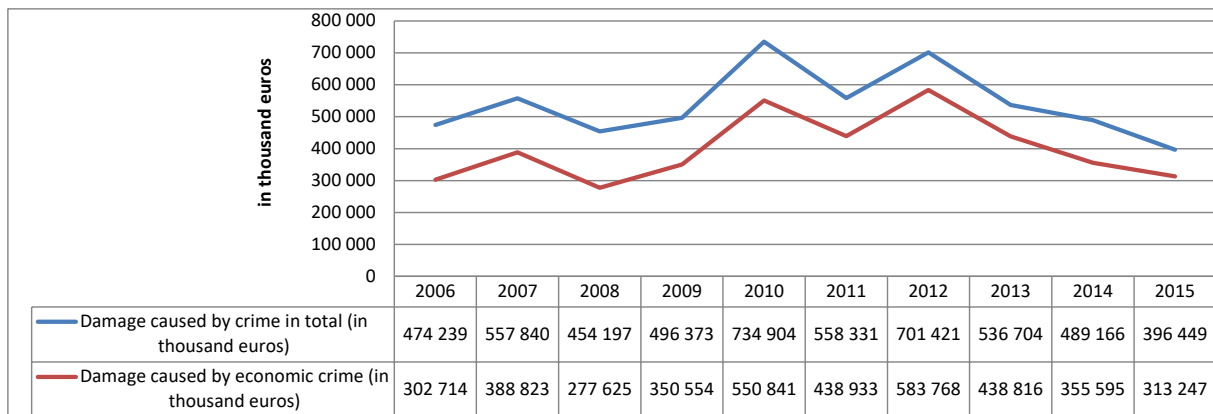


Figure 2: Damage caused by crime and economic crime

(self-elaboration based on the data from the Ministry of Interior of the Slovak Republic, 2016)

The Figure 2 shows that the highest damage caused by economic crime during the examined period was in 2012. The largest share in the reported damages is represented by the damages from frauds in the amount of 256,126 thousand euros and by the tax evasion and contributions evasion in the amount of 160,969 thousand euros.

If you calculate the average loss per detected economic crime, its highest value was in 2012 in the amount of 34.99 thousand euros, and the lowest value was in 2006 in the amount of 15.79 thousand euros. In 2015, the average loss per detected economic crime is 20.00 thousand euros.

Economic crime is constantly evolving, adapting to new conditions and its forms are increasingly sophisticated. Companies must therefore continually look for new and more effective methods of combating economic crime in order to protect their property. According to the survey made by PwC (Figure 3) about 34% of respondents have met with economic crime in the last year in Slovakia, that is more than a third. Compared to the survey made in 2011, this number represents an increase of up to 13%. Globally, the level of economic crime in 2014 reached the level of 37 % according to the survey (PwC, 2015).

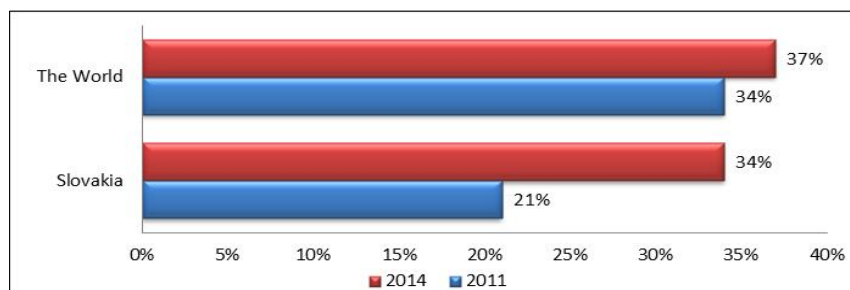


Figure 3: The number of companies affected by economic crime (in %)

(self-elaboration based on PwC, 2015)

Looking at the economic crimes by the sectors of national economy it can be seen that three of the sectors are standing out above the others with the highest level of economic crime, these are the:

financial services, retail and telecommunication services (Figure 4). Financial services are related to the economic crime mainly in relation to the large cybercrime and money laundering activities. In retail, the reason for the increased fraud is mainly in the defraudation of assets. A relatively large group with a similar level of criminality consists of sectors as: transport, construction and energy sector, which are particularly vulnerable to the economic crime committed in the form of corruption, bribery and frauds in public procurement.

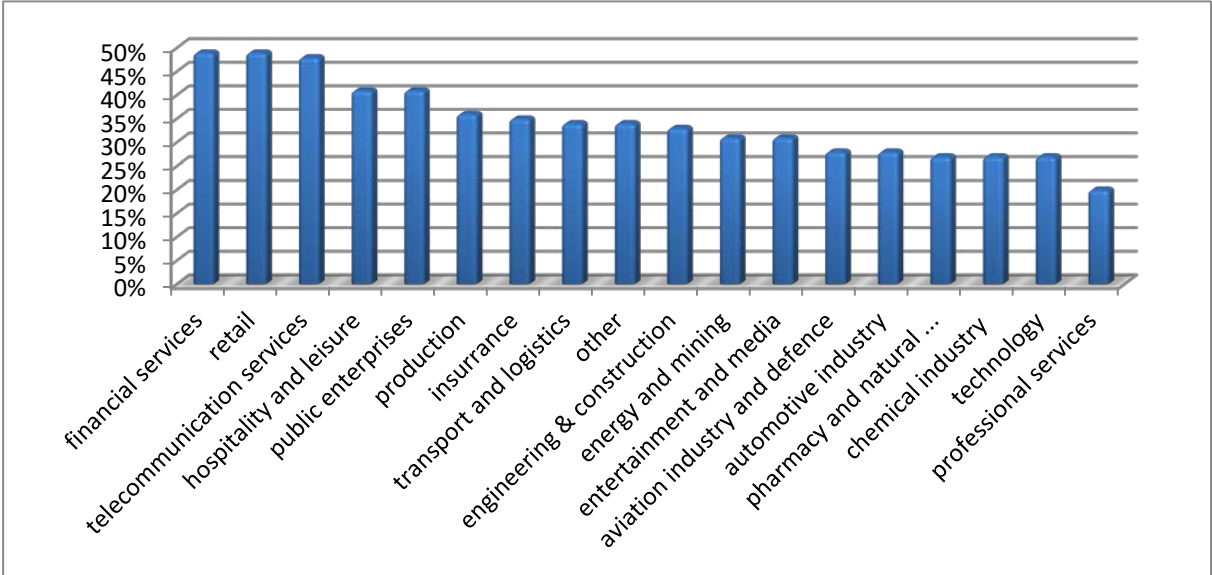


Figure 4: Economic crimes by sectors of national economy
(self-elaboration based on PwC, 2015)

In the survey it was also found out that the share of simple types of fraud is decreasing in favour of the growth of more sophisticated forms of the economic crime. However, the top positions in the ranking of the most common forms of economic crime in a long-term period are the occupied by the following categories of fraud: asset defraudation, corruption and bribery and accounting fraud. Over time, by the PwC Company were included in the rankings also new categories of fraud – that almost immediately occupied the highest positions in the rankings. There are the following types of fraud: computer crime and fraud in procurement processes. The following chart (Figure 5) indicates the percentage of companies with a given form of economic crime encountered.

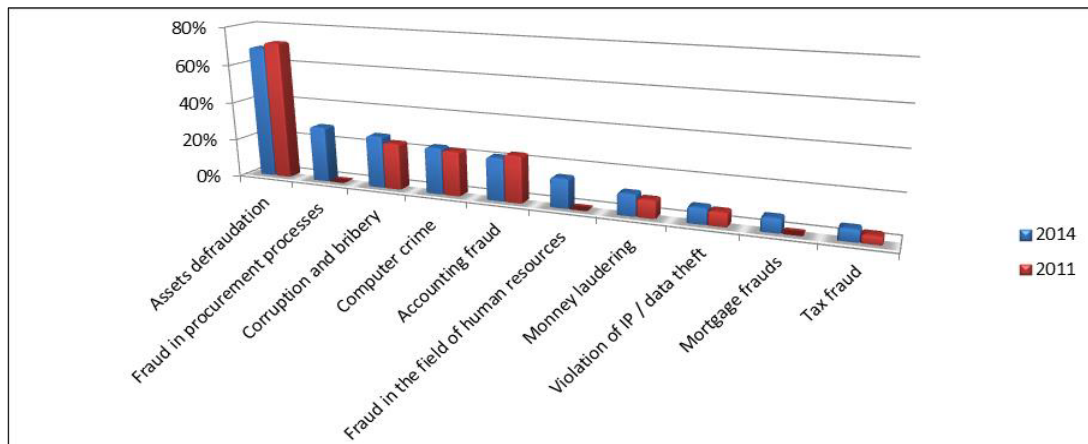


Figure 5: The most frequent forms of economic crime in the world
(self-elaboration based on PwC, 2015)

4. TAX FRAUDS AND ACCOUNTING FRAUDS IN SLOVAKIA

Business management is currently in a difficult situation and under an enormous pressure of the owners, of the market forecasting, of creditors and regulatory bodies. On the other hand, the complex tax and accounting legislation allows defrauders to commit fraud by the use of the defects of the legislation, of the inefficiency of control processes and management complexity.

Often can be seen incorrectness in the financial statements that may originate from fraud or error. The factor that makes a difference between the fraud and error is the fact of the intention – if the conduct that resulted in the incorrectness in the financial statements was intentional or unintentional. The intentional covering-up – or let us say: setting accounting methods and procedures in the way of enabling to cover-up the reality – is called Creative Accounting. There are different definitions of Creative Accounting, but all of them agree that creative accounting can be defined as “an approach that allows the targeted distortion of the economic condition of the company shown in the accounting”. The most common use of creative accounting is the handling with financial accounting to meet the requirements of the state – especially of the tax authorities. Companies tend to understate the profit to reduce the tax liability – for this may be used various methods and procedures.

Common mistakes detected during tax inspections in the Slovak Republic:

- Unauthorized deduction of value added tax,
- Application expenses unrelated to taxable income,
- Implementation of expenditure on the basis of fictitious documents,
- Undercutting the prices of assets, goods and services,
- Inclusion of ineligible expenditure in the tax base,
- Fictitious invoicing,

- Revenue-recognition,
- Reporting fictitious business trips, and so on.

In our experience, the most common frauds in the accounting of Slovak enterprises are:

- Falsification of financial statements,
- Overvaluation of income and assets,
- Underreporting of expenses and liabilities,
- Refusal of commitments, for example unrecognised financial transactions (invoices received, or other document)
- Accounting for one operation several times (duplication),
- Record the amount in error (typo),
- Incorrect or not included accrued transactions,
- Use of an incorrect account.

These errors may be due to bad internal control system of an accounting entity, poor circulation of accounting documents, poor internal directives, lack of inventory and so on.

The correctness of the double-entry bookkeeping and of the financial statements is controlled/verified by the auditors. As already mentioned above, 'fraud' is a broad legal concept. In terms of ISA (International Standards on Auditing), the auditor is concerned with fraud that causes a material misstatement in the financial statements. Two types of intentional misstatements are relevant to the auditor – misstatements resulting from fraudulent financial reporting and misstatements resulting from misappropriation of assets. Although the auditor may suspect or, in rare cases, identify the occurrence of fraud, the auditor does not make legal determinations of whether fraud has actually occurred (International Federation of Accountants, 2009).

At the date of 13th of July, 2015 there has been 784 active auditors and 236 audit firms in the Slovak Republic. Audit provides an overall protection of society. In the case of corporate entities (trading companies and cooperatives) in the Slovak Republic, they are obligated for audit if they fulfil at least two of the three following criteria (in two consecutive years):

1. if their assets exceed 1 million euros,
2. if their turnover exceeds 2 million euros,
3. if the number of employees exceeds 30.

In addition, the audit duty is regulated by specific laws, for example, a duty to audit have all the cities, municipalities and higher territorial units (regions), also foundations, political parties, etc. In 2013, about 3% of Slovak business entities were obligated to have an audit (Slovak Chamber of Auditors, 2015).

The present economic situation makes more and more business entities to think about the destination on which will end the money they invested in the state in the form of taxes. In many cases it is this speculation that leads them to tax avoidance. For most countries, the tax evasion represents a serious problem. Legal tax evasion involves the use of Tax Havens. The most often companies with an owner in the Tax Havens are the companies with activities in the field of trade business, of technical activities and of real estates. Since this is a legal business, there are no ways to reduce this phenomenon or to stop it. Slovakia is currently experiencing a boom in Tax Havens. The number of companies whose owner has an address in a Tax Haven reached the number of 4,266 at the end of 2014 and compared to previous year it increased by 9.3% (+364). The reason is that the entrepreneurs have a continual interest in tax optimization, in asset protection, in less red tape and in anonymous ownership. But, it can be partly attributed to the changes in legislation, e.g. to the introduction of withholding tax for offshore companies, or to the increased pressure on the release of information – as more and more countries abolished the bank secrecy. The rate of the check-outs of companies will vary depending on the policy of the state and changes in the laws affecting the business environment.

Table 1: The number of Slovak companies with owners from Tax Haven
(self-elaboration based on Bisnode, 2016)

Country	Number of firms						Change 2010 – 2015
	2010	2011	2012	2013	2014	2015	
Bahamas	5	4	7	15	13	11	6
Belize	51	75	96	117	114	98	47
British Virgin Islands	78	81	78	88	101	138	60
Gibraltar	23	17	7	8	16	14	-9
Guernsey (United Kingdom)	7	6	6	6	10	9	2
Hong Kong	20	25	30	35	36	35	15
Jersey (United Kingdom)	11	9	16	13	10	10	-1
Cayman Islands	2	3	3	6	4	5	3
Cyprus	535	600	767	755	750	917	382
Liechtenstein	15	18	28	32	36	62	47
Latvia	16	26	44	49	69	71	55
Luxemburg	318	344	392	354	393	411	93
Malta	33	36	45	54	83	131	98
Marshall Islands	0	0	2	2	2	46	46
Monaco	11	16	18	21	24	19	-45
Netherlands Antilles	2	2	4	3	3	5	3
Netherlands	1,050	1,052	1,110	1,124	1,154	1,140	90
Panama	25	38	62	94	158	174	149
Isle of Man (United Kingdom)	4	5	5	4	5	6	2
Republic of Seychelles	18	65	180	220	205	254	236
United Arab Emirates	32	37	41	53	67	80	48

United States of America	601	671	760	859	1,028	1,064	463
Total	2,846	3,119	3,693	3,902	4,266	4,700	1,790

The number of companies, whose owner has an address in a Tax Haven in the examined period from 2010 to 2015, was continuously increasing. The number of companies increased by 160% in the number it makes 1790 companies. The highest increase in the outflow of companies was to the United States of America, in number 463, followed by Cyprus with the number 382 and the Seychelles with the number 236. In contrast, the largest decline occurred in Monaco. The biggest change in 2015 compared to 2014 was because of the outflow of companies to Cyprus, it was an increase represented by 167 companies. The continuing trend in the use of foreign companies in the context of business activities is not a surprise. The business entities are more oriented to the Netherlands and America, which have more weight in the business environment. The popular Tax Havens also include Cyprus, Luxembourg, Panama and Seychelles. The discussion about these destinations was opened thanks to the recent scandal called Panama Papers, which discovered how are some leading politicians and businessmen hiding their assets and how they avoid paying taxes. By us, the outflow of companies to the Tax Havens will continue despite the fact that the EU pressure on the exchange of information between the countries is increasing significantly. The companies will continue to explore the ways to reduce their tax burden. Between the years 2010 and 2015 the number of companies established in Tax Havens increased by over 160%.

5. CONSLUSIONS

Economic crimes are often very sophisticated; they are often very well treated in fact and in law. Over the time we can meet economic crime in Slovakia more frequently and its forms are more diverse. Its rate is increasing in the business entities from year to year increases. Therefore, the fact that economic crime continues to persist and it affects the business including all its processes, still remains. There is a paradox in that: the more control mechanisms are implemented, the higher is the rate of detection of fraud. The companies also use legislative advantages that are offered by Tax Havens, this is why they use foreign companies for their own businesses. In terms of tax and accounting, there are different ways to deceive public authorities, shareholders, investors and even auditors in order to hide or to distort the actual results and financial health of the company. In Slovakia there is a strong connection between the tax legislation and the accounting legislation. The companies are using financial information from accounting for determining the tax base of the most important taxes (VAT, income tax). The reason of the distorted reporting of accounting information is to pay the lowest possible taxes. Even though the cases of fraudulent reporting are less frequent than the other forms of economic crime, these frauds have the greatest impact.

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Determinants of Real Private Consumption Expenditure in Lesotho

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ABSTRACT

Using the Autoregressive Distributed Lag (ARDL) approach to cointegration, an error correction model (ECM) is estimated for real private domestic consumption in Lesotho. Lesotho is one of a number of countries with low gross domestic product (GDP) per capita, that are landlocked and of which the national currency is pegged to that of a highly dominant trading partner. Analysis of consumption pattern in such countries is scant in the literature. This paper finds evidence of a long-run relationship between private consumption, income, interest rates, and inflation. The empirical findings suggest that higher income is associated with higher private consumption, higher inflation reduces private consumption and that higher interest rates reduce private consumption, implying that the substitution effect outweighs the income effect in Lesotho in the long term. Although the model is not designed to evaluate consumption theories, the estimated parameters to some extent support the absolute income hypothesis (AIH), relative income hypothesis (RIH), life-cycle hypothesis (LCH) and permanent income hypothesis (PIH).

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1. INTRODUCTION

Private sector consumption is an important driver of every economy. Aside from being a key measure of overall welfare, it significantly influences aggregate demand through the multiplier effects of spending. As a result there are many studies that have estimated private consumption functions for many individual countries and groups of countries (such as monetary unions) around the world, especially for developed countries like the United States (US), Europe and United Kingdom (UK). In recent years, the number of such studies have grown in respect of developing countries as well such as those in the African continent. In the context of African countries many studies of this nature have been done in Nigeria. However, these studies are very limited in the case of small, landlocked, currency pegged countries that are economically characterised by poverty and close ties with dominant trading partners. In countries with these

characteristics (such as Lesotho), where econometric studies of consumption exist, they are often carried out by central banks as part of the development of macroeconomic models and are focused primarily on forecasting ability rather than developing understanding of underlying determinants.

Therefore, the purpose of this paper is to contribute to the general body of knowledge on the determinants of real private consumption expenditure in these countries. In particular, it seeks to unpack factors driving private consumption spending in Lesotho, with a hope that the results may be generalizable to some extent to other countries that have the same characteristics. To do this the paper applies autoregressive distributed lag (ARDL) bounds testing approach to cointegration and estimates an error correction model (ECM) on Lesotho's annual time series data ranging from 1982 to 2013. Lesotho's economic characteristics possibly have the potential to lead to private consumption patterns different from those explored in larger, richer countries that do not share these characteristics. For example, much consumption in Lesotho is in the form of imports, therefore consumption patterns also influence the external sector position to a large extent. In general better understanding the drivers of real private sector consumption would assist policy makers in Lesotho to assess its potential future path in the context of the broader macroeconomy. This would provide valuable information which can be used to guide broader macroeconomic policy in terms of economic growth.

Following this introduction, the rest of the paper is structured as follows: Section 2 sets out the key theoretical considerations in modelling consumption and broadly reviews empirical studies on private consumption. Section 3 provides summarises the methodology employed; Section 4 sets out the results and Section 5 concludes.

2. LITERATURE REVIEW

2.1 Theoretical Background

Given the importance of consumption in macroeconomic analysis, there is a substantial body of theoretical and empirical work that analyses consumption behaviour. There are four theories of consumption behaviour which tend to guide much of the literature. These are the Absolute Income Hypothesis (AIH) of Keynes (1936), the Relative Income Hypothesis (RIH) of Duesenberry (1949) and Modigliani (1949), the Life-Cycle Hypothesis (LCH) of Modigliani and Brumberg (1954) as well as Friedman's (1957) Permanent Income Hypothesis (PIH).

