

## **The new form of payout policy: the emergence and theoretical background of share repurchases**

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*The way companies return cash to their shareholders has changed considerably in recent decades. After changes in the legislation, share repurchases or buybacks have gained prominence, while dividends have somewhat lost their role as the main payout method. I intend to explore the reasons for this shift in payout policy.*

*In this paper, I focus on the theoretical background of share repurchases. Besides surveying the main theories related to share repurchases, I introduce the different ways companies can buy their shares back. Data indicating the emergence of share repurchases is also presented, while empirical studies testing the theories are discussed as well. The aim of this paper is to find out why share repurchases have become popular, and to reveal unanswered questions on the topic which point to future research possibilities.*

*Keywords: corporate finance, payout policy, share repurchases*

### **1. Introduction**

Corporate finance deals with three questions that companies face: how to optimally invest their resources (investment policy), what is the best way to fund these investments (financing policy), and how much money should be returned to shareholders (payout policy). In this study, I focus on the third element of corporate finance, highlighting the change in the way companies return cash to their shareholders.

Dividends were the primary means of transferring money back to shareholders for much of the twentieth century. The form of payout policy, however, has changed considerably in recent decades, as share repurchases or buybacks have gained significance. In this paper, my aim is to reveal why share repurchases have become more and more important in the payout decisions of companies. I show that dividends have somewhat lost their status as the main form of payout, while share repurchases are on the rise. I introduce the different ways companies can repurchase shares, also presenting data about the different methods. A substantial part of my paper focuses on the theories related to share repurchases, which intend to explain why companies buy their own shares back.

The structure of the study is as follows: Section 2 presents data showing that share repurchases have become significant in recent decades, Section 3 introduces the different share repurchasing methods available to companies, Section 4 reviews the literature about the theories related to share repurchases, and finally, Section 5 gives the concluding remarks.

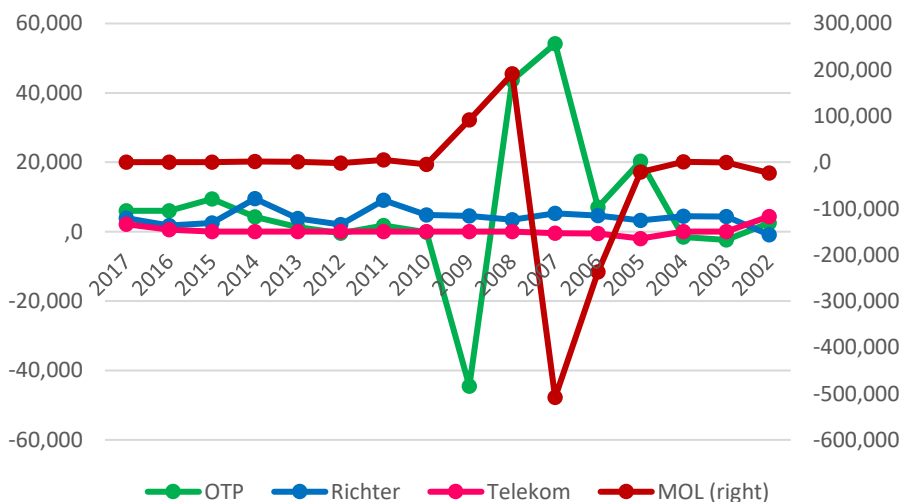
## 2. The emergence of share repurchases

As already mentioned, dividends were the primary means of transferring money back to shareholders for much of the twentieth century. However, Fama–French (2001) report that in 1973, approximately 52.8% of public companies in the United States (excluding utilities and financial services) paid dividends, the ratio peaked in 1978 (66.5%), then fell sharply: in 1999, only 20.8% of US public companies were dividend payers. This significant decline coincided with the emergence of share repurchases or buybacks. Farre-Mensa et al. (2014) show that the proportion of repurchasing companies has exceeded that of dividend-paying companies in the United States since 1997. A similar pattern is observed in absolute terms: the aggregate dollar amount of share repurchases has overtaken the aggregate dividends paid since 1997, thus buybacks have provided the greater part of the total payout of US public companies in the twenty-first century.

