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The financial-economic crisis and value of equity capital: A case study of Slovenian public limited companies 2006–2011

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ABSTRACT

The purpose of this paper is to discuss the effect of financial-economic crisis on the equity value of companies, as well as present the importance of fair and honest company valuations. The fundamental value of equity capital of a company is important for both management and external shareholders. The wide disparity between market and fundamental values can lead to high value adjustments, which reduces investors confidence in the capital market. This has had a negative impact on the operations of financial institutions, and individual as well as company investment; especially on developing financial markets during a financial-economic crisis. This research was designed to assess the equity value of Slovenian public limited companies based on the discounted free cash flows to equity and comparing it with market value of equity capital of companies before and during the financial-economic crisis. The fundamental value of equity capital of the selected companies (sample of 25) is calculated using a two-tiered model. The paired-sample *t*-tests method rejected the hypothesis that the fundamental value of equity capital of Slovenian public limited companies better reflects the market value of equity capital in today's times of financial-economic crisis (2011) than before the crisis (2006). However, we found that the market value of equity capital in relation to the fundamental value of equity capital of the selected companies was lower in 2011 than in 2006. Various models of the basic calculations are used in the model evaluation. This study shows the problem of company valuation on small and emerging capital markets which have a short history of data.

1. The financial-economic crisis and equity value of companies

In recent years a number of companies have closed down (see Janeš & Dolinšek, 2010), the level of unemployment has drastically risen (see Laporšek & Dolenc, 2012), equity indices have been overthrown and some countries are on the verge of bankruptcy due to incorrect monetary policies of central banks. The consequences of this financial crisis could paralyse the global economic system (Norberg, 2009). The market value of equity capital of the majority of Slovenian public limited companies on the stock exchange has therefore decreased. In times of economic boom the market value of companies was incredibly high. The large difference between the market value and fundamental value of equity capital was proven by Stubelj (2010) who in his research stated that market values can be higher due to: (a) investors who have "insider" information about the company increasing share prices; (b) expected high acquisition value of the company; (c) purchasing of shares for too high prices (for speculative reasons) in order to sell the company for a higher price; (d) lack of investment opportunities for the investor on the Slovenian capital market. These factors have contributed to a dramatic decrease in value during times of financial-economic crisis (from 2008 onwards). The effects of the financial-economic crisis which have severely shook and swung the global financial markets causing share prices on the stock market to fall, have also been felt in Slovenia. The share prices of Slovenian companies have decreased a lot more than on some more developed financial markets. This can be seen on the stock market index; the Slovenian stock market index decreased by 60% between 2007 and 2012 (LJSE, 2012), whereas on the developed financial markets like Dow Jones, NYSE, S&P, the stock market index decreased by only 15%. On the financial market NASDAQ the stock market index even increased by 8% in 2007 (MWatch, 2012).

Market price of shares shows how much investors are willing to pay for shares on the basis of expected benefits of ownership. The benefits are expected cash flows belonging to the owners of equity (shareholders). Due to market imperfections and perceived expectations of investors, there is a discrepancy between the market price of the company and its internal (fundamental) value. The internal value is a value based on a comprehensive analysis and assessment of a company. It is expressed as the current value of all the company's expected cash flow from doing business,

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discounted to the current value by using the appropriate discount rate. For Fama (1995) the analyst should in principle be able to determine if the actual market price of the security is above or below its intrinsic value. If actual prices tend to move toward intrinsic values, then attempting to determine the intrinsic value is the same as predicting the future market price. This is the essence of the predictive procedure implicit in fundamental analysis (Fama, 1995).In addition to fundamental value there are many factors that can affect the market price of shares. An important factor is supply and demand for shares, which depends on economic factors, government policy, the expected performance of companies and industries and potential growth.

Significant impact on the supply and demand of shares can have irrational behaviour of investors, which can lead to excessive investment optimism or pessimism. In our opinion most of the market price growth of Slovenian listed company's shares to autumn 2007 is due to excessive investment optimism, which led to excessive demand for shares of Slovenian public companies. Increased inflows of capital investments (mainly in shares and mutual funds) pushed up share prices.

The level of stock market prices is important for the economy. This was highlighted by James Tobin (1969) who with his model made a great contribution to financial theory. Tobin's q shows the relationship between its market value and replacement value of assets. The fundamental value is the present value of expected discounted cash flows that belong to investors and we can express Tobin's q as the present value of cash flows discounted by the cost of capital divided by the replacement value of assets. The basic idea is that if the ratio is bigger than one ($q > 1$) the company is willing to invest. In this case, the investment adds value. The difference between the market value of investments and the cost of investment is positive. If $q < 1$, the market value is lower than the replacement cost, which means that the desired volume of capital is lower than the current volume, and companies are not willing to invest. Tobin's q connects the capital market with the real sector of the economy. This is explained by the impact of capital market investment activity of enterprises. High stock prices are an incentive for owners to increase the volume of investment and in the case of low stock prices owners are not willing to invest a lot. This connection can also be deceptive because the market price of shares may deviate from fundamental values, which can lead to erroneous investment decisions. Excessive growth in share prices which deviate market prices of shares from fundamental values can lead to large negative corrections of market share prices, which can drastically reduce investment activity. However, Blanchard, Rhee, and Summers (1993) found that this relationship is not so strong. They found that in the United States from 1920 to 1990, the fundamental value of a company was a better predictor of investment than stock prices. Decisions on companies investment is based not only on changes in share prices but rather on the basis of the expected added value of investment. Summers (1986) suggest caution in treating stock prices or their changes as rational reflections of fundamental values. For Summers this point is very important for macroeconomic theories such as q investment theory which presume that asset prices can be used to reflect the present value of the rents an asset will generate.

Levine and Zervos (1998) found that various measures of stock market activity are positively correlated with measures of real economic growth across countries. They found that the association is particularly strong for developing countries.

According to Mishkin (2007) the share price may affect the economy and GDP: (a) trough Tobin q on investment, (b) on consumer wealth and hence consumption, and (c) trough moral hazard and adverse selection problems on lending activities for the scope of investment. Therefore, the level of share prices is of utmost importance for the economy. Since Slovenian companies finance investments mostly by internal sources (retained earnings) and loans, lower stock prices lower firms' creditworthiness and reduce investment possibilities. Reduction in share prices through increases in financial leverage causes refinancing problems and rise debt costs. Also other factors as for example the effectiveness of the legal system is important for the financing of companies which was demonstrated by Demirguc-Kunt and Maksimovic (1998).They showed that firms in countries with high ratings of legal system effectiveness are able to grow faster by relying more on external finance. For Mishkin (2001) financial liberalization promotes transparency and accountability, reducing adverse selection and moral hazard.

This paper deals with the problem of the disparity between the market and fundamental value of equity capital of Slovenian public limited companies. This topic is very relevant today when the financial-economic crisis has uncovered overvaluation of companies in the past. Knowing the fundamental value is important for making the right decisions on different levels (policymakers, investors, employees, country, buyers, suppliers, banks,...) (Koller & Goedhart, 2005). Huge imbalance between the market prices of the shares and their fundamental values should concern providers of economic policy. Providers of economic policy should work towards large deviations of market values from fundamental values, which can cause extreme reductions in share prices and the negative impact on economic growth.

This article is divided into five parts; the second section presents the theoretical foundations of company valuation, the third section the methodology and the fourth section shows the analysis and findings of the research. The fifth section provides a conclusion and recommendations for regulators, providers of economic policy, management and the public.

2. Company valuation

Company valuation or estimated value of a company consists of forming an expert and impartial opinion on the value of the whole company, its individual organisational units, resources, capital equity and debts. The need for expert and impartial company valuation comes from the undeniable fact that the amounts shown in accounting records which are influenced by accounting guidelines, generally differ significantly from the actual market value of the company assets (Glen, 2005, see also Odar, Kavcic, & Jerman, 2012; Huang, Tsaih, & Lin, 2012; Ong & Chen, 2013). The main aim of valuating a company is, by using appropriate valuation methods and techniques, to uncover what the actual value of the company is (Fires, 2009).

The most frequent reasons for company valuation are: (a) the purchase or sale of all or part of the company's equity value or ownership share, (b) the execution of acquisition procedures, (c) withdrawal and payment of a shareholder, (d) mergers or acquisitions, (e) buyout of the management, (f) increase or decrease of (share) capital, (g) rehabilitation, liquidation or bankruptcy value of the company's estate which is in bankruptcy proceedings and (h) internal audit of assets and financial position of the company to support the adoption of strategic financial decisions (Fiducari, 2009). NLB (2012) also states various purposes for evaluation of fundamental values of companies: (a) acquisitions, mergers, sale and purchase of the company or part of the company, recapitalisation, separation and spin-off, withdrawal of shareholders, management buyouts and leveraged buyouts, (b) investment decisions, (c) accounting reports, (d) tax purposes, (e) legal disputes.

We often wonder how much a company is worth, or if the market value of the company is overestimated or underestimated. In order to answer this question, it is necessary to calculate the fundamental value of the company, which reflects the current value