Keynes' AIH is an early theory that proposes that current household consumption is a linear function of current disposable income¹. It proposes that the marginal propensity to consume (MPC)—the derivative of consumption with respect to income—is positive but less than one, and that the average propensity to consume (APC) declines as the income of an individual increases. Therefore, the AIH implies people adjust their consumption instantaneously as their income changes. Although this theory does not account for the trade-off between present consumption and future consumption, it provides a good first approximation of consumption in cases where the economy was stable (Keynes, 1936).

Alternatively, the RIH proposes that consumption does not depend so much on consumers' absolute income (Keynes' view), but rather on their relative income, both current income relative to previous income and current income relative to the income of the consumer's peers in society. Hence, an individual maximizes utility subject to a weighted average of the population's consumption. In addition, the proponents of this theory believe that consumption behaviour tends to be habitual in that once individuals become accustomed to a certain standard of living; they attempt to maintain it regardless of a decline in income.

A further theory is the LCH, which proposes that an individual's consumption depends on their stage in life, since income fluctuates substantially depending on age, and that the average consumer attempts to smooth consumption over their lifetime. Specifically, in the young adulthood and retirement phases of the life-cycle, consumption in excess of income may be maintained through borrowing or by drawing down past savings. However, in the middle phase of life-cycle when income tends to be relatively high, only a proportion of income is consumed, with savings being built up or debt reduced. In addition to labour income, LCH also postulates significant influences of wealth, which earns income and can be drawn down and consumed over the remainder of an individual's life, thus influencing the individual's level of permanent income. For example, the higher an individual's starting wealth, the lower their net savings is likely to be, as consumption will be boosted by the availability of wealth (see Singh, 2004; Matlanyane, 2005; Saad, 2011; Kazmi, 2015).

Finally, Friedman's (1957) PIH postulates that individuals adjust their consumption mainly in response to changes in expected future income (or "permanent income²"), rather than

¹ It is referred to as AIH because it emphasizes that an individual's consumption decisions are based on their absolute amount of current disposable income.

² This is the level of income that can be expected to persist in the long run, which is normally generated by an individual's total wealth (consisting of human capital which is the stock of inborn physical and mental capabilities, knowledge and training that enables an individual to earn labour income).

responding only to changes in current income. It is based on the assumption that people prefer to maintain smooth consumption over time, and thus will only change consumption in response to a permanent change in income rather than a temporary change. There are various possible ways of estimating a consumer's permanent income, including using LCH concepts. In initially testing his theory, Friedman (1957) assumed that on average people base their idea of permanent income on what had occurred over the past several years. This formulation of the theory introduces lags in the consumption function, and implies that the effect of an increase in income may be gradual, rather than taking effect immediately and fully.

Based on these theories, many studies have been undertaken to further understand the determinants of the optimal level of consumption. For example, Hall (1987) combined the LCH and PIH theories with an application of the rational expectations hypotheses (REH)³; Flavin (1981) revisited Hall's hypothesis using a structural econometric model of consumption; and Davidson, Hendry, Srba and Yeo (1978) developed an error correction model describing consumption patterns. In addition, other studies attempted to analyse consumption paths under conditions of uncertainty, extending analysis to account for multiple assets and risk, liquidity constraints and buffer stock models (see Hall, 1978).

These various studies on consumption find that, in addition to income, a number of other variables may also influence consumption patterns. These variables include wealth, interest rates, inflation, and consumer prices, as reflected by Saad (2011) for Lebanon, Johnsson & Kaplan (1999) for Sweden, Singh (2004) and Kumar (2009) for Fiji and Habeeb (2015) as well as Kalumbu (2014) for Namibia. In addition, other variables have also been identified as determinants of private consumption, such as unemployment as a measure of income uncertainty (Johnsson & Kaplan 1999), public consumption, terms of trade, the old-age dependency ratio, financial development, the share of employment in service sector, the real effective exchange rate, and external financing (see Guo & N'Diaye, 2010).

Furthermore, tax rates, money supply, or government expenditure (see Raut & Virman, 1990 and Habeeb, 2015), transfer payments (see Kazmi, 1994) and personal saving or savings rates (see Habeeb, 2015 & Horioka, 2012) have also been identified as affecting consumption behaviour.

³ In this theory, Hall (1978) argued that individuals only alter their consumption in the presence of new information, which forces them to revise their future expectations of income. In this case, both consumption and wealth evolve as a random walk.

2.2 Modelling Techniques

Studies that analyse consumption behavior in a single country often tend to employ time series techniques; namely cointegration and error correction model approaches (see Davidson, Hendry, Srba and Yeo, 1978; Guisan, 2004; Singh, 2004; Saad, 2011; Ibrahim, 2014; Apere, 2014; Ezeji & Ajudua, 2015; Vasilev, 2015). On the other hand, studies that examine a group of countries often utilise panel cross-country regression (see Tapsin & Hepsag, 2014; Sutherland & Craigwell, 2011; Dreger & Reimers, 2012; Ianole & Druică, 2015; Wang, 2011). However, other analytical techniques are also used such as ordinary least squares (OLS), fully modified least square (FMOLS) and instrumental variables (see Manitsaris, 2006; Paz, 2006; Nwala, 2010, and Osei-Fosu et al, 2014)

2.3 Geographic Focus

A large strand of the extensive theoretical and empirical literature on private consumption or consumer behavior addresses industrialised countries, particularly the United States (US), Euro Area (EA) and United Kingdom (UK). Examples of such studies include Flaven (1981), Cambell and Mankiw (1990), Davidson et.al (1978), Molana (1991), Johnsson & Kaplan (1999), Byrne & Davis (2003), Guisan (2004), Dreger & Reimers (2012), Horioka (2012), Ianole & Druică (2015). In addition, several studies on this issue have also been carried out in the context of emerging markets economies such as India and China (see Guo & N'Diaye, 2010; Avazalipour, 2011; Gandhimath, Amibigadevi & Sundari, 2012).

The number of empirical studies on consumption in developing countries has increased in recent years. Among these countries, many studies have been conducted in Nigeria in particular (see Uwujaren, 1977; Nwabueze, 2009; Akekere & Yousuo, 2012; Thomas, 2013; Apere, 2014; Ezeji & Ajudua, 2015; Alimi, 2015). In addition, many studies of consumption expenditure have been carried out by central banks in the course of developing macroeconomic models (see for example Smal et al, 2007; Tjipe et al, 2004).

The focus of this paper is on patterns of aggregate consumption in Lesotho, a landlocked country that is economically characterised by its poverty and its close relationship with South Africa, a more economically developed country. Specifically, not only is South Africa Lesotho's dominant trading partner, the Lesotho Loti is pegged to the South African Rand.

Lesotho is one of a number of countries exhibiting these characteristics. Other examples include Bhutan, Nepal, and Swaziland⁴.

This combination of traits arguably has the potential to lead to consumption patterns different from those noted in larger, richer countries that do not share these characteristics. Some econometric studies of aggregate consumption in the above-noted countries have been carried out, such as Akano (1998), Matlanyane (2005) and Dobbelaere & Lebrun (2010) for Lesotho, Dhungel (1999) and Ra & Rhee (2005) for Nepal and Chhoedup (2013) for Bhutan. However, empirical work in this area is currently lacking relative to the extent of such analysis in respect of many other countries. This paper therefore analyses private consumption determinants in Lesotho, yielding insights which may be paralleled in other countries possessing the aforementioned characteristics.

3. METHODOLOGY

In building real private consumption model in Lesotho, this paper employs the bounds testing approach to cointegration and error-correction modeling based on the Autoregressive Distributed Lag (ARDL) procedure developed by Pesaran et al. (2001). An error correction model with a differenced dependent variable is an alternative mathematical expression of a standard ARDL model with the same dependent variable in levels. This alternative, in cases where a cointegration relationship has been identified, offers a more intuitive interpretation by separating the long-term equilibrium relationship from the short-term adjustment dynamics. This is useful in analysing consumption patterns, in particular in view of the various predictions made by the dominant theories of consumption.

One of the advantages of the bounds testing procedure is that it can confidently be applied in the context of the small sample sizes typical of empirical macroeconomic studies. This contrasts with the predominant use of asymptotic properties by other cointegration tests. In addition, the level variables being tested may be integrated of order 0 or 1, i.e. they may be either $I(0)$ or $I(1)$. Many other approaches require the variables to be $I(1)$, which must be established by pretesting for unit roots in the variables used. Under the bounds test approach, pretesting is still

⁴ For this list, poverty was defined by a maximum for 2014 gross national income (GNI) per capita (World Bank Atlas method) of \$4,125, consistent with the upper limit of the World Bank's lower-middle-income country classification. A dominant trading partner was defined as accounting for more than 50% of the international trade value of the country in question in 2014. Only landlocked countries were considered.

necessary, but only to ensure that the variables are not integrated of order 2 or greater, which would invalidate the procedure.

To carry out the bounds test an ARDL model is estimated as follows:

$$\Delta c_t = \beta_0 + \sum_{i=1}^p \beta_i x_{i,t-1} + \sum_{j=1}^q \gamma_{0,j} \Delta c_{t-j} + \sum_{i=1}^p \sum_{j=0}^q \gamma_{i,j} \Delta x_{i,t-j} + v_t \quad (1)$$

In Equation 1, Δ is the difference operator, c_t is the dependent variable, x_t is a vector of endogenous variables excluding the dependent variable, p is the number of explanatory variables, and q is the maximum lag length. After estimating the above model, where differenced variables at particular lags have insignificant coefficients, they are removed (subject to pragmatic judgement), and dummy variables are applied as appropriate to account for outliers and improve the fit of the model.

To assess the existence of a long-run relationship between the variables of interest, the bounds test uses the Wald or F-test to examine the joint significance of the coefficients of the one-period-lagged levels of the variables in Equation 1 above. That is, the null hypothesis $H_0: \beta_0 = \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$ is tested against the alternative hypothesis; H_1 : At least one of $(\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6) \neq 0$. The calculated F-statistic is compared with the critical value bounds for small samples tabulated in Narayan (2005).

For the bounds test for cointegration, upper and lower bounds for the critical value are specific to the sample size and number of cointegrating variables. If the calculated F-statistic is lower than the lower bound, the null hypothesis of no cointegration cannot be rejected. If the calculated F-statistics is higher than the upper bound, the null hypothesis can be rejected, indicating cointegration. In cases where the calculated critical value falls between the two bounds, the results are inconclusive.

Having established the existence of cointegration, the long-run and error correction models are estimated using the ARDL framework as follows:

$$c_t = \alpha_0 + \sum_{i=1}^p \alpha_i x_{i,t} + \varepsilon_t \quad (2)$$

$$\Delta c_t = \beta_0 + \eta ECT_{t-1} + \sum_{j=1}^q \gamma_{0,j} \Delta c_{t-j} + \sum_{i=1}^p \sum_{j=0}^q \gamma_{i,j} \Delta x_{i,t-j} + \omega_t \quad (3)$$

Equation 2, the long-run model, is estimated by Fully Modified Least Squares (FMOLS), advocated by Phillips and Hansen (1990). The use of this method to produce the error correction term (ECT_t) in Equation 3 is an attempt to improve the robustness of the long-run elasticities in Equation 2.

In Equation 3, ECT_t is set equal to ε_t from Equation 2. The coefficient of this error correction term, η , measures the speed of adjustment towards the long-run equilibrium following a shock to the system. ω_t is the white noise error term for Equation 3. Similarly to the procedure used to establish the ARDL model, where differenced variables at particular lags have insignificant coefficients, they are removed (subject to pragmatic judgement), and dummy variables are applied as appropriate to account for outliers and otherwise improve the fit of the model. The model generated is tested based on statistical diagnostics, as well as forecast accuracy statistics.

4. DATA AND EMPIRICAL RESULTS

This paper uses yearly data for Lesotho's economy (except where otherwise stated) from 1982 to 2013 on period average consumer price index (CPI) inflation (π_t), natural log of real private domestic consumption (c_t)⁵, natural log of real gross domestic product (y_t)⁶, natural log of real gross national income (GNI) (y_t')⁷ and natural log of real household disposable income (y_t'')⁸. Other variables include real prime lending rate (r_t), which is nominal interest rate adjusted for CPI inflation, natural log of nominal narrow money supply ($m1_t$) as well as natural log of nominal broad money supply ($m2_t$). The "t" subscript on each variable refers to the year. These data was obtained from the Central Bank of Lesotho (CBL), Ministry of Finance (MoF) and Bureau of Statistics (BoS).

Table 1: Results of Unit Root Tests Performed on Differenced Variables

	Augmented Dickey-Fuller Test	Phillips-Perron Test
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⁵ Final private consumption (BOS) less acquisitions by basotho workers in SA

⁶ Deflator used: GDP deflator for GDP component, SA CPI (Statistics SA) for factor income from abroad, Lesotho CPI for factor income paid to other countries.

⁷ This is based on GNI with adjustment for domestic taxes net of subsidies and transfers. It is deflated by the implied GNI deflator.

Variable	No trend	Trend	No trend	Trend
$\Delta\pi_t$	-5.02***	-4.90***	-18.02***	-18.50***
Δc_t	-4.55***	-4.66***	-4.58***	-4.64***
Δy_t	-6.80***	-1.22	-6.64***	-6.53***
$\Delta y'_t$	-1.80	-7.74***	-8.13***	-8.01***
$\Delta y''_t$	-8.88***	-8.88***	-8.96***	-8.97***
Δr_t	-7.59***	-4.31**	-13.58***	-16.82***
$\Delta m1_t$	-3.87***	-3.97**	-6.72***	-6.62***
$\Delta m2_t$	-5.61***	-5.66***	-5.61***	-5.66***

Note: ***, ** and * represent the rejection of the null hypothesis of the unit root at 1%, 5% and 10% level of significance, respectively. The null hypothesis is that the variable is non-stationary against the alternative hypothesis that the variable is stationary. For Augmented Dickey-Fuller tests, the Akaike Information Criterion (AIC) is used to choose the number of lags. For Phillips-Perron tests, the Newey-West bandwidth is used with the Bartlett Kernel estimation method.

As mentioned in Section 3, it is necessary to ensure that the variables used in the ARDL approach to cointegration are either I(0) or I(1). In Table 1 unit root test results for tests performed on differenced variables are presented. Since the null hypothesis of a unit root is rejected for all variables tested, these results indicate that no variable is integrated of order 2 or above, and the ARDL bounds-testing approach to cointegration can therefore be used.

The results of the ARDL bounds tests of cointegration are set out in Table 2. In this table, combinations of variables were tested by using the automatic variable lag selection feature offered in the Eviews 9 software package, using the Akaike Information Criterion (AIC) as the selection criterion. Impulse dummy variables were used to ignore outliers. The combinations of variables shown in Table 2 are those that, when combined in an ARDL equation, did not exhibit statistically significant serial correlation up to four lags, using the Breusch-Godfrey test. The remaining models all produce significant ARDL bounds-test F-statistics, and pass other standard diagnostic tests.

M1 and M2 are not used in the models shown in Table 2. Although such data could in theory improve the models by acting as proxies for households' real net wealth in Lesotho, unfortunately such data series for the current study period are inconsistent due to different data compilation methodologies used before and after 2009. Therefore M1 and M2, when used within ARDL models of consumption, resulted in model parameters that were materially inconsistent with theory and basic intuition. M1 and M2 were therefore excluded from the analysis in this paper.

Table 2: Results of ARDL Bounds Test for Cointegration

Variables (Δc_t as dependent variable)	k	Calculated F-statistic	95% critical bounds [^]		99% critical bounds [^]	
			I(0)	I(1)	I(0)	I(1)

c_t, y_t, r_t	3	12.50***	3.71	5.02	5.33	7.06
c_t, y'_t, r_t	3	11.67***	3.71	5.02	5.33	7.06
c_t, y''_t, r_t	3	5.44**	3.71	5.02	5.33	7.06
c_t, y_t, π_t	3	20.09***	3.71	5.02	5.33	7.06
c_t, y''_t, π_t	3	9.08***	3.71	5.02	5.33	7.06
c_t, y_t, r_t, π_t	4	7.59***	3.35	4.77	4.77	6.67

*, ** and *** denote significance at the 10%, 5% and 1% levels, respectively. ^ Critical bounds taken from Narayan (2005) using n = 30.

Similarly, employment statistics in general can be useful as a measure of future income security and perceptions thereof. However, in Lesotho such data is scarce, with comprehensive employment data only being available less frequently than yearly. More regularly updated employment data only covers a small portion of Lesotho's workforce.

A number of error correction models were formulated and subjected to diagnostic testing. Key decisions included selection of variables for inclusion in the long-run cointegration relationship based on the options in Table 2, selection of lagged differenced variables based on significance and the trade-off between model fit versus parsimony, and inclusion of dummy variables to account for outliers and improve the fit of the model. The best model based on these tests is shown below, with diagnostic test results presented in Table 3.

$$\Delta c_t = \frac{-0.026}{(0.016)} - \frac{0.501}{(0.000)}(c_{t-1} - 5.872 - 0.375y_{t-1} + 0.027r_{t-1} + 0.008\pi_{t-1}) + \frac{0.371}{(0.003)}\Delta c_{t-3} + \frac{0.629}{(0.008)}\Delta y_t + \frac{0.009}{(0.000)}\Delta r_{t-1} + \frac{0.006}{(0.001)}\Delta r_{t-2} + \frac{0.072}{(0.001)}D_{198788} - \frac{0.063}{(0.007)}D_{1998} + \frac{0.042}{(0.001)}D_{2008onwards}$$

Table 3: Error Correction Model Diagnostics and Forecasting Accuracy

R ²	0.861
SIC	-4.341
SC: Breusch-Godfrey F-statistic p-value (2 lags)	0.684
Heteroskedasticity: Breusch-Pagan-Godfrey p-value	0.481
Normality test: Jarque-Bera p-value	0.526
RMSE, in-sample	1.62%

SIC = Schwarz information criterion, SC = serial correlation, RMSE = root mean squared error. *, ** and *** denote statistical significance at the 10%, 5% and 1% levels of confidence respectively. Eviews 9 statistical software package used.

The estimated error correction model uses income, interest rates, and inflation as determinants for consumption growth, using GDP as the measure of income. This is consistent with the

cointegration test results in Table 2, which imply that either or both of inflation and the interest rate are required in order to obtain a significant cointegration test result.

In respect of the long-run response of private consumption to its observable determinants, the estimated cointegration relationship suggests the following:

- Higher income is associated with higher private consumption, with an estimated marginal propensity to consume of 0.375 in equilibrium in the long term. This is discussed in light of the key theories of consumption below.
- Higher inflation generally leads to less private consumption. This corresponds to the notion that higher inflation is associated with higher uncertainty regarding future inflation.
- Higher interest rates lead to less consumption. This may indicate that the substitution effect dominates the income effect in respect of the choice between saving and consumption in Lesotho in the long term. Thus households defer more of their consumption when the opportunity cost of immediate consumption—the interest rate—is higher.

Outside of the long-run cointegration relationship, the model identifies some significant short-term influences of private consumption determining variables on changes in private consumption. A large and positive influence of the short-term change in GDP in period t is present, indicating the possibility that short-term increases in income are often consumed rather than saved. The short-term effects of changes in interest rates (in periods $t-1$ and $t-2$) are also positive and statistically significant, apparently contradicting the long-term observed negative effect of higher interest rates on consumption. This may signify that the strength of different influences of interest rates on consumption varies through time. For example, the income effect of higher interest rates may lead to greater consumption in the short term. Alternatively, the positive coefficients of interest rate changes terms may capture some of the effect of GDP growth on consumption growth, if interest rates are positively correlated with general economic activity due to the monetary policy process.