The shift in payout methods is quite apparent in the United States, yet is it a universal phenomenon? In Europe, the proportion of dividend-paying companies has also decreased towards the end of the twentieth century, although not as drastically as in the US (von Eije–Megginson 2008). Dividends remained the major form of payout for European companies at the start of the twenty-first century, although share repurchases have gained prominence in Europe as well.

As we can see, share repurchases have become highly relevant in the world’s developed markets. Unfortunately, less developed or developing markets have not drawn the attention of researchers yet, at least concerning share repurchases. In Figure 1, I illustrate the share repurchasing activity of Hungarian blue-chip shares:

Figure 1 Share repurchasing activity of Hungarian blue-chip shares, million forints, 2002–2017



Source: Annual reports of the companies

The hand-collected data from the annual reports in Figure 1 indicate that the share repurchasing activity of Hungarian blue-chip shares has been mixed. For Telekom, buybacks have not been relevant at all. Richter has a steady level of share repurchasing activity, which corresponds to its employee compensation programs. Meanwhile, OTP and MOL have utilized share repurchases the most among the Hungarian blue-chips.

### **3. Share repurchasing methods**

There are several ways in which companies can repurchase their shares. The different methods include fixed-price tender offer or self-tender offer, Dutch auction tender offer, open market repurchase program, privately negotiated share repurchases or targeted stock repurchases, and transferable put-rights distributions.

#### *3.1. Fixed-price tender offer*

One of the share repurchasing methods is the fixed-price tender offer. The fixed-price tender offer – as its name suggests – means that the company may buy shares back for a price fixed in advance. Apart from the price, the ratio of shares outstanding which can be repurchased is also set, as well as the duration of the program. This period may be extended, although usually the repurchase is conducted within five or six weeks (Hsieh–Wang 2009).

The repurchase price determined in advance is generally higher than the actual market price because shareholders can be motivated with this premium to sell their shares to the company. If there are too many shareholders willing to sell their shares, then the company may choose to buy more shares back, while in case of lower participation than expected, the repurchase program may be extended or the offer withdrawn. Usually, the management of the company does not participate in the program to preserve the credibility of the repurchase announcement (Hsieh–Wang 2009, Vafeas 1997).

#### *3.2. Dutch auction tender offer*

The Dutch auction tender offer is very similar to the fixed-price tender offer. The number of shares to be repurchased and the duration of the program are fixed in advance in this method as well. The difference is regarding the determination of the repurchase price: during a dutch Dutch auction tender offer, there is no fixed price, but rather, a range for the price. Shareholders participating in the repurchase program submit the price and the number of shares they are willing to sell to the company. The company sorts these offers in order, then sets the minimum price, per which it can buy back enough shares to reach its particular goal. Shares offered at or below the minimum price are bought back, while the other shares remain at the shareholders (Hsieh–Wang 2009, Vafeas 1997).

### *3.3. Open market repurchase program*

Among share repurchase methods, open market repurchase programs are the most popular. This method has several distinctions from the above discussed tender offers.

First, the number of shares to be brought back is not determined beforehand, rather, the value of the program is announced. Second, open market repurchase programs are generally conducted through longer time periods, a program can last as much as several years. Third, one of the most significant differences from fixed-price and Dutch auction tender offers is that during an open market repurchase program, the company is not obliged to repurchase shares for the value announced earlier (Hsieh–Wang 2009, Vafeas 1997). Stephens–Weisbach (1998) show that in the United States sample an average of 74% to 82% of the announced value is repurchased in the three years after the announcement is made.

### *3.4. Privately negotiated share repurchases*

The fourth method of repurchasing is the privately negotiated share repurchase. The essence of this method is that the company targets a shareholder or a group of owners who hold a great number of shares. Generally, the price includes a premium above the current market price, thus the term “greenmail” is widespread. If the premium is big enough, then it is worth selling the shares back to the company, thus the “greenmail” reference. This method can be an effective measure to hinder a hostile takeover attempt, although it may also be used when there is no such event (Hsieh–Wang 2009).

### *3.5. Transferable put-rights distributions*

The last share repurchasing technique is the transferable put-rights distributions. As the name suggests, this method means that the company distributes put options among the shareholders. This option grants the right to shareholders to sell their shares for a given price and maturity. The option can also be sold to other shareholders of the company (Hsieh–Wang 2009).

