

## Some of the Unanswered Questions in Finance

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**Summary:** A very dynamic development of finance in the last 50 years is inter alia probably due to experiments and innovations in this field. Previously, theoretical base could not explain and predict movements especially in volatile times. “The new finance” appeared 50 years ago (portfolio theory, CAPM, the efficient market theory, M&M theorem) and made substantial progress in understanding movements in globalised and internationalised financial markets. However, many questions remain open. The author tries to put emphasis on some of these questions, perfectly aware that these are not the only ones. Unresolved questions are related to company's aims, project's risks, degree of portfolio optimisation, importance of liquidity, dividend policy, as well as factors that determine M&A. As the “new finance” is not able to predict and explain volatile movements, a question that should be posed is whether it is appropriate to add some non-economic factors as the behaviourist theory suggests. Although the behaviourist theory is an important part of „new finance”, it is unfortunately the only theory able to explain movements in volatile times. In conclusion, many questions still remain unanswered and wait for appropriate theoretical explanations.

**Key words:** New Finance, Operational leverage, Risk, Portfolio optimisation, Rating agencies, Efficient market hypothesis, Quality of liquidity, Behaviorist theory.

**JEL:** GO

### 1. Introduction

The financial science is a relatively new discipline of the economic science. Even though theories of “new finance” tried to explain this segment of economic activity, a dynamic development of finances in the last fifty years has opened a new set of questions in need of fresh answers. “New finance” theories have radically changed the approach to the phenomenon, abandoning research on accountancy data of enterprises and introducing a sophisticated analysis of capital structure as well as its influence on the value, capital budgeting or evaluation of stocks. “New finances” theories have contributed to a better understanding of the globalised world.

The most important questions are now related to risks all actors are facing during their economic activities. These risks are growing global, due to an increased openness of the markets, worldwide trade, liberalisation and rapid transfers of capital from one geographic area to another. One should bear in mind that the worldwide “contagion effect” appears to be more important in finances dur-

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ing volatile movements in the markets than in any other segment of the global economy.

Beside operational and financial risks, there are speculation risks, as well as other various risks with different effects depending on their frequency and importance. In addition, risk management is much more difficult today due to the appearance of “catastrophic risks”.

Management of catastrophic risks is still based on standard methods of risk evaluation, such as standard deviation, coefficient of variation or scenario and sensitive methods.

## **2. Some opened questions in the financial science**

Even though there is no common position on whether the business goal is making profit or enrichment of shareholders, all economic actors put highlight on making profit as the primary business motivation. A question that should be posed is whether it is possible to predict and plan profit gains. There are several methods of project budgeting for that purpose. Some of them are less reliable (such as the pay-back method) than the other (such as Net Present Value (NPV, IRR or the index of profitability). Even though all these methods look economically rational and simple, a question is why do some projects make positive net present value, while others don't? What is an extent to which it is possible to determinate factors that may influence project risks? Could these factors be found in different beta or operational leverages?

The relation between risks and gains is one of the central financial questions. CAPM [1] has made a remarkable progress in interpreting markets. Inspired by the portfolio optimisation of Markowitz, CAPM is based on the fact that all investors have the same motivation although they might have different portfolios. Diversification reduces variability, as the prices of action do not move in the same direction due to the absence of correlation. Therefore, market risk (beta) is relatively important but not sufficiently for an efficient risk avoidance. According to the theory, the assets that have beta risk equal to market risk, or where beta is higher than 1, beta risk is higher than market risk. If beta is lower than 1, beta risk is lower than market risk. However, experience has shown that the return of inferior betas is higher than the return of superior betas – the evidence theory can not explain at the moment.

Fama and French [2] have shown that small enterprises and those with high accounting ratios are highly profitable and highly sensitive to changes in national economies. Fama and French have equally shown that expected profit depends on the size of firm and accountancy value of its stocks at the market. One should put the following question: which factors can influence prices of actions? CAPM can not explain the need for hedging or induction of risk in order to eliminate

existing risks. Do rating agencies contribute to share prices? It is doubtful whether their ratings have credibility, particularly after the affairs such as Enron. Research has shown that existing economic models can explain barely 10% of the influence on market premium. This means that social and political tensions, terrorist attacks and all other conflicts, as well as psychological factors, might have more influence on expected profit, and therefore prices of actions, than any other factor suggested by the theory.

Merton [3] has tried to adapt the research on real conditions at the market and explain methods of hedging. Under the presumption that all investors want to create hedging for the same object, it would be interesting to examine the relation between the profit and the risk.

A risk-averse investor, as most common investors are, takes into consideration how many securities should be included in the portfolio in order to decrease the risk. Research of Slolnik (1974) is more than instructive in this respect. Slolnik has examined the influence of portfolio on securities towards the risk in eight different countries. The research showed that the risk is considerably reduced by adding the first four securities in portfolio. The highest diversification is achieved in a portfolio spreading over 10 to 15 securities. Research has equally showed that about 90% benefits from diversification can be achieved by maintaining a relatively small portfolio.

The second theory that aims to explain the phenomenon is the efficient market theory [4]. This theory is divided into sub-theories focused on different aspect of the market, such as the information that could be extracted from previous prices, when the efficiency of markets is weak, then, past information but also all relevant information, when there is a semi strong market efficiency, and the aspect when all information are taken into account.

The theory is based on an assumption that prices of stocks reflect all available information. This hypothesis has effects both on companies and investors. As information has an immediate impact on stock prices, investors may expect to achieve a balanced and normal profit rate they were able to predict. Thus, company might expect to obtain a “just” price for its offer on the market.

If these presumptions are right, it can be presumed that investors will use all available information and rapidly react to any information change. Prices of actions do not change parallel to changes in company profits. A question is: what happens to stocks not valued to their real value?

The theory of “random walk” is opposed to the efficient market theory. The theory presumes that prices of stocks are independently formed and previous experiences can not be used for making investment decisions, as the market has no memory.

If previous experiences are used in investment decisions, investors would easily opt for more risky investments than investing in more predictable securi-

ties, such as state securities. A reason of such a decision might be explained by the fact that predictable securities bring less profit.

The efficient market theory have successfully explained some events on the market, but has seriously neglected human behaviour, which is emphasized by authors defending the behaviourist theory.

The basic paradigm of finance is risk aversion. Risk aversion does not mean a refusal of risk – it includes risk taking. Some investors have a neutral attitude towards risk, some of them are tolerant, while others speculate with it. Risk aversion and risk reduction are not necessarily the best options and usually they are not. The best option possible is the one which leads to risk aversion or risk reduction while at the same time creates values, including Markowitz's „efficient set”, or a portfolio with the lowest risk possible or portfolio with the highest profit from the risk [5].

A question that should be put is which risk level does represent the best solution for an investor, taking into account the results of research on reduction of risk through portfolio diversification.

Generally speaking, the liquidity risk means the absence of an investment marketability. With the liquidity risk, the investment can not be quickly sold or bought for cash. Two questions may be put:

The first question concerns the quality of liquidity. It is well known that the liquidity of an economic subject only contributes to the increase of its' rating. Does it mean that liquidity always provides NPV? Liquidity and cash retention are economically rational only to a certain extent – if and when there are no opportunities for profitable investments.

The second question is related to differences between state and private securities. Private securities need to be attractive and issued by companies with a high rating (AAA). In terms of risk, they are always less valued than state securities, often qualified as risk-free securities. Can this statement be explained by the fact that marketability of state securities is better than corporate ones (liquidity) or because state securities have no default risk or both? Is liquidity risk or default risk more important for investors than risk of return? Or, are they afraid not to receive the expected return due to a lower marketability or default?

The influence of dividend policy on the value of a firm is still not clear. Modigliani & Miller (M&M) have thus elaborated the theory of irrelevance of dividends on the price of securities. According to Modigliani & Miller, prices of securities do not rise fast enough to counter balance cheaper forms of financing. Modigliani & Miller conclude that structure of capital does not influence company value, thus questioning an earlier theory which assumed that an optimal structure of capital (a combination of debts and assets) was maximising the company value.

One of the explanations is that shareholders are interested in paying the dividends in cash, as “bird in the hand” (capital profit is uncertain). Some theories explain that dividend policy gives certain signals to investors; if dividend policy is consistent with the company goals, it indicates that the company has perspectives and it is worth investing in. However, if a company decides not to pay dividends in cash and its financial indicators are satisfactory, (bearing in mind that financial indicators are transparent in market economies), it gives a sign to investors that the company is prosperous.

The preference of shareholders towards paying dividends in cash is largely influenced by tax considerations. If the tax on undistributed profit is less important than the dividend tax, shareholders will prefer to use the retained income for prosperous investments instead of paying cash dividends.

Shareholders may decide not to pay dividends in cash if a new share issue seems expensive (because of floating or selling costs) or if this represents the only option for the undistributed profit. In this case dividends are paid once financing of all projects with NPV is completed.

Dividend policy also depends on the estimates company makes regarding the effects its dividend policy may have on the clients. These effects may motivate the company to opt for stability in the dividend policy.

In conclusion, the theories explained above seem to offer a mere description of different dividend policies, but do not provide conclusions on their causes and effects. One of the possible conclusions is that, generally speaking, companies do not pay their dividends in cash in the case they expect or foresee profitable investments, even if this makes a negative impact on investors.[6]

Mergers and acquisitions of companies (M&A), as a method of restructuring and increasing operational efficiency, is a phenomenon that appears in waves. Financial motives are related to portfolio effects, improvement of the financial position, strengthening of the cash position, an easier access to capital markets, etc. Mergers and acquisition might be pursued for the reasons of improvement in management and marketing. Through M&A, enterprises seek to produce a synergy effect, or a conglomerate premium, or  $2+2=5$ . Stiglitz however points out another dimension of M&A of the 1990s: those M&A produced a discount instead of conglomerate premium.<sup>1</sup>

It would be interesting to know what are the driving factors behind M&A? M&A increased 35% in the period from January to November 2005 in comparison to the same period in 2004. M&A are related to foreign direct investment, which means that in the case of foreign direct investments increase, an increase of M&A might be expected as well.

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<sup>1</sup> For example, some US companies active in high technologies were not paying dividends for a decade, but were using profits for highly profitable investments.

Globalisation and internationalisation of financial markets, their round-the-clock working hours, liberalisation and an increased transnational commerce facilitated by development of new technologies – all imply proliferation of financial instruments. New financial instruments have been created by the need of minimising or avoiding risks. A great number of innovations, particularly at dynamic derivatives markets (options, futures, swaps), as well as issuance of zero coupon bonds and bonds with fluctuating interests, open space for researchers to present them in a descriptive manner, without being able to explain why some of them are remarkably successful at the market and others are not.

The answer can be found in Shiller's words that people are not able to understand economic consequences of these innovation. In his programme of construction of the new financial order [8] he argues in favour of a gradual introduction of market innovations, as they would be in this way accepted by general public.

### **3. Answers offered by the behaviourist theory**

During the last fifty years the world of finance has been one of the most dynamic segments of the world economy, due to innovation and experimentation. Theories that have been developed have made an important step in understanding risks that influence the values as well. This research, however, was not able to offer a successful design of risk management. The basic reason for that is in the fact that risk cannot be designed on abstract principles offered by sophisticated mathematical theories of finance. R. Shiller, who besides Thaler pleads in favour of the behaviourist theory in finances, have introduced a “correction of errors of mathematical finances: negation of human element”<sup>2</sup>. This theory tries to explain some anomalies of financial markets by introducing psychological paradigms. The theory makes an important improvement in explaining market anomalies, but does not necessarily answer the above-mentioned questions.

A question should be posed whether these anomalies can be interpreted by irrational behavior of investors. As people often regard themselves the best in what they are doing, investors also think of themselves as the best in choosing portfolios or in deciding to pursue investments, even though the signals are different from those expected.

Psychological factors have, without any doubt, an important impact on the behavior on financial markets. Numerous analyses of developed economies pay growing attention to „consumers' confidence”, which is of a great importance for the economic activity. For example, the consumption is considered to be one of the most important factors of the economic growth in Great Britain and the

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<sup>2</sup> Shiller Robert J. (2003) *The New Financial Order*, The Princeton University Press, pp 231.

USA. Shiller has taken into consideration psychological factors when answering the questions. [10] Other researchers have come to the same conclusion. [11] When evaluating prices of stocks, investors relate to the last price they remember or Dow Jones, FTSE100, CAC40 they remember. Changes of prices from the past may serve as the basis but are never reliable indicators. It is interesting to mention that the collapse of the market during 1987 was the same as in 1929, a crisis investors always had had in mind. Besides, the market collapsed without any announcement.

#### **4. Conclusion**

J.S.Mill once said that “fortunately there is nothing in the law of value which could be resolved by present or future writers: the theory is completed”. He would have not been so convinced if the above-mentioned questions had been put – questions which are certainly not the only ones without adequate answers for the time being.

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#### **Neka od neodgovorenih pitanja u finansijama**

**Rezime:** Veoma dinamičan razvoj finansija u poslednjih 50 godina se između ostalog duguje eksperimentisanju i inovacijama u toj oblasti prethodne teorije nisu mogle da objasne i predvide kretanja, posebno u volatilnim vremenima.“ Nove finansije“ nastale tokom poslednjih 50 godina ( portfolio teorija, CAPM, teorija efikasnog tržišta, M&M teorema) napravile značajan pomak u razumevanju na globalizovanim i internacional-

izovanim finansijskim tržištima. Međutim, ostala su brojna pitanja. Autor pokušava da ukaze na neka pitanja, potpuno svestan da nisu sva. Nerešena pitanja su naročito vezana za ciljeve kompanija, projektni rizik, stepen optimalizacije portfolija, značaj likvidnosti, politiku dividendi i razloge za spajanje i pripajanje. Kako „nove finansije“ nisu u stanju da predvide i objasne volatilna kretanja, postavlja se pitanje da li je primereno da se u tumačenju ekonomije koriste ne-ekonomski faktori kao što predlaže bihevoristička teorija. Iako je bihevoristička teorija značajan deo „novih finansija“. Ona može na žalost da objasni kretanja samo u volatilnim vremenima. Kao zaključak ostaje da su mnoga pitanja u finansijama otvorena i da čekaju odgovarajuća teorijska objašnjenja.

**Ključne reči:** Nove finansije, Operacioni leveridž, Rizik, Optimalizacija portfolija, Rejting agencije, Teorija efikasnog tržišta, Kvalitet likvidnosti, Politika dividendi. Bihevoristička teorija

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