

FINANCIAL AND INVESTMENT BEHAVIOR OF SLOVENIAN FIRMS

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Abstract

In this paper the empirical analysis of financial behavior of Slovenian firm is presented. It focuses on the goal of the firm, capital budgeting, and capital structure and dividend-payout decision-making. Three theories of financial and investment behavior (neoclassical, post-Keynesian and employee governance) with three different goals of the firm (maximization of share value, maximization of long term probability of survival and maximization of wages) provide the theoretical background. The empirical analysis is performed for a sample of 51 important Slovenian using the data from a questionnaire for chief financial officers, financial statements data, and two additional samples of listed and privatized companies. It is concluded that the average investigated Slovenian firm is governed by employees, its primary goal is maximization of wages, it does not have net capital investments, and it is financed predominantly by equity and pays very low dividends.

INTRODUCTION

Before the transition period started in former socialist countries it was widely believed that the introduction of private owners of capital would change the corporate governance of companies.¹ In Slovenia, where the companies were mainly governed by workers (or the state), it was strongly believed that governance would shift to shareholders (or at least managers) and thus increase the efficiency of these companies and the economy as a whole. In this paper we will focus on the analysis of financial and investment behavior of Slovenian firms several years after privatization started.

To explain the financial and investment behavior of firms operating in market economies with developed capital markets, the neoclassical theory is predominantly used.² Therefore, the neoclassical theory of financial and investment behavior of firms is already well presented in almost all textbooks on corporate finance (e.g. Brealey, Myers, 1999; Brigham, Gapenski, Daves, 1999), investments (e.g. Bodie, Kane, Marcus, 1999), accounting and other subjects. The theory is based on a large body of literature. Some of the most important milestones, keeping in mind that the list is far from complete, are: the beginnings of the efficient market hypothesis in financial markets (Bachelier, 1900), the concept of internal rate of return (Fisher, 1930), the introduction of the assumption of rational behavior of economic subjects in the field of corporate finance (Modigliani, Miller, 1958), the development of the CAPM model (Sharp, 1964) and the option-pricing model (Black, Sholes, 1972). A number of authors have tested these hypotheses and models and, based on their findings, believe that they have explained the constituent elements of a firm's financial and investment function. Today, we have a widely -developed system of quantitative models

¹ For a more extensive analysis of beliefs see Mramor (1996)

² The financial and investment behavior of a firm embraces both the company's financing decisions and investment decisions – both direct financial investments as well as investment in tangible and intangible assets. The financial function of a modern company is not only to ensure short- and long-term liquidity, but it also requires the analysis of a company's investment opportunities.

and qualitative theories of the logic of financial analysis and decision-making. The theory is becoming more normative, as companies are increasingly accepting the models.

However, despite the large body of apparent empirical support of the neoclassical theory in developed market economies, there are a number of dilemmas concerning the appropriateness of this theory. Qualitative analysis (e.g. McGoun, 1996) and, to a certain extent also empirical research (e.g. Haugen, 1997), have shown some serious weaknesses in the underlying assumptions of the neoclassical theory (market efficiency, rational behavior of economic subjects, the formation of expected return on investments, the goal of companies). Because of these problems an alternative theory of financial and investment behavior of companies has emerged. We use the term post-Keynesian theory for it, as proposed and developed in Gordon (1994). A significant part of the theoretical framework is already developed, but it has not yet been widely empirically tested.

The theory of financial and investment decision-making in firms operating in transition economies poses even bigger challenge. As they are not developed market economies (yet) and as there are still elements of their previous economic systems present, the financial and investment behavior of firms might be also very different from the predictions of neoclassical theory.

Slovenia has transitioned to the current economic system from an economic system based on workers' self-management of firms and social capital.³ The general behavior of firms governed by workers, and in particular their financial and investment behavior, has been the subject of a number of studies. Among the first was Ward (1958), and later Vanek (1970), Furubotn (1971), Mead (1972), Jensen and Meckling (1979), Horvat (1983), Ribnikar (1984), Prasnikar (1988), Kornai (1990), Nuti (1997) and others followed. It is difficult to conclude unequivocally that there exists a well-supported and widely-accepted theoretical explanation of the behavior of these firms. However, there are some elements that are widely accepted.

We will try to verify if it is possible to explain financial and investment behavior of Slovenian firms with any of the three theories mentioned above. The behavior in accordance with neoclassical theory would mean that corporate governance has shifted to (outside) shareholders, as was intended by the domestic and foreign designers of transition process. Managers' goals dominate Slovenian companies if their financial and investment behaviour is best explained by post-Keynesian theory, and little has changed if they are best explained by the theory of workers' management, as in this case workers (employees) are still governing the companies.