The distribution of transferable put rights has several advantages compared to other share repurchasing methods. Those shareholders will sell the option and retain their shares who have a higher reservation price concerning the shares. Consequently, shareholders with a lower reservation price will sell their shares back to the company, thus the ratio of shareholders with a higher reservation price will increase, which makes a potential hostile acquisition harder to pull off. Furthermore, investors face different tax rates, and the ability to sell the options means that they can decide to keep the shares or strike the options while optimizing tax payment as well (Hsieh–Wang 2009).

### *3.6. Statistics of share repurchase methods*

Banyi et al. (2008) provide data for four of the above discussed methods in the United States: fixed-price tender offers, Dutch auction tender offers, open market repurchase programs, and privately negotiated share repurchases are analyzed in their work. Open

market repurchase programs are the most popular among the share repurchase methods. Between 1985 and 2004, 84% of repurchases (12,931 events) were open market repurchase programs. In dollar amounts, about 90% (approximately 1,749 billion dollars) were paid through open market repurchase programs. Data for the other methods: fixed-price tender offer: 747 events and about 71 billion dollars, Dutch auction tender offer: 253 events and about 41 billion dollars, and privately negotiated repurchases: 1,369 events and about 94 billion dollars. Thus, we can conclude that open market repurchase programs dominate other repurchase methods.

#### **4. Theories related to share repurchases**

Research in corporate finance theory gained significance in the middle of the twentieth century. In their influential paper, Miller–Modigliani (1961) state that payout policy is irrelevant regarding the value of the enterprise. The theory is valid when crucial assumptions are made, including no taxes and transaction costs, competitive markets, informational symmetry, and rational investors. Naturally, these assumptions are not fulfilled in real markets, and most of the theories related to payout policy, and to share repurchases as well, originate from the violation of one or more of these assumptions (Farre-Mensa et al. 2014). These considerations and other relevant theories related to share repurchases are discussed below.

##### *4.1. Taxes and regulation*

One of the assumptions of Miller–Modigliani (1961) that definitely does not hold in real markets is that there are no taxes. Clearly, individuals and companies have to pay taxes on their income. Taxes are highly relevant for payout policy because dividends and share repurchases have different tax implications in many countries. Usually, income from dividends is taxed according to the personal or ordinary income tax rates, while earnings from buybacks are deemed as capital gains, to which different tax rates apply. Grullon–Michaely (2002) point out that even though dividends were at a tax disadvantage in the United States for much of the twentieth century, payout policy was still overly dominated by dividends and share repurchases played only a marginal role.

Why were dividends preferred instead of share buybacks despite the tax disadvantage? The answer can be found in regulatory measures. The Securities Exchange Act of 1934 regulated share repurchases in the United States. The Securities Exchange Commission (SEC) wanted to prevent companies from manipulating the price of their own shares, but the regulation turned out to be too rigorous, thus companies avoided buybacks and paid dividends instead. However, in 1982, the SEC adopted Rule 10b-18, which eased the regulation (Grullon–Michaely 2002). Since then, share repurchases have gained prominence, as I have shown above.

Regulation is a key factor in payout decisions in other parts of the world as well. For example, Lee et al. (2010) report that share repurchases were prohibited in many European countries in the nineties, which may be one of the reasons why

buybacks have not been as dominant lately in the continent as in the United States. Andriosopoulos–Lasfer (2015) assess three European countries, the United Kingdom, France, and Germany, their results indicating that local institutional environment and regulatory measures significantly influence the amount of and approach to share repurchases.

In a unique empirical study, Brav et al. (2005) surveyed 384 financial chiefs and interviewed a further 28 company officials to uncover the motivations of management regarding dividends and buybacks. Concerning the tax implications of payout policy for their investors, managers replied that tax considerations are only of secondary importance when payout decisions are made.

#### *4.2. Signaling and undervaluation theory*

The informational asymmetry observed in capital markets is a violation of the Miller–Modigliani (1961) assumptions. This asymmetry arises from the fact that the managers of the company have more information about the business they run than the shareholders who own the company. The management may utilize dividends or share repurchases as a costly signal to the market that the company is operating appropriately, and even foreshadow improving future performance (Miller–Rock 1985). Share repurchases are especially suitable signals according to the undervaluation theory: managers of the company may initiate buyback programs when they think the shares of the company are undervalued in the market (Ofer–Thakor 1987).

