

M&A waves and its evolution throughout history

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Abstract

M&A activity is a topic that has been widely investigated throughout history and this paper attempts to summarize the characteristics of different waves that seem to be inherent in the activity of mergers and acquisitions. These, so called, waves are compared with one another to see how the climate of mergers and acquisitions has changed over the last century. In comparing the different waves the paper also indicates factors that drive the occurrence of M&A waves. The results comes from the extensive literature on mergers and acquisitions and this paper tries to give a clear overview of M&A activity and how it evolved during every wave. Focus will also be on the performance of the mergers and acquisitions in every wave to see whether M&A's have an economic significance. Especially, the performance for shareholders is investigated. In summary, this paper will provide an overview of the merger waves of the last century and will try to give a clear and concise explanation of the occurrence of merger waves.

I. Introduction

The field of M&A is one in which research is abundant and therefore there has been a lot of research with respect to the occurrence of merger and acquisition waves and about different characteristics of them. Before analyzing these results we should first define a merger and an acquisition. Mergers and acquisitions are ‘fusions’ of two or more companies to attain certain strategic goals. Furthermore, we can divide mergers as being either horizontal, vertical or as a conglomerate. A horizontal merger is the combining of companies that compete in the same industry. Vertical mergers are mergers when a company merges with its suppliers or distributors. Conglomerate mergers take place when companies from unrelated industries merge.

In the M&A process there are usually bidding and target companies, where the target company is a potential takeover target for the bidding firm. Although we speak of *mergers and acquisition*, there is usually one ‘bigger’, or dominant, company that acquires the other. The rest of the paper will therefore distinguish between target and bidding companies.

There are different stakeholders affected by mergers and acquisitions. Besides the target and bidding shareholders, also the employees and creditors of the merging companies are affected. Furthermore, other stakeholders like tax authorities, suppliers, customers, communities are also affected by the process of mergers and acquisitions.

In describing the characteristics of the M&A waves the method of payment is also very important. The bidding company can offer cash or equity shares, or a combination of both, in order to acquire the target firm. Furthermore, the bid on the target company can either be hostile or friendly which can also be a describing factor of a merger and acquisition wave.

After evaluating and describing the characteristics of the merger and acquisition waves the paper also provides an overview of the influence of these characteristics on company performance. Is there a difference in performance between a cash bid and an equity bid? And, do the strategic characteristics of the takeover deal have an influence on the success of the acquisition? So, do horizontal acquisitions outperform vertical acquisitions, for example? Focus will be on the performance of the bidding and target shareholder.

The remainder of the paper is divided into 4 sections. Section 2 will review previous literature about the different merger and acquisition waves that have occurred and I will compare them accordingly, section 3 will describe the theories that lie behind the occurrence of M&A waves. In section 4 the performance of mergers and acquisitions for the bidding and target shareholders is evaluated. Finally, section 5 will conclude with a short summary and I will highlight areas where future research could be complementary.

The main goal of this paper is to provide the reader with a clear understanding of M&A activity of the past century, that the activity is clustered in waves, and what the economic theories behind these waves are. Furthermore, I will also present an overview of the performance of M&A activity.

II. History of Merger Waves

The activity in mergers and acquisitions in the past century shows a clustering pattern. The clustering pattern is characterized as a wave and they occur in burst interspersed with relative inactivity (Sudi Sudarsanam (2003)). When we discuss these merger waves, economics usually refer to 5 specific waves starting from 1890. The length and start of each wave is not specific, but the end of each wave usually falls with a major war or the beginning of a recession/crisis. Furthermore, the first and second wave was only relevant for the US market, while the other waves had more geographical dispersion. Especially in wave five, where besides US, UK and continental Europe, Asia also had a significantly increased M&A market.

A general conclusive theory about the M&A waves is not available yet, although there seems to be industry-specific factors that trigger the waves because different industries experience increased M&A activity at different times (Sudi Sudarsanam (2003)). The available perspectives about the occurrence of M&A waves will be discussed in the next section, this section will identify characteristics of each wave.

Wave #1: 1893-1904

The first wave followed after a period of economic expansion, and an important characteristic was the simultaneous consolidation of manufacturers within one industry (Sudi Sudarsanam (2003)). This within industry consolidation led to horizontal consolidation of major industries and created the first ‘giants’ in the oil, mining and steel industries, among others.

Furthermore, the horizontal mergers led to the creation of monopolies. According to Stigler (1950), mergers “permit a capitalization of prospective monopoly profits and a distribution of portions of the capitalized profit”. In 1890 the Sherman Antitrust Act¹, which limits cartels and monopolies, was passed but it was not yet clear in the beginning so the direct impact was limited (Stigler, 1950). The creation of monopolies was therefore not being restricted.

The first wave was also characterized by ‘friendly’ deals and by cash financing. Having said this, we still do not know why the merger wave started in the first place.

In the first place, laws on incorporations² were evolving and were implemented more rigorously at the end of the nineteenth century. Before proper legislation, entrepreneurs had an unlimited liability on their assets which means that growth of your company also means greater exposure and greater risk. Improvement of laws on incorporations led to limited liability for entrepreneurs. Furthermore, economic expansion and the development of the modern capital market, i.e. the improvement of the New York Stock exchange, also boosted the number of mergers because capital needed to acquire, or merge, became more accessible.

The end of the first wave came due to a more rigorous enactment of the new antitrust laws, e.g. the Sherman Antitrust Act. Besides this, the stock market crashed around 1905 which resulted in a period of economic stagnation. Furthermore, the beginning or threat of the First

¹ Sherman Antitrust Act: purpose was to restrict the combination of entities that could limit competition unlawful.

² Incorporate: combined into one united body; casu quo: merged.

World War is also pointed as a cause of the end of the first identified wave, also known as the 'Great Merger Wave'.

Wave #2: 1910s-1929

The second merger wave started in the 1910s, where the primary focus of merger activity was in the food, paper, printing and iron industry but the wave was significantly smaller in magnitude than the first wave. Where the first wave exceeded more than 15% of the total assets in the US market, the second wave had an impact of less than 10% (Sudi Sudarsanam (2003)). The second wave followed after the First World War in times of economic recovery and increasing concerns about monopoly power. As opposed to the first wave, this wave characterizes itself as a creator of oligopolies. At the end of the wave, industries were no longer dominated by one large corporation, but rather by two or more. Especially small companies, which 'survived' the previous wave, were active on the M&A market. The objective of these companies was to gain economies of scale so that they were better equipped against the power of the previous monopolist. Logic behind the emergence of the oligopolies is that the merged companies of the previous wave were faced with restricted resources due to the previous crisis and greater enforcement of antitrust laws, especially the Sherman's act (Stigler, 1950).

Similar to the first wave was the 'friendly' character of the deals, but the prevalent source of financing switched from cash to equity.

The end of the second merger wave was caused by the market crash of 1929 which started the 'Great Depression' which led to a world-wide depression in the following years.

Wave #3: 1955-1975

Due to the 'Great Depression' and the following Second World War, the activity on the M&A market slowed down significantly. The new wave started only in the 1950's and coincided with further restrictions which needed to prevent anticompetitive mergers and acquisitions. This resulted in the development of a new business organization. Mergers in the first and second wave usually involved horizontal (wave 1) or vertical (wave 2) integration, but the third wave gave rise to the concept of diversification. Similar to the second wave was that equity was the dominant source of financing.

The method of diversification led to the rise of conglomerates, which are large corporations that consists of numerous businesses not necessarily related. Example of a conglomerate is General Electric, which has interest in a vast number of businesses including healthcare, transportation and energy. Diversification can be a method to reduce the cash flow volatility through reduction in the exposure to industry specific risk. The conglomerate will be less vulnerable to shocks in one industry because it generates income in different, maybe unrelated, industries so that loss of income in one industry can be offset by other industries. Due to conglomerate creation, growth opportunities in unrelated businesses can be exploited. Finally, a conglomerate will create its own internal capital market which is especially useful when outside capital is expensive.

The diversification process also led to changes in the market structure. Chandler (1991) with his concept of the Multidivisional Enterprise stated that: “structure follows strategy and the most complex type of structure is the result of concatenation of several basis strategies”. Interpretation can be that the strategy of corporations leads to changes in the market structure. The diversification led to an increased distance between the managers at the headquarters and the divisional managers. Besides possible inefficiencies associated with increased communication lines, the addition of the numerous businesses also led to a decision overload at the company headquarters (Chandler (1991)).

Whether the third wave began due to the stricter enactment of antitrust laws which led to increased diversification and ‘empire’ building is still up for debate. Clear is that in the third wave the percentage of corporations active in unrelated business increased from 9% to 21% among the Fortune 500 companies, which suggest that diversification plays a key role in the third wave (Sudi Sudarsanam (2003))

The third merger wave slowed down and the end of the 1970s and collapsed completely in 1981 when there was an economic recession due to a significant oil crisis.

Wave #4: 1984-1989

The fourth merger wave started in the 80s, and was quite different then its previous one. Foremost, the bids were usually hostile which meant that the bids did not have the target’s management approval. Second, the size of the target was also significantly larger than in the previous wave. Furthermore, the dominant source of financing shifted from equity to debt and cash financing.

According to Ravenscraft (1987) the beginning of the wave could have been a bargain hunt taken place in a depressed stock market, where the conglomerates of the previous wave divested their divisions. Sudi Sudarsanam (2003) states that in the fourth wave divestitures constituted about 20-40% of the M&A activity. Apparently there was a simultaneously expansion and downsizing of businesses, where the expanding corporations made use of the divestitures to increase their competitive position (Sudi Sudarsanam (2003)).

Schleifer and Vishny (1991) view the new merger wave as one that is characterized by ‘bust-up’ takeovers, where large parts of the target were divested after acquiring. Besides these bust-ups, the concept of leveraged buy-out (LBO) emerged. In a LBO, the firms’ own management uses large amounts of outside debt to acquire the company. After acquisition, large fractions of the assets are sold as was the case with the bust-up takeovers.

The fourth wave started to eliminate the inefficiencies that were created by the conglomerate mergers in the third merger wave. Morck, Schleifer and Vishny (1990) show that in the 1980s a bid on a target firm, which is competing in the same industry, has a positive relationship with stock market return for the shareholders of the bidding firm. For bids on unrelated targets the opposite holds. This indicated that the market had a negative attitude towards unrelated diversification, a strategy appreciated in the third merger wave.

After 1989 M&A activity gradually slowed down and yet another stock market crash led to the end of the wave.

Wave #5: 1993-2000

The 1990s was a decade of great economic prospect. The financial markets were booming and a globalization process was developing. The merger activity also boomed in continental Europe where it almost equaled the US market. Due to globalization the number of cross-border acquisitions increased significantly. In order to keep up with the economic growth and the global opportunities, organizations searched outside their domestic borders to find a target company. Growth was an important driver for merger activity. Corporations wanted to participate in the globalization of the economy. This created some 'mega' deals that were unthinkable before this wave. Some major mergers were: Citibank and Travelers, Chrysler and Daimler Benz and Exxon and Mobil.

The fifth wave started due to technological innovations, i.e. information technology, and a refocus of corporations on their core competences to gain competitive advantage (Sudi Sudarsanam (2003)). This resource-based view leads to a better focus to gain a sustainable competitive advantage through the best use of their resources and capabilities.

The nature of the merger was prevalent friendly, and the dominant source of financing was equity.

The end of the wave was once again caused by an economic recession. The beginning of the new millennium started with the burst of the internet bubble, causing global stock markets to crash.

M&A waves summarized

The walk over the mergers and acquisitions waves from the past century draws a picture about the evolution of M&A activity, and about different corporate strategies. The first three waves occurred during periods of economic boom and a flourishing stock market, the end of the waves were due to economic recessions usually preceded by a stock market crash (Sudi Sudarsanam (2003)). The fourth and fifth waves were respectively due to increased enforcement of anti-trust laws and technological innovations which led to the redeployment of assets (Jovanovic and Rousseau (2002)). Furthermore, Sudi Sudarnsanam (2003) states that M&A waves are usually accompanied with high economic growth, technological innovations, recovery from economic recession and a rising stock market.

The focus of corporations also shifted in the different waves, whereas the first wave was directed to monopoly building with a significant impact on industry structure while the fifth wave was characterized by globalization with limited effect on industry structure. M&A activity in the last century is industry specific. The clustering of mergers and acquisition is focused on different industries. Gort (1969) argues that different industries are affected differently by economic shocks. In the first wave the oil, mining and steel industry were subject to increased M&A activity while in fifth wave, for example, the industries involved

with information technology were most active in M&A activity. So there is a considerable amount of dispersion between active industries in the different M&A waves.

Geographical dispersion is also very different between the waves. The first and second wave predominantly existed in the US, while from wave three onwards the M&A activity in Europe increased significantly. The last was really a global M&A wave, where also the activity in mergers and acquisitions increased substantially in Asia.

The dominant source of payment also gives an interesting picture about the changing climate of the capital market and corporate strategy. In the first wave, cash was the prevalent way of financing the deal. This was probably due to the fact that the capital market was only just beginning to development. In the second, third and fifth wave, equity was the dominant form of financing whilst the fourth wave is characterized by cash and debt financing. Most likely, this was due to the hostile character of most deals and the significant increase in LBO's.

See the table below for a summary of the completed waves of the past century.

	Wave # 1	Wave # 2	Wave # 3	Wave # 4	Wave # 5
Period	1893-1904	1910s-1929	1955-1975	1984-1989	1993-2000
Predominant means of payment	Cash	Equity	Equity	Cash / Debt	Equity
M&A outcome	creation of monopolies	creation of oligopolies	Diversification / conglomerate building	'bust-up' takeovers; LBO	Globalization
Predominant nature of M&A	Friendly	Friendly	Friendly	Hostile	Friendly
Beginning of wave	Economic expansion; new laws on incorporations; technological innovation.	Economic recovery; better enforcement of antitrust laws.	Strengthening laws on anti-competitive M&A's; Economic recovery after WW 2.	Deregulation of financial sector; Economic recovery.	Strong economic growth; Deregulation and privatization.
End of wave	Stock market crash; First World War.	The Great Depression.	Market crash due to an oil crisis.	Stock market crash.	Burst of the internet bubble; 9/11 terrorist attack.

III. Theory behind the occurrence of merger waves

After giving the characteristics of the different waves in the past century I will now turn to the theories that could be underlying these waves. These theories can be roughly divided into three groups. A first group relates merger waves to changes, *casu quo* shocks, in the business environment. These changes, like an economic boom or changed regulation on competition, should result in an increase in M&A activity. Another group suggests that merger waves are driven by managerial decisions. Where managers make irrational decisions or act only out of self-interest. This may refer to the occurrence of ‘empire’ building in the third merger wave. The last group suggests that the development of the capital market is underlying the merger waves and relates the occurrence of waves to market timing.

Business environment changes

Martynova and Renneboog (2008) state that economic factors that trigger firms to restructure as a response to changes in the business environment is one point of view which could explain the occurrence of M&A waves.

Gort (1969) created the economic disturbances model, in which he states that economic disturbances generate discrepancies in valuations needed for mergers. These discrepancies in valuations exist due to different opinions about the true value of the target. According to Gort, these discrepancies are necessary in order for mergers to arise. ‘Dramatic’ changes in economic factors, i.e. economic disturbances, will therefore create the discrepancies in valuation and lead to increased M&A activity. In his empirical part, conducting an industry analysis on the US market from 1951 till 1959, Gort also concluded that economic growth and capital market conditions have a positive relationship to the merger rate³.

Another model from Lambrecht (2004), which illustrates the timing and terms of M&A’s in a dynamic environment, shows there is a positive relation between product market demand and the gains from mergers driven by economies of scale. Lambrecht interprets this by saying that mergers arise in rising product markets. The cyclical pattern of product markets could therefore indicate a pattern of M&A activity.

Maksimovic and Phillips (2001) analyze the market for corporate assets. They use plant-level data between 1974 and 1992 for the US market to draw a picture about the determinants of mergers and acquisitions and about (partial-) firm asset sales between industries. The results indicate that efficient firms are more likely to buy (part of) less productive firms when the industry undergoes a positive demand shock. Increase in (industry) demand could therefore lead to increased M&A activity.

Technological changes are also believed to have an impact on the market for M&A. The Q-theory of Mergers created by Jovanovic and Rousseau (2002), models ‘technological change’ and says that the rate of investment should increase with the incremental Q. The Q of a firm is the market value divided by the replacement cost of capital. According to Jovanovic and

³ The merger rate is the number of acquisitions with respect to the number of businesses in the relevant sector and is a proxy for M&A activity.

Rousseau an increase in the firm's Q should lead to increased investments. They also argue that the inter-firm dispersion of the Q explains M&A activity and they state that the first, second, fourth and fifth wave were the result of profitable reallocation opportunities. About the third wave, no such relation could be given. Martynova and Renneboog (2008) connect the reallocation opportunities to the technology development of electricity and the internal combustion engine respectively for the first and second M&A wave. The development of microprocessors marked the beginning for the fourth wave and improvement information technology was a main factor for wave number five.

Research conducted by Andrade et al (2001) for the US market spanning from 1962 to 1998 shows that each wave is different with respect to the industries that are experiencing significant M&A activity. This could indicate that M&A activity is, at least partly, due to industry-level shocks. Andrade et al (2001) suggest that technological innovations, supply shocks and deregulation are possible drivers for the M&A waves. Technological innovations, as was also stated by Jovanovic and Rousseau (2002), can lead to M&A activity due to the creation of excess capacity (which could indicate a higher Q).

Another study done by Mitchell and Mulherin (1996) also researched M&A activity on an industry level. The study investigated the US market for the period 1982-1989 and stated that mergers and acquisitions are frequently the most cost-efficient way in order to respond to economic shocks. The study defines an economic shock as any factor, whether expected or unexpected, that alters industry structure. M&A's are according to Mitchell and Mulherin (1996) the most appropriate way of coping with the changed industry structure and the fourth wave is therefore not about the divestitures of conglomerates but about reacting to a changing industry.

The analysis done at industry-level is complemented by a study from Andrade and Stafford (2004) which state that M&A activity is partly due to industry-level shocks and partly due to firm specific factors. According to them the fifth wave is the result of strategic, synergistic factors and not about industry restructuring like wave number four. Industry expansion, i.e. growth, was according to Andrade and Stafford (2004) the main driver behind the fifth wave resulting in increased globalization and cross-border acquisitions. In contrast with the fifth wave, M&A activity in the 1970s and 80s was driven by industry-level shocks. Martynova and Renneboog (2008) state that in the fourth wave the build-up of excess capacity forced industries to reallocate assets by way of mergers.

Another viewpoint stretches the importance of financial flexibility in M&A activity. A study conducted by Hartford, for the period 1950-1994, concluded that in the US cash-rich firms are more likely to be active on the M&A market. The liquidity created through increased cash buffers can play an important strategic role in imperfect capital markets deriving from asymmetric information (Hartford (1999)). The build-up of large cash reserves happens according to Martynova and Renneboog (2008) most probably in times of capital market growth and M&A activity should therefore be clustered in these periods. Another study done by Hartford (2005), spanning from 1981 till 2001, researched whether M&A waves occur due to market timing or industry shocks. The study stated that M&A waves, in general, occur due

to economic, technological or regulatory shocks but only when there is sufficient liquidity. The occurrence of a wave therefore depends on the existence of a significant shock and the presence of cash buffers (Hartford (2005)).

Managerial behavior

Besides the viewpoint that economic factors explain the occurrence of M&A waves there also exists a viewpoint regarding agency problems and the overconfidence of managers (Martynova and Renneboog (2008)). This viewpoint relies on empirical studies stating that M&A activity destroys corporate value.

Agency problems exist when there are conflicts of interest between the agent (i.e. the managers) and the principal (i.e. the shareholders) (Jensen (1986)). These agency problems can exist due to large free cash flows⁴ that are at the disposition of managers. According to Jensen (1986), the existence of large free cash flows gives the managers incentives to grow beyond their optimal size. Managers perceive growth as a way to increase their power (increased resources under control) and growth is also affiliated with increased compensation (Murphy (1985)). When this growth goes beyond the optimal size, a conflict is created between the manager and the shareholders. These agency problems arising from large amounts of free cash flow can create M&A waves in times of industrial shock or the presence of booming financial markets (Jensen (1986)). According to Martynova and Renneboog (2008) the availability of large amounts of free cash flow enables managers to make negative present value investments.

A study conducted by Schleifer and Vishny (1991) states that due to free cash flow managers invest in unrelated diversification leading to negative performance for the bidding shareholders in the long run. This 'empire' building, due to access to large amounts of free cash, explains the occurrence of the third M&A wave (Schleifer and Vishny (1991)). Agency problems resulting from free cash flows are therefore underlying the third M&A wave. The fourth wave is, according to Schleifer and Vishny (1991), a reversal of the conglomerate wave.

Amihud and Lev (1981) researched what the influence of risk reduction is on conglomerate building. They state that a conglomerate merger will lead to reduced risk for the combined entity because of reduced earnings volatility. But according to them, diversification does not add value to the bidding shareholders because they can duplicate the investment with a 'homemade' investment portfolio. Although the conglomerate merger does not add value for the bidding shareholder, the manager has incentives to undergo mergers and acquisitions because it reduces the employment risk⁵. So availability of free cash flow, 'empire' building and risk reduction (i.e. reduction of employment risk) are agency problems, or the result of agency problems, underlying at least the third M&A wave.

⁴ Free cash flow is the excess of cash flow that is required to undergo all net present value acquisitions (Jensen (1986)).

⁵ Employment risk: risk of losing job, professional reputation, etc. which is largely un-diversifiable (Amihud and Lev (1981)).

The agency problems discussed above give explanations for the occurrence of mergers and acquisitions. But the clustering characteristic of mergers and acquisitions seem to be triggered by economic factors, also indicated by Jensen (1986) who stated that an industrial shock or a flourishing financial market could lead to the build-up of large amounts of free cash flow leading to agency problems and increased activity in mergers and acquisitions. Another viewpoint on M&A tries to explain mergers and acquisitions and the occurrence of waves with the hubris hypothesis and herding. Roll (1986) introduced the hubris hypothesis suggesting that hubris, i.e. arrogance or overconfidence, explains the occurrence of mergers and acquisitions. According to Roll (1986), managerial hubris, arises due to overconfident managers believing that they can manage the target firm more efficiently. Martynova and Renneboog (2008) argue that the hubris hypothesis explains unsuccessful M&A's in each wave. According to the hubris hypothesis, 'overconfident' managers overstate the increase in economic value of the combined corporation resulting in inflated takeover premiums.

The concept of herding implies that managers just mimic investment behavior of other managers, disregarding their own private information (Scharfstein and Stein (1990)). According to *The General Theory* of Keynes (1936, pages 157-58) managers 'follow the herd' if they are concerned about judgments upon their investment decision making by others. Scharfstein and Stein (1990) state in their paper that herd behavior will most probably arise due to reputational incentives or the presence of unpredictable investment outcomes. This unpredictability makes managers follow others because then a 'sharing-the-blame' effect arises in case of unfavorable investment outcomes.

The combination of herding and the hubris hypothesis constructed by Roll could therefore be an explanation for the clustering of mergers and acquisition. Because herding will lead to mimicking behavior of competitors, successful mergers and acquisitions will lead to increased M&A activity by other firms (Martynova and Renneboog (2008)). Due to the imitating behavior of the 'following' firms (the herd), some M&A's will be biased with managerial hubris leading to inferior performance for the combined corporation. This is supported by research done by Hartford (2003) arguing that first-movers in a wave have an advantage because they will likely buy the 'best' targets. The research concludes that in the US market, for the period 1981-2000, abnormal returns for bidding firms are lower for mergers and acquisitions taken place at a later stage of the wave.

Market timing

The last viewpoint on the occurrence of M&A waves focuses on the theory that market timing triggers increased M&A activity in times of financial boom. Myers and Majluf (1984) argue that in times of financial boom managers make use of their 'overvalued' equity to invest in other firms. When managers believe that their stock is overvalued they could exchange these for real assets, although this only holds for mergers and acquisition paid for in stocks.

A study conducted by Schleifer and Vishny (2003) on the fifth merger wave concluded that the occurrence of M&A waves is related with the boom of financial markets and the overvaluation of stocks. In times of financial boom stocks tend to be overvalued but this overvaluation varies significantly across firms. The management of firms with less

overvalued stocks will therefore buy the more overvalued ones. According to Martynova and Renneboog (2008) the theory assumes that the target manager maximizes his own short-term benefits, therefore accepting the stock offer.

According to Martynova and Renneboog (2008) recent empirical studies show that the fifth M&A wave is due to market timing from managers. The studies only show this relation with M&A paid for in stock, for other means of payment no such relation could be given yet. Furthermore, previous research could not provide evidence that the other waves were also caused by market timing.

Summary

The theories presented in this section connect the occurrence of M&A waves to shocks or changes in the business environment. Different perspectives are given on both industry and firm-specific level and for different time frames. From the models we can say that there is no single answer possible (yet?) which can explain the clustering pattern in mergers and acquisitions. The respective waves seem to be explained by different models, for instance the fourth wave is according to Jovanovic and Rousseau (2002) due to technological innovations while Mitchell and Mulherin (1996) state that the wave occurred as a response to industry restructuring.

Other theories argue that the occurrence of M&A waves is due to the behavior of management. For instance, Jensen (1986) argues that the existence of large amounts of free cash flow leads to inefficient mergers and acquisitions. These free cash flows are built up during times of booming financial markets. Besides the agency problems caused by the free cash flow theory, M&A activity is according to several theories related to managerial hubris and herding. The clustering of mergers is according to this viewpoint due to the arrogance or confidence, i.e. hubris, of managers about their ability to manage the target and about the synergistic value existing between target and bidder.

The last viewpoint examined is about market timing and M&A clustering. According to these theories, the M&A patterns exist due to the timing of takeovers in times of booming financial markets.

IV. M&A performance

The existing literature shows a great deal of dispersion in the results on M&A success. This depends upon the subject you are evaluating its success on and on how you are valuating this success. For instance, you can evaluate the success for target and for bidding shareholders, or you can look at long or short term success. The success measured also depends upon the method of research. There are different approaches to measure the success of M&A, there are accounting studies, surveys of executives, event studies, et cetera. Accounting studies look at the reported financial statements and they test the success of M&A by looking at net income, return on equity, earnings per share, et cetera. The event study examines abnormal returns around the M&A announcement for the bidding or target shareholders. This paper will focus mainly on event studies because in financial theories the wealth effect on shareholders is usually the main objective, as they are residual the owners of the corporation and will lead to efficient evaluation criteria (Martynova and Renneboog (2008)). Event studies are also the predominantly study used in assessing M&A success. A (short-term) event study assumes that when an M&A announcement occurs, the market assesses the new information and their expectations will transfer to adjusted share prices (Martynova and Renneboog (2008)). The abnormal returns, difference between realized and expected return, are then measured and evaluated as the measure of success. For the long-term a similar method is used but a major shortcoming is the difficulty in measuring the takeover effect in the share price (Martynova and Renneboog (2008)). Furthermore, methods usually rely on market efficiency to incorporate all the new information in the share prices.

A study conducted by Mueller (1980) observed that between 1962 and 1972 there was not a significant increase or decrease in the profitability for merging firms. Commenting on the results, he wrote:

No consistent pattern of either improved or deteriorated profitability can therefore be claimed across the seven countries. Mergers would appear to result in a slight improvement here, a slight worsening of performance there. If a generalization is to be drawn, it would have to be that mergers have but modest effects up or down, on the profitability of the merging firms in the three to five years following merger. Any economic efficiency gains from the mergers would appear to be small, judging from these statistics, as would any market power increases.

Having said all of the above it is therefore difficult to assess the performance of mergers and acquisition, and M&A waves because; “there are probably almost as many types of mergers and acquisitions as there are bidders” (Grinblatt and Titman (2002)).

The remainder of this section will consist of analysis of short-term and long-term M&A performance. Second, I will give a review of studies regarding performance for target and bidding firms. Finally, the source of payment is evaluated in the effect it has on M&A success.

Short-run performance

The bulk of research conducted on the short-term wealth effect of M&A's concludes that the target and bidder shareholders combined are expected to create value (Martynova and Renneboog (2008)). Research conducted by Leeth and Borg (2002), researching the US market for the period 1915-1930, concluded that mergers in the second wave had a significant abnormal positive return for target shareholders around 18%, but the target shareholders only had an abnormal positive return of 0.38 percent.

For the third wave, similar results hold. Asquith (1983) conducted a research for the period 1962-1976 for the US market where it shows a positive short-term performance for target and bidding shareholders, where the abnormal returns are respectively 6.20 and 0.20 percent. Malatesta (1983), spanning the same period, gives similar results as Asquith only gives a higher return for target shareholders.

Schwert (1996) conducted a research on the short-term performance for the fourth M&A wave. The researched spanned from 1975-1991 and showed a positive abnormal return for target and bidding shareholders of respectively 11.9 and 1.4 percent. Mulherin and Boone (2000) conducted a research for the US market from 1990-1999. Their research concluded that in the fifth merger wave target shareholders on average had a positive abnormal return of 21.2, while bidding shareholders had a slightly negative abnormal return of -0.37. Research done by Ray and Forsyth (2004), for the US market from 1990-1998, give similar results for wave number 5 only give a slightly positive abnormal return for bidding shareholders.

The research conducted on the short-term performance seems to be conclusive that target shareholders outperform the bidding in all the different waves. Especially the bidding shareholders do not seem to gain that much through mergers and acquisitions, they even incur negative abnormal returns sometimes (Mulherin and Boone (2000)).

The papers above give abnormal returns for the entire sample. Let us now distinguish between mergers and tender offers. Tender offers, in the US, mean that a bidding company offers a bid for the shares directly to the shareholders with or without management's agreement (Sudi Sudarsanam (2003)). Mergers that are made with management's agreement are usually friendly deals, so tender offers will therefore probably be hostile. When we look at the performance of tender offers research shows us that the effects are the same as above. Target shareholders seem to outperform bidding shareholders in each wave, only now the abnormal return is on average higher. Lang et al (1989) show that in the US for the period 1968 till 1986 the abnormal return for target shareholders in tender offers is 40.30 percent. Bidding shareholders abnormal return is 0.01 percent. A study by Smith and Kim (1994) shows the similar result for wave four with an abnormal return for target shareholders of 30.19 percent. It appears to be that tender offers outperform 'normal' mergers, at least for target shareholders point of view.

Long-run performance

The long run performance for M&A is measured using the abnormal returns, also used for short term performance, with an extended window of several years following the M&A announcement. In order to measure the long-term effect of mergers and acquisitions different benchmarks to calculate the abnormal returns are used in previous literature. The most common are the market model and the CAPM model. The market model predicts the expected return based upon the return of the market portfolio and the companies beta, i.e. the exposure to the market risk. The Capital-Asset-Pricing model determines the required rate of return of specific assets, i.e. the firm. This return is based upon the risk-free rate and the exposure to market risk, i.e. the beta.

Malesta (1983) researched the long-term performance of M&A in the period 1969-74 (wave 3) for the US market using the Market Model. The results show a significant negative return for the acquirer of -7.6 percent. Ellert (1976) shows similar results for the third wave and also uses the Market Model, but these findings are not significant. A study conducted by Frank and Harris (1989) researched the period 1955-1972 but uses the CAPM model. This model shows a significant positive return of 4.5 percent.

The long-term performance in the fourth wave gives similar results. Agrawal et al. (1992) results that the long-term abnormal returns for the acquiring firm are significantly negative with -10.26 percent, using the CAPM model. Rau and Vermaelen (1998) researched the long-term performance from 1980 till 1991 and also show a significant negative return for the acquiring shareholder of -2.58 percent, using the CAPM model.

For wave number five Datta et al. (2001) conducted a research for the US market from (1993-1998) resulting in a significant negative return for the acquiring shareholder of -10.67 percent. The abnormal return in this research was calculated using the Market Model.

The returns for tender offers show different results. The studies done by Agrawal et al. (1992), Rau and Vermaelen (1998) and Datta et al. (2001) all show positive abnormal returns although none of these outcomes are significant.

In comparison with the short term performance, we can conclude that the abnormal returns for mergers and acquisition decreases in the long run. According to Martynova and Renneboog (2008) one reason for this can be that both long and short term performance are based upon the assumption that capital markets are efficient. The expected gains from mergers and acquisitions are frequently overstated, and when new information about the synergies is available the capital market incorporates this in the share price.

Target vs. Bidding firm

Besides this, in an M&A transaction there are usually two primary players: target firm' and the bidding firm' shareholders. Other players, like government or employers, are also affected by a possible merger but are usually not taken under consideration because of difficulties in assessing the effect of the merger on their wealth position. Research shows that there exists a significant difference between target and bidding shareholders, usually favoring target shareholders. For example Mulherin and Boone (2000) show that target shareholders in the US in the period 1990-99 experience a significantly positive abnormal return of 21.2 percent on the announcement day. A research conducted by Loughran and Vijh (1997) conclude that target shareholders earn a five year post-acquisition return of 29.6 percent for mergers in the period 1970-83 for the US market. On the other hand Mitchell and Stafford (2000) resulted that acquiring firm's shareholders in the US achieve a significant negative return of -0.14 percent on the announcement day, with a sample period from 1961 till 1993. . Asquith (1983) shows a positive announcement return of 3.48 percent for the US market between 1962 and 1976.

Source of financing

Another factor that determines if M&A creates value for shareholders is the payment by stock or cash. Asquith, Brunner and Mullins (1990) studied this phenomenon for the period 1973-83 and concluded that an equity financed merger generates a lower excess return than their cash merger equivalents in the US market for bidding shareholders. This is also in line with earlier results that equity financing will have a negative announcement return. Others like Travlos (1987) and Brown and Ryngaert (1991) reported similar results for the US in the same sample period for bidding shareholders. Furthermore, Yook (2000) reported for the same period and market that this difference comes from the signaling role of payment in cash or stock. According to Yook an acquirer would be more likely to pay in cash when it believes the assets are undervalued and it would pay in stocks when it believes the assets are overvalued. Another reason for the (announcement) returns of stock-paid mergers being lower is due to timing. Managers often time the issuance of stocks when they are priced high. This could mean that the manager believes the stock is overpriced which gives a signal to the market. This signaling leads to a decrease in the stock price on the announcement date.

Summary

The finding of underperformance by Agrawal, et al (1992) is according to them partly due the concept of efficient capital markets. Previous research on mergers was focused on announcement returns in assessing the performance of M&A. This approach assumes that markets are efficient so the post-merger returns are not used in the analyses. The theory behind this is that in efficient markets stock prices should include all information about the future and therefore also the success or failure of a merger.

According to Berger and Ofek (1995) diversification will lead to a reduction in firm value. The research estimated that the value reduction averages 15 percent. The research also shows that diversified firms have a lower operating profit than their undiversified counterparts.

Although diversification seems to produce negative returns the relatedness of the businesses in the firm mitigates this problem. So firms that diversify with targets that are in the same line of business will be more likely to create a positive or non-negative return. The reason for this lies in the utilization of synergies which will be easier with businesses in the same industry. Conglomerate deals therefore perform the poorest. Benefits that are associated with diversification, increased tax shield and the utilization of it apparently do not offset the loss in value.

Concluding this topic, one has to be careful in stating that M&A creates or destroys value. Research has shown that there is a difference in performance between the target and bidding shareholders and that this depends on a number of factors like, relatedness of markets, synergies and the source of payment. When acquiring a firm, managers always have to be careful in selecting their target. They should be aware that an M&A strategy by itself will probably not create value. A merger, like any project, should return its opportunity costs or more.

V. Concluding remark

In the last century the US market underwent five M&A waves. A lot of research has been spent on the occurrence of the waves, on the characteristics of each wave and on the performance on M&A in general. Each wave of the last century is different from one another, but there also seem to be similar characteristics. The waves usually happen in times of economic boom or recovery and in times of increasing capital markets. Ending of the waves predominantly occurs due to economic recessions or for example the First World War in case for the first merger wave.

Other factors that influence waves are technological innovations and industry shocks. Besides 'shocks' in the business environment, managerial behavior also appears to have an influence on the occurrence of waves. The hubris theory in combination with herding is also given as a explanation of M&A waves. In this theory managers follow the herd, and managers after the first-mover are potentially biased with hubris. This means that the 'overconfident' manager overstates the value of the synergistic value between the target and bidder firm.

Research done about the performance of M&A also does not come with conclusive explanations of the potential value creation of mergers and acquisitions. Research does show that the target shareholders overall perform significantly better on the short term. Such conclusion cannot be given about the gain of the combined. From previous literature it even seems to be that long-run performance is negative for the acquiring firm.

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