Our hypothesis is that Slovenian firms are governed by the management, as (outside) shareholders are not yet active enough because of the lack of knowledge, lack of concentration of voting rights in their hands, and as the legal system and its enforcement do not allow their full governance yet. On the other side, the governing position of workers has

³ The social capital is the equivalent of equity capital in market-economy companies, but to which no specific owner can be attributed. The details and functioning of the system and the peculiarities in self-managed firms are well explained in Ribnikar (1997).

decreased substantially with the introduction of a new constitution and other (market) legislation. Therefore, we expect that post-Keynesian theory would explain best the financial and investment behaviour of Slovenian firms.

In the paper we first develop a theoretical framework in which the main assumptions of each theory are explained as well as the main factors that influence financial and investment decisions of companies and the directions of these influences. On the basis of this analysis the main differences between the theories are recognised. In the second part the behavior of Slovenian companies is empirically analyzed for the three groups of companies: 1) a sample of 51 larger Slovenian companies that answered a special questionnaire for CFOs, 2) 134 public corporations listed on the Ljubljana Stock Exchange, and 3) 1334 privatized companies. We seek to find which theory best explains the behavior of a typical Slovenian firm. Contrary to our hypothesis we find that the financial and investment behavior of a Slovenian firm has not changed (yet), therefore, it is still predominantly governed by employees. Finally, we evaluate what does such financial and investment behavior of Slovenian companies imply for the future development of these companies and the national economy as a whole.

THEORETICAL FRAMEWORK OF FINANCIAL AND INVESTMENT BEHAVIOR OF COMPANIES

We limit this part only to the most important elements of the financial and investment behavior of companies, organised as corporations, that we are able to test with data available to us. We focus on the goal of the firm and on its long-term investment and financial decisions. We assume a market (capitalist) economic system.

Neoclassical Theory

Neoclassical theory stresses the role of the company's owner – the shareholder – in financial decision-making. It assumes that among different interest groups (stakeholders) the role of owners is central. The entire corporate governance system is in accordance with the goals of its shareholders. The goals of other interest groups represent constraints to the achievement of the owners' goals. Neoclassical theory shows that the maximisation of the market value of a share of stock allows the shareholder to attain the highest-possible utility stemming from the shareholder's investment of financial savings in the firm. The theory therefore states that the goal of financial and investment decisions in a firm is the *maximisation of market value of a share of stock*.

The most important assumption regarding the functioning of capital markets is that it is efficient. This assumption means that prices of financial assets reflect all publicly-available information. On the basis of this hypothesis models have been developed that allow estimates of the value of assets, expressed as the present value of expected future cash flows from an asset. These models also allow estimates of market required rates of return on assets.

According to neoclassical theory, the company accepts all investment projects whose net present value is greater than or equal to zero or whose internal rate of return is higher than the marginal cost of capital. Net present value and internal rate of return are therefore primary investment criteria. The estimate of cost of equity at a certain point of time is based on market estimates of future average return on shares, as reflected in the share price and in estimates of future expected cash flows. The relevant risk is only an asset's market risk. Investment decisions are independent from capital-structure and dividend policy decisions.

The level of debt a firm uses depends on a number of factors, but an important part could be attributed to the costs of financial distress. The lower the probability of financial distress and the lower the costs of financial distress, the higher the indebtedness of a firm, as it uses more debt to create tax-shield effects of interest as a tax-deductible item. Therefore, highly-profitable firms and firms that have relatively higher stocks of tangible fixed assets should be using more debt. The probability of financial distress in these firms is relatively low and even if a financial crisis does occur, the cost of such crisis is relatively low, as lenders will be repaid from the sell-off of fixed tangible assets. The liquidation value of fixed tangible assets is usually much closer to their going-concern value as opposed to intangible assets where the liquidation value might be significantly lower and in some cases even zero. The reverse is true for low-profitability firms and those with a significant proportion of intangible assets.

Dividend policy is independent from investment and capital-structure decisions for firms that have free access to capital markets. Therefore there is no relationship between the proportion of retained earnings and proportion of net investment in net income. The neoclassical theory does not pinpoint to a particular dividend policy that companies should follow. Based on explanations of different factors that influence the dividend-payout ratio we might even conclude that the dividend policy does not have an important effect on the market value of a share of stock.

Post-Keynesian Theory

The crucial point of this theory is agency relationships. Managers follow primarily their own goals when managing a company; therefore, the primary goal of the firm is not the same as that of the firms' owners – the shareholders' goal. Rather, the primary goal is that of the managers and professionals. The theory assumes that a firm's failure (liquidation, bankruptcy) represents such a big loss to key personnel that they try to lower the probability of failure in the long run with all their business decisions, among which are financial and investment decisions. In other words, the goal of the firm is *the maximisation of the probability of long-term survival of the firm*. It is assumed that shareholders accept this behavior and that they see the costs associated with such behavior (agency costs) as a constituent part of costs of management and employees.⁴

⁴ Gordon (1994, pp. 16) states that financial and investment decisions that do not lead to maximum market value of shares, but rather maximise the probability of long-term survival of the firm, should be treated in the same manner as wages, bonuses, share options and other perks attributed to managers for their services in managing shareholders' assets and creation of market value.

According to this theory, the idea of efficient capital markets is very questionable. It is far more difficult to state what are appropriate (objective) prices than it is believed under neoclassical theory.

Investment decisions are primarily dependent on the size of equity capital, on the expected return on these investments and on the riskiness of their expected returns. The market value of equity of mature companies is almost always relatively high (e.g. per employee), and if these companies follow the goal of maximisation of the probability of long-term survival, then they undertake relatively lower net investment as compared to net income. They also choose less risky investments. The relatively low level of net investment is also a consequence of lower expected returns on these investments. It is sensible for newer companies, which usually have lower levels of equity, to invest a relatively high proportion of net income (possibly over 100%, the investment being then partially financed with debt) and to invest in relatively risky projects.⁵ Expected returns on these projects are usually high. Therefore, the criteria of net present value and internal rate of return are not the most important – the estimates of stand-alone risk and within-company risk of projects are also important. Companies assess stand-alone and within-company risk by means of scenario and sensitivity analyses, but also with payback period or, indirectly, with the internal rate of return. The post-Keynesian theory also postulates that the cost of equity is lower than the cost of equity predicted by the neoclassical theory, and it is positively related to the proportion of net investment in net income.

A company's riskiness is also related to the amount of debt used in financing the company. Companies with low absolute levels of equity financing (e.g. per employee) will maximise the probability of long-term survival if they finance relatively large projects, having high expected return and high risk, with debt. Therefore, such companies use more debt capital. The reverse is true for mature companies. They will invest comparatively less and will be predominantly financed with equity.

Dividend policy is not independent of investment and capital structure decisions. A firm that maximises the long term probability of survival pays out relatively low dividends (possibly none), if it invests heavily. The payout ratio and the share of net investment outlay in net income should be, therefore, positively correlated. The Post-Keynesian theory also concludes that a firm's dividend payout will be low when the return on equity is high, when the variability of this return is high, and when debt ratio is high.⁶

The Theory of the Employee-Governed Firm⁷

⁵ For a theoretical insight see Gordon (1994, pp.33-36).

⁶ Unfortunately, the data on dividend payout for the companies in the sample are not available to us yet.

⁷ It has been already emphasized that the theoretical framework of an employee-governed firm has not reached a predominant consensus among different authors. The theory described in this paper reflects also our personal views.

This theoretical framework assumes either implicitly or explicitly that employees, not managers or shareholders, govern a firm. Governance by employees can be attributed to different factors. Employees as an interest group can hold a high joint proportion of outstanding shares, and each employee holding represents a relatively small share of his wealth. Also, the legal framework or some other reasons may allow for major corporate influence by employees.

The theory assumes that the goal of employees is to maximize wages. Wages in this context are defined broadly as material benefits from the company that include wages, perks, good working conditions, short work time, but also dividends, if employees are shareholders. It is usually assumed that the goals of employees are relatively short-term.

Mature firms controlled by employees make few investments, because short-term wage maximisation is given priority. Higher investment layouts would impose a constraint on wage increases over and above increases in productivity. Employee-controlled companies also invest less if they are financed in greater amounts with equity. This equity allows for a more longer-term maximisation of wages, of course to the detriment of shareholders' funds. The capital market imposes capital constraints on such companies, and they have to rely on internal sources of equity financing.

The firm prefers investment projects with shorter payback periods and relatively high internal rates of return compared to the cost of capital.⁸ However, the estimated cost of capital is relatively low. Mature companies especially do not need much additional external equity financing, which enables them to value the cost of equity (the cost of internally-generated funds) as being low, in some instances even zero.⁹ The estimated internal rate of return is not used as a measure of change in wealth of shareholders, as the returns above the cost of capital are mainly meant to be paid out as wages.

As the cost of equity is low, then the optimal capital structure is to lower the debt ratio as much as possible in order to maximize wages. There are no other factors that might influence the differences in capital structure among companies, except for different initial levels of debt and the different profitability of each firm, which enables it to finance potentially highly profitable investments from retained earnings. If profitability is not high enough, debt financing is necessary, as it is not reasonable to use very expensive external equity financing coupled with the possible dilution of power of employees.

Dividend policy depends on investment and capital structure policies. The firm retains the amount of net income needed to finance acceptable investment projects. A company with good investment opportunities will, therefore, have higher levels of retained earnings than companies with fewer investment opportunities. It must be noted that rarely does a mature company have a large investment-opportunity set. Mature companies usually disinvest

⁸ Employees are willing to give up part of their current wages only if they can expect a significant increase in wages in the as-near-as-possible future.

⁹ Such companies would be obvious take-over targets; however, they are usually well protected by the law and also through effective use of poison pills.

(make negative net investments) and use the proceeds to increase wages. This is the reason why labor productivity increases at a slower growth rate than wages.