Ofer–Thakor (1987) summarize the stylized facts about the effects of the announcement of dividends and share repurchases: (1) announcement of dividends and buybacks have a significant positive effect on share price, (2) announcements of repurchases generate a greater response in share price than those of dividends do, (3) companies repurchase shares with a premium, thus the buyback price is higher than the earlier market price, (4) in many cases, share price drops after the repurchase is finished, (5) despite this drop, the share price after the repurchase is still greater than it was before the buyback.

Ofer–Thakor (1987) provide a theoretical framework, in which they prove that the signaling theory holds for dividends and share repurchases alike. They also show that the announcement of buybacks conveys more information than that of dividends does. Howe et al. (1992) utilized fixed-price repurchase offers and special dividends to test – among other things – the signaling theory, and their evidence suggests that the theory holds. Vafeas (1997) reveals a subtle difference between different repurchase methods: he argues that fixed-price tender offers do provide a signal, while open market repurchase programs can be employed to exploit short-term undervaluation. Dittmar (2000) analyzes a sample ranging from 1977 to 1996 to simultaneously test several hypotheses. Her Tobit model results indicate that the undervaluation theory is valid for every year in her sample.

Contradicting these theoretical and empirical results, managers do not believe they use share repurchases as a costly signal to the market. However, they gladly repurchase shares, when the shares are deemed undervalued (Brav et al. 2005).

#### *4.3. Agency costs and the theory of free cash flows*

In most cases concerning publicly traded companies, the management and the owners of the company are not the same group of people, which can lead to conflicting interests between these sides. Agency costs arise when the management of the company does not operate the business in the best interest of the shareholders but seeks to maximize its own wealth or influence (Damodaran 2014).

Easterbrook (1984) and Jensen (1986) uncover the relationship between agency costs and payout policy. At the time, dividends were the main instruments of returning cash back to the shareholders, thus the researchers focused solely on dividends. They argue that increasing dividends reduce the cash balance available to managers, thus leaving them with limited resources.

Free cash flows that are not returned to the owners can damage shareholder value in two ways (Hsieh–Wang 2009). First, the available cash reserves could be used to invest in projects which have a negative net present value. This overinvesting behavior reduces the value of the enterprise, thus shareholder value is decreased as well. Second, cash balances could be utilized to directly serve the interests of the management, for example increasing managers' compensation, which reduces free cash flow available to investors (Hsieh–Wang 2009).

Howe et al. (1992) analyze the Tobin Q measure of companies, which is the ratio of the company's market value and the replacement cost of its assets. Companies with lower Q values are the overinvesting companies, while a high measure indicates successful value maximization. Howe et al. (1992) find that the two groups of companies react approximately the same to announcements of share repurchases, thus they reject the theory of free cash flows.

Perfect et al. (1995), however, oppose the results of Howe et al. (1992). They believe that the rejection or acceptance of the free cash flow hypothesis depends greatly on the calculation method of the Tobin Q measure, and criticize that Howe et al. (1992) used three years of data for the calculation of the measure, instead of considering the latest year, which is the standard procedure in the literature. Perfect et al. (1995) thus argue that the theory of free cash flows cannot be rejected.

Vafeas–Joy (1995) evaluated 162 share repurchase announcements between 1985 and 1991. They also utilized the Tobin Q measure, and their results indicate that Jensen's (1986) theory holds, thus the free cash flows hypothesis is valid. Dittmar (2000) reports evidence that the theory holds for several years in her sample as well, further proving the free cash flows theory.

Perhaps unsurprisingly, the Brav et al. (2005) paper contradicts most of the above-mentioned empirical results. The surveyed and interviewed managers, perhaps unsurprisingly, do not believe that the agency theory is adequate. Naturally, it is not expected that managers would willingly admit running the business in a way that is not entirely in conjunction with the interests of the shareholders.

#### *4.4. Substitution hypothesis*

The way companies return cash to their shareholders does not matter in the Miller–Modigliani (1961) framework, as because of the no taxes and transaction costs assumptions, the value of the company is indifferent to payout decisions. The substitution hypothesis originates from this classic proposition, which suggests that dividends and share repurchases are perfect substitutes.

As discussed above, these assumptions do not hold in real markets, thus the substitution hypothesis has been tested on several occasions. Grullon–Michaely (2002) inquire whether the emergence of buybacks at the end of the twentieth century was caused by companies replacing dividends with share repurchases. Applying Lintner’s (1956) dividend forecasting model to test the relationship between dividends and share repurchases, they prove that the substitution theory holds.

Jiang et al. (2013) also report evidence justifying the substitution theory. They utilize the catering theory of Baker–Wurgler (2004), which states that managers cater to the investors’ demand for dividends when dividend-paying shares trade with a higher price than other companies’ shares. Jiang et al. (2013) find that the premium related to share repurchases (dividends) has a negative effect on the willingness to pay dividends (repurchase shares), which supports the substitution theory.

Most of the empirical studies related to share repurchases have been conducted using data from the United States. Andriosopoulos–Hoque (2013), however, test the substitution hypothesis in three European countries, the United Kingdom, France, and Germany, considering open market repurchase programs and the relevant legal system in these countries. The researchers report that the substitution hypothesis can be rejected in the UK and Germany, but the evidence backs the theory in France (Andriosopoulos–Hoque 2013).

Opposing the above results, Dittmar (2000) finds that the substitution theory does not hold in most of the years in her sample. Brav et al. (2005) claim that managers do not think of dividends and share repurchases as perfect substitutes for each other. They explained that dividends are sticky and hard to reduce without negative consequences to share price, while buybacks provide flexibility in determining the amount of cash returned to shareholders.

#### *4.5. Other motivations for share repurchases*

The previous sections discussed the theories related to share repurchases which can be derived from the violation of one or more of the Miller–Modigliani (1961) assumptions. There are, however, other factors which may motivate managers to



repurchase shares. The motivations considered below are takeover deterrence and the avoidance of earnings per share dilution.

Share repurchases may hinder hostile takeover attempts through various channels. First, according to the signaling and undervaluation theory, the announcement of a repurchase program increases the price of the shares, thus the potential acquirer would have to offer a higher price for them. Second, owners of the company who sell their shares in a repurchase program have a lower reservation price regarding the share price, leading to an ownership structure where shareholders with a higher reservation price remain in place. The remaining owners would only accept a higher potential bid from the acquirer, thus a buyback program may reduce the possibility of a successful hostile takeover (Hsieh–Wang 2009).

Denis (1990) analyzed the payout policy of targeted companies, which faced hostile acquirers. He reports that share repurchases and special dividends are effective tools against hostile acquisition attempts. Lee et al. (2010) show that takeover deterrence is a relevant motive for share repurchases in the European countries evaluated. Dittmar (2000), however, finds that hindering hostile takeovers is a significant factor only in some years of her sample.

Companies sometimes compensate their workforce with stock options. If these options are exercised, then the company has to issue new shares, and the increased number of total shares causes the earnings per share (EPS) to decline. Many managers have EPS as one of their performance indicators, thus they are motivated to reduce the number of shares outstanding, which can be achieved by buying shares back (Farre-Mensa et al. 2014).

The surveys and interviews conducted by Brav et al. (2005) reveal that avoiding earnings per share dilution is indeed one of the major motivations of managers initiating share repurchase programs.

## 5. Conclusion

The payout decision is one of the major questions of corporate finance. The way companies return cash to their shareholders has changed significantly over the last few decades. Share repurchases or buybacks have gradually replaced dividends as the main form of payout in the United States, and have gained prominence in other capital markets of the world as well.

The importance of share repurchases has motivated researchers and professionals alike to discover why payout policy is shifting from dividends to buybacks. Several theories originate from the violation of the Miller–Modigliani (1961) assumptions, such as taxes and regulatory considerations, signaling and undervaluation theory, the agency costs and theory of free cash flows, and the substitution hypothesis. These theories are discussed above, as well as other motivating factors, for example, takeover deterrence and the avoidance of earnings per share dilution.

Overall, empirical studies testing the hypotheses often report contradictory results, and thus no dominant theory relating to share repurchases has arisen. Further research is needed to better understand the motivations behind buybacks and reduce this ambiguity. Moreover, existing research focuses mainly on the United States and some other developed countries, while less developed and developing markets have not been in the center of attention, an area which is open for new research. Classical valuation theory and methods concentrate on shareholder cash flows of dividends, but the emergence of share repurchases may prompt the reassessment of such models, highlighting the theoretical and practical significance of share repurchases or buybacks.

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