Three dummy variables were used to improve model fit. The D_{198788} variable, which is 1 in 1987 and 1988 and 0 otherwise, may result from poorer data quality since it pertains to a relatively early period within the dataset. The D_{1998} variable—1 in 1998, 0 otherwise—coincides with the violence and unrest experienced in Lesotho following the elections that year, with its negative coefficient providing one estimate of the impact on overall consumption

growth in that year. The $D_{2008\text{onwards}}$ variable, which is 1 for years after and including 2008 and 0 otherwise, is likely to relate to the impact of the global financial and economic crisis of 2008 and 2009.

The model is not specifically designed to evaluate the theories of consumption discussed earlier—AIH, RIH, PIH and LCH. However, some limited conclusions can be drawn about their validity in Lesotho's context based on this model. The intuition behind AIH that consumption should rise with income in the same period is reflected in the model, as all coefficients of GDP variables are positive, in particular the coefficient of the change in GDP in the current period. However, the presence of GDP in both the short term and long term parts of the model imply that the relationship is more complex than postulated by the AIH.

The model is particularly limited in its ability to evaluate the RIH. However, this hypothesis is supported to some degree by the positive dependence of consumption growth on its past value, reinforcing the notion that individuals may attempt to maintain past consumption levels.

Similarly, while it is difficult to thoroughly assess the LCH using the estimated model, one macro-level implications of this hypothesis that are observable in the model is the influence of interest rates on consumption, which may imply the presence of consumption smoothing or the influence of net wealth on consumption as per the LCH.

The PIH does lend itself more readily to evaluation at the macro level. As such, this model offers mixed evidence pertaining to its validity in Lesotho's context. The existence of a long-run equilibrium relationship, and reversion to this equilibrium throughout time, is consistent with a relatively stable and growing permanent income. Any changes in income, such as the gradual increase in income experienced in Lesotho over the period covered by the data, may not be permanent or perceived as such. This leads to deviations from the equilibrium. However, as time progresses, it becomes more and more probable that the change is permanent, and thus consumption is able to adjust accordingly. In the above model, the coefficient of the error correction term is -0.501.

However, if the cointegration relationship largely captures the effect of permanent increases to income, then we might expect its coefficient of GDP (0.375 in the estimated model) to be closer to one, based on the PIH. Further, the relatively large coefficient of Δy_t in the model suggests that short-term changes in income are often consumed rather than saved. This weakens the case for the PIH to the extent that the short-term changes are transient rather than permanent.

5. CONCLUSION

This paper seeks to understand the determinants of real private domestic consumption in Lesotho with a view to contributing to the general body of knowledge on private consumption in countries with low gross domestic product (GDP) per capita, that are landlocked and of which the national currency is pegged to that of a highly dominant trading partner. Using the ARDL approach to cointegration, a number of cointegration relationships were identified that all produced significant ARDL bounds-tests and passed other standard diagnostic tests. Following those results, many ECMs were formulated and the best ECM model was chosen. The chosen model builds upon the long-run relationship identified between private consumption, income, interest rates, and inflation in Lesotho.

The long-run results suggest that higher income is associated with higher private consumption and that higher inflation is associated with reduced private consumption, potentially due to higher uncertainty of price movements. In addition, higher interest rates also negatively affect private consumption due to the substitution effect, which appears to outweigh the income effect in Lesotho in the long term. Therefore, households defer more of their consumption when the opportunity cost of immediate consumption is higher. In the short-term, the paper finds that increases in income may often be consumed rather than saved. The positive and statistically significant effects of changes in interest rates in previous periods appear to contradict the observed negative effect of higher interest rates on consumption in the long-term.

Although this model is not specifically designed to evaluate the theories of consumption, some limited conclusions can be drawn about their validity in Lesotho's context based on this model. The positive coefficient of the change in GDP in the current period reflects the AIH, although there is evidence of a more complex relationship than postulated by AIH due to the presence of GDP in both the short term and long term. The positive dependence of consumption growth on its past may also support the RIH, while the LCH may be backed by the influence of interest rates on consumption. In addition, the existence of a steady state equilibrium relationship and reversion to this equilibrium throughout time supports the PIH. However, support for the PIH this may be weakened by, amongst others, the finding that short-term changes in income are often consumed rather than saved.

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Modelling fraud prevention process **

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ABSTRACT

Fraud is global social problem and they occur in all activities. The term fraud implies corruption, misappropriation of assets and fraudulent financial reporting. People that commit fraud are inside and outside of organisation. Factors that affect fraud doing are: motive, opportunity, ability and justification. In our region, it can be said that fraud is not individual problem but it's a case of systematic fraud, especially in public sector by creating monopoly of private over public sector. Costs related to fraud will be difficult to objectively assess. Everyone is sensitive to health care related frauds, from patients and doctors to whole society. For battle against fraud requires political will, effective legislative framework and anti-fraud strategy. Every strategy has to begin with prevention process. Paper presents model of fraud prevention process. Model is based on increasing awareness of all participants about the importance of battle against the fraud, accepting anti-fraud policies and zero fraud toleration, establishing channels for reporting fraud, as well as defining responsibilities of internal audit in evaluation of internal controls, fraud risk assessment, corporate governance and providing recommendations for process improvement.

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1. INTRODUCTION

As frauds can catastrophically effect business performance, implementation of fraud prevention process can save companies from failure. If fraud risks are not identified and managed they can cause large losses and rapid company failure. Even if company survives losses caused by fraud, it can negatively impact company's reputation and stakeholders trust.

Implementation of fraud prevention process saves organisation's money, as fraud activities unnecessary takes money out of organisation. In today's global competitive environment no one can afford to waste resources.

Frauds have become custom to such a degree that they are not exception but rather a standard behaviour in organisation. Every organisation that does not systematically protect itself from fraud increases its vulnerability to fraud and becomes fraud victim. Implementation of fraud prevention process increases trust from investors, shareholders, board members, audit committee, management and society. It is important that information from fraud prevention process is not ignored. If fraud prevention process shows weaknesses, they have to be corrected as fraud prevention process provides very important information for fraud revealing, reporting and repairing damages caused by fraud.

With the aim to battle a fraud in organisation it is important to rise awareness of all employees

about the harmful affects that could be caused by fraud. Training and cooperation with experts for fraud research its highly important as they can provide information about new scenarios and methods for doing fraud as well as information about using methods and techniques for detection and prevention of fraud. Management of fraud prevention control needs to start with efficient fraud prevention system. Software control of transactions and information system is very important as very efficient software for fraud detection and information system control already exists. Legal framework has to be implemented in such a way to discourage people to commit fraud and that process of investigation and sanctions of fraud is efficiently conducted.

In performing their tasks internal auditors should have necessary knowledge and skills for fraud prevention and control. However, in order for company to systematically battle fraud, it needs to teach and train sufficient number of auditors for fraud control and establish sector for fraud control.

2. THEORETICAL ASPECTS OF FRAUD PREVENTION AND RESEARCH HYPOTHESIS

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization’s operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes. (Supplemental Guidance 2012). Figure 1. Presents activities of internal audit in company.

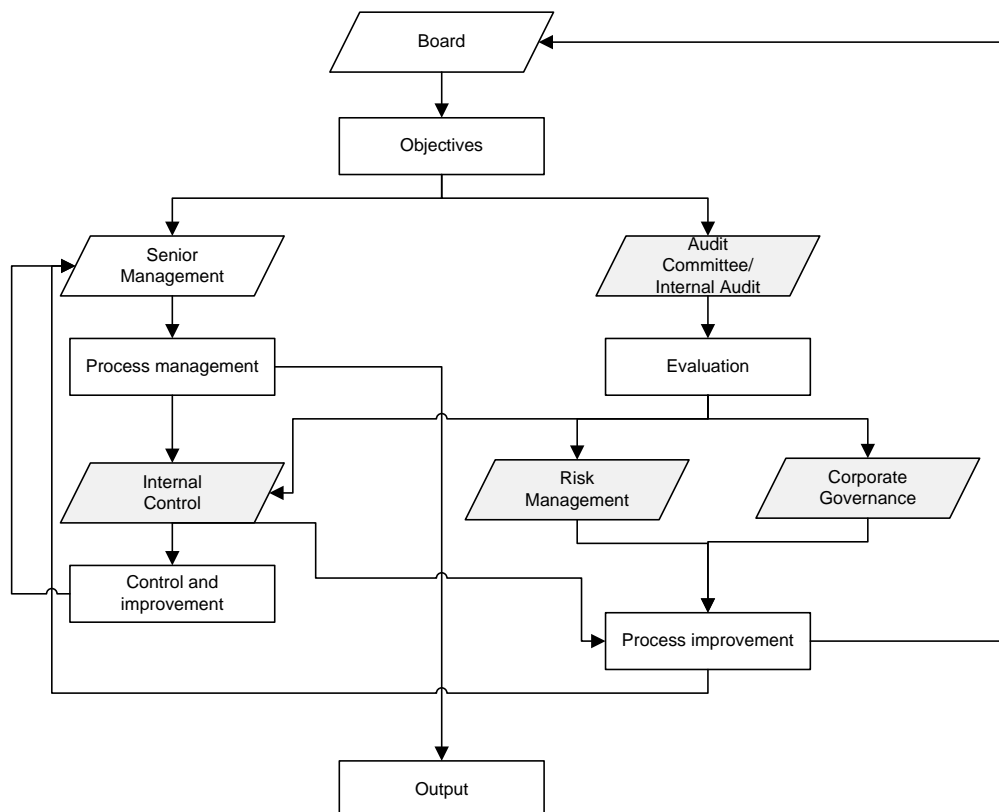


Figure 1. Activities of internal audit
Source: Authors' illustration

Main cause of problem which leads to crises and failure of companies is conflict between

manager’s personal goals and shareholders’ goals, known as agency problem. Asymmetric information between managers and shareholders can lead to moral hazard, that is to fraud.

Examples of fraud are: receiving bribe or gifts; shifting valuable and profit generating transactions outside organisation; illegal appropriation of organisation’s funds or assets as well as falsification of financial data in order to hide fraud activity; deliberate non disclosure or hiding of events, transactions or data; claims for goods or services that were never provided to organisation; deliberately not taking actions even though its regulated by law and company’s rules; unauthorised or illegal use of confidential information; unauthorised or illegal use of information network or software; and theft.

Association of Certified Fraud Examiners (ACFE, 2014) divides frauds into corruption, asset misappropriation and financial statement fraud (Figure 2).

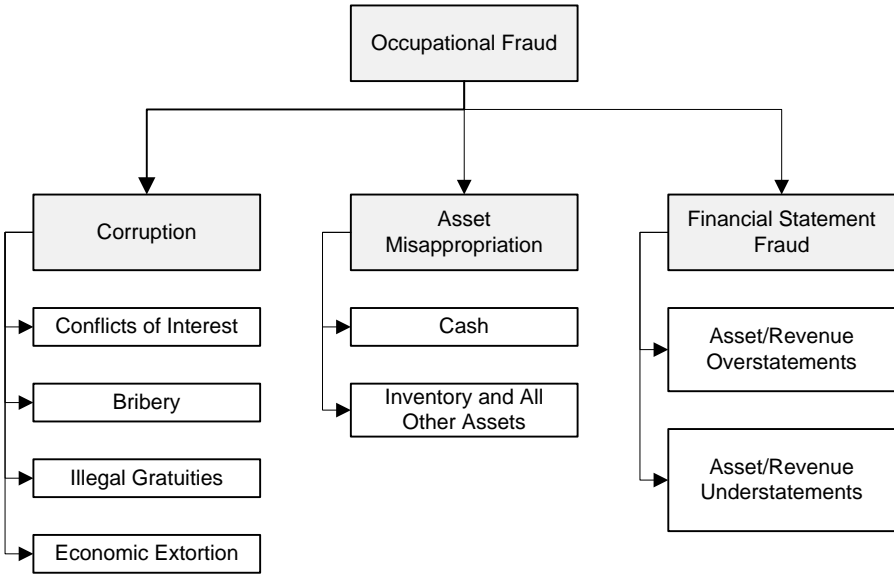


Figure 2. Classification of fraud in organisation
 Source: Association of Certified Fraud Examiners, Fraud Tree, 2014.

Frauds and illegal activities in businesses are phenomenon to which no country (Braithwaite 2010; Brennan, McGrath 2007), no social system (Burke 2010), no company is immune. Many foreign (Dyck, Morse and Zingales 2010) as well as domestic (Bešvir 2010) authors were dealing with this issue and trying to identify phenomenon of fraud or illegal activities (Cohen, Ding, Lesage, Stolowy 2010). Authors were dealing with profits of persons committing fraud (Dorminey, Fleming, Kranacher, Riley 2010), motivation for committing fraud (Ernst, Young 2010), forms of fraud and methods for possible solution of this problem (Hermanson 2009).

The total cost of fraud will be difficult to objectively assess, in particular, will be difficult to calculate the indirect damage caused by fraud. Some frauds will never be discovered. Therefore, we can only talk about estimated losses due to fraud. Association of Certified Fraud Examiners has in 2014¹ disclosed survey results based on national fraud reports. It is estimated that organisations around the world on average lose 5% of annual revenues to fraud. According to Global Fraud Study from 2014 it is

¹ ACFE-Association of Certified Fraud Examiners (2014). Report to the nations on occupation fraud an abuse, 2014 Global fraud study. Note: more than 1000 companies were involved in research and that research is conducted for 11 years already.

estimated that world’s BDP for 2013 was 73.85 trillion USD, therefore 5% of BDP loss due to fraud is more than 3.7 trillion USD. Also, it is estimated that 5% of employees are always willing to commit fraud, 10% are willing to commit fraud, while 85% can tend to commit fraud in favourable circumstances.

It is estimated (OLAF 2014) that economy of EU only due to corruption has lost 120 billion EUR, which is slightly less than annual budget of EU. Therefore, battening fraud contributes to competitiveness of EU and world’s economy.

Corporate scandals and frauds were reasons for development of OECD principles of corporate governance (Hussain 2011) with the aim of implementing best practices of governance into companies. Good corporate governance can help to prevent corporate scandals, fraud, and potential civil and criminal liability of companies (Todorovic, 2013).

Three factors impact committing fraud (Lord 2010). They are opportunity, motive and rationalization (Picard 2012). Although, auditors maybe can’t find motive and rationalization for committing fraud, they are expected to be knowledgeable enough with internal controls in order to find opportunities for fraud.

International Standards for the Professional Practice of Internal Auditing are based on principles and provide framework for implementation and improvement of internal audit (MOPP 2014). Standards are compulsory but they can not be interpreted in such a way that they are contrary to local legislations. Certain Standards shown in Figure 3. are linked to internal auditor’s duties in fraud control. Under fraud control in organisation we imply implementation of anti-fraud strategy with prevention, detection, investigation, monitoring and fraud report processes.

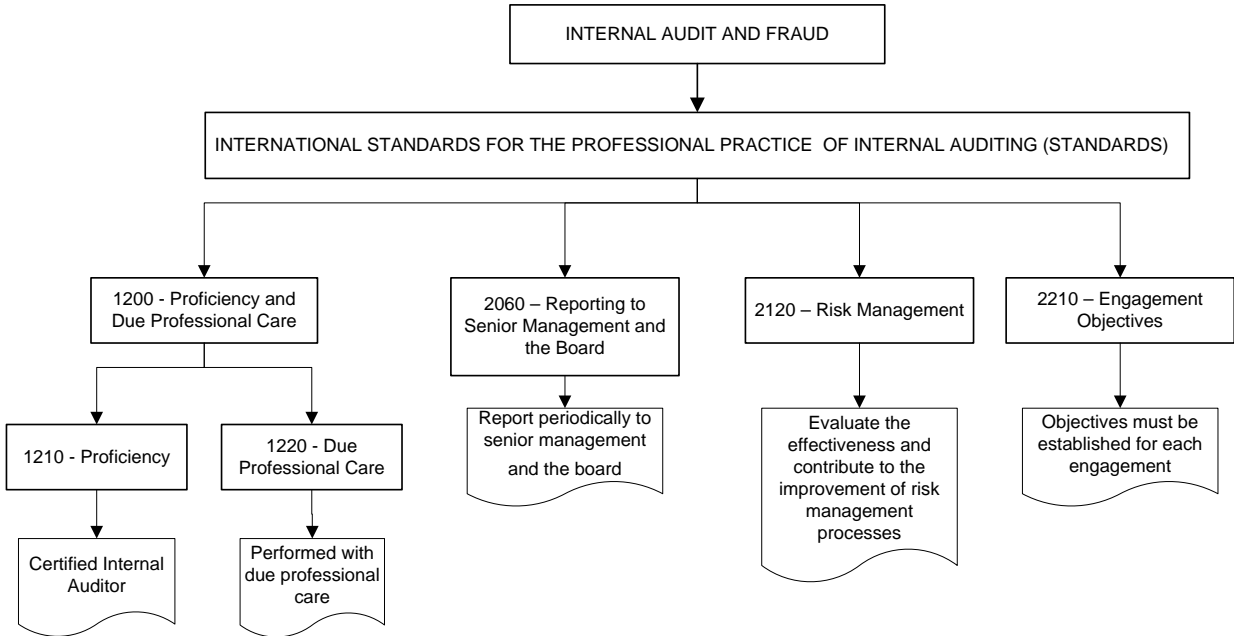


Figure 3. International Standards for the Professional Practice of Internal Auditing
 Source: International Standards for the Professional Practice of Internal Auditing (Standards). 2012.

Paper only deals with accountability of internal auditors for fraud prevention. Fraud prevention implies actions that will discourage fraud doers and limit exposure to frauds (Wells 2010),

through assessment, planning and implementation of controls that proactively prevent fraud (Coenen 2008). Fraud preventions is reached through: implementation of anti-fraud culture and zero fraud tolerance; testing and training of employees; implementation of procedures and processes for fraud prevention, effective communication, surveillance and control; maintaining effective internal control and risk evaluation framework.

Therefore, research hypothesis of paper is: “Designing and implementing fraud prevention process will discourage fraud doers and reduce frauds in organisation”.

3. RESEARCH METHODOLOGY

Paper applies combined research methodology using both quantitative and qualitative methodologies of scientific research. Quantitative methodology helped us to gather numeric data, with aim of investigation and explanation of links between variables, establishing connections between examined phenomena. Qualitative research we have gathered data through interviews and surveys.

Data was gathered from the University Clinical Centre of the Republic of Srpska in Banja Luka which is the largest and the most significant public healthcare institution in the Republic of Srpska.

Interviews were conducted based on structured survey, where interviewees are asked about specific fraud questions that provide us with data for analysis of dependant and independent variables related to prevention and detection of fraud. Collected data helped us to test hypothesis.

Additional data was collected by **questionnaires**. Questions are written is such a way to reflect key criteria for fraud prevention. Criteria is determined based on International Standards for the Professional Practice of Internal Auditing, particularly segments regarding role of internal auditor’s in assessment of fraud risk and best practice for fraud prevention. Principles about fraud preventions are formed based on discussion with internal auditors and managers. Questionnaires main goal is to expand and improve quality of on data collect through interviews. Qualitative data collected by questionnaires is evaluated by Deming Cycle.

4. RESULTS

Results in table 1. and figure 4. show cumulative results of level of compliance with fraud prevention requirement.

Table 1. Results of level of compliance with fraud prevention requirement

No.	Description	Score UKC RS	Max. Score
1.	Fraud prevention procedure	0	5
2.	Fraud risk management	0	5
3.	Internal control system	2	5
4.	Internal audit	3	5
5.	Fraud control department	0	5
6.	Fraud prevention training	0	5

7.	Fraud reporting	2	5
8.	Control of suppliers and customers	0	5
9.	Control of potential employees before employment	0	5
Average score		0,71	5

Source: authors

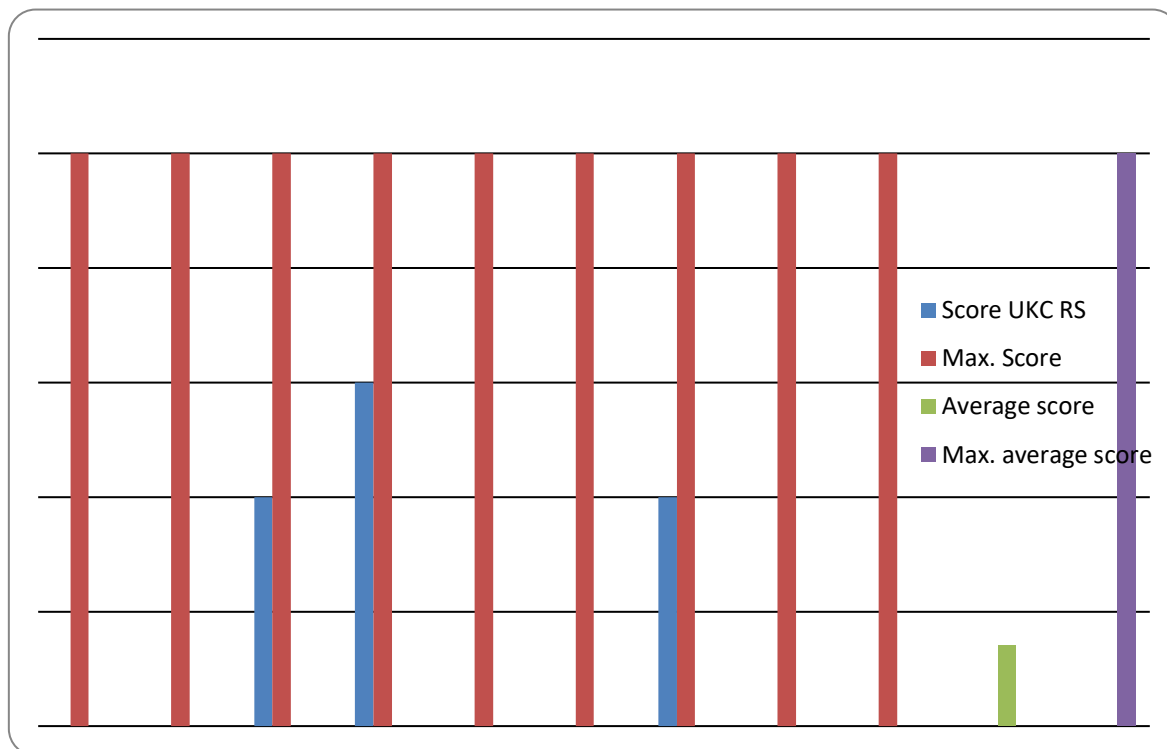


Figure 4. Graph of level of compliance with fraud prevention requirement

Source: authors

Analysis of data regarding level of compliance with fraud prevention requirement for the University Clinical Centre of the Republic of Srpska (UKC RS) shows that UKC RS has score of 0.71 (14.20%) from maximum score of 5, which indicates that there is no evidence and that UKC RS does not comply with fraud prevention requirement.

UKC RS had no compliance for 6 out of 9 fraud prevention requirements, that is had no procedure for fraud prevention, didn't manage fraud risk, didn't have established fraud prevention department, no fraud prevention training, no controls of suppliers and customers and no control of potential employees before employment. In other 3 there was a limited compliance with fraud prevention requirement (internal control system, internal audit and fraud reporting).

Because UKC RS didn't comply with fraud prevention requirements and implemented anti-fraud procedures we were not able to identify impact of fraud prevention on fraud detection.

Therefore, we used different method to assess level of fraud prevention. Assessment of fraud prevention level was done by Balance Scorecard method and cumulative research results are shown in table 2 and figure 5.

Table 2. Scores based on Balance Scorecard for fraud prevention

FRAUD PREVENTION			
		Maximum Score	UKC RS Score

1.	CONTROL ENVIRONMENT	40	7,5
2.	FRAUD PREVENTION ASSESSMENT	30	0
3.	CONTROL ACTIVITIES	20	4,5
4.	INFORMING PUBLIC ABOUT FRAUD	5	0
5.	MONITORING	5	0
	TOTAL	100	12

Source: authors

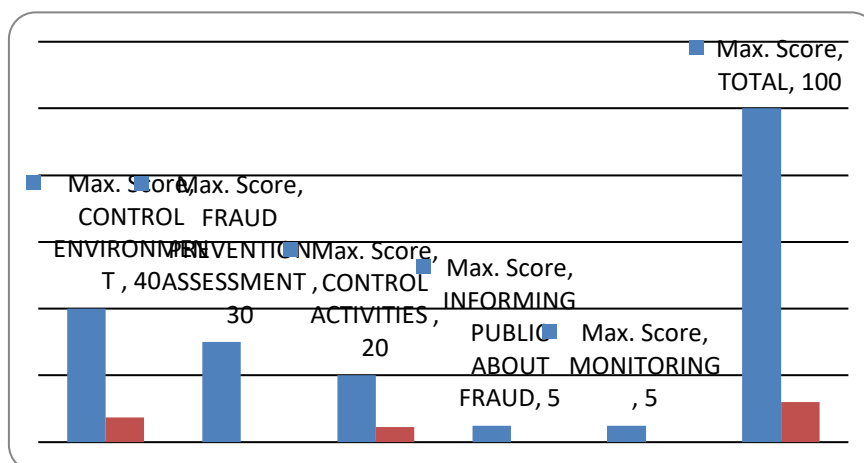


Figure 5. Fraud prevention level

Source: authors

Total cumulative score for fraud prevention is 12 out of maximum 100 which indicates that we have also identified with this method that level of fraud prevention of UKC RS is unsatisfactory because it's under the 65% level.²

Fraud prevention analysis indicates that UKC RS has low level of compliance with requirements which leads to conclusion that UKC RS does not have implemented fraud prevention process and that organisation is exposed to fraud activities.

In order for UKC RS to implement fraud prevention process and discourage fraud-doers we have designed fraud prevention process. Process is based on all fraud prevention requirements and principles. This fraud prevention process is described in flow chart shown on figure 6.

² Satisfactory level has a score between 65% and 75%. Score from 75% to 100% is incentive for companies to implement higher principles.

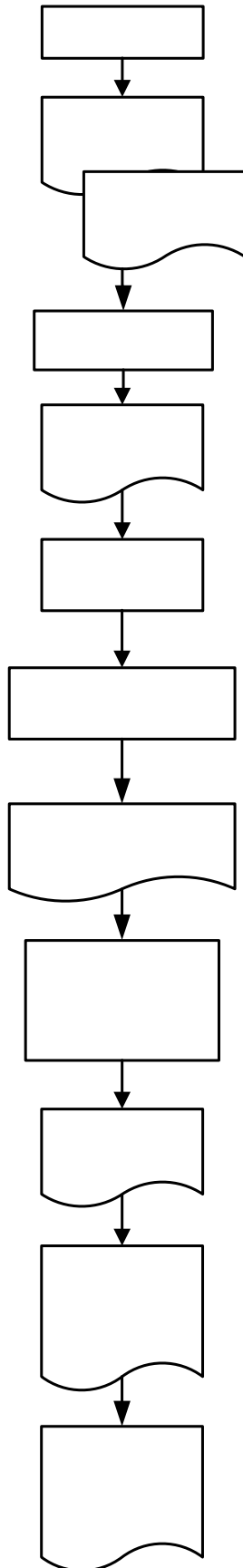


Figure 6. Fraud prevention model
Source: authors

Model of fraud prevention process includes following activities: defining organisational policies regarding zero fraud tolerance and implementation anti-fraud culture; defining accountability for fraud prevention in Code of corporate governance; determining fraud risk; determining control points and establishing internal control in processes; fraud prevention training for employees and spreading anti-fraud culture; establishing reporting channels for fraud suspicion; establishing fraud prevention department; analysis of documentation and procedures for fraud prevention; identification of appropriate processes for fraud prevention and implementation of these processes.

Implementation of fraud prevention model will discourage fraud-doers and reduce fraud in organisation.

5. DISCUSSION

List of questions for fraud prevention has been designed by many organisations. In Report to the Nations on Occupational Fraud and Abuse from 2010 Association of Certified Fraud Examiners has designed checklist to help organizations test the effectiveness of their fraud prevention measures. This checklist is comprised of following questions:

1. Is ongoing anti-fraud training provided to all employees of the organization?
 - a. Do employees understand what constitutes fraud?
 - b. Have the costs of fraud to the company and everyone in it — including lost profits, adverse publicity, job loss and decreased morale and productivity — been made clear to employees?
 - c. Do employees know where to seek advice when faced with uncertain ethical decisions, and do they believe that they can speak freely?
 - d. Has a policy of zero-tolerance for fraud been communicated to employees through words and actions?
2. Is an effective fraud reporting mechanism in place?
 - a. Have employees been taught how to communicate concerns about known or potential wrongdoing?
 - b. Is there an anonymous reporting channel available to employees, such as a third-party hotline?
 - c. Do employees trust that they can report suspicious activity anonymously and/or confidentially and without fear of reprisal?
 - d. Has it been made clear to employees that reports of suspicious activity will be promptly and thoroughly evaluated?
3. To increase employees' perception of detection, are the following proactive measures taken and publicized to employees?
 - a. Is possible fraudulent conduct aggressively sought out, rather than dealt with passively?
 - b. Does the organization send the message that it actively seeks out fraudulent conduct through fraud assessment questioning by auditors?
 - c. Are surprise fraud audits performed in addition to regularly scheduled fraud audits?
 - d. Is continuous auditing software used to detect fraud and, if so, has the use of such software been made known throughout the organization?
4. Is the management climate/tone at the top one of honesty and integrity?
 - a. Are employees surveyed to determine the extent to which they believe management acts with honesty and integrity?

- b. Are performance goals realistic?
 - c. Have fraud prevention goals been incorporated into the performance measures against which managers are evaluated and which are used to determine performance-related compensation?
 - d. Has the organization established, implemented and tested a process for oversight of fraud risks by the board of directors or others charged with governance (e.g., the audit committee)?
5. Are fraud risk assessments performed to proactively identify and mitigate the company's vulnerabilities to internal and external fraud?
 6. Are strong anti-fraud controls in place and operating effectively, including the following?
 - a. Proper separation of duties
 - b. Use of authorizations
 - c. Physical safeguards
 - d. Job rotations
 - e. Mandatory vacations
 7. Does the internal audit department, if one exists, have adequate resources and authority to operate effectively and without undue influence from senior management?
 8. Does the hiring policy include the following (where permitted by law)?
 - a. Past employment verification
 - b. Criminal and civil background checks
 - c. Credit checks
 - d. Drug screening
 - e. Education verification
 - f. References check
 9. Are employee support programs in place to assist employees struggling with addictions, mental/emotional health, family or financial problems?
 10. Is an open-door policy in place that allows employees to speak freely about pressures, providing management the opportunity to alleviate such pressures before they become acute?
 11. Are anonymous surveys conducted to assess employee morale?

Comparing checklist published in Report to the Nations on Occupational Fraud and Abuse with checklist which we have established for assessing level of fraud prevention, following advantages of checklist which is implemented in this research can be indicated:

- Checklist systematically included all important questions related to fraud prevention.
- Checklist is divided into five key sections: control environment, fraud risk assessment, control activities, informing public about fraud and monitoring.
- Checklist is comprised of 30 questions and 50 sub-questions.
- For assessing level of fraud prevention we have used Balance Scorecard methodology with integrated scoring scale, weighing factors and compliance score.
- Methodology is comparable with similar researches as it is based on assessing level of fraud prevention.

Based on established checklist we have created model for fraud prevention which is, with certain adjustments, applicable to most of organisations.

6. CONCLUSION

Fraud is a problem in the modern world, which is present in different forms and sizes, even in economically powerful, democratic and organised countries. Fraud presents a major problem for transitional countries in which democratic, institutional and value systems are not enough developed. In these countries, inadequately developed political and legal mechanisms can not provide an effective battle against fraud on all levels.

Fraud in a social sense influences changes in the value system and rationalisation which tries to justify illegal behaviour. Fraud impacts legitimacy and credibility of government institutions, threatens implementation of the legal system, causes mistrust of citizens in government and political instability by increasing the gap between the elite and citizens. In Bosnia and Herzegovina fraud is a key problem for lagging behind in economic development of the country. Even though there is no exact data on fraud we assume that costs related to fraud are way over 5% and that Bosnia and Herzegovina is getting close to countries with extremely high corruption which lose more than 20% of revenues of organisations to fraud.

Previous strategies for battling fraud did not give any effect. The main problem is that previous strategic commitments which were passed on the highest level of government were not passed down to business systems of organisations. Therefore, in this paper we have presented an original model for fraud prevention which is applicable to business systems in organisations. The fraud prevention model is based on the following main activities: acceptance of zero fraud tolerance at the highest level in organisation; implementing anti-fraud politics in the Ethical code; defining accountability for fraud prevention in the Code of corporate governance; fraud risk assessment; implementation of internal controls; assessment of internal control processes, risks and corporate governance by internal audit and providing recommendations for improvement; fraud prevention training for employees; establishing reporting channels for fraud suspicion; controls of suppliers and customers and control of potential employees before employment.

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APPROCHING EUR/CHF EXCHANGE RATE VOLATILITY IN ALBANIAN MARKET

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ABSTRACT

This paper explores the forecasting of EUR/CHF exchange rate volatility in short term period in Albanian market, being that Euro is the mostly used currency in financial and commercial transactions and furthermore together with Swiss franc are considered as safe currencies with a probabilistic volatility distribution statistically interesting. Precisely the latter, represents a continuous concern for the economic agents dealing with the above mentioned exchange risk, hence the measurement of its volatility helps them in the assessment and maintenance of capital needed for coverage purposes almost referring to trade balance trend toward Euro-Area and not as well as to the Eurobond issued. Under these circumstances, the financial time series dynamic models such as ARMA (1;1), ARCH (1) and GARCH (1;1) are used to estimate the EUR/CHF exchange rate volatility in short term period. The last one, which at 95% confidence level displays satisfactory statistical parameters in confront of the others in terms of normal residuals distribution is also used to forecast EUR/CHF exchange rate during 2015 in correspondence of moving average method based on latest 252 exchange rate values. In statistical terms the comparison of EUR/CHF exchange rate forecasted data through GARCH (1;1) model with the current ones demonstrated a good robustness of the latter at the confidence level taken into consideration. Therefore, the research in question suggests to the economic agents dealing with these kinds of transactions the implementation of GARCH models for the estimation and forecasting of EUR/CHF exchange rate volatility in the short term period, necessary for risk management purposes.

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1. INTRODUCTION

The present research aims to identify the functional form of EUR/CHF exchange rate volatility in Albanian market, necessary to economic agents exposed to the above mentioned exchange risk not only for its forecasting needs in short term period but mainly for the assessment and maintenance of economic capital for coverage purposes. Namely, by considering EUR/CHF exchange rate and its variance statistical behavior (see Fig.1&2), leads to the understanding that precisely the last one makes the issue interesting in the market in question. What correspondently has also frequently contributed in the depreciation of domestic currency (Albanian Lek) against foreign currencies mainly used in the country. Referring to these kind of circumstances, worth mentioned that domestic currency has been significantly

depreciated against foreign currencies due to: trade liberalization, implementation of flexible exchange rate regime and import volume growth as per primary services and goods necessity (in 1992); political/social issues followed consequently by the financial/economical instability (in 1997); the entrance of common currency of European Union (EURO) and the significant increase of imports and remittances in the country in this currency (in 2001-2002); the continuous depreciation of domestic currency against USD has maintained the same trend due to country's economic slowdown (during 2012-2014), at the end of January 2015 as per CHF overestimation against EUR in the financial markets while during the rest of year in question it marked a slight overestimation against both currencies in question.

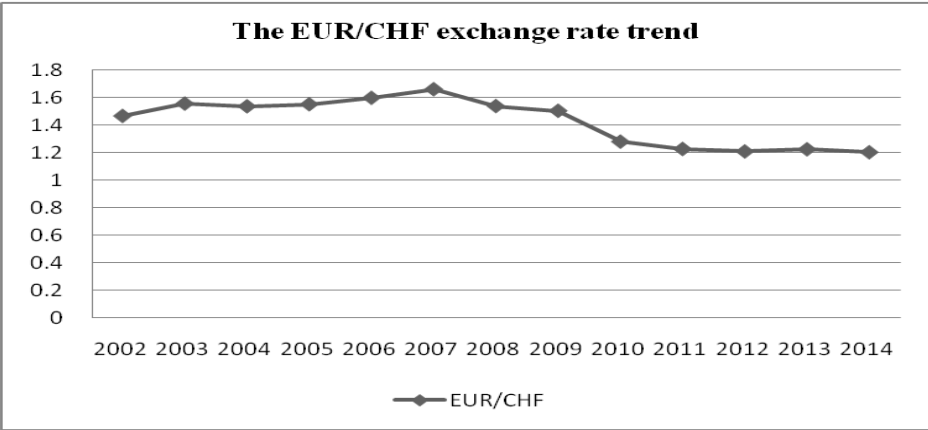


Figure 1: The EUR/CHF exchange rate trend (2002-2014)

Source: Bank of Albania data, author's elaboration.

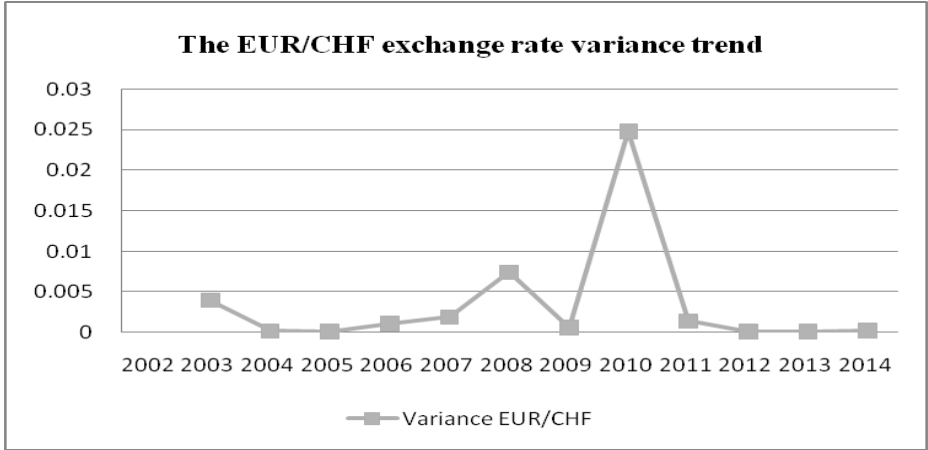


Figure 2: The EUR/CHF exchange rate variance trend (2002-2014)

Source: Bank of Albania data, author's elaboration.

Meanwhile is observed an increasing export trend toward Euro-Area and European Union especially to Italy year after year, but the value of these exports in 2014 felt about 52% of the total value. The same drop in exports is verified toward countries such as : France, UK, Germany, Spain, Switzerland, China. Contemporary they are increased in countries such as: Kosovo, Macedonia, Turkey, Greece, Austria and

Egypt and the transactions are performed in EUR, CHF and USD. From the other side imports have maintained a positive trend by generating a consistent gap in country's trade balance (see Fig.3).

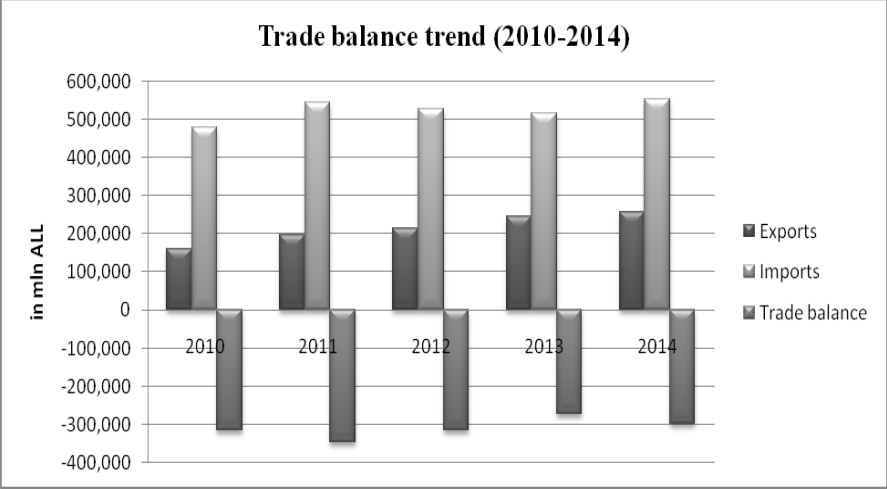


Figure 3: Trade balance trend (2010-2014)
Source: Bank of Albania data, author's elaboration.

Correspondently frequent oscillations are obtained regarding EUR/CHF exchange rates first order differencies which directly leads to the understanding of domestic currency depreciation/overestimation against both currencies by contributing in a certain way in the analysis in question and orienting the study into the financial time series dynamic models. Therefore the paper is developed through the raise of three hypotheses aiming to accurately explore the EUR/CHF exchange rate volatility charateristics in short term period in Albanian market helping by this way the economic agents in respective Value at Risk (VaR) calculation.

2. LITERATURE REVIEW

In general, the literature presents disputed empirical results regarding the impact of various factors on exchange rate volatility, but how is addressed the exchange rate volatility modeling issue on it? There are also many studies that deal with exchange rate volatility modeling, although most of them are focused mainly on finding the volatility sources for an appropriate market risk estimation and management according to Marrison (2002). And precisely for this reason they differ on the way how handle the exchange rate volatility issue. Especially the latter can be treated in two large groups. The first group pertains to the studies that use different standard deviation errors' modifications in autoregressive models while in the second one are classified the models that treat auto-correlated errors attitude with varying variance, the also called Autoregressive Conditional Heteroskedastic volatility models (ARCH). The latest was firstly developed from Engle (1982) and Bollerslev (1986) and further explored from Giot and Laurent (2001). As well as further modifications of ARCH approach can

be found in Orlowski (2004). While, Belke and Setzer (2003) belong to the first group of researchers as they studied exchange rate volatility impact in labor market of Visegrad. From the other side Baum et al. (2004) by analyzing the impact of exchange rate volatility on bilateral exports volume applied a GARCH-type (Generalized Autoregressive Conditional Heteroskedastic volatility) model through which were made respective volatility measurements. Specifically, here for the exchange rate volatility modeling is used TARARCH (an ARCH model with consistent autoregressive terms) model even it assumes that negative information distort the market as evidenced from Zakoian, (1994). And in fact, through TARARCH models are analyzed the current developments in exchange rate volatility in Czech Republic, Poland, Hungary and Slovakia. The authors suggest it as they can't distinguish any difference between exchange rates and capital time series behavior. However, the literature shows another model which can be used in these cases and is a first order GARCH model. In addition other GARCH-type models were further developed from Sentana (1995) trying to detect also variance structural breaks (they demonstrate irregularities in financial time series related to heteroskedasticity problems in the data analyzed) and are usually present in financial time series on behalf of Bali and Guirguis (2007). Contemporary some simpler models like ARMA (which represents an autoregressive moving average process) are equally used to analyze and forecast exchange rate time series in compliance with Box et al. (2008) and Brooks (2002) proposed methodologies. Furthermore researchers, referring to time series characteristics initiated respective analysis from the best model (in statistical terms) that explains exchange rate volatility in order to forecast future values by keeping in mind the evidences of Brooks (1997) and Hsieh (1989) in this context. Also according to Engle (2001), Dowd (2002), Žiković (2008), Erdemlioglu, Laurent and Neely (2012) and Duffie and Pan, (1997) these models represent the best methodology in measuring exchange rate volatility or respective returns. By also giving the option of the largest loss expected calculation under a certain probability level during a given time period (depending on the exposure) for those entities that are exposed to a certain position and consequently are directly affected by exchange rate risk as confirmed from Marcucci (2005).

3. METHODOLOGY

Referring to EUR/CHF exchange rate financial time series (see Fig.4) can be evidenced its heteroskedastic distribution (see Fig.5) and consequently it technically reserves the right to be focus on the financial time series dynamic models for the estimation of EUR/CHF exchange rate volatility and further for its forecasting in short time period. Because these kind of models estimate the differential equations containing the stochastic component (which is missing due to leptokurtic functional form that the financial time series in question presents) and in this case are elaborated through gretl (1.9.8) version.

Another important element observed in the EUR/CHF exchange rate financial time series trend is the asymmetry of distribution which simultaneously confirms also the autocorrelation of respective data. Hence, by strictly referring to these characteristics, generally, two of the functional forms mostly used pertaining to the previously mentioned models are:

- autoregressive models (AR);
- moving average models (MA). And the Box-Jenkins (1970-1994) methodologies, combine these models in order to build the extended models ARMA (autoregressive moving average models).

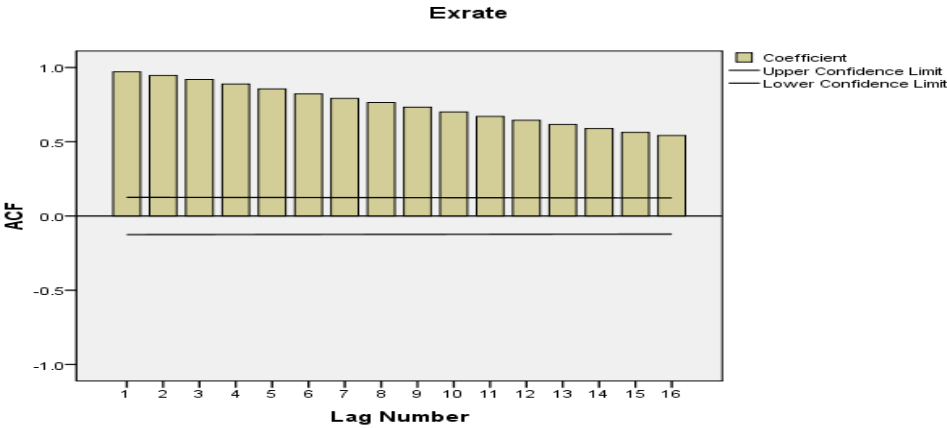


Figure 4: Lack of stochastic component in the EUR/CHF exchange rate trend during 2014
 Source: Bank of Albania data, author’s elaboration.

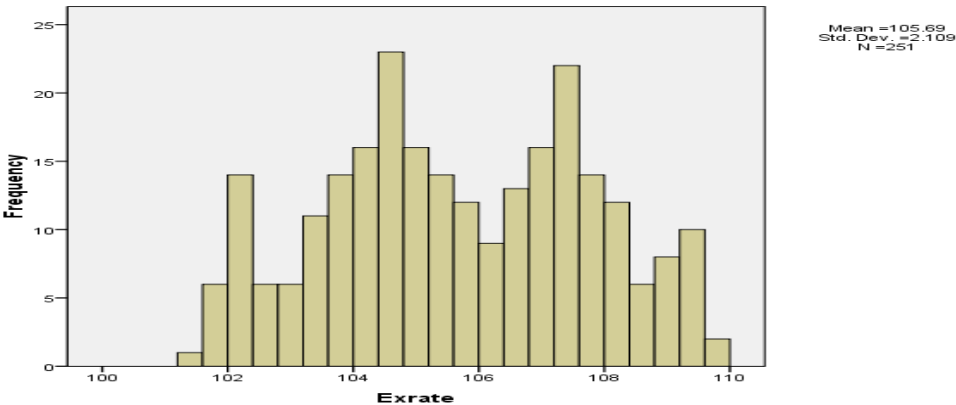


Figure 5: The EUR/CHF exchange rate frequency distribution during 2014
 Source: Bank of Albania data, author’s elaboration.

As they are used to describe the non-stationary of a financial time series, but in order to implement them in the time series in question, must be avoided its trend component and the last one is possible through the application of natural logarithm on EUR/CHF exchange rate financial time series first differences. The above transformation is used in order to verify the short memory of EUR/CHF exchange rate financial time series which simultaneously helps in a better understanding of respective behavior by

implementing some simple financial time series models. Precisely for this purpose, is used the daily EUR/CHF financial time series for the entire year 2014.

3.1. The research hypothesis

H1-The ARMA (1;1) model can accurately estimate EUR/CHF exchange rate volatility in short term period;

H2-The ARCH (1;1) model can accurately estimate EUR/CHF exchange rate volatility in short term period;

H3-The GARCH (1;1) model can accurately estimate EUR/CHF exchange rate volatility in short term period in Albanian market.

4.1 THE ARMA MODEL

The autoregressive process (AR and MA) as can be understand for the name itself, explains the EUR/CHF exchange rate financial time series data and residuals in correspondence of its previous data through a linear autoregressive order and precisely this order determines the entire model order thus, in these cases the model data explain better than anyone else itselfes. But as described in literature, must be estimated the persistence of these autocorrelations (as displayed in Fig.6) before applying it. As evidenced cat be confirmed the first order autocorrelation of EUR/CHF exchange rate data at 95% confidence level and the same situation persists to the residuals autocorrelation (refer to Fig.7&8). By this way, is deemed necessary to implement ARMA (1;1) models (refer to Table.1 data) for the forecasting of EUR/CHF exchange rate volatility even why the previous results don't confirm it. So, the **hypothesis H1 of the study is rejected**. And in order to prove the ARMA (1;1) model validity, it must be refer to respective residuals distribution and compare it within normal ones.

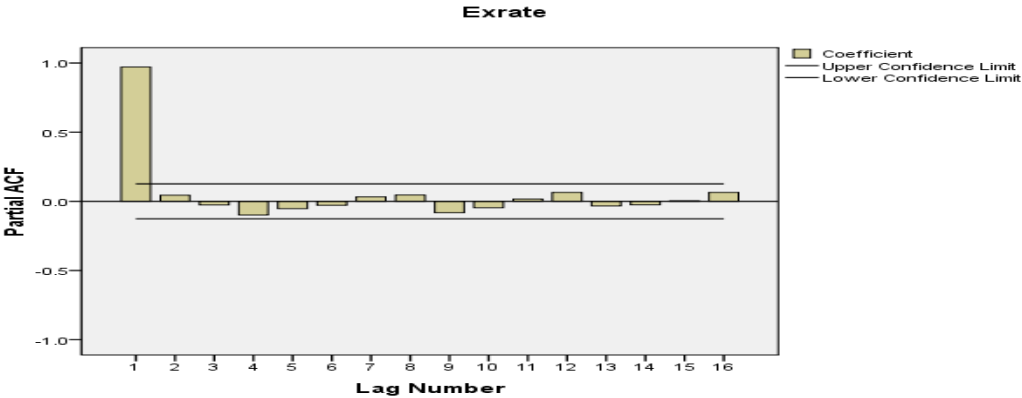


Figure 6: The EUR/CHF exchange rate data correlogram
 Source: Bank of Albania data, author's elaboration.

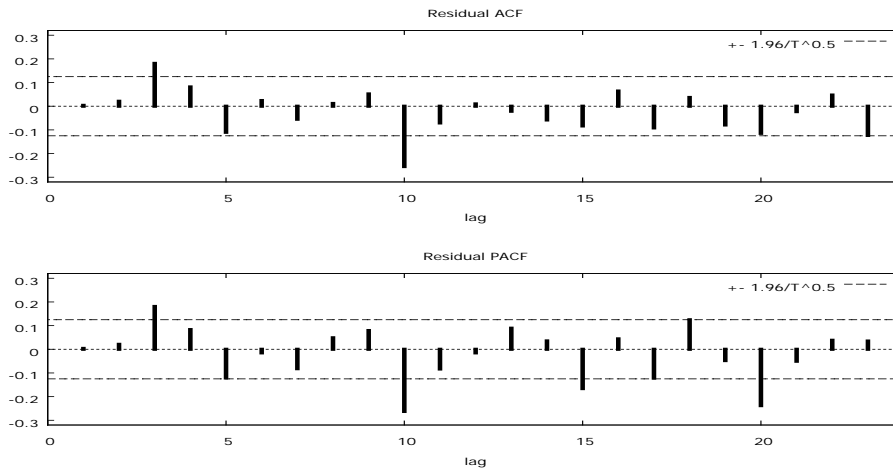


Figure 7: The ARMA (1;1) model residuals correlogram results

Source: Bank of Albania data, author's elaboration.

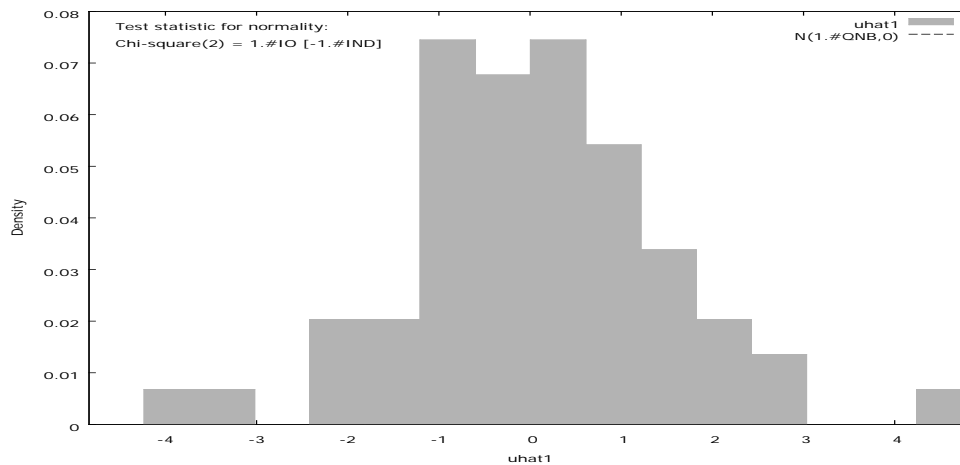


Figure 8: The ARMA (1;1) model residuals' normality test results

Source: Bank of Albania data, author's elaboration.

Table 1: ARIMA, using observations 2014/01/01-2014/12/31 (T = 251)

Estimated using Kalman filter (exact ML)

Dependent variable: EUR/CHF

Standard errors based on Hessian

	coefficient	std. error	z	p-value
const	0.106745	0.192539	0.5544	0.5793
phi_1	0.883882	0.0338065	26.15	1.11e-150 ***
Phi_1	-0.441638	0.0599420	-7.368	1.74e-013 ***
theta_1	-0.0242688	0.0706410	-0.3436	0.7312

Mean dependent var 0.100528 S.D. dependent var 0.985289

Mean of innovations 0.000082 S.D. of innovations 0.531432

Log-likelihood -194.6098 Akaike criterion 399.2195

Schwarz criterion 416.7462 Hannan-Quinn 406.2767

The results obtained by this way, demonstrate that the previously mentioned residuals aren't normally distributed and furthermore do not fit with the actual ones (see Fig.9). As far as can be understood, ARMA (1;1) model residuals' are significantly distributed in the extreme values. And this ascertains that other models should be explored in order to accurately estimate and forecast EUR/CHF exchange rate volatility in Albanian market.

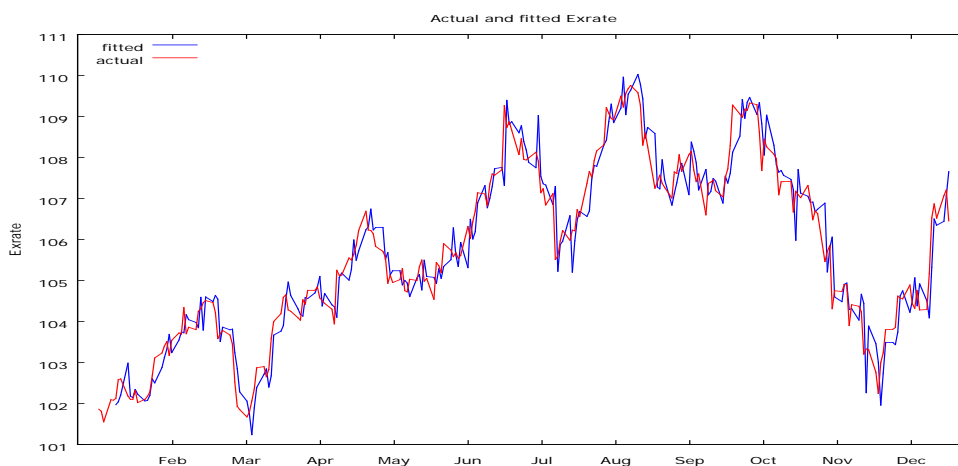


Figure 9: The ARMA (1;1) residuals' versus actual ones

Source: Bank of Albania data, author's elaboration.

4.2 THE ARCH MODEL

As previously mentioned is the phenomenon of heteroskedasticity manifested in EUR/CHF exchange rate financial time series data that negatively impacts on its behavior which is actually transformed in its primarily risk unit. In order to particularly include in the analysis this phenomenon, another model category must be explored, precisely it should be dealt with that category which is able to directly treat the heteroskedasticity of financial time series. In fact these ones have gained a special interest in the academic and applicative field. Namely, Engle (1982) paved the way to the detailed analysis that exists today over the models called ARCH (*Autoregressive Conditional Heteroskedasticity models*). Subsequently, it can be implemented ARCH (1) model by referring to H2 hypothesis of the study in order to estimate the EUR/CHF volatility in short term period (respective results are presented in Table.2). The results demonstrate that model coefficients are all statistically significant at 95% confidence level.

Table 2: ARCH, using observations 2014/01/01-2014/12/31 (T = 251)

Dependent variable: EUR/CHF
Standard errors based on Hessian

	coefficient	std. error	z	p-value	
const	105.342	0.220175	478.4	0.0000	***

alpha(0)	0.176721	0.0796777	2.218	0.0266	**
alpha(1)	0.983003	0.124065	7.923	2.31e-015	***

Mean dependent var	105.6884	S.D. dependent var	2.108586
Log-likelihood	-465.8988	Akaike criterion	939.7976
Schwarz criterion	953.8994	Hannan-Quinn	945.4725

While by referring to the specification test, the criterions of Akaike and Schwarz are significant and this leads to the understanding that ARCH (1) model can't accurately estimate EUR/CHF exchange rate volatility **by rejecting also the H2 hypothesis of the study**. Same results are obtained from residuals full and partial autocorrelation as well as from normality test (see Fig.10&11). All this from the other side reconfirms the presence of heteroskedasticity phenomenon in the financial time series in question. That's why additional dynamic financial time series models are explored in following.

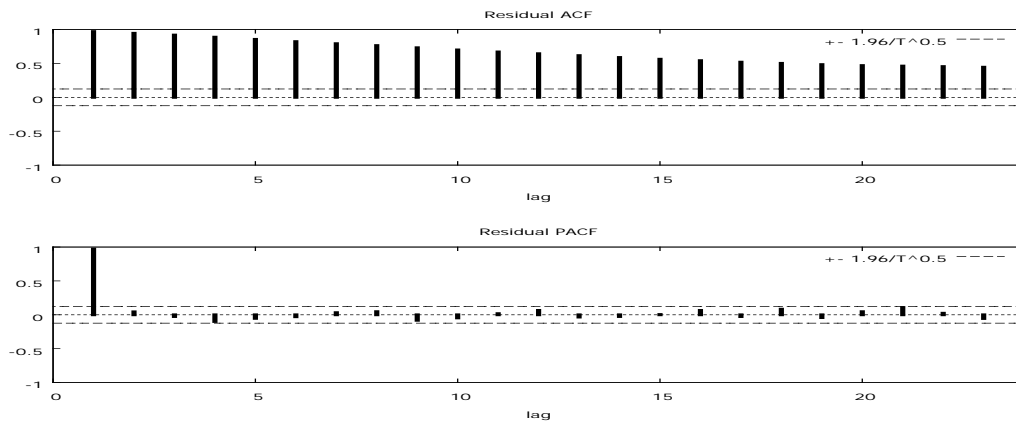


Figure 10: The ARCH(1) residuals full and partial autocorrelation data
Source: Bank of Albania data, author's elaboration.

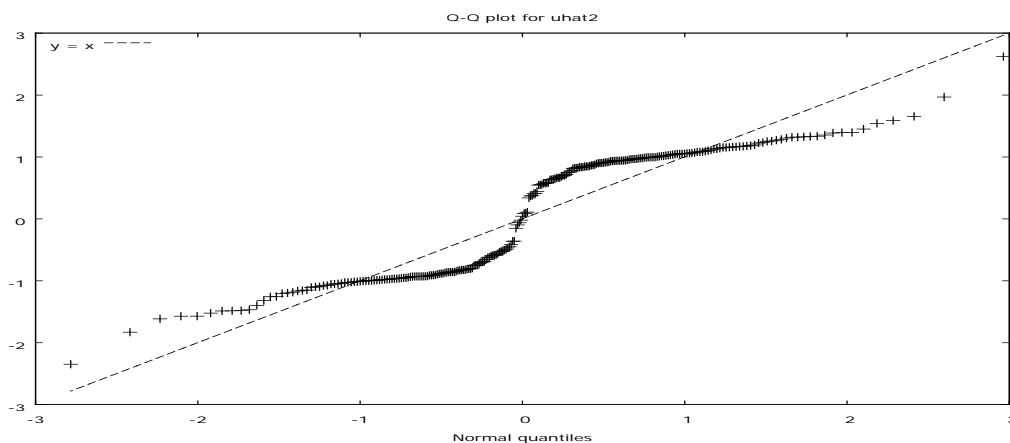


Figure 11: The ARCH(1) residuals quantiles distribution
Source: Bank of Albania data, author's elaboration.

4.3 THE GARCH MODEL

The latter empirical studies pertaining to heteroskedastic autoregressive conditional variance proposed from Bollerslev (1986), have significantly improved the ones proposed from Engle (1982). By this way, born and further developed GARCH (*Generalized Autoregressive Conditional Heteroskedasticity*) models. In this process, called GARCH of the (p; q) order the conditional variance doesn't represent only the autocorrelation function of squared EUR/CHF exchange rate financial time series variables (p-variables) but also to the respective squared residuals (q-variables).

Differently said, these kinds of models correspond to squared ARMA models. By this way, trying to estimate the validity of H3 hypothesis of the study is developed GARCH (1;1) model (see Table.3 data).

Table 3: GARCH, using observations 2014/01/01-2014/12/31 (T = 251)

	Dependent variable: EUR/CHF			
	Standard errors based on Hessian			
	<i>Coefficient</i>	<i>Std. Error</i>	<i>z</i>	<i>p-value</i>
alpha(0)	283.347	24457.1	0.0116	0.0076
alpha(1)	0.926364	9.01156	0.1028	0.04812
beta(1)	0.0483497	9.2615	0.0052	0.99583
Mean dependent var	105.6884	S.D. dependent var		2.108586
Log-likelihood	-1525.894	Akaike criterion		59.787
Schwarz criterion	73.889	Hannan-Quinn		3065.462

Two of latest coefficients are statistically significant at 95% confidence level, but the specification tests results aren't reduce in confront of ARCH (1) model. From the other side the residuals' normality distribution results conduct to an identical and consequently to a symmetrical data distribution by concluding in the H3 hypothesis acceptance.

4.3.1 The forecasting of EUR/CHF exchange rate volatility in short term period through GARCH(1;1) model

The estimations done regarding EUR/CHF exchange rate volatility through GARCH (1;1) model demonstrate that the last one can accurately do it, but in any case, beyond the statistical estimations in order to confirm the acceptance of H3 hypothesis of the study through the forecasting of financial time series in question in short term period.

More specifically, for this purpose is implemented the moving window method for the short time period forecasting of EUR/CHF exchange rate data (within a day period) for the entire year 2015 in correspondence of latest 252 exchange rate data pertaining to 2014 as presented in the Fig.12.

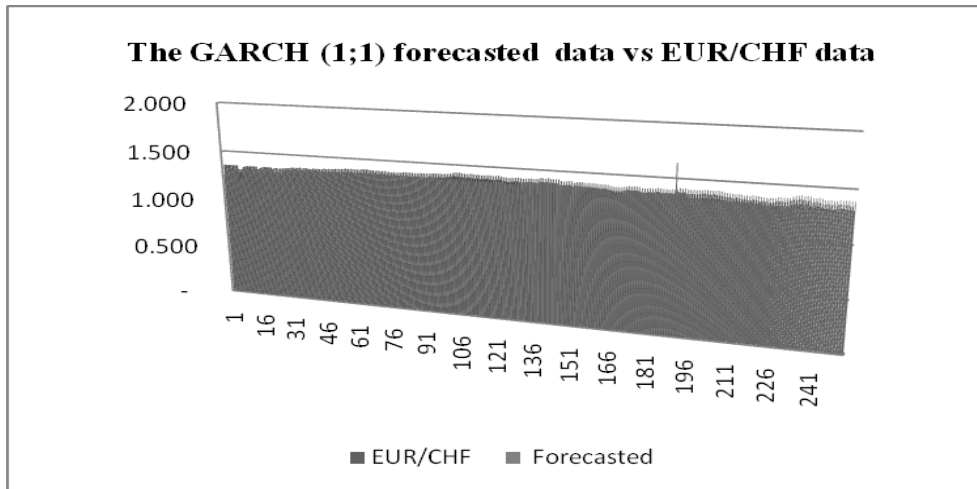


Figure 12: The USD/ALL exchange rate forecasted data through GARCH (1;1)
 Source: Bank of Albania data, author's elaboration.

5. CONCLUSIONS

The detailed analysis of EUR/CHF exchange rate volatility in Albanian market demonstrated that no one of simple models described and explored as above such as ARMA (1;1) and ARCH (1) weren't capable to accurately estimate its volatility. Referring to statistical results the forecasted data have exceeded the minimal threshold 2 times and never the maximal one (see Fig.13). **So it can be concluded in the acceptance of H3 hypothesis of the study.**

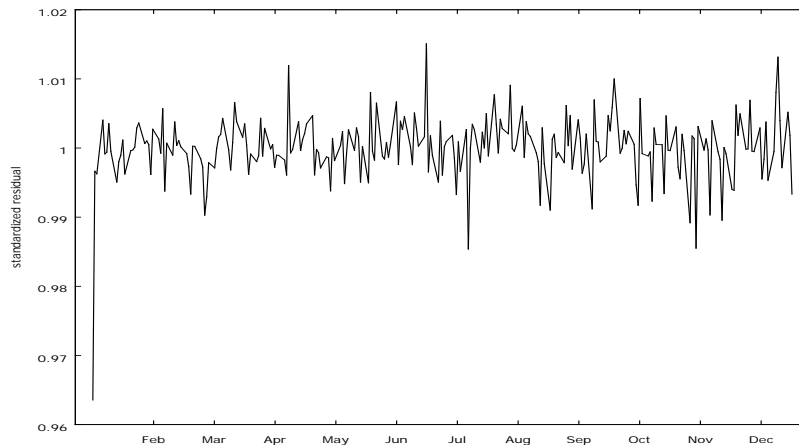


Figure 13: The distribution of USD/ALL exchange rate data without its trend component
 Source: Bank of Albania data, author's elaboration.

By this way, in order to analyze and better manage EUR/CHF exchange rate volatility the GARCH (1;1) model is used. Furthermore it can also be implemented for the EUR/CHF exchange rate returns forecasting and economic capital estimation for coverage purposes (refer to Fig.14).



Figure 14:The EUR/CHF exchange rate return data estimated through GARCH (1;1)

Source: Bank of Albania data, author's elaboration.

Hence, depending on the circumstances the exploration of GARCH models from the rational economic agents operating in the country and exposed to the above mentioned fluctuations makes possible even respective Value at Risk calculation for a certain time period under a given confidence level what simultaneously positively contributes in the exchange risk management approach.

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Are There Relationship among Stressor, Behavior, and Employee Performance? A Case of Civil Servants in Bantul, DIY, Indonesia

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ABSTRACT

High stressors can be experienced by employees, both by civil servants and private sector employees. This could have an impact on the positive and negative behaviors of employees and could eventually affect employee performance. The purpose of this study is to examine and analyze the effect of stressors on deviant behavior (negative and positive) and work performance of civil servants in Bantul, Yogyakarta, Indonesia. This research is a survey research using questionnaires given in private to civil servants as respondents, with a purposive sampling technique. Research results concluded that; (1) stressor of individual and task demands has a significant positive effect on negative behavior, (2) stressor of role demand has no significant effect on negative behavior, (3) stressor of individual demand has a significant negative effect on positive behavior, (5) stressor of task demand has no significant effect on positive behavior, (6) stressor of role demand has no significant effect on positive behavior, (7) negative attitudes have a significant negative effect on employee performance, and (8) positive behaviors have a significant positive effect on employee performance.

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Keywords:

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1. INTRODUCTION

Stress is a condition that can be created by an environmental change which was accepted as a challenge, threaten, or breaking the balance of a person's life. Stress is mostly defined by just observing the stimulus or response experienced by someone (Lazarus & Folkman, 1984). According to Robbins (2005) stress is "a dynamical condition in which the individual face the opportunities, obstacles, or demands that are related to what is very broad and the results are perceived as something uncertain but important". Stress can hit anyone either a private employee or a government employee. The condition that caused stress is called a stressor (Handoko, 1995). There are two kinds of stressor according to Barney and Griffin (1992), the stressor which is related with work (organizational stressor) and the stressor which is not related with work (non work stressor).

This research was carried out in Bantul Regency where was chosen as the object of the research because according to the survey results, this regency has a score value of performance management civil servants 52 (low) whereas the highest score is 80. This indicates that the performances of civil servants of Bantul was still far behind, compared with the performances of the civil servants of Sleman Regency (score 61) and Kulon Progo Regency (score 61) (Pusat Kajian Otonomi Daerah, 2012). This condition could have been caused the presence of stressor that is experienced by the employee. High stressor can cause employees to have an increase in positive and negative behavior either in the work surroundings or outside and in the end it could have an impact on the employees' performance.

2. THEORY AND HYPOTHESES

2.1. Stressor Relationship Patterns, Behavior, and Individual Performances

Stress can be defined through three different ways, as a stimulus, response, and interaction. As a stimulus, if there is a focus on the environment, for example when someone says stress while he is on a depressed conditions, "I feel stress when I have to give a speech. As an interaction, one's relationship with the stimulus' environment, someone here is the active agent who can affect the result of the stressor through behavior, cognition, and emotional strategy (Brannon and Feist, 2007)

In general, stress is a negative condition, that is, a condition which leads to the indication of physical or mental illness or leads to unreasonable behavior (Robbins, 2005). In differentiate between distress, the destructive one, and eustress, the positive. Distress has an impact on mood, skeletal muscle, and vital organs in the body (Robbins, 2005; Munandar, 2008; Luthans, 1998). The condition that caused stress is called a stressor (Handoko, 1995). There are two kinds of stressor according to Barney and Griffin (1992), the stressor which is related with work (organizational stressor) and the stressor which is not related with work (non work stressor).

Robbins (2005) states that, the cause of the stress of work on an employee at least comes from three source, which are: (1) Task demand, i.e. work stress is directly related to the work environment and work directly with the function. The task include these following factors: a night work, workload, and a total comprehension of the risks and dangers. (2) Role demand, i.e. a work stress which is related with the pressure that is given to someone as a function of a particular role. Any labor work as his role in the organization, it means that every labor has a workforce that has to be done, along with the existing rules and in accordance with his superior's expectation. (3) Individual demand, i.e. a work stress that is associated with the pressure created by other employees (Susilo, 2000; Sutherland & Cooper, 2000; Luthans, 1998). Deviant behavior at work places can be caused by the presence of *stressor* which will eventually affect the performance of the employees (Muafi, 2011; Penny dan Spector, 2005; Chen dan Spector; 1992; Fox dan Spector, 1999). A contra productive behavior includes role ambiguity, conflict of roles, workload, organizational limitation, and interpersonal conflict. Based on several previous studies on theory and research, can be found the hypothesis of the research.

- H1. Individual stressor affects significantly positive to negative behavior,
- H2. Task demand stressor affect significantly positive to negative behavior,
- H3. Role demand stressor affect significantly positive to negative behavior,
- H4. Individual stressor affects significantly positive to positive behavior,
- H5. Task demand stressor affect significantly positive to positive behavior,
- H6. Role demand stressor affect significantly positive to positive behavior,
- H7. A negative behavior affects significantly positive to individual performance, and

H8. A positive behavior affects significantly positive to individual performance.

3. METHODOLOGY

This kind of this research is survey. It is done on the Civil Servants in Bantul Regency based on the reason that this regency has a score value of performance management civil servants 52 (low) whereas the highest score is 80. Therefore, the samples and the respondents in this study is some part of all of the Civil Servants in Bantul Regency and it was take as a purposive sampling. The questionnaire was distributed to 150 respondents, and the result that was return decently to be used in the research was 92 questionnaires. Statistic technique was using Partial Least Square. The result of the validity test of all the questionnaire items has a lower significant value than 0,05 so it can be said that the questionnaire item in this research has a good convergent validity. Also, the *cronbach's alpha* value and *composite reliability's* result has a higher value than 0,7. This show that the variable of this research can be said is a reliable one.

4. RESULTS

4.1. Respondents Characteristics

The respondents' characteristics can be viewed through the respondent demography that include year of birth, age, work period, level of education, and gender.

Table 1
Respondents Characteristics

Year of Birth	Frequency	Percentage
1943 – 1960	8	8,7
1961 – 1981	60	65,2
1982 – 2001	24	26,1
Age		
49 – 66 year old	33	35,9
28 – 48 year old	51	55,4
< 28 year old	8	8,7
Work Period		
1 – 3 years	1	1,1
4 – 6 years	13	14,1
7 – 9 years	6	6,5
10 – 12 years	14	15,2
≥ 13 years	58	63,1
Level of Education		
Senior High School	25	27,2
D3/(Scholar)	54	58,7
S2 (Master)	12	13,0
S3 (Doctor)	1	1,1
Gender		
Male	57	62,0
Female	35	38,0
Total	92	100,0

Based on Table 1 can be viewed that the most likely respondents was born between the years 1961 - 1981 which reached 60 people or about 65,2%; the it is followed with respondents who were born between the years 1982 – 2000 as many as 24 people or around 26,1%, and the least was respondents who were born between the years 1943 – 1960, only 8 people or about 8,7%. Most respondents are in the age between 28 – 48 years which reached 51 people or about 55,4%; followed by the respondents between age 49 – 66 years, around 33 people or about 35,9%; and the least likely is respondents which is less than 28 years, of only 8 people or about 8,7%. Most respondents that have worked more than 13 years reaches 58 people or about 63,1%; followed in a row, respondents who have worked for 10 – 12 years as many as 14 people or about 15,2%; respondents who have worked for 4 – 6 years as many as 13 people or about 14,1%; respondents who have worked for 7 – 9 years are 6 people or about 6,5%; and the least was respondents who recently worked for 1 – 3 years, only 1 person or around 1,1%. Latest education of most respondents was scholar, namely reach 54 people or about 58,7%; followed by respondents whose latest education was in senior high school graduation as many as 25 people or about 27,2% respondents; respondents whose latest education was master as many as 12 people or about 13,0%; and the least is respondents whose latest education was a doctoral, only 1 person or about 1,1%. Male respondents are more than female, reaching 57 people or about 62,0%, whereas female respondents are only 35 people or about 38,0%.

4.2. Hypothesis Testing

The result for hypothesis testing can be viewed on Figure 1 and Table 2.

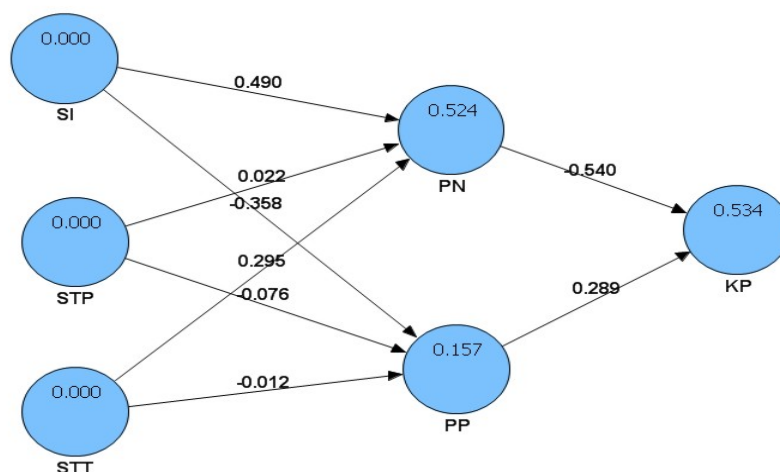


Figure 1. Result of Coefficient Path

Table 2
Coefficient of the Variable Path Research

Path	Path Coefficient	t-statistic	Significance
H _{1a} : SI → PN	0,490	5,037	0,000* (Sign)
H _{1b} : STT → PN	0,295	2,803	0,006*(Sign)

H _{1c} : STP → PN	0,022	0,276	0,783 (ns)
H _{2a} : SI → PP	-0,358	3,051	0,003*(Sign)
H _{2b} : STT → PP	-0,012	0,106	0,916 (ns)
H _{2c} : STP → PP	-0,076	0,670	0,505 (ns)
H ₃ : PN → KP	-0,540	4,253	0,000*(Sign)
H ₄ : PP → KP	0,289	2,215	0,029*(Sign)

Note= * Sign (significant); ns = non significant

5. DISCUSSION

The analysis result influence of the individual stressor that affects towards negative behavior has been earned the t statistic number, 5,037 with the significance level 0,000 which is less than 0,05. This shows that individual stressor affect significantly to negative behavior. The higher the level of individual demand, push an increase of negative behavior.

The analysis result influence of the task demand stressor towards negative behavior has been earned the t statistic number, 2,803 with the significance level 0,006 which is less than 0,05. This shows that task demand stressor affect significantly to negative behavior. The higher the level of task demand, push an increase of negative behavior.

The analysis result influence of the role demand stressor towards negative behavior has been earned t statistic number 0,276 with the significance level 0,783 which is higher than 0,05. This shows that the role demand stressor does not affect significantly towards negative behavior. The changing of the role demand stressor does not affect significantly towards negative behavior changing.

The analysis result influence of the individual stressor towards positive behavior has been earned t statistic number as many as 3,051 which is higher than the t table 1,960 or with the significance level 0,003 which is less than 0,05. This shows that individual stressor affects significantly towards positive behavior. The higher the level of individual demand, push a decrease of the positive behavior.

The variable influence of analysis result of the task demands stressor towards positive behavior has been earned t statistic number 0,106 that is less than the t table 1,960 or with significance level 0,916 that is higher than 0,05. This shows that the stressor variable of the task demand does not affects significantly towards positive behavior. The changing of task demand stressor does not affect towards positive behavior changing.

The variable influence of analysis result of the role demand stressor toward positive behavior has been earned t statistic number 0,670 that is less than t table 1,960 or with significance level 0,505 that is higher than 0,05. This shows that the stressor variable of the role demand does not affect significantly towards positive behavior. The changing of the role demand does not affect towards positive behavior changing.

The analysis result influence of negative behavior towards employee performance has been earned t statistic number 4,253 that is higher than the t table 1,960 or with significance level 0,000 that is less than 0,05. This shows that the variable of negative behavior is significantly affect towards performance of employee. Employees who behave negatively are more likely decrease the employee's performance.

The variable influence of analysis result of positive behavior toward employee performance has been earned t statistic number 2,215 that is higher than the t table 1,960 or with significance level 0,029 which is less than 0,05. This shows that the variable of positive behavior is significantly affects towards the performance of employee. Employees who act a

positive behavior are more likely increase the employee's performance. The whole results also prove a findings that stressor can have impact to deviant behavior in the work place that eventually will affect towards performance (Penny dan Spector, 2005). Chen dan Spector (1992; Fox dan Spector, 1999; Fox *et al.*, 2001) also added that work stressor has a tight relation with the performance of the contra productive behavior which are role ambiguity, role conflict, workload, organizational limitation, and interpersonal conflict

Related to the stressor of task demand, role demand, and individual demand, someone who can manage it will give a positive impact to the increase of positive behavior. It can be an innovation behavior, organizational citizenship behavior, creativity, whistleblowing—in a good way, and corporate social responsibility (Muafi, 2011; Spreitzer and Sonenshein, 2004; Appelbaum, et al., 2007). On the contrary, it will give negative impact, tend to behave negatively, and will also affect the performance of the employee. If a high task demand does not addressed with positive behavior can be harmful either for the individual employee as well as the organization. Employees should be fully aware about the task that is their responsibility so they will give the best result towards organization. Siswanti (2006) added that work stress that is caused by high stressor can be affect directly to aggressive deviant behavior.

However, employees are not always able to play their role and tasks without causing problems. Less well functioning of tasks and role is also able to cause stress. Task and role conflict arise if employees experience a conflict between the task and role that has to be done and the responsibility. Stress arises because of his inability to fulfill the task and role demands while there is lot of expectation towards him. Usually, the reason is lack of work goals, an unclear responsibility, and lack of work procedures. Related to individual demand, psychological reaction, physiology, and in the form of many behavior toward stress is the result's situation with individual employee. Usually it is influenced by behavior patterns based on the attitudes, needs, values, past experiences, life circumstances, and competence. This aspects also needs to be taken care by the organization.

6. CONCLUSION

The conclusions of this research are: (1) individual demand stressor affects significantly positive towards negative behavior; (2) task demand stressor affects significantly positive towards negative behavior; (3) Role demand does not affect significantly towards negative behavior; (4) individual stressor affects significantly negative towards positive behavior; (5) task demand stressor does not affects significantly towards positive behavior; (6) role demand stressor does not affect significantly towards positive behavior; (7) negative behavior affects significantly negative towards the performance of the employee; and, (8) positive behavior affects significantly positive towards the performance of the employee. As for suggestion that could be proposed is: (1) organization requires ways or strategies for stress management. Prevention needs to be done by; time management, relaxation, meditation, the presence of the social support, physical exercises either done individually or organizationally, (2) provide training to employees in accordance with their competencies so that employees who have a high job stress can distribute it to positive behavior, and, (3) performance improvements can be done with the employee is directed to have a positive behavior like innovation, organizational

citizenship behavior, creativity, whistleblowing—in a good way, and corporate social responsibility.

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The Impact of the Iron and Steel Industry to Karabük and Sheffield: A Historical Background**

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ABSTRACT

In this study, the two cities, Sheffield in the UK and Karabük in Turkey, which are famous for iron and steel producing, were analyzed through their historical background to focus on the differences and similarities from an urban perspective. Both the rise in the production of iron and steel in the 18th century through Industrial Revolution and the innovations made Sheffield popular throughout the world. Karabük is called “The Republic City” in Turkey because the first iron and steel works were built in Karabük in 1937 shortly after the proclamation of Republic of Turkey. The museums were visited and the local studies and academic papers were sorted out to see the effects of sudden changes which the heavy industry caused in the cities and it's concluded that the industrial, urban and social experiences of Sheffield may be a guide for Karabük.

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1. INTRODUCTION

The Industrial Revolution began in England sometime after the middle of the 18th century. The revolution was something more than just new machines, smoke-belching factories, increased productivity and an increased standard of living (Historyguide, 2013). England is the first country which achieves the industrial revolution and one of the leading countries in iron and steel industry. Abundance of underground and aboveground sources, mining and technological advances paved the way for England's fast industrialization. Sheffield had been one of the first cities in mass iron and steel production. By the sixteenth century Sheffield was nationally known for its production of knives and blades of all sorts (Linton, 1956). During the Industrial Revolution, a lot of innovations were made in iron and steel production. Sheffield's industries manufactured metal and metal alloy products which in turn helped to advance technological discoveries (Howse, 2011).

The development of the iron and steel industry in Turkey consisted of two phases. They were in the last periods of The Ottoman Empire and The Turkish Republic period. The economy was mostly based on agriculture in The Ottoman Empire. Some operations were applied in order to develop industry in the

period of reforms. However, they were unsuccessful to reach the innovations and production capacity of the Industrial Revolution which began in England and spread to Europe. The reason for this fact was that the beginning and the effects of the industrial revolution fell upon the stagnation and fall period of The Ottoman Empire. In this study, developments in Karabük and Sheffield are researched through historical background since the two cities had been the iron and steel production centres.

2. HISTORICAL DEVELOPMENT OF THE IRON AND STEEL INDUSTRY IN THE WORLD

Archaeological evidence suggests that people have been using iron for at least 5000 years. Iron is the cheapest and one of the most abundant of all metals, comprising nearly 5.6% of the earth's crust and nearly all of the earth's core. Iron metal has been used since ancient times, though copper alloys, which have lower melting temperatures, were used even earlier in human history. The first iron production started in the Middle Bronze Age but it took several centuries before iron displaced bronze. Samples of smelted iron from Asmar, Mesopotamia and Tall Chagar Bazaar in northern Syria were made sometime between 2700 and 3000 BCE. The Hittites appear to be the first to understand the production of iron from its ores and regard it highly in their society. They began to smelt iron between 1500 and 1200 BCE and the practice spread to the rest of the Near East after their empire fell in 1180 BCE. The subsequent period is called the Iron Age. Huge amounts of iron are used to make steel, an alloy of iron and carbon. Steel typically contains between 0.3% and 1.5% carbon, depending on the desired characteristics [1].

Developments in the iron industry also played a central role in the Industrial Revolution. In the early 18th century, Englishman Abraham Darby (1678-1717) discovered a cheaper, easier method to produce cast iron, using a coke-fueled (as opposed to charcoal-fired) furnace. In the 1850s, British engineer Henry Bessemer (1813-1898) developed the first inexpensive process for mass-producing steel. Both iron and steel became essential materials, used to make everything from appliances, tools and machines, to ships, buildings and infrastructure. The steam engine was also integral to industrialization. In 1712, Englishman Thomas Newcomen (1664-1729) developed the first practical steam engine (which was used primarily to pump water out of mines). By the 1770s, Scottish inventor James Watt (1736-1819) had improved on Newcomen's work, and the steam engine went on to power machinery, locomotives and ships during the Industrial Revolution (historyguide.org, 2014).

2.1. 19th Century

Iron is a metal which has been used since prehistoric ages; obtainment procedure by refining iron from ore has greatly accelerated after coke was found in 18th century (Bilir, 2012). Progresses in the areas of construction, transportation and technology have enhanced the use and the need of iron. From the year of 1825 on, while the first road in England was built, railroads have been the preferred system in transportation all over the world (Durak, 2012).

In case of steel production, various processes have been developed. Modern steelmaking process has been started with the use of air blast convertor in duplicate production which was invented by H. Bessemer in 1856 in England. Thomas process has been developed with alterations of implementation of cast iron which contains high incidence of phosphorus in Bessemer process in 1878. Commercial production of Bessemer steel began in 1858 and the output reached a peak in Great Britain and later all over in Europe (Bodsworth, 1998). Innovations in production technology have expanded the whole world and steel production from arising has caused the emergences of many steelmaker countries in the world. Between 1875 and 1896, world's pig iron production more than doubled. In addition, scrap iron was increasingly used as a raw material, particularly for open hearth steelmaking. World pig iron production as is seen on Table 1, had risen from 30.22 million tons to 58.09 million tons between the years of 1896 and 1906. Within this time period, steel production increased from 18.36 million tons to 50.40 million tons.

Table 1. World Production of Pig Iron and Steel 1896 - 1906 Million Tons, (Carr and Taplin, 1962: 183).

Year	Pig Iron	Steel
1896	30.22	18.36
1898	35.30	24.18
1900	39.81	27.83
1901	39.81	30.56
1902	43.36	33.96
1903	45.73	35.51
1904	44.71	35.74
1905	53.24	44.22
1906	58.03	50.40

2.2. 20th century

In the world, only USA, Germany, France and Russia produced steel for trade in the early 1900s. In the years following the end of the World War II, more than half of the world's steel production was provided by the USA. If we count Russia and England's productions in this, the total amount of these three countries' steel production in that period meant 75% of the world's production. However, world's production area of iron and steel industry has considerably expanded today and many countries have become producers (Koca, 2008).

The great financial depression that the world experienced in 1930s and the effects of which continued until 1940s influenced the iron and steel sector, too. The shrinking in demands and the increase in production costs brought about companies' closing down and firings in this period. World steel production, which shows a constant increase tendency, is seen with a rigid fall in the years of great

depression, especially in 1932 in Figure 1. The production, which was 118.880 million tons in 1929, went down to 49.920 million tons in 1932.

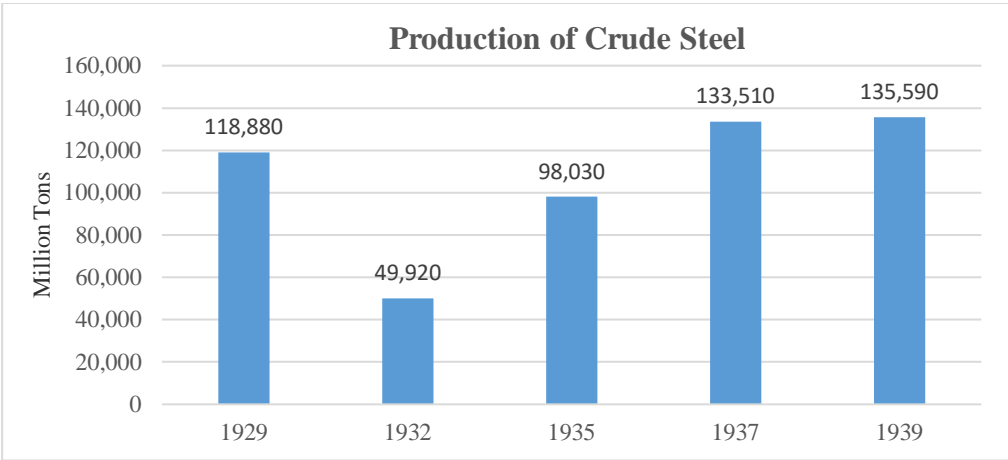


Figure 1. World Production of Crude Steel 1929–1939, Million Tons, (Carr and Taplin, 1962).

2.3. 21st century

World’s steel production tends to increase demand for steel products and accordingly the increase of consumption rate. As seen in Table 2, world’s ultimate consumption of steel rose to 756, 6 million tons in 2000 from 591, 4 million tons in 1985 and mounted to 1.208,5 million tons in 2007 by developing 6,9% per year in the period of 2000-2007. Turkey reached a consumption level of 23,8 million tons in 2007 by increasing its iron and steel consumption by 9,4% per year in the period of 2000-2007 (Koca, 2008).

Table 2. World’s Ultimate Consumption of Steel (1985-2007)

Year	Consumption (Million Tons)
1985	591,4
2000	756,6
2007	1.208,5

The countries which increased their production most in 2011 were South American countries. Production in the area reached to 48.5 million tons by increasing 10, 2% per year. Productions of North American countries produced approximately 119 million tons with an increase of 6, 8%. Productions of EU countries in 2011 reached to 177. 4 million tons with 2, 8% increase while productions of Asian countries surpassed 988 million tons with an increase of 7, 9% per year. Production of raw steel in Middle-East countries reached 20.9 million tons with 6, 9% increase while African countries’ production, influenced by political instability, decreased to 14,3 million tons with a fall of 13,8% [2]. In

Figure 2 world's steel production increased by three times in around 40 years. The production was 595 million tons in 1970 went up to 1 billion 547 million tons in 2012.

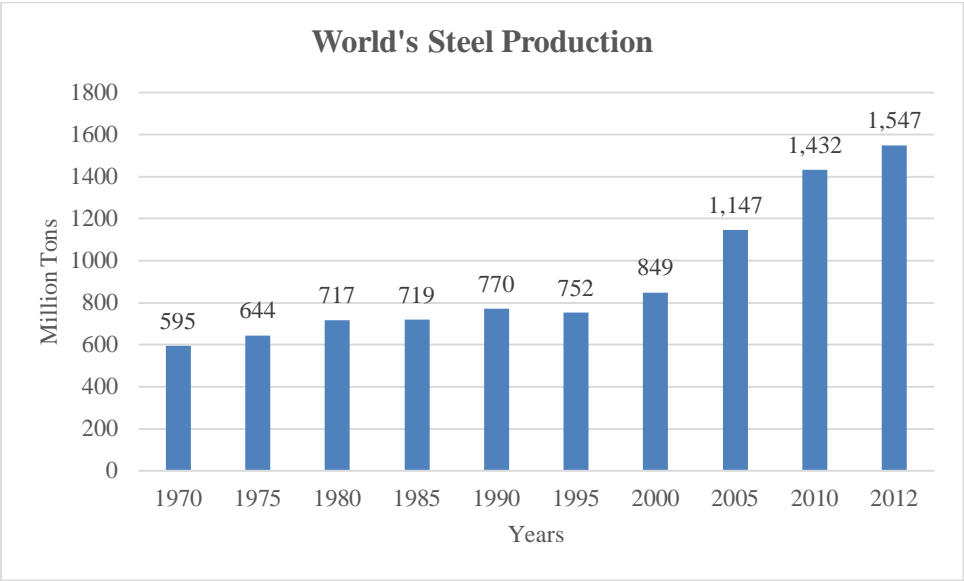


Figure 2. World Production of Crude Steel 1970 - 2012, [3]

3. THE HISTORY AND THE DEVELOPMENT OF IRON STEEL INDUSTRY IN TURKEY

3.1. Pre-Republic Period

Iron in Ottoman times, was generally mined by the local public and then bought by the government and engraved in order to be sent to the cast house in Istanbul for making war equipment. Iron used in these cast houses were taken from previous Ottoman territory Bosnia, Serbia, Greece, Bulgaria, Kalecik, Keban and Kigi (Duman, 2008).

Industrial and technical dominance of The Ottoman Empire continued until the late 18th century. What draws attention in this century is the development of machine production industry which started in England first and rapidly spread to the other Western European countries. Being unable to keep up with these rapid developments, The Ottoman Empire started to fall behind in terms of economy. While the large industry rapidly developed in this period, The Ottoman Empire was financially exhausted. Also the political influence of The Ottoman Empire cleared away. Capitulations disabled The Ottoman Empire to adjust the customs tariffs freely (Duman, 2008).

3.2. After Republic Period

Turkish Republic, being founded after the fall of Ottoman Empire in the World War I, had an economy lacking modern industrial institutions. What it had earlier had been destroyed in the war. In the economy,

the production of industry and craft were weighed more and besides that, limited industrial business depended on textile. A fast process of reconstruction and industry began after the proclamation of the republic announced on the 29th of October in 1923. Turkey, going through a hard and long war period, headed towards iron steel and mechanization which are the first cores of defence industry. It made it hard without a previous history of production. The iron and steel industry was dependent on foreign sources. New financial and industrial institutions were started to be founded. Within this scope, Industry and Maadin Bank was founded in 1925 after which Teşvik-i Industrial Law was introduced. The first legal regulation about that ‘The Law about the Iron Industry Institution’ was accepted on the 17th of March in 1926. With this law, Iron Industry Head Office was founded on the 11th of May in 1926. With the legal steps, it was aimed to support private enterprise. Yet, Turkey was affected negatively because of the financial negations. Included in the process was state industry resulting in no private enterprise (Kütükçüoğlu, 2012: 32).

After a short period of the announcement of the republic of Turkey, Machinery Chemist Industrial Institution (MKEK) was founded which was the first step and the basic core of the industrial structure got into operation in 1928. The other plants started to operate in Ankara and Kırıkkale at certain intervals. Then, all these plants had become as a major centre for the production of armaments. Light Weapon and Gun Repair Shops, Casing and Carpenter Factories in Ankara in 1924, Brass Factory, Electric Machinery Factory in Kırıkkale in 1928 and Munitions Factory in Kırıkkale in 1929 were the first to go into operation. Later, Kayaş Primer Factory in Ankara in 1931, Steel Factory in Kırıkkale in 1931, Mamak Gas Mask Factory for producing gas masks in Ankara, powder, rifle and gun factories in Kırıkkale were established in 1936. These factories have underlain today’s MKEK [4].

3.3. 1960s’ and the period after 1960

The second iron and steel plant of Turkey was planned due to emerging economic conditions of the country and increased demand for products. The construction and installation works of Ereğli Iron and Steel Plants (ERDEMİR) started in 1961 and were completed in a short time of 42 months and they started production with the capacity of about 0.5 million tons of raw steel and 0.4 million tons of flat steel on May 15, 1965 [5]. Later, Iskenderun Iron and Steel Plants (İSDEMİR) being the third integrated plant of Turkey were established in the vicinity of Payaş (Yakacık), which is 17 km from Iskenderun, on the shores of the Mediterranean in the south of Turkey on October 3, 1970. On the date of establishment, it was settled on an area of 16.75 million m² in total (factory site is 6.8 million m²) with its community facilities. İSDEMİR is the only integrated plant producing long and flat products of Turkey with its 3.5 million tons/year of hot-rolling capacity which was put into use in 2008 [6].

Numerous iron and steel products like metal things, machine, pipe and section have been produced in iron and steel production plants in Turkey and these products have been basis of national economy due to the fact that they have provided input to all other sectors which are from automotive to white goods. When it came to 2005, iron and steel sector made progress thanks to public and private sector enterprises in Turkey. Although the Turkish steel industry declined; in December 2012, Turkey managed to maintain its position currently ranked 8th of the world's largest steel producers [7]. Among steel producing countries in Europe, it has ranked second after Germany. This is an indication of the importance given to steel production and advancing technology in Turkey. The usage of steel and steel products has become popular all around the world. Turkey's position in the world steel production is important and steel production will play an important role in the country's development. Turkey has increased its raw steel production by 5.2% with producing 35.8 million tons that year compared to 34, 1 million tons a year ago. With this performance, Turkey has been the eighth country among the top ten countries in the ranking of the World Raw Steel Production [8].

4. IRON AND STEEL INDUSTRY IN KARABÜK

4.1. 1937-1995 Period

In this period, Karabük Iron and Steel Plant (KISP) has been the first and biggest step for the establishment of the iron and steel sector and the prevention of foreign-source dependency in Turkey. The foundations of KISP were laid by Prime Minister Ismet İnönü in Karabük on April 3, 1937. KISP kept increasing their capacity of production from the year 1939 till the year 1989. But, it could not get its old golden years back after the strike even though they got an agreement on the subject. Institution's competitive force in the domestic market ran short because it was not being able to keep up with the technological advancements and there was a heavy burden on the public with the raw material export and the increase on the iron-steel products imported to the country. In addition, it caused uneasiness inside the institution that the demands of the workers were rejected in the meetings between the union and the governments of that time. Besides, there was an excessive employment, which was a political reality that governments could not prevent (Kalyoncu, 2007).

4.2. After 1995

In 1994, the banking crisis led to the introduction of the April 5 measures in Turkey. In accordance with the April 5th Economical Stability Precautions by the government of that time in 1994, KISP Board of Directors was decided to have establishments stop their operations. However, union and non-governmental organizations got together and reclaimed that the institution is the most important source of income of the region. Due to the objection of the locals to the closure of the institution, the option of transferring it to the workers and the public use by the way of customizing was started to be considered. Thus, a community named 'city council' was formed consisted of craftsmen, industrialists, union and

management part of the institution participated in. Afterwards, the Board of Entrepreneurship was founded by Öz-Çelik Labor Union and the Commercial and Industrial Chamber of Karabük. Transfer conditions of the integrated institutions were negotiated between the government and the Board of Entrepreneurship. At the end of it, the institution was decided to be customized (Kalyoncu, 2007).

As a result, through the privatization process, KISP works were taken into the program of customizing by the Customizing High Commission with the 94/16-numbered and 13.12.1994-dated verdict. The shares of the factory which were turned into Karabük Iron Steel Factories A.Ş (Incorporated Company) on the 13th of January in 1995 were transferred to Karabük Iron Steel Industry and Trade Corporation (Kardemir Inc.) which had 12.7000 multi partners including factory workers, locals, craftsmen and industrialists [9]

5. IRON STEEL INDUSTRY IN SHEFFIELD

Sheffield, making a name for itself in the production of fork, knife and other sharp tools in the local scale, got attuned to technological advancements from being a part of iron steel production to atelier production. During the 19th century, Sheffield gained an international reputation for steel production. Many innovations were developed locally, including crucible and stainless steel, fuelling an almost tenfold increase in the population during the Industrial Revolution. Sheffield received its municipal charter in 1843, becoming the City of Sheffield in 1893. The major event in the history of steelmaking was the making of Stainless Steel which was pioneered at Sheffield in 1903 - although it was developed in Germany and the USA at around the same time. Sheffield was a major centre for the manufacture of armaments during the first and second world wars and as a target for enemy bombing, suffered much wartime damage [10].

5.1. The Production of Iron and Steel

The expansion of the Sheffield steel industry was achieved largely by means of the endeavors of many relatively small concerns operating with comparatively little capital and often in very restricted premises. In 1856 there were no fewer than 135 steel-making firms in Sheffield, most of them founded by cutlers or other steel users (Linton, 1956). Much of Sheffield's early industrial development was based on water power. Steam power was first used locally to work the pumps that drained the deeper coal mines (Liddament *at al*, 1997). Later, the use of steam engine in manufacturing and the innovations in production of steel increased the amount of production. The first important change was the substitution of steam for water-power in grinding, a change which was not possible until James watt, in 1871, had made his improved steam-engine capable of rotative motion. No doubt the abundance of water-power and its relative cheapness had favoured the localization of the cutlery trades in the Sheffield region, but water power was subject to the disadvantage of irregularity, since it might fail through

drought in summer or freezing in winter. Certainly from the late 18th century, it was being superseded, though slowly. 1794 there were 3 steam-driven wheels and 83 driven by water; by 1908 only 8 water-driven wheels were in use as compared with 300 driven by steam (Linton, 1956).

5.2. The period before the World War I

The rapid growth in industrial process with the mass production resulted in the need of human work force, and the industrial revolution triggered the migration to the industrial centres throughout the UK. When the commercial and industrial activities were compared with other cities, apart from being the oldest city Sheffield, did not make production just for England markets. During the 16th century, the companies in Sheffield produced and exported the steel productions to firstly to Spain and Austria and later to the Arabic world (Fine, 1992).

Sheffield also became the city of innovations coal and steel and sub-industry. An event which greatly stimulated the expansion of Sheffield trade was the invention of silver-plating by Thomas Boulsover. He became a cutler and in 1742, while repairing a knife, part copper and part silver, he accidentally fused the two metals. This suggested to him the possibility of coating copper with a silver covering. Developing the process, which is now called “Sheffield Plate”, he plated buttons, buckles and snuff-boxes (Vickers, 1987). By 1750, silver plated tea pots, cups, plates and candlesticks became very popular because of their shiny and silver appearance in the middle-class (Wray *at al*, 2001). This invention soon led to growing number of silversmiths and an Assay Office for stamping silverwork was opened in Sheffield in 1773 (Vickers, 1987).

In 1740, Benjamin Huntsman, a Doncaster clockmaker came to live at Handsworth, little knowing that he was to have a profound effect upon one of Sheffield’s principal industries, the iron and steel trade. In 1740, he moved to Sheffield where there was a better supply of the coke he needed as a fuel. He first settled in the district of Handsworth just to the south of the centre of Sheffield where he carried out his experiments in secret [11]. After many years of experimenting, he finally perfected his crucible steel process and realised that this process could be used to make superior tools and cutlery. His experiments led to the invention of crucible steel, that is steel melted at a high temperature in sealed clay crucibles, a crucible being a kind of pot. Huntsman had made Sheffield internationally famous as a steel-making centre. The industry had expanded so rapidly that by the mid-19th century the Sheffield region manufactured 90 per cent of British steel and nearly half the European output (Hey, 2010:154).

The first integrated factory was the Sheaf Works near the canal basin, built in 1823 for William Greaves, manufacturer of steel, razors and cutlery mainly for the American market, later taken over by Thomas Turton and Sons who manufactured saws, files, edge tools and railway springs. This was followed by the Globe Works, built for the Ibbotson Brothers between 1825 and 1830. By 1850 integrated factories were also operated by two of Sheffield’s most famous cutlery manufacturers, Joseph Rodgers and Sons, at the Norfolk Works and George Wostenholm and Son at the Washington Works; and by one of the two leading silver plate manufacturers, James Dixon and Sons, at Cornish Place (Jones, 2005).

Sheffield, being the pioneer the city in steel production in England was registered in London. The Great Exhibition was organized in London in 1851. 158 firms from Sheffield participated in this international industrial exhibition to present their productions. 6 million people visited this exhibition which was open for 4 months.¹ As seen in Table 3 (Tweedale, 1995), there were lots of large steel producer firms in Sheffield in those years. The largest firm was Jessop with its 120 furnaces. The following firm was Sanderson Bros with its 110 furnaces.

Table 3. Leading Sheffield Steel Firms, (1852)

Company	Converting Furnaces	Crucible Holes
Jessop	10	120
Sanderson Bros.	10	110
Naylor&Vickers	8	90
Firth	N/A	80
Beet&Griffiths	N/A	70
Turton&Sons	11	48
Johnson&Cammel	6	40
John Brown	4	40

In Sheffield, with the rise in steel making, the production of rail systems increased. John Brown made his first rails in 1860 and for a time was the largest rail maker in the world. In 1861 Charles Cammel started the same trade. In 1871 George Brown founded Brown, Bayley&Dixon, in Attercliffe, in order to manufacture Bessemer steel and rails. By 1873 the Sheffield district was able to make about a quarter of a million tons of rails per annum. America, in particular, was a major customer for Sheffield steel. It has been estimated that in 1871 Brown’s and Cammel’s alone exported to the U.S about three times the whole domestic American output. The other famous name in special steels is that of Harry Brearley

¹ This information was gotten personally from the Industrial Museum in Kelham Island in Sheffield after visiting the interactive sections and observing the exhibition.

(1871-1948), a man with a working-class background and little formal education who found employment at the Brown-Firth Research Laboratory. While working in his lab in 1912 he discovered a low-carbon steel containing about 12 per cent chromium which resisted corrosion. The first called “rustless steel”, but the name that caught on was “stainless steel”. The usefulness of this discovery for the Sheffield cutlery industry soon became apparent (Hey, 2010).

Then, in 1939 he was presented with the Freedom of the City of Sheffield (Jones, 2005). Harry Brearley was certainly the pioneer of stainless steel but after he left Brown Firth Research, his successor Dr. W.H. Hatfield went on to develop a stainless steel which even today is probably the widest used alloy of this type. It is referred to as “18/8”. This steel also includes nickel [12]. The population of Sheffield started to increase in parallel with industrial renewals in England. In 1851, the population of Sheffield being a borough was 135.310, after 1893 being a city, its population arrived to 400.000 in 1901 (Hey, 2010).

5.3. First and Second World War Period

Sheffield was an important centre for supplying the England’s war machine during the First World War. Sheffield steel was used to make a range of armaments, from bayonets and guns to heavy naval shells, as well as defensive products such as helmets and armour plate. Sheffield’s steel companies experienced major growth during the war resulting in a significant increase in the industrial labour force. By 1915 over 5.000 women were employed at Thomas Firth and Son’s National Projectile Factory at Templeborough. (Firth's produced over 4 million shells and 2 million steel helmets). Hadfield’s had a workforce of over 15,000 by the time the war ended and was Sheffield’s largest employer. New lodgings were built in the manufacturing areas to accommodate the influx of workers - huts on Tyler Street, Petre Street and at Tinsley were built in 1916 for the Ministry of Munitions [12].

By the beginning of the First World War, in spite of the steady expansion of the light steel trades, the heavy steel traders dominated industry in Sheffield. While its sister industry had expanded slowly and unevenly, the heavy steel industry had gone forward by leaps and bounds. The industry employed about 40.000 workers in 1914, an increase of 80 per cent since 1891. Between 1891-1911, employment in steel making had increased by 50 per cent and in engineering by more than 80 %. There were 193 firms in the city engaged in refining and manufacturing steel, 41 firms engaged in rolling and forging steel and there were 33 foundries (Jones, 2004). In 1911, the number of people working in heavy industry was 38.379, while the number of people in cutlery and light industry was 34.800 (Pollard, 1959). By 1914, Sheffield had become the world leader for armour, projector and certain alloy steels (Hey *at al*, 1997). When the First World War ended, the demand for the armour and shells etc. ascended, the firms in the city confronted some fiscal problems. After the war in 1921 there were 65.724 workers in heavy industry and there were 40.536 workers in light industry (Pollard, 1959).

The price of steel decreased and unemployment had broken out. In the middle of October 1920 there were less than 6000 unemployed workers in the city but within a week this had more than doubled to 13.000 and a year later the figure had risen to between 40.000 and 50.000. After that date over the next decade there were periods of marked improvement but also major setbacks and between May and September 1932 unemployment in the city was between 60.000 and 70.000 out of a total workforce of 171.000 a staggering figure of between 35 and 41 per cent. It has been estimated that employment in Sheffield's heavy trades decreased from 66.000 in 1921 to 47.000 in 1931- a fall of nearly 29 per cent. But technical change went on in this period of recession and depression. The electric arc furnace, which had been introduced just before the outbreak of the First World War became increasingly important in the production of special steels, output from electric arc furnaces rising from 55.000 tons of ingots and castings in 1920 to 221.000 tons in 1939, more than three-quarters of total British electric arc production (Jones, 2004).

Through the crises years, firms had come together to prevent increasing stress on the steel producers. In 1928 Vickers and Cammels amalgamated to form English Steel Company (ESC). In 1930 Firths and Browns amalgamated to form Firth-Browns and in 1934 further amalgamations of Firth Vickers Stainless with ESC created the English Steel Corporation. In this period, the steel firms in North America and in Europe closed the gaps in technological developments and in steel production and they had become forward in heavy trades market. In the years leading up to the start of Second World War, the industry was reinvigorated and output reached new heights. By 1939 Firth-Browns were melting 145.000 tons of liquid steel compared with 79.000 tons in 1934 (Machan, 2010).

During Second World War, Sheffield became geared to supply the Army, Navy and Air Force. Parts for all the tanks, Churchills, Valentines, Cromwells, Centaurs and Shermans, in use by the Allies were also produced by the English Steel Corporation in Sheffield. HMS Sheffield was launched on 23 July 1936. The cruiser had a displacement of 9.025 tons, was 591 feet in length and was armed with heavy guns. Because of the many fittings of Sheffield stainless steel, the cruiser was known throughout the Navy as the Shiny Sheff (Vickers, 1987).

The steel industry was in full production during the 1950s. By the end of the decade, United Steel's profits rose from 9 million Pounds in 1954 to 23 million Pounds in 1960. In the late 1950s, the English Steel Corporation regularly achieved profits of 4-5 million Pounds. Firth-Brown trading profits increased from 586.173 Pounds in 1949 to 2.2 million Pounds in 1960 (Hey, 2010). In 1954 in Sheffield,

100 % of hot-rolled strip, 97,2 % of tyres, wheels and axles, 95 % of rods and bars in coil, 95 % of tool and magnet and 88,3% of high-speed steel as percentage of the U.K were produced (Linton, 1956).

In the immediate post-war period stretching into the 1950s and 1960s, Sheffield's heavy steel and engineering industry remained in full production, profits were large and there were even labour shortages (Jones, 2004) and for the first time attracted large numbers of workers from overseas, particularly people who had been born in East or West Pakistan (Hey *at al*, 1997). The period also saw the giant combines nationalized by the Labour Government in 1949, de-nationalised by the Conservatives between 1953 and 1955 and re-nationalised by Labour in 1967 (Jones, 2004).

5.4. 1970's

Until the 1970s, Sheffield had boasted virtually full employment, with unemployment rates consistently below the national average. The global oil shock of 1974 and the increasing globalization of trade and manufacturing dealt a major blow to British industry and Sheffield was among the cities hardest hit. Its status as a centre for primary production with an economy which was heavily reliant on its manufacturing sector, left it highly vulnerable in the face of industrial decline. The steel crisis was a recession in the global steel market during the 1970s recession, following the end of the post-World War II economic boom and the 1973 oil crisis. During the 1970s, Britain suffered a long running period of relative economic malaise, dogged by severe inflation, strikes and union power as well as inflation, with neither the Conservative government of 1970-1974 nor the Labour government which succeeded it being able to halt the country's economic decline. The Sheffield City Council thus made a commitment to addressing the deep economic problems of the city through a generous spending regime, which was to continue until the mid-1980s [12].

Until the 1970s, Sheffield had boasted virtually full employment, with unemployment rates consistently below the national average. The global oil shock of 1973 and the increasing globalization of trade and manufacturing dealt a major blow to British industry and Sheffield was among the cities hardest hit. Sheffield's large steel firms failed to adapt to the changing economic landscape during the 1970s as the country began to deindustrialize (Power *at al*, 2010).

In 1979, Sheffield's manufacturing base began to shrink drastically Both the British Steel Corporation and the private firms faced serious difficulties from foreign competition and the shrinking home market in engineering. By the later 1970s, Sheffield no longer produced as much alloy steel as did countries as diverse as Brazil, Italy, Spain and Sweden (Hey, 2010).

5.5. 1980's and after

The early 1980s recession tore through the fabric of the Lower Don Valley-Sheffield's industrial zone-like a whirlwind, destroying jobs factories and Sheffield's sense of pride in the achievements of its heartland. Sheffield had too many jobs tied to just one industry, metals manufacture. So factory closures followed one another in rapid succession. Between 1975 and 1988 the Valley, where the factories were, suffered a reduction in employment from 40.000 to 13.000 jobs. By 1988 fewer than 300 residents remained and 40 % of all the available industry land was vacant, derelict or underused (Hey *at al*, 1997).

Factory closures in Sheffield, which had begun in the late 1970s, accelerated through the 1980s, with the unemployment rate exceeding the national average for the first time in 1981, rising from 4 % in 1978 to 11 % in 1981. By 1984, unemployment had soared to 16 %, and the manufacturing industry that had employed almost 50 per cent of the city's workforce in 1971 now employed just 24 % (Power *at al*, 2010).

In spite of a bitter national strike in 1981, large plant after large plant was closed and eventually swept away. John Brown's Atlas Works opened in 1857 was closed in 1983 and Hadfield's massive East Hecla Works opened in 1898 was closed in the same year. The city was in shock and the lower Don Valley was badly in need of economic and environmental regeneration (Jones, 2004).

In 1983, Firth Brown amalgamated with the River Don Works to form the private sector company, Sheffield Forgemasters, employing a workforce of 6,500. Within three years and despite an annual turnover of £100m, the company recorded losses of approximately £20m per annum. With British Steel due for privatization in 1987, Sheffield Forgemasters' management agreed a management buy-out. In 1998 the company was sold in two parts to USA buyers - the aerospace business to Allegheny Teledyne, and the River Don and Rolls businesses to Atchison Castings [13].

By the mid-1990s, the work force had fallen below 10.000. About two-thirds of the total registered unemployment in the Sheffield district came from the loss of jobs in the steelworks. The majority of the local labour-force were no longer employed in either the "heavy" or the "light" trades. A long era in the history of the city was coming to a close (Hey, 2010:289). In 1970, 45.000 people were working in the steel and cutlery industries in Sheffield. By the mid-1980s the number had fallen 12.000 and in 2001 there are fewer than 8.000 steel and cutlery workers (Howse, 2011).

By the early 1990s, indeed, the whole employment structure of Sheffield and South Yorkshire had experienced a profound and very sudden transformation. In Sheffield itself, for example, the “City of Steel”, the vast majority of the 235.000 people in employment in 1993 was actually employed in shops, hospitals, offices, education and recreation. The three largest employers in the city were the City Council, the health authority, and the two universities (Taylor *at al.* 1996).

By the 1990s the co-operation between the City Council, the Sheffield Development Corporation and the Chamber of Commerce had been extended to include other institutions, such as the two universities, in a body known as the City Liaison Group to regenerate Sheffield’s economy. Towards the end of 1994, a strategy for the future of the city centre was agreed by the City Liaison Group. Between 1990 and 1996 at least £300 million was invested in the city centre, and another £200 million was projected for further developments by the end of the century (Hey, 2010).

6. CONCLUSION

England was the country which industrial revolution started. The most important tool of technological improvements with the revolution is iron-steel sector. Iron-made products were an indispensable part of production, transportation and armament industries have become impulsive force for countries to constantly increase their production capacity. Sheffield's economy had been based on steel, cutlery, engineering and tool-making industries, for which the city had gained a world-wide reputation. The steel industry collapsed in the early 1980s and Sheffield City Council was one of the first in the UK to turn to the cultural industries as an alternative source of employment creation and urban regeneration. Constantly decreased production capacity of steel has decreased considerably nowadays.

The history of production of iron-steel in Turkey is very new compared to England and the industry is still growing. The first integrated iron and steel factory constructed in Karabük in 1937 and began to produce in 1939. However, the steel production capacity in Turkey is increasing every year and it is estimated that the increase will continue in the future. Therefore, England which entered the stage of early industrialization will be a role model to Turkey with the terms of industrialization, urbanization and social aspects. Sheffield has developed and experienced urbanization process with the rapid increase in production of iron-steel. Especially in the last two decades, various projects were embodied to increase the quality of life in the city and to enable citizens live in a more comfortable way in the social aspects by local administrations.

On the other hand, planned urbanization couldn't come into existence in Karabük in the first period of iron-steel industry. So irregular urbanization was experienced and projects aiming to increase the quality of living in the city are not enough. The local authorities and non-governmental organizations should come together to prepare a master plan about Urban Regeneration in Karabük. To maintain a strong sense of community further housing schemes should be planned and completed. In addition, new public parks in a walking distance in the city centre must be designed. The busy road that passes through the city centre should be moved and the new projects must be developed for the iron and steel plants in the city centre.

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