»Dividends« in an employee-governed firm can take on very different forms and can be paid not only to shareholders but also to workers. How much of the residual earnings allocated to be paid out is actually paid out in the form of dividends to shareholders depends on the proportion of shares held by employees, on the tax system, and the marginal tax rates. The firm will pay out such a share of residual earnings in the form of dividends that employees will maximise their return from the firm. This return is maximised when the sum of tax-payments and cash returns to external shareholders are minimised. Therefore, dividends might even equal zero, and employees award themselves additional wages, bonuses and other perks.¹⁰

FINANCIAL BEHAVIOR OF A SLOVENAIN FIRM

On the the basis of previous analysis Table 1 presents the conclusions of the three theories on the goal of the firm, investment, capital structure and dividend policy decisions, that we are empirically testing for Slovenian companies.

Table 1: Expected Relationships Between Variables According To Neoclassical, Postkeynesian And Employee-Governed Firm Theories

	Neoclassical Theory	Post Keynesian Theory	Theory of Employee – Governed Firm
Major Assumptions:			
Dominating interest group	Shareholders	Managers	Employees
The goal of a firm	Maximization of the share value	Maximization of probability of long term survival	Maximization of wages (rather short term view)
Expected relationships and values of variables tested:			
Goal of the firm:			
1. Difference between the growth rate of productivity and wages (per worker)	Positive	Positive	Negative
2. ROA	Large	Large	Small
3. ROE	Large	Large	Small
Investment decision:			
1. Net investment to net income	Positive	Positive	Negative
2. Gross fixed asset investment to depreciation	* 1	> 1	< 1
3. Correlation between equity per worker and net investment to net income ratio	/	Negative	/
4. Correlation between equity per worker and gross investment to assets ratio	/	Negative	/

¹⁰ Treven (1995) has developed a dividend-payout model that shows, for a given tax system, the proportion of shares held by employees needed to make a payout of true dividends rational for employees-shareholders.

5. Correlation between share of equity financing and gross investment to assets ratio	/	/	Negative
Capital structure:			
1. Debt to assets	/	/	Small
2. Correlation between fixed assets to assets ratio and debt ratio	Positive	(Negative)	/
3. Correlation between equity per worker and debt ratio	/	Negative	Negative
Dividend policy:			
1. Number of dividend paying companies	/	/	Small
2. Dividend return	/	/	Small

The Data

To determine the financial and investment behavior of Slovenian firms we use three sets of data. The first set was collected with a special questionnaire for CFOs of a sample of 51 privatized Slovenian companies. In 1996, the Faculty of Economics, University of Ljubljana started an extensive five- year research project on the behavior of Slovenian firms in transition. Financial and other data were collected, and an extensive questionnaire was prepared for the management. The 100 largest Slovenian companies were selected to be investigated, and for 51 of them, mainly in 1998, CFOs completed the part of questionnaire that was aimed at investment and financing decisions. For these 51 companies data from financial statements were also collected for the year 1998.

The second set consists of the financial statements' data for the period 1994-1999 on 134 public corporations that are traded on the Ljubljana Stock Exchange (LJSE). Of the 51 companies in the first data set, 17 are traded on LJSE and the others are closed corporations. We have also divided the companies in the second data set into two subsamples – those listed on the official segment of the market and those trading on the so-called free market that do not comply with listing requirements.

The third set consists of financial statement data on all privatized companies for which data was available. There are 1,334 companies in this sample. However, some of these companies have undergone extensive programs of restructuring and have not submitted the financial statement data to the Agency of Payments¹¹. All financial statement data was drawn from the database of the Agency for Payments of Slovenia.

The first set of data gives us valuable insights into the decision processes of Slovenian CFOs, unfortunately for only a rather small number of otherwise important Slovenian companies (7.83 % of total sales, 4.73% of total assets and 7.69% of total employees of

¹¹ The Agency of Payments acts as the central institutuin that maintains the payment system among companies in Slovenia. The payments among companies are not, therefore, done through banks, as is normal in developed economies. This is being introduced only now. As a corrolary of its functions, companies are required by law to provide financial statement data to the Agency.

non-financial business sector¹²). The second set concerns Slovenian public corporations where the pressure of the capital market could influence their behavior. They represent an important part of the non-financial business sector – 13.26 % of total sales, 12.34% of total assets and 10.38% of total employees. As we anticipated different behavior of firms in the listed-companies segment and those trading on the free market, we additionally split the second set in two subsets. The first subset represents listed companies on segments A and B that represent 7.95% of total assets, 8.21% of total revenues and 4.68% of employees of the non-financial business sector. The second subset consists of companies trading on the free market. The respective figures for total assets, total sales and number of employees relative to non-financial business sector are: 4.39%, 8.21% and 5.70%. The third set consists of data for almost all privatized companies, but as most of them are closed corporations and predominantly employee and management owned, this could cause different behavior. They represent 37.91% of total sales, 40.12% of total assets and 43.77% of total employees of non-financial business sector.

The results and interpretation

The goal of the firm. Table 2 presents the summary of answers of CFOs on the questions concerning the goal of the firm.

Table 2: Importance Of Different Goals Of The Firm When Financial And Investment Decisions Are Being Made In Analyzed Slovenian Firms (1 – not important; 5 - the most important)

THE GOAL OF THE FIRM	AVERAGE IMPORTANCE
Long term survival	3,8
High credit capacity	3,3
Financial independence	3,1
Maintaining stable financing sources	3,1
Financial flexibility	2,9
Maximizing the share value	2,5
Industry comparable financial structure	1,6

Source: “The Questionnaire for Chief Financial Officer”, a part of the research project “Behavior of Firms and Financial Institutions in the Period of Transition”, Faculty of Economics, University of Ljubljana, 1998.

From these answers it could be concluded that maximization of the probability of long-term survival is the goal of a Slovenian firm. However, it might be the case that the overall goal is different than the one stated by CFOs. If the actual overall goal leads to illiquidity and insolvency, CFOs could, in order to fulfill their direct job requirement of maintaining the liquidity and solvency of the company, follow the goal of long-term survival with maintaining high credit capacity, stability of financial sources, financial independence (e.g. with low indebtedness), etc. As financial data could reveal a clearer picture of the actual goal of a Slovenian firm, we calculated the difference between growth rates of productivity and wages, returns on assets and returns on equity ratios, and present them in table 3.

¹² Non-financial business sector includes private as well as usually very large state owned companies.

Table 3: Median Difference Between Growth Rates Of Productivity And Wages, Returns On Assets, Returns On Equity, Debt To Total Asset Ratios And Growth of Fixed Assets for All Samples (1995-1998)

Sample	Year	Indicator / Ratio				
		<i>gTRW - gWW</i>	<i>ROA</i>	<i>ROE</i>	<i>DA</i>	<i>gFA</i>
Sample of 51 Companies	1998	1,536% pt.	5,265%	3,180%	35,450%	1,041%
	1997	-2,476% pt.	6,280%	3,585%	34,940%	-0,690%
	1996	-2,963% pt.	5,545%	2,760%	36,970%	-0,333%
	1995	1,783% pt.	4,670%	2,145%	35,720%	-7,010%
Listed companies – Segments A+B	1998	2,720% pt.	7,935%	7,360%	32,705%	4,848%
	1997	-2,721% pt.	8,725%	7,407%	29,907%	3,475%
	1996	-4,375% pt.	7,396%	6,440%	25,651%	1,026%
	1995	8,820% pt.	7,535%	7,181%	26,086%	6,559%
Free Market C	1998	0,115% pt.	3,526%	1,146%	25,907%	-1,540%
	1997	-1,518% pt.	4,347%	1,890%	26,332%	-2,580%
	1996	-3,031% pt.	4,089%	1,167%	29,491%	-2,620%
	1995	-0,649% pt.	3,364%	0,746%	27,585%	-2,730%
All Companies Traded	1998	1,085% pt.	4,518%	2,817%	26,428%	-0,544%
	1997	-1,773% pt.	5,240%	3,115%	27,135%	-0,535%
	1996	-3,350% pt.	4,788%	2,665%	29,088%	-1,180%
	1995	0,971% pt.	3,780%	1,594%	27,585%	-0,885%
Privatized Companies	1998	0,257% pt.	3,508%	1,345%	34,914%	-2,340%
	1997	-0,943% pt.	3,524%	1,094%	34,344%	-2,220%
	1996	-2,463% pt.	3,277%	0,476%	34,289%	-3,020%
	1995	2,375% pt.	2,690%	0,320%	32,798%	-1,600%

Legend: *gTSW-gWW* – growth of total revenue per worker over wage per worker; *ROA* – return on assets; *ROE* – return on equity; *DA* – debt to total assets; *gFA* – growth of fixed assets (net investment)

In 1995, at the beginning of restructuring wages per worker (*gWW*) were growing faster than total revenue per worker (*gTSW*) of companies. The same observation can be done in general for the year 1998. In between, wages have probably been falling relatively to revenue because of restructuring, but have resumed their excessive growth over productivity-growth as soon as the critical period was over at the rate ranging from 0.257 to 2.720 % points in 1998. We might conclude, therefore, that the goal of the firm for most firms in the sample is the maximization of wages¹³. This is also supported by the fact that the

¹³ We used only wages and have not included bonuses and other perks which would probably worsen the results presented in Table 3.

median return on equity of these firms is very low (average median value around 3%; see Table 3)¹⁴.

Such a policy of earnings distribution reduces substantially the probability of long term survival of the firm, and it is more or less clear to CFOs that they will have great difficulties in maintaining liquidity and solvency. In our opinion this is the reason that CFO answers concerning the goal of the firm are in accordance with post-Keynesian theory, while the great majority of firms is in reality following the goal of the employee-governed firm. Of course there are differences among firms; however, on the basis of the financial data and answers of CFOs, only very few companies can be identified that pursue the goal of maximizing the share value, while other non-employee governed firms are governed by the management and try to maximize the long term probability of survival.

The Slovenian capital market is, according to empirical research completed so far, still not efficient even in the weak form (e.g. Dezelan, 1996 and Aver, Petric, Zupancic, 2000). Therefore, it is fair to assume that prices of securities are different from their intrinsic value and it is problematic for firms to rely on market prices and rates of returns in their financial and investment decision as suggested by the neoclassical theory.

Investment decisions. We can begin analyzing the behaviour of Slovenian firms in capital investment decisions with the results of questionnaires. Concerning the importance of different investment criteria, CFO answers are presented in Table 4.

Table 4: The Importance Of Different Investment Criteria In Analyzed Slovenian Firms (1 – not important; 5 - the most important)

INVESTMENT CRITERIA	AVERAGE IMPORTANCE
Payback period	3,7
Internal rate of return	3,5
Net present value	3,3
Profitability index	2,9
Accounting based criteria	2,2

Source: "The Questionnaire for Chief Financial Officer", *ibid*.

Payback period being the most important investment criteria excludes the possibility to explain capital investment behavior of Slovenian firms with neoclassical theory. The order of importance indicates either behavior in accordance with employee-governed or maybe post-Keynesian theory.¹⁵ When we add answers to the questions concerning the estimates of the costs of different forms of capital there is little doubt left that the theory of the employee-governed firm best explains the capital investment behavior of Slovenian firms. 90% of the analysed companies estimate that the cost of equity is zero, and 8% of

¹⁴ In 1998, ROE was lower for all samples compared to 1997.

¹⁵ Following post-Keynesian theory we could expect internal rate of return being more important than payback period, as IRR is most likely a better measure of relative riskiness of an investment project than payback period. However, we aware that such a statement is more or less subjective.

companies estimate these costs being smaller than the costs of long term debt. In addition, only 36% of companies analyse the riskiness of investment projects and consider riskiness as an important element in investment decision, which is the core of post-Keynesian theory.

Further, firms invest relatively little. Except for the companies listed in segments A and B of Ljubljana Stock Exchange, net investment was negative in the whole period studied. In general, companies have not invested not even in the amount of depreciation, which does not seem to conform with neither neoclassical nor post-Keynesian theory. The correlation between the proportion of net investment in net income or in the relative increase in fixed assets of a firm and the proportion of equity financing used, is negative, although not always statistically significant. This is also in contrast with the post-Keynesian theory.

Capital structure. From the answers of CFOs concerning the policy of financing (capital structure), the following can be concluded. To the question of the most important factors involved in capital structure decisions, a large majority of CFOs answered that expected financing needs of investment projects are the most important. Capital structure decisions are, therefore, closely tied to investment decisions. This excludes neoclassical behavior, where these decisions are in principle independent. Dependence of these decisions is assumed by post-Keynesian and employee-governed firm theories. In Table 6 we present the answers of CFOs on the attractiveness of different forms of financing.

Table 6: The Attractiveness Of Different Sources Of Financing In Analyzed Slovenian Firms (1 – not important; 5 - the most important)

SOURCES OF FINANCING	AVERAGE IMPORTANCE
Internal equity capital	3,5
Long term bank loan	2,5
External equity capital	2,2
Convertible debt	1,5
Convertible preferred shares	1,1
Preferred shares	1,0

Source: "The Questionnaire for Chief Financial Officer", *ibid.*

It is clear from the Table 6 that by far the most attractive source of financing is internal equity capital, and much less attractive are outside bank long term debt and external equity capital.¹⁶ This result is in accordance with pecking order theory (Myers in Majluf, 1984), one branch of neoclassical theory based on asymmetric information. However, the difference between the attractiveness of inside equity and debt is most likely too large, and explains only a part of the differences among companies. The result of course contradicts mainstream neoclassical theory, as heavy reliance on costly equity capital does not lead to minimum costs of capital. It is more likely that the high attractiveness of inside equity financing is in

¹⁶ Such an order of attractiveness means that dividend policy is dependent on capital structure.

accordance with the employee-governed firm theory, as explained above.¹⁷ However, as most of the companies in the sample are mature, it is difficult to exclude post-Keynesian theory, where mature companies maximize the probability of long term survival if they are financed predominantly with equity.

The analysis of financial statement data presented in Table 7 leads to rejection of neoclassical capital structure behavior of the companies in the first sample.

¹⁷ Since there are predominantly mature companies in the sample, a postkeynesian approach also cannot be completely ruled-out. According to the postkeynesian theory, mature companies make less risky decisions, including financing with more equity, to maximize the probability of long-term survival.

Table 7: Analysis Of Financial Statement Data For All Samples In Year 1998

	Dependent Variable	Sample / Independent Variables	Neoclassical Theory		Post Keynesian Theory		Theory of Employee – Governed Firm	R ² _{Adj.}
			ROA	FAA	FAW	EW	NeNI	
In ve st m en t D eci sio ns	$FA_tTA_{t-1} = \frac{FA_t}{FA_{t-1}}$	Sample of 51 Companies			* 0,00001202	-0,00001187		0,019
		Listed Companies A+B			-0,00000039	0,00000066		0,041
		Free market C			*** 0,00000116	*** - 0,00000123		*** 0,079
		All Traded Companies			** 0,00000109	** -0,00000107		* 0,024
		Privatized Companies			-0,00000019	0,00000109		-0,002
	$FA_tTA_{t-1} = \frac{FA_t}{FA_{t-1}}$	Sample of 51 Companies					* -0,21100000	* 0,047
		Listed A+B					** -0,33700000	** - 0,058
		Free market C					0,14000000	0,031
	All Traded Companies					0,01857000	-0,007	
	Privatized Companies					0,00207400	0,000	

	$NeINI = \frac{NeI}{NI}$	Sample of 51 Companies			** 0,00069900	** - 0,00069490			* 0,058
		Listed A+B			0,00007305	-0,00006643			0,05
		Free market C			0,00000914	-0,00000769			-0,018
		All Traded Companies			0,00000782	-0,00000561			-0,013
		Privatized Companies			0,00013020	-0,00013430			-0,001

Continued...

Table 7 – Continued

			Neoclassical Theory			Post Keynesian Theory		Theory of Employee – Governed Firm	
Dependent Variable	Sample / Independent Variables	ROA	FAA	FAW	EW	NeINI	EA	$R^2_{Adj.}$	

Capital Structure	$DA = \frac{D}{A}$	Sample of 51 Companies	-0,55700000	** - 0,39200000				** 0,117	
		Quotations A+B	-0,34600000	*** - 0,71800000				*** 0,408	
		Free market C	*** - 0,73500000	*** - 0,39300000				*** 0,194	
		All Traded Companies	*** - 0,50700000	*** - 0,44200000				*** 0,199	
		Privatized Companies	*** 30,76700000	*** - 5,84800000			*** 0,103		
	$DA = \frac{D}{A}$	Sample of 51 Companies			*** 0,00003254	*** - 0,00003488		*** 0,408	
		Quotations A+B			0,00000063	-0,00000070		-0,064	
		Free market C			* 0,00000045	** -0,00000060		* 0,035	
		All Traded Companies			0,00000042	* -0,00000055		* 0,024	
		Privatized Companies			*** 0,00000260	*** - 0,00000298		*** 0,072	
	$DA = \frac{D}{A}$	Sample of 51 Companies				** 0,00917400		** 0,096	
		Quotations A+B				-0,00274700		-0,034	
		Free market C					-0,00050700		-0,007
		All Traded Companies					-0,00046870		-0,006
		Privatized Companies					* 0,00000735		-0,001

Legend: FA_t, FA_{t-1} – growth of fixed assets (net investment); $NeINI$ – net investment as a proportion of net income; ROA – return on assets; FAA – proportion of fixed assets in total assets; FAW – fixed assets per worker; EW – equity per worker; EA – equity to total assets.

It can be observed in Table 7 that the correlation between profitability, measured as return on assets, and the proportion of debt financing used, is negative. More important is the observation that there is a strong negative correlation between the proportion of fixed assets and debt financing for all samples in 1998. This is in contrast to one of the core propositions of the neoclassical theory that require positive correlation.

These results could be more in line with the post Keynesian explanation, that less risky operations are financed with less debt. Namely, the operations of a firm with more fixed assets is presumably less risky, as there is a large stock of fixed assets that might be used as collateral. Also, (see Table 7) there is a statistically-significant negative correlation between equity per worker and the proportion of debt financing. Low median level of debt relative to total assets debt-to asset ratio (see Table 3) and also the fact that companies in the first and second sample are predominately mature companies, additionally enforces the above conclusions. We also cannot reject the validity of the theory of employee-governed firm. The results presented do not contrast with this theory and become more probable when these results are compared to the answers of CFOs to the questionnaire.

Dividend policy. Concerning dividend policy, CFOs considered stability of dividends, and well-informed shareholders when changes occur as the two most important factors. Not much different in importance was the alignment of dividend policy with the needs of financing planned investment projects.

As already stated, the companies in the first sample on average have negative net capital investments, have high growth rates of wages and an ROE that is very low (median around 3%). Even from this data alone we can conclude that dividends are not of primary concern. This conclusion is further supported by CFO's opinions on the most appropriate payout ratio of 31% (in 1996 it was actually 55%, but only 40% of companies in the first sample paid dividends). This is in accordance with average payout ratio of listed companies in 1998 (31.4%), but relatively fewer companies (20%) paid dividends (80%). However, only 30% of companies traded on the free market paid dividends in 1998. Although this payout ratios are in accordance with payout ratios in developed economies, they are based on very low net incomes. Therefore, these dividends represent only very small part of distributed residual earnings, where the most important form are wages, in the broader meaning of the word, for employees (and management).¹⁸ This is of course contrary to neoclassical behavior. If one would use the term dividends for all distributed residual earnings (to employees and shareholders), he could claim that Slovenian firms in the first sample behave according to post-Keynesian theory. As they are mainly mature companies they have low investment outlays and pay out high dividends. However, such »dividend« policy, tied to investment and financing policies as explained above, does not maximize the probability of long term survival, as assets and equity are decreased. Therefore, competitiveness of these firms on a global market declines. In our opinion it is better to conclude that this is not post-Keynesian behavior but the behavior of employee-governed firms.

¹⁸ An explanation of the problems of dividend (or "dividend") policy of Slovenian firms can be found in Mramor (1996).

Conclusion and discussion

The above analysis leads us to a highly probable conclusion, that in its financial and investment decisions an average privatized Slovenian company does not pursue the goal of maximizing the value of its shares. Thus, neoclassical theory based on shareholders primacy does not apply. For a majority of these companies it is also most probable that they do not maximize the probability of long term survival as assumed by post-Keynesian theory, where managers are the most important interest group. Empirical results are dubious only concerning capital structure decisions. However, if we assume a certain consistency in financial and investment decision making we have to reject our hypothesis on post-Keynesian behavior also for these decisions.

The financial and investment behavior of privatized Slovenian companies in our samples is best explained as employee-governed behavior. Such behavior assumes that employees are the governing interest group, with the goal of (rather short term) maximization of wages. Relatively large companies in our first and second samples on average decrease their assets, are financed predominantly by equity, have very low returns on assets and equity, pay very low dividends and have higher growth rate of wages than productivity.

There are some possible reasons for such financial and investment behavior of Slovenian firms, even several years after privatization, of which we will consider five. The first concerns the majority shareholding by employees in most privatized companies and an important share in others. A part of these shares was granted to employees, and the other part was bought by them with a substantial discount. Since each employee has a small fraction of shares, investment in shares of the company might not be regarded as a significant factor of wealth in comparison to wage (in its broader meaning). However, the larger companies in our first sample and the officially listed ones (A+B segments of the LJSE) are majority-owned by outside investors, and they in general behave similarly to other companies. Important shareholders in these companies are usually blockholding financial institutions (investment funds) that are quite active on the boards.

The second reason is the usually mentioned two-tier governance system, with employee participation on both the supervisory and management boards of medium and large companies, which is a consequence of the new corporate law.¹⁹ In our opinion this is not the sole reason, as with one member of the management board, half or less members on the supervisory board and no members on the shareholder's assembly (the highest corporate body), employees can not outweigh managers and shareholders. The third reason could be strong labor unions as an external factor of rapidly increasing wages.

But it is our belief that the fourth and most important factor is cultural. Decades of labour management where employees were governing companies through workers' councils and electing managers resulted in special kind relationships between workers and management.

¹⁹ Companies over 500 employees must have a representative of the employees on the management board and 1/3 of the members of the supervisory board, or 1/2 of the members of the supervisory board in companies with more than 1000 employees.

Managers were just first among equals pursuing the goal of maximizing wages. Changing from “a friend” with the same goal to a person who is pursuing mainly his own goal or even the goal of somebody else (shareholders) at the expense of workers, is in a close society of a small country a very long-term process. During this process, the so called “soft budget constraint” will still apply to wages. According to some CFOs who are well educated and trained in the “West”, a fifth reason was suggested. It is simply the lack of knowledge of existing CFOs that have for decades used a certain logic and tools appropriate for the former economic system, but inappropriate for privatized companies.²⁰ In our opinion the combination of all these reasons leads to the explained behavior of Slovenian firms.

Such a behavior is cause of serious concern as the primary economic goal of privatization, more efficient corporate governance, does not seem to be achieved. Employee-governed firms pose a similar long-term threat for the national economy as did labour-managed firms in the previous economic system.

Some authors have foreseen these problems and propose different legal and other measures reducing the governing powers of employees and increasing the influence of managers (e.g. Prašnikar & Gregoric, 1999, p. 49, Bohinc & Bainbridge, 1999). In this respect Prašnikar and Gregoric assume that maximization of the probability of long term survival of firms is, from the macroeconomic point of view at this stage of development, a more appropriate goal than maximization of wages or maximization of the market value of shares.²¹ Bohinc and Bainbridge are concerned with possible self-dealings of Slovenian block shareholders (primarily financial institutions) if their governing power would be increased to the level known in the U.S., but without necessary minority shareholder protection. However, it is a question if Slovenian companies with managers' governance would be long run survivors in global competition where the capital is becoming an increasingly important governing force of companies.

²⁰ A detailed description of the level of knowledge among financial professionals in Slovenian companies can be found in Mramor (1998).

²¹ It is assumed by Prašnikar and Gregoric, that maximization of the market value of shares is not an appropriate goal of Slovenian companies with the current structure of shareholders who base their share valuation predominantly on the very near future expected dividends.

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