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# Value creation through cross-border M&A: FCA-PSA case study

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# 1. INTRODUCTION

Over the recent years, few sectors witnessed the same degree of profound transformation and tumultuous reshaping seen in the automotive industry. In particular, a series of concurrent factors, on the one hand are representing the main challenges for surviving the industry in the present environment, while on the other hand are indicating the direction of a new course.

In this context, featured by numerous moving pieces (as will be explained in following chapters), the strategic choice of Mergers and Acquisitions (hereafter M&A), is increasingly identified as the most viable option to stay competitive. Historically, the automotive industry has represented a substantial part of the worldwide M&A volumes both in terms of deals value and count. The reasons refer to the evolutionary pattern of the sector, embracing in its early stages the benefit of scale of operations and later the quest for growth and access to new markets in the wake of the globalization. However, over recent years, the continuous search for production volumes and sales gradually left the stage to rationalization of business activities and higher attention to margins and profitability. Nonetheless, in each of these phases, M&A accompanies automotive companies in their path, representing the most immediate tool to address strategic goals[1].

In spite of the often far-from-certain success of such business combinations, the role of M&A still holds true in today's business environment. Additionally, the mantra of consolidation featuring the sector, not only applies to traditional activities such as components suppliers of manufactures, but it is increasingly embracing also emerging segments of the markets represented by electric cell producers and charging infrastructures.

In light of the above-mentioned issues, the scope of the present study is aimed at understanding the inherent dynamics of value creation in M&A transactions conducted in the automotive industry. In particular, starting from the existing theoretical foundations in the field, the objective is threefold. First, an in-depth review is conducted on main contributions addressing the strategies to conduct the right transaction in an evolving landscape. Second, an overview of the characteristics featuring the M&A activity in the sector is provided. Third, the empirical section, based on FCA-PSA case study and regression model, is developed to address the main research question of how value creation is sought in automotive.

[1] Warter, L., Warter, I. (2016). The Phenomenon of Mergers and Acquisitions within the Automotive Industry. Proceedings of North International Conference on Economics, 1st Issue 2016.

Accordingly, the remainder of the thesis is organized as follows. In Chapter 2 a brief overview on the automotive industry is provided in terms of main historical developments, key activities along the value chain, recent trends and rationales for strategic combinations. Chapter 3 deepens on the understanding of M&A through a dedicated analysis of the factors affecting transactions. In Chapter 4, the scope is restricted to the analysis of value creation in cross-border deals. Chapter 5 lays the ground for a comprehensive appraisal of the FCA-PSA merger conducted in 2020. In Chapter 6 an empirical analysis is construed on a sample of transactions, in order to evaluate which variables affect value creation. Finally, the main conclusions of the analysis are gathered in Chapter 7.

# 2. AN OVERVIEW ON AUTOMOTIVE INDUSTRY

## *2.1 A Brief Historical Perspective*

The origins of automotive industry date back to 1860-1870, when the first applications of gasoline engines were applied to mobility needs in European countries (France, Germany and Great Britain) and later in America. Until the World War I, the automotive makers were basically small shops producing just a few units and most of them abandoned the sector shortly after going into it. The handful of the first car producer which managed to survive had one key characteristics in common, namely they were previously involved into activities to some extent related to mobility (manufacturing of bicycles, horse-drawn vehicles or machinery).

Probably, the most important contribution to the development of car industry was brought by the implementation of technological advances leading to the introduction of full-scale mass production. This was a process relying on precision, standardization interchangeability and synchronization of the processes which was deployed for the first time in the United States. The idiosyncratic example of scale production is embedded into the so-called Model T produced by Ford, probably the most recognized car model in the history. With the aim of realizing a "*car for the great multitude*", the Model T was a technically reliable and economically affordable vehicle produced in more than 15 million units from 1908 to 1927.

The success of Model T inspired other car makers in then advanced countries and the mass production model flourished with the affirmation of the large-scale business organization in the same period. The two phenomena were closely related as, if only large firms could afford such heavy investments in plants for cars manufacturing, at the same time, mass production was the only production model capable to achieve cost efficiencies hard to be replicated from smaller competitors. After the end of World War I, it is possible to see the emergence of the so-called "Big Three": Ford, General Motor and Chrysler, accounted for the most of the United States market and expanded operations in Europe.

During the World War II the industry witnessed a surge in production due to the large adoption of motor vehicles in war activities. This led to the affirmation of European players as well, such as Daimler (Germany) Renault (France) and Vauxhall (Great Britain). After the conflict there was a tremendous expansion of car production on a worldwide scale. From 1945 to 1980 the global production of vehicles grew ten-fold, with the markets outside the United States accounting for the most of such increase. Interestingly, from this point an important shift in

global production balance occurs. The predominance of the US production is challenged by Japan and European producers (the latter taken collectively). The forces of globalization and the introduction of new production models (such as the *Just in Time* approach adopted by Toyota) bring the focus of vehicles production towards the emerging economies of Far East (Japan, South Korea and later China), which managed to better cope with cost pressures and delivery of finished cars to Western markets.

Interestingly, since the mid-1980s, automotive entered into a phase of transformation. From a series of clustered national industries, concentrated around a few national champions, the industry turned into a really integrated global sector. As will be discussed in next paragraphs, this pattern has been accompanied by the emergence of regional trends featuring the different stages of the value chain. In particular, market saturation, growing levels of motorization and increasing political pressures on automakers to have a higher engagement where they produce, have all played a role in the process of dispersion of assembly activities. In 30 years, from 1975 to 2005, the countries accounting for 80% of global production increased from 7 to 11[2].

The automotive industry of 2000s has reached a level of global integration never seen before, with a club of large companies coordinating networks of operations and activities on a global scale. To this extent, consolidation plays a big role. In fact, as witnessed from the early stages of the industry, the natural tendency of manufactures is to grow in size, leading to a situation in which the market is concentrated among few large companies, with the smaller and independent entities forced to disappear or be acquired from larger companies. The reason is again related to the mass production model, in which high investments can be sustained only from the largest companies, in order to achieve scale advantage in terms of unit costs. Also, automotive industry is strictly related to economic cycles a feature posing the sector under recurrent financial strains (i.e. the great financial crisis of 2008 or the Covid19 pandemic). Accordingly, consolidation is not only a strategy for growth, but in such cases represents the only survival option. As of 2019[3] the world top vehicles manufacturer is Volkswagen (10.8 million) followed by Toyota (8.9 million).

[2] Sturgeon, T. J., Van Biesebroeck, J. (2009). Crisis and Protection in the Automotive Industry: A Global Value Chain Perspective. Policy Research Working Paper 5060, September 2009.

[3] In 2019, figures are considered normalized pre-Covid19.

### *2.2 Key Activities in Automotive Value Chain*

The automotive industry can be broken down in a series of interconnected typical activities. The entire value chain consists of a diverse set of firms with different size, scope of activities, know-how, geography and output, making the sector a complex and multi-tiered architecture characterized by a high degree of outsourcing[4]. Among the possible representations, the perspective taken for the scope of the current analysis relates to the stages summarized in Figure 1. Overall, activities can be grouped into five main areas, with different relationships of relative power among them. A preliminary consideration refers to the fact that the automotive value chain can be defined as an automaker-driven network, mainly because of the concentration of capital and key competencies in this level. A detailed description is outlined below.

*Raw Material Suppliers*

Supplies in automotive industry provide a series of basic materials needed for parts and components production. Such materials generally include steel, metals, textiles, glasses, plastics, rubbers, chemicals and so on. Activities at this stage are generally decentralized and relate to single countries' availability of these basic resources. Some of the main supplies are localized in China, India, Japan, Republic of Korea, ASEAN Countries (particularly Indonesia, Thailand and Malaysia), but also in some Eastern European and North America countries. From these areas, materials are generally exported to more advanced countries where production technologies are available.

*Manufacturing (Automotive Suppliers)*

Manufacturing specialists' activities may markedly vary according to the degree of specification and/or requirements needed to deliver the required output necessary for the assembly of auto vehicles. Typical activities refer to the realization of structure, engine, drivetrain, electronics and motor system, tires and glasses. Accordingly, within this stage some intermediate activities and manufacturers may be referred to Tier 1, Tier 2 and Tier 3. The definition means that, for instance, first-tier suppliers deliver their output directly to assemblers, whereas lower-tier manufacturers (generally smaller in size and responsible for relatively simpler streams of activities compared to first-tier manufactures) output is destinated to be integrated by higher-tier suppliers. Given the level of coordination required to manage relationships with lower-level supplies, first-tier ones need to deploy effective managerial skills

[4] Dicken, P. (2007). Global Shift: Reshaping the Global Economic Map in the 21st Century, 5th ed. London: Sage Publications.

and R&D investment as well (e.g. the case of integrators which design and assemble key elements to realize an engine). As seen for materials suppliers, this level is featured by a substantial geographical characterization, with countries the Far East Region, Eastern Europe and other growing non-OECD countries being the primary location for these activities.

*Assembly (Automaker or Original Equipment Manufacturers)*

As mentioned in the opening of this paragraph, automotive value chain is quintessentially dominated by assemblers or automakers. The key reason stands in the fact that they are recognized as brands incorporating a broad set of values, built on sales and marketing, after-sales services and quality, all elements which are centered around final customers. Assemblers are generally automakers (with a few exceptions represented by some first-tier suppliers), which assemble the final vehicles near to the final markets, in order to exploit proximity in terms of logistics and market knowledge. They are present next to key final markets worldwide, although they may vary markedly according to size, operational scope and product range.

More often than not, automakers also perform a crucial activity, which may be considered as the very initial activity in automotive value chain, that is standardization. This refers chiefly to market research, development of the vehicle concept, design of specifications of the vehicle (including modules and systems), an activity which closely relates to investments in Research and Development (R&D) and process engineering. Hence, on the one hand standardization is due to the capital resources of automakers, while, on the other hand, heavily relies on the latter's market understanding and closeness to final customers.

*Logistics and Distribution*

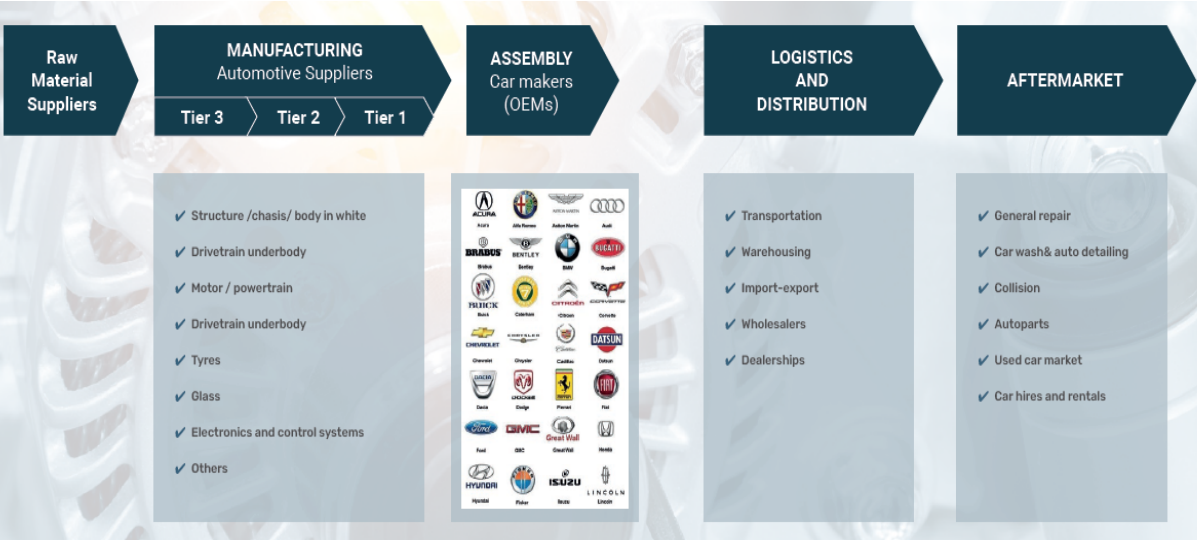
Ensure the supply of vehicles to customers in local markets, taking care of sales and marketing activities and sometimes after-sales services as well. Typically, this area comprises activities such as transportation of vehicles, warehousing, import-export, wholesale and dealership. In some cases, integrated players may perform all these operations, but specialized companies may still be operating in single stages. The peculiar characteristics related to logistics and distribution make necessary the capillary presence in every final market, with limited scope of integration across different countries.

*Aftermarket*

Finally, aftermarket stage comprises all those services and activities after the sales of the vehicle. Aftermarkets services can be general repair, car wash and auto detailing, collision, auto

parts, second-hand market and car hire and rentals. It is quite clear that, apart from few cases, the intrinsic differences among aftermarket activities poses limited scope of integration, with companies performing in practice single activities (i.e. car hires and rentals services are clearly separated from general repair services). In this stage the fragmentation is at the highest level, since companies operates in the very proximity with the final customer. Some concentration may be found within single activities (e.g. car rentals).

Figure 1 – Overview of Automotive value chain key activities (Adapted from IMAP[5])




### *2.3 Recent Trends and Future Developments*

After an initial long period of time (lasted until few years ago) in which the most prominent challenge for automakers was related to the understanding of final customers market and to the maintenance of stability along the value chain, today the perspective has drastically changed. A series of new trends (or megatrends), driven by the combined effect of digital technologies and higher sensitivity to climate change, are taking place together, forcing OEMs to reconsider their role ahead in a period of disruption in the market. The combined threats are resulting into automakers and first-tier suppliers committed to finance high levels of capital expenditures (or CAPEX), because of the need of investment to implement immediate technology-driven solutions to cope with production shifts and competitive pressure. It must be reminded that all these patterns are being exacerbated by the Covid19 pandemic, forcing many players to

[5] IMAP.

carefully reassess strategies and reactions to market evolution. Here below, an overview of such megatrend is provided:

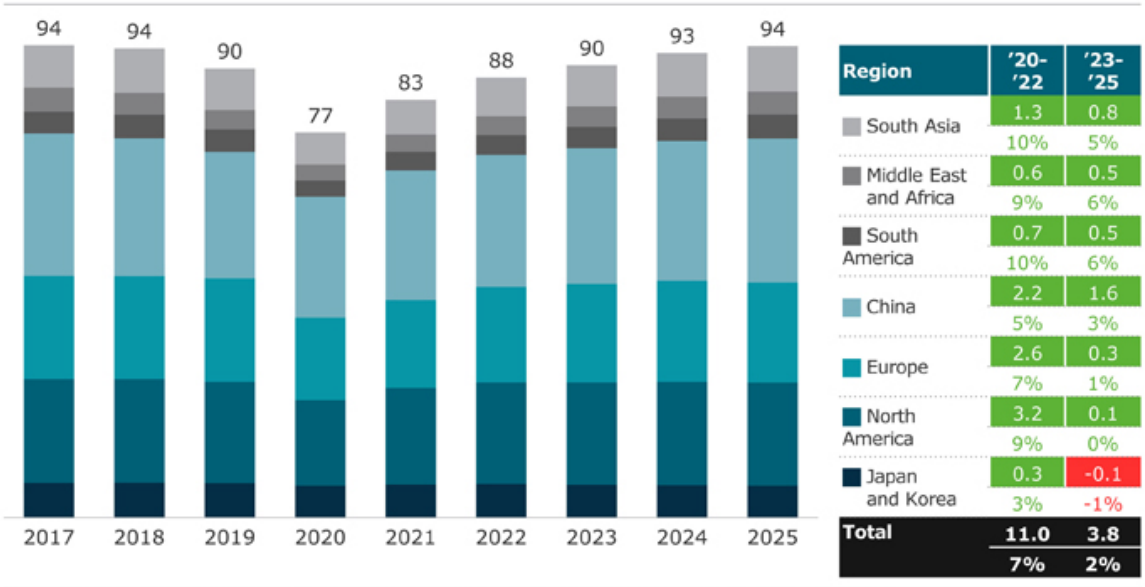
- *Climate Change*: new and tighter regulations and emission targets are forcing OEMs to look for efficiencies and cleaner generation in conventional drivetrains and modules. In particular, a growing number of OECD and other non-OECD growing countries are increasingly ruling out the introduction in the market of new diesel engines at determined times in the future in favor of cleaner engines. This trend is finding momentum also in less developed countries;
- *Flexible Drive Technology*: partially connected to the previous item, the mix of different drive technologies available to fulfill the evolving mobility needs is expected to change the market in the next years. In particular, Battery Electric Vehicles (BEVs) and Plug-in Hybrid Electric Vehicles (PHEVs) are expected to account for a meaningful share of the market already by 2030;
- *Production and Supplier Industry*: both players are striving to improve their processes and cooperate to fast-track innovation in light of the recent market developments. The need for acceleration is the result of IT technologies transforming the automotive industry. The increasing share of value related to the software part over the total value of the vehicle is related to other trends. The increasing importance of software is making the hardware share of the vehicles increasingly standardized and subject to cost reductions;
- *Connectivity*: the increasing convergence between vehicles and digital technologies is poised to revolutionize automotive in a market which may surpass $150 billion by 2025[6]. Connectivity, closely related with autonomous technology will increasingly allow cars to become a platform for drivers and passengers for a new travel experience accessing their media and contents in line with personal values and interests. The high speed of innovation in information technology (with particular reference to software-based systems) will require upgradable vehicles as they will be increasingly seen as platforms enabling access to contents;
- *Autonomous Technology*: current development towards a concept of fully autonomous mobility are owed to data exchange between vehicles and IT infrastructures. To date

[6] IMAP.

first prototype of autonomous cars have been tested with mixed results leading to concerns in terms of safety. Notwithstanding this, in the medium term the successes from pilot programs and advancements from manufactures are expected to make possible a commercial launch in the mass market by 2030[7]. Advanced Driver-Assistance Systems (ADAS) will play a pivotal role in the broader acceptance of this solution to both regulators and final customers;

- *New Distribution and Use Model*: refers to the trend of less individual usage in favor of more mobility-on-demand and shared-mobility solutions. In this respect, urban areas will replace the traditional country or region level as the most important level of segmentation to define mobility behaviors. This is self-representative of the ongoing change, as markets are becoming comparable at city or metropolitan level (e.g. New York vs Shanghai) rather than within the national boundaries (e.g. New York vs Texas). These trends are emerging as in metropolitan areas, car ownership is becoming a burden, leading to the adoption of shared mobility solutions. On the contrary in less populated areas, ownership still represents the preferred alternative and is not going to change in the near future.

*Figure 2 – Estimated global light vehicles sales automotive production to 2025 (Source: Alix Partners)*



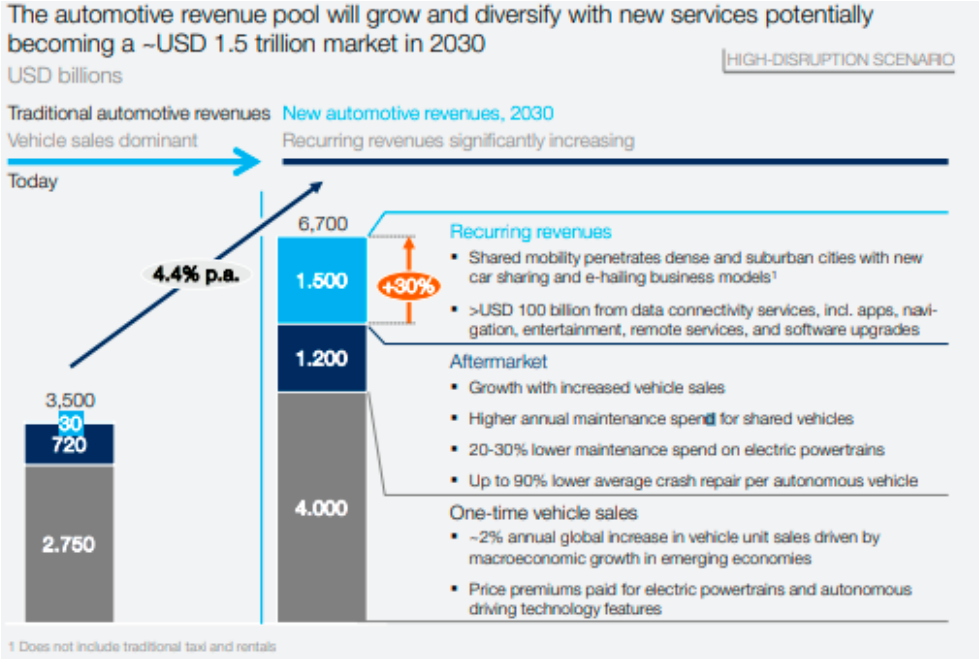

[7] McKinsey & Company.

Turning the focus on market volumes, as summarized in Figure 2, the growth pattern in annual light vehicles sold worldwide plateaued at around 94 million units in 2017-2018 posting a marked decrease 2019 to 90 million units before plummeting in 2020 due to Covid19 outbreak. Such plunge to 77 million units represents a larger contraction than what recorded in 2009 after the outbreak of the great financial crisis, but, differently from then, the market is not going to return to previous levels in the near future. Despite a substantial rebound to 83 million units expected in 2021 thanks in large part to the extensive efforts in connection to emergency public funds directed into many economies worldwide and the ability to improve offer mix in the face of shortages. The reason stands in the substantial market saturation reached in all the major final markets. Here new trends are surfacing in the wake of sustainability and reduction of pollution. For instance, the above-mentioned car sharing initiatives or alternative mobility solutions launched in many large urban areas are *the facto* ruling out the need for new cars, replacing it with the availability of cheap and shared solutions.

It is estimated that the overall sales will not return to 2017-2018 until 2025 with separate consideration for the 2020-2022 and 2023-2025 periods. In the first timeframe, an aggregate CAGR of 7% will drive recovery across all markets, though with differences among regions. Afterwards, growth is expected to flatten to 2% worldwide, with emerging non-OECD countries are expected to drive growth whereas signs of contraction are predicted in Japan and Korea markets. Some considerations should be dedicated to China, the single market accounting for most of the growth in the aftermath of Covdi19 pandemic with an increase of 3.8 million units, (+5% in 2020-2022 and +3% in 2023-2025). Hence, the Chinese market is of crucial importance and competitive pressures for global manufacturers are going to increase from both Chinese OEMs and suppliers.

In this perspective, with tighter market conditions and increasing competitive pressures, it is of determinant for survival a greater diversity of revenues base relative to the traditional areas represented by One-time vehicle sales and aftermarket services. Particularly relevant to this scope are the on-demand mobility services and data driven solutions, seen as the major driver to growth (Figure 3). From these areas it is expected the bulk of revenues increase to 2030, namely from $30 billion in 2015 to $1,500 billion of recurring revenues in 2030 surpassing the Aftermarket segment. Therefore, the expected developments in shared mobility solutions in metropolitan and densely populated areas together with the deployment of connectivity services will constitute the bulk of growth in automotive industry with a 30% CAGR over the period.

*Figure 3 – Evolution of Automotive Revenue Base to 2030 (McKinsey & Company)*




### *2.4 Rationales for strategic combinations in Automotive*

Different emerging trends are redetermining the competitive settings in automotive industry. On the one side, customers are increasingly demanding new characteristics, whereas regulators around the worlds are imposing stricter levels of adherence to environmental and safety standards. Additionally, new tech players, once considered far from automotive sector, are making their foray in the mobility industry, threatening the traditional dominance of OEMs. The answer to the above challenges, refers to a series of options available to automakers adopting the taxonomy of Build, Buy or Partner[8].

*Build*

Consists in the strategy to build at home core competencies and skills. Whereas EVs are gaining momentum in terms of market share and are poised to be a meaningful portion of the market sooner than later, the largest share of the market today is still related to diesel internal combustion engine (ICE) vehicles. This duality reflects on a dual R&D stream related to both vehicle categories. The R&D amount for OEMs is then expected to balloon as they not only are required to maintain ICE car to sustain current cash flows but also invest in EV as the source

[8] Deloitte (2021). Meeting market disruption head on Strategic M&A in the automotive industry.

of future growth. Although the capital requirement and time necessary to sustain two parallel manufacturing processes can be very high, the key advantages to pursue a "build" strategy is to develop and maintain control over intellectual property and the possibility to cash in from the licensing out.

*Buy*

The Buy alternative, generally referred to M&A options, guarantees a direct access to new competencies to fill the gap in current company's technology base. The possibilities under this case, elaborated though the next paragraphs of present thesis, from a strategic point of view, can expose the company to a series of challenges. The most important one regards the scarce availability of the value-adding assets, which are becoming highly desirable and relatively rare due to the industry concentration. For instance, taking the perspective of development of future technologies, if a number of companies are working in that respect, only a few may have reached an appropriate scale to be incorporated and exploited by bigger OEMs. Additionally, innovative business model of technology-based start-ups are difficult to be evaluated under the lens of today's financials (no revenues, negative operating margins).

*Partner*

From an operative perspective, partnerships between automotive businesses constitutes the most suitable balance to share the burden and risks of product and capabilities development. The typical forms of partnerships occur under joint ventures and strategic partnership agreements. Historically, partnering has been adopted to combine existing and commoditized capabilities whenever the deployment of build or buy presented higher risks. Although M&A or buy option is still the best way to quickly expand businesses and access to know-how, partnerships see an increasing adoption related to next generation technologies. Hence, this option represents a quicker way to reduce capital expenditures in the short term, however, carries the downside to lower the exclusive access to certain built-in-house capabilities.

The choice of one alternative over the others strictly relies on the peculiar characteristics of the choice related to the strategic opportunity. Pro and cons of each alternative may be an indicator of better suitability of Buy over Partner, for instance in a possible future technology development. However, in many cases opportunities can be maximized by the combination of Build, Buy and Partner, which can be an effective tool to reduce the inherent risks of single options and create value for the OEMs.

Narrowing the scope to M&A, the determinants of this strategic option applied to the automotive industry have attracted a significant interest from scholars, researchers and advisory firms. Different large-scale transactions have reshaped the competitive environment of the industry over recent decades, from Daimler-Chrysler merger to FCA-PSA combination. Apart from general interest in the headlines, the findings on automotive M&A performance are to date non univocal and somewhat contradictory. Some of the main motivations behind the M&A activity in the sectors are[9]:

- Economies of scale;
- Geographic market expansion;
- Risk reduction and diversification;
- Leveraging on core competences and technological changes.

Additionally, specific reasons may refer to:

- Access to new customers in new markets;
- Acquisition of new production capabilities or technology;
- Growth in customer base in both existing and new markets;
- High level of liquidity in the carmaker's balance sheet.

Generally, these motivations apply in case of positive market conditions when the strategic goal of companies is about gain customers, market shares, expand production lines and push for investments in technology. However, in conditions of economic headwinds or just strategic reviews, the focus of OEMs is more likely to turn on cost reductions, exploitation of depressed company evaluations and disposal of non-core assets (underperforming business lines or participating interest in a joint venture). In particular, the option of non-core business carve-outs and disposals are in many circumstances motivated by the de-risking of business and the possibility to free-up capital need to be relocated for strategic businesses. In spite of these reasons, the evidence of post-merger performance remains uncertain and further research and discussions are needed to further investigate the determinants of success in automotive M&A. In particular, barriers to success may arise from business integration of the two entities at different levels.

[9] Warter, L., Warter, I. (2016). The Phenomenon of Mergers and Acquisitions within the Automotive Industry. Proceedings of North International Conference on Economics, 1st Issue 2016.

A final but still meaningful trend concerns the recent developments in financial industry. If in the past OEMs competed each other to secure the most valuable assets in the industry, today competition includes new entrants such as tech companies and financial investors. In the former case, mobility divisions of tech giants are operating in the sector leveraging their know-how in terms of connectivity and data management and pursue acquisitions to complement their technology base. In the latter case, venture capital and private equity firms are also newcomers in the company hunt, as they are less interested in building on target technology but instead willing to accompany small companies in their growth path. Competition in the sector may ultimately turn in the opportunity to cooperate between incumbent automakers and newcomers in order to have access to faster-growing segments (e.g. Toyota's $500 million investment in Uber) or to have a wider funding availability (e.g. Softbank's $2.25 billion investment in GM's Cruise).

Also, over the recent years the approach of public listing through Special Purpose Acquisition Companies (SPACs) is gaining momentum. This trend is attracting an increasing interest from new-energy vehicles (NEVs), as in the first half of 2021, four of the major deals conducted in the US market referred to SPAC deals ranging from Electric Vehicles (EV) manufacturers to EV charging solutions. The peculiar macroeconomic conjunction arising in recent months, in connection to the semiconductor's context, poses shortages of raw materials, a critical resource for EV manufacturers. SPACs are alternative solutions to secure capital for these ventures., sheltering them from markets downturns.

# 3 M&A: A THEORETICAL FRAMEWORK

## *3.1 M&A Definition and Classifications*

The definition of M&A embraces a series of different equity transactions[10]. In general terms, when referring to pure acquisitions, an acquiring entity launches a cash and/or stock offer to gain control of the acquired (or target) firm that, upon completion of the transaction, ceases to exist via incorporation (i.e. company A and company B are incorporated into company A). Conversely, in the so-called mergers of equals there is no clear distinction between the acquirer and acquired firm as parties are similar in size prior to the combination and, upon a share-based transaction, create a unique business (i.e. company A and company B result in a brand-new company C). Hence mergers and acquisitions are combinations of two companies into a single entity taking the assets and liabilities of the merged company.

The common characteristic of M&A transaction refers to the transfer of control by means of transfer of capital. Starting from this consideration, M&A may occur under a series of transaction structures. A first typology of classification regards what is subject to change of control. In fact, M&A may refer to asset transactions, when the scope of the deal regards specific assets or businesses (including liabilities) of the target company. Alternatively, in stock purchases the acquirer intends to gain control of the entirety (or sometime just the absolute or relative majority) of the outstanding capital of the target firm. In this case, the perimeter of the deal is not linked to specific assets or activities, but to the purchase of shares of the target firm. The preference towards assets of shares of a company may depend upon specific factors such as: operating issues, the degree of integration and complexity of involved assets, regulatory requirements or shareholder structure.

Another element of peculiarity is related to the modality of acquiring target shares. For instance, a buyer may acquire control into a company via a public bid (or tender offer) for the target's outstanding capital. In such type of offer, target's shareholders may decide to accept or not the proposal for strategic reasons or in search for a higher price. Tender offer are often the means through which hostile takeovers are conducted, with the intention to bypass the board approval needed to carry out an otherwise merger transaction.

[10] Gaughan, P. A. (2007). Mergers, Acquisitions and Corporate Restructurings. Fourth Edition, John Wiley & Sons, Inc, Hoboken, New Jersey.

In some cases, a company may decide, for strategic reasons, the reverse course leading to the separation of some parts of its business into a dedicated entity. This is the case of so-called "spin-off", that is, the ownership of a business is distributed to shareholders of the company that retains other businesses. The new company hence benefits from different management bodies and from better independence from the former parent company. A peculiar case of business separation refers to the placement of a business corporation shares on the market in exchange for cash. This is the case of assets carve-outs, featured by the partial ownership of the parent company.

A final degree of difference regards the nature of the parties involved in the deal. Generally, acquirer and target have in common the same (or are somewhat related to) core business of operations and this is the case of strategic buyer, which integrates the acquired firm into its activities. Differently, it may happen that buyers are financial institutions (or sponsor) which aims at conducting transactions based on potential returns, disregarding possible business combinations. In case of financial buyers, the deal is conducted through the so-called leveraged buyouts (LBOs), whereby the sponsor carries out the transaction through a significant amount of debt.

Regardless of the type of transaction, M&A deals are transformative events for organizations, particularly for involved target companies. Once the selling process is triggered, two alternative ways can be chosen, according to the required speed of execution, certainty of completion and other deal-specific considerations. If seller is not sensitive to timing, confidentiality issues and deal structure, a broad auction can be arranged to include as many potential buyers as possible, in order to leverage on competitive dynamics and maximize on value creation. Differently from this, when one or more of the above elements constitute a key point of consideration, a targeted auction or even a direct negotiation with a single party are more appropriate solutions[11].

### *3.2 Rationale (Drivers)*

An extensive strand of academic literature, over the last decade has been addressing the issue of M&A. Several objectives may be sought in such transactions, as detailed below[12].

[11] Rosenbaum, J., Pearl, J. (2009). Investment Banking: Valuation, LBOs, M&A, and IPOs. Third Edition, Wiley, Hoboken, New Jersey.

[12] Gaughan, P. A. (2007). Mergers, Acquisitions and Corporate Restructurings. Fourth Edition, John Wiley & Sons, Inc, Hoboken, New Jersey.

*Growth*

One the fundamental triggers to pursue M&A relates to growth in its diverse meanings (sales, market share, profitability and so on). M&A constitutes a quick alternative to expand business when organic growth strategies are not viable or too uncertain to be carried out. However, despite this clear advantage, M&A can be accompanied by some degree of risks, when purchase price is miscalculated. Business growth via M&A occurs in different ways: expansion of geographical scope through cross-border acquisitions (a case analyzed in depth in the Chapter 4), entry into new businesses via diversification or increase of market share within the same market via the acquisition of a direct competitor.

Indeed, as companies expand organically through internal growth, uncertainties may arise from stiff competition or new competitors in the market, with other companies eroding market shares, trying to replicate products and putting in place defense actions. M&A represents the best solution to cope with all this kind of issues, leading to a quick response to growth. This is true in particular respect to certain types of industries showing high entry barriers. Taking the case of pharmaceutical industry featured by patent protection, the scope of growth is inherently driven by acquisition of companies which hold patents covering drug treating specific diseases. Another case in which M&A is a suitable solution is related to the access to markets whereby economic or regulatory conditions may not be supportive toward the set-up of greenfield activities from a foreign company. The acquisition of a local company already operating in such countries can undoubtedly facilitate market access.

*Synergies*

Focusing on the operating side, M&A deals are justified in many circumstances due to the upside they can bring in terms of synergies[13]. The definition comes from the field of physics, whereby it refers to the case when two substances produced together a greater effect than the sum of the two taken independently. More specifically, in the business jargon, synergies in any company combination materialize when two companies operating as a single entity perform better than they would do alone (this effect is also referred to as 2 + 2 = 5).

In a typical acquisition, where $NAV_{AB}$ is the net acquisition value of the combined company, $V_{AB}$ is the value of the combined company, $V_B$ is the value of the buyer and $V_A$ is the value of

[13] Vulpiani, M. (2014). Special cases of business valuation. McGraw-Hill Education, 2014.

the acquired firm, P is the premium[14] paid to gain the control of the acquired company and E refers to the expenses sustained to conduct the transaction, synergies can be defined in the following equation:

$$NAV_{AB} = [V_{AB} – (V_A + V_B)] – (P + E)$$

Considering the synergistic effect of the transaction in the first term of the equation, this must be greater than the second term to justify the transaction. In other words, the higher value of the combined entity shall be higher than premium paid and expenses sustained in the process.

Synergies can be categorized in two main areas: operating and financials. Operating synergies generally refer to revenue-enhancement and cost-reduction synergies. In the first case, after combination, the two companies may be better able to benefit from market opportunities and exploit joint activities (i.e. leveraging on cross-marketing and commercial capabilities to expand top-line faster). On the contrary, cost-reduction synergies refer primarily to the theories of economies of scale and scope (especially in capital-intensive industries), supporting that the wider scope of activities allows the company to produce the same output at lower unit costs, with a positive impact on operating margins. Broadly speaking, cost synergies apply to any possible overlap arising from the business combination, starting from managerial redundancies down to savings achieved at single business unit. These latter savings are perceived as easier to achieve as they can be better determined in the valuation phase of the deal, compared to revenues synergies.

Financial synergies arise in connection with the pooling of capital of the two entities. In particular, a single company combining two entities which cash flows are not correlated, carries an overall lower financial risk than the two companies on a standalone basis. Also, the pooling of financial resources on the on hand may help convoy larger investments leading to higher returns, and on the other hand may have positive effects on the debt rating, resulting in a lower interest amount paid for financing

[14] Vulpiani (2014) provides a detailed view on M&A value determination based on transaction type. In particular, considering the deal spectrum going from Minority Shareholdings of Private Companies to Strategic/Synergistic Sharholdings of Private/Public Companies, a series of adjustments reflecting the higher value of liquid, controlling and strategic and/or synergistic shareholdings.

*Diversification*

As mentioned above, diversification typically occurs whenever a company starts operations outside its current industry sector. The mantra of diversification witnessed a large success starting from 1960s, with the emergence of conglomerate model (although this trend substantially reverted in 1980s in many cases with divestures). A careful look should be taken to the real extent of diversification pursed between related and unrelated. If in the former category, the buyer and the target operate in different subsectors within the same industry (i.e. manufacturer and distributor in pharmaceutical industry) in the latter the two entities operate in different industries.

Some of the companies which successfully pursued this second model emerged as conglomerate (i.e. General Electric). For their success, these companies leveraged on a handful of key elements. First of all, a diversified conglomerate can exploit the advantage of having a leading position in each sector it operates gaining profits and reinvesting resources. A company operating in different industries can achieve the same benefits of an investor having a diversified portfolio, that is, reducing the overall risk thanks to the diversification in non-correlated business, a feature which help stabilize dividends. Second, diversification is often motivated by the life-cycle model of the industry, supporting that sector in maturity or, worse, decline phase are accompanied by high competition a low profitability. Diversification helps avoid these pitfalls by investing in more profitable industries featured by higher profitability and better growth opportunities.

*Other Economic Motives*

Traditional economic theories see at the possibility to achieve horizontal and vertical integration as supporting reasons to conduct M&A. Horizontal integration results into business combinations within the same industry with the goal to increase market share. Considering the possible spectrum of market condition between monopoly and perfect competition, M&A can be an effective tool to gain market power through consolidation. Horizontal M&A can be defined as the expansion in the same industry or sector, in which the acquirer can leverage on substantial knowledge and prior experience. In summary, the main reasons underpinning horizontal integration are[15] [16]:

[15] Gross, S. K., Lindstädt, H. (2006). Horizontal And Vertical Takeover And Selloff. Virtus Interpress, 3(2), 23-30.

[16] Ziva, R. B. (2018). Comparison of merger and acquisition (M&A) success in horizontal, vertical and conglomerate M&As: industry sector vs. services sector, Service Industries Journal, 38 (7-8), 492-518.

- Reduced competition and increased market share, leading to a higher control on prices;
- Better integration between companies related to operational similarities and reduced risk factors;
- Benefit from scale and scope as resources redundancies are reduced, resulting in cost savings.

Differently from horizontal integration, vertical integration refers to the combination across activities at different levels. It may take place either upward (integration of suppliers) or downward (integration of activities proximate to the final customers) along the value chain. Vertical integration makes sense particularly in manufacturing and industrial sectors (i.e. automotive, energy) for different reasons. First, it allows acquiring company to seize margins by combining different levels and abate transactions costs. Second, strategic considerations such as proximity to final customer or securing a scarce or specialized source of supply may play a role. Therefore, vertical integration can be seen as a way to coordinate different stages of an industry activities, possibly up to the entire value chain. Rationale for M&A seeking vertical integration are[17]:

- Expansion in adjacent stages activities: the relative strength between two stages in the supply chain may lead a company in a stronger bargaining position to acquire the weaker one;
- Financial and managerial synergies: benefits of vertical integration accrue in terms of improved information flow, reduction of transaction costs, reduction of technological and demand uncertainties, which ultimately results in cost efficiencies.

*CEO Hubris*

Interestingly, from different researches it emerges how, beyond strategic reasons, the pride of the management of the acquiring firm may play a big role in explaining M&A activity. The reasons behind this phenomenon refers to the fact that the possibility to gain control over another firm, makes acquiring firm's CEO more willing to pay a premium over the market price of the target firm. A series of factors such as CEO M&A track record (both in terms of past successes or inexperience), praise from media and financial community and CEO overconfidence can increase the commitment toward the possibility to conduct a deal. Hence the hubris theory is among the conventional reasons behind M&A.

[17] Zhang, D. (2013). The Revival of Vertical Integration: Strategic Choice and Performance Influences.

Hubris' role varies from case to case and may emerge in specific circumstances where a company is the most suitable target for an acquirer, a situation leading to higher valuation of the target firm. Such cases may lead to real takeover battles, in which the bidder tends to overstate the market value of the target to win resistance from the board or counter bids from competitors, ultimately reducing the room for synergies (the so-called "winner course").

*Other Motives*

Other reasons can be identified in more specific motivations. First, M&A deals can be conducted with the aim to improve the management of the target company, either because the target company is falling short of market expectations or because target firm lacks those managerial competencies to evolve in its growth path. This is particularly true in acquisitions of smaller companies, which, without the right managerial skills would limit their potential to scale-up in the broader marketplace. Another reason refers to the access to research and development (R&D) skills which are fundamental to maintain a competitive edge over competitors, particularly in industries such as pharma & biotech. The combination of R&D from the two entities not only can complement existing pipelines but also can open the access to new areas not reachable before.

*Tax Motives*

Finally, many deals do not lay foundations in any of the above-mentioned factors, but see their rationale mostly explained in fiscal synergies. Notwithstanding the absence of peculiar strategic factors, M&A based on tax benefits are relatively common and may prove reasonable from a price consideration point of view. Assuming the case of a buyer company B carrying a profit in the current fiscal year, and a target company T carrying a loss position for the same amount over the period, then, the combination of B and T, from a purely fiscal perspective, would have the effect to abate the fiscal burden for the year optimizing the tax position of the company B. In many cases, however fiscal motivations should be accompanied by other strategic reasons as purely tax-led M&A may face oppositions from regulators or fiscal authorities.

### *3.3 Valuation*

In this section a brief overview of valuation issues and approaches is provided to better understand peculiarities and dynamics of the deals. Valuation methodologies are of great relevance in the transaction process as they may vary markedly. Indeed, elements such as

discount rate adopted in the discount cash flow method or selection of comparable companies in multiples approach, constitute elements to be carefully considered from case to case. In this analysis, the right evaluation of benchmarks of value represents a fundamental element as certain benchmark constitutes the floor value of a company[18].

*Book Value*

The methodology, one of the most widely adopted, is referred to the per-share value to which shareholders are entitled in case of the company's assets were liquidated for the values at which assets are carried in the book less the repayment of liabilities. The book value, also denominated as net asset value, is hence a measure not reflecting the full market value of the company but rather a floor level for company evaluation. Book value is often used in relative terms, for instance in the construction of the Market to Book Value ratio, a widely adopted measure to capture the market over/undervaluation of the company compared to its book value. Values of the ratio above 1 represents a healthy company having a market evaluation higher than its book value, whereas ratio below 1 is an indicator that market undervalues the company compared to its book value (for instance due to uncertain liabilities).

*Liquidation Value*

Liquidation value is a more prudential benchmark than book value, as the method is less related to accounting policies. Liquidation value reflects the per-share value of the company if all assets were disposed less the value of liabilities and it may be applied in special situations, whereby the going concern capability of the company to generate earnings is not considered. Instead, takes the perspective of "fire sales" and so may underestimate the full market value of company's assets. Therefore, generally, the liquidation value is lower than the book value.

*Discounted Cash Flow or Net Present Value*

The methodology compares the investment sustained to purchase the firm against the future cash flows generated discounted at a discount rate. This approach is a fundamental valuation methodology very popular and widely adopted across industries and target's operating characteristics. The basis of the DCF approach can be found in the models embracing the

[18] Gaughan, P. A. (2007). Mergers, Acquisitions and Corporate Restructurings. Fourth Edition, John Wiley & Sons, Inc, Hoboken, New Jersey.

capitalization of future dividends[19] which adoption has been consolidated during 1960s. In particular, the key elements of the methodology regard:

- Expected cash flows generated by firm's operations;
- Weighted Average Cost of Capital (WACC), that is the average cost of firm's sources of capital; and
- Expected growth rate of firm's cash flows.

The resulting valuation from Discounted Cash Flow analysis can be also referred to as "intrinsic value", as opposed to market-based approaches as comparable companies and precedent transactions multiples determined on markets values at a certain point in time. Discounted Cash Flow can complement other valuation techniques and overcome the limitations deriving from the lack of pure comparable companies in multiples analysis[20]. The following equation summarizes the components of the *Net Present Value*:

$$NPV = I_0 - \sum_{i=1}^{n} \frac{FB_1}{(1+r)} + \ldots = \frac{FB_n}{(1+r)^n}$$

Where: $I_0$ is the investment at the time of acquisition, $FB_n$ is the future benefit (in terms of cash flow or earnings), $r$ is the discount rate adopted and $n$ is the number years of the evaluation period. The choice to consider the appropriate cash flow or measure of earnings (i.e. income or EBITDA) depends on the scope of the valuation. As mentioned, some assumptions may be necessary in terms of the discount rate and the time span to which future benefits (hereafter cash flows) are considered. Hence, the Discounted Cash Flow methodology consists of a two-part process. The first one refers to the above stated formula, that is, the consideration of the cash flows in a specifically forecasted period, where the evaluator is comfortable with the accuracy of the forecast. Generally, this period is set on five years (it may extend to ten years for business in which revenues are regulated under contractual arrangement). The second one, starting thereafter considers the further cash flows in terms of a perpetuity, referred to as continuing value. In the determination of the perpetuity the estimation of the long-term growth rate is required. Combining the two parts of evaluation, the following formula elaborates the

[19] Gordon, M. J., Shapiro E. (1956). Capital Equipment Analysis: The Required Rate of Profit. Management Science, 3(1), 102-110.

[20] Rosenbaum, J., Pearl, J. (2009). Investment Banking: Valuation, LBOs, M&A, and IPOs. Third Edition, Wiley, Hoboken, New Jersey.

full determination of the today's Business Value (BV) from the Free Cash Flows of the firm (FCF).

$$BV = \frac{FCF_1}{(1+r)} + \frac{FCF_2}{(1+r)^2} + \cdots + \frac{FCF_5}{(1+r)^5} + \frac{\frac{FCF_6}{(r-g)}}{(1+r)^5}$$

This methodology needs a few considerations as the accuracy of the final valuation results is heavily reliant on the assumptions adopted form the evaluator in the various elements needed in the formula. First of all, in the example, FCF are utilized, a measure which captures the cash flows generated by the firm as a whole. In some cases, valuations may be referred only in respect to the equity side, a circumstance requiring the determination of the cash flows related to equity holders. Another area of care regards the determination of the discount rate, which includes in the model the cost of capital for the firm. The cost of capital is a fundamental element in company evaluations in M&A transactions or other extraordinary operations. In such cases, it is necessary to estimate a value taking into account among the others: expected synergies, market conditions and other elements independent from a simple stand-alone evaluation[21]. Considering the case of FCF the cost of capital is a weighted average of the costs of capital (WACC), namely the remuneration owed to equity and debt holders. The WACC is explained below.

$$WACC = \frac{E}{E+D} * R_E + \frac{D}{E+D} * R_D * (1-T)$$

Where: $E$ is the market value of equity, $D$ is the market value of debt, $R_E$ is the cost of equity, $R_D$ is the cost of debt and $T$ is the corporate tax rate. $R_E$ is determined as:

$$R_E = R_f + \beta * (R_m - R_f)$$

Where, $Rf$ is the return of a risk-free security, $\beta$ is a measure of the sensitivity of company toward systemic risk and $R_m$ is the market return.

*Real Options*

Is an innovative approach that enjoys better flexibility than NPV determined through Discounted Cash Flows. The concept of options applied to business decisions is particularly

[21] Vulpiani, M. (2014). Special cases of business valuation. McGraw-Hill Education, 2014.

useful in allowing modifications in the value of investments over time. This because alternatives are crucial in investment decisions in terms of postponement, delay, increase of even abandonment of an investment opportunity. Applying real options to the scope of M&A valuation, helps buyer understand the implications of anticipating or postponing the acquisition, or divesting a specific business unit at some point in the future. Real options may also improve the understanding of specific projects ongoing at the time of the deal.

For all these reasons, simply creating one projection based on future cash flow of the firm without the comprehensive consideration of the options to be pursued in the course of the investment may limit the buyer's perception of the real value of the target firm. Therefore, the development of real options approach goes further in incorporating all the factors affecting the investment cycle and has the important benefit to complement the results reached through other valuation models.

*Multiples*

Constitute a quick and relatively immediate measures of valuation as they are construed as a ratio based on the relevant earning measure. Multiples valuation approach see two main steps: selection of the correct multiple and application to the chosen measure. After selecting the sample of comparable companies, the multiple for each is determined based on the past years (trailing multiples) or future estimate (forward multiples) and the average is calculated. The value so determined is applied to target firm's accounting measures to understand its valuation. Commonly adopted multiples are:

- Price Earning (P/E): by dividing the market price of the common shares over the firm's earnings per share (EPS), the P/E ratio allows to have an estimate of target firm's equity starting from its earnings;
- Price Book (P/B): as mentioned above allows to understand if the target firm's equity value is over/undervalued compared to its book value (particularly useful in the valuation of financial institutions);
- Enterprise Value/EBITDA (EV/EBITDA): EBITDA is often used as it can be considered a proxy of firm's cash flows. Based on this, it is possible to evaluate the firm's value, and by subtracting the outstanding debt it is possible to determine the equity value;

- Enterprise Value/Revenues (EV/Revenues): allows to evaluate the firm based on the value of revenues (particularly useful in the valuation of startups).

A key factor in multiples evaluation refers to the establishment of a sample of comparable companies. The foundation to consider trading comparables relies on the premise that comparable companies provide a "*highly relevant reference point*" for the target evaluation as they share key business and financial characteristics, risks and operating drivers (Rosenbaum and Pearl, 2009). Hence, comparable analysis is deployed to reflect the current valuation as per prevailing market conditions (and sentiment). Also, peculiar market conditions may expose company valuation to substantial fluctuations. In these cases, it is important how to deal with outliers and to value normalization of results. Finally, it is important to keep in mind that no two companies are exactly the same, meaning that valuation based on comparable analysis should be used in conjunction with other methodologies discussed in this chapter.

Similarly to comparable analysis, precedent transactions analysis adopts multiples evaluations, but it considers as reference point precedent M&A transactions. The rationale of precedent transactions approach lies on the relation between the current evaluation and the transaction multiples paid in comparable deals. The selection of an appropriate sample base is a major element of this approach, as for comparable companies it is sometimes challenging to obtain a robust sample of really comparable prior M&A deals. Since comparable transaction approach is market focused, under normal market conditions it tends to return higher values than trading comparable analysis because of inclusion of premium and synergies considerations[22].

### *3.4 Factors Affecting Value Creation in M&A: a Review*

Different studies have been proposed in recent decades with the aim to address to determinants of value creation in M&A. As general wisdom, there is great debate among scholars and analysts on the real determination of value creation in M&A transaction. The perspective taken in this study focuses on the post-transaction market value increase or decrease for shareholders of the buyer. Different perspectives emerge between those who contend that M&A can be an

[22] Rosenbaum, J., Pearl, J. (2009). Investment Banking: Valuation, LBOs, M&A, and IPOs. Third Edition, Wiley, Hoboken, New Jersey.

effective tool for value creation of the acquiring company and critics pointing to M&A as a value destruction choice for companies undertaking such option.

Recent and valuable contributions[23] suggest that to understand the value creation of M&A it takes to consider the time perspective adopted. If in the short term, around the announcement date, shareholders gain significant returns from the following the deal, in the longer term, three to five years from the deal, evidence shows that acquirer firms tend to destroy value compared to industry peers, even though some cofounding effects may explain firm underperformance. Elements such as strategic complementarity, cultural fit and degree of integration account as a proxy for M&A success[24]. However, not all acquisitions are all likely to succeed *ex ante*, and that acquisitions that are construed around a sound business logic are more likely to create value afterwards[25].

M&A success relies on the mechanisms enabling the absorption of new knowledge and motivation and ability to share knowledge[26]. Also, different views on value creation may emerge from the perspective of acquirer's shareholders (generally slightly negative) and target's shareholders (significantly positive)[27]. In their study, concludes that while many researches are biased toward the determinants of gains, there is a substantial lack of understanding on the value destruction and to fact that M&A can simultaneously lead to creation and disruption of value. The following analysis is devoted to summarize the main factors treated in literature.

*Deal Value*

Researches emphasize how large acquisitions tend to destroy more value, turning as a costly option for shareholders. Academical studies focus on the issue of "Mega Mergers" to point out cases of value destruction transactions[28]. Multiple reasons such as overpayment, empire-

[23] DePamphilis, D. (2011). Mergers and Acquisitions Basics-Negotiation and Deal Structuring. Burlington, MA: Academic Press, Elsevier.

[24] Bauer, F., Matzler, K. (2014). Antecedents of M&A success: The role of strategic complementarity, cultural fit, and degree and speed of integration. Strategic Management Journal, 35, 269-291.

[25] Chatterjee, S. (2009). The Keys to Successful Acquisition Programmes. Long Range Planning, 42, 137-163.

[26] Reus, T. (2012). A Knowledge-Based View of Mergers and Acquisitions Revisited: Absorptive Capacity and Combinative Capability. Advances in Mergers and Acquisitions, 11, 69–88.

[27] Yaghoubi, R., Yaghoubi, M. Locke, S. M. Gibb, J. L. (2014). Mergers and acquisitions: a review. Part 1. Studies in Economics and Finance. 33(1), 147-188.

[28] Bayazitova, D., Kahl, M., Valkanov, R. I. (2012). Value Creation Estimates Beyond Announcement Returns: Mega-Mergers versus Other Mergers.

building and integration complexities can explain have all proven to derail from success in large transactions. At the same time, emphasizes how confident managers often overstate their capability to extract full value of synergies from acquisition[29]. Notwithstanding this, an emerging strand of literature shows that, mispricing of target firm occurs in many circumstances also for smaller target companies. Since large companies are less likely to be acquired, the lower competition mitigates the "winner's curse" problem[30]. Also, recent evidence witnesses a partial reversal in such trend, with mega-mergers generating more value for acquirer shareholders in transactions conducted since 2009[31].

*Premium*

Premium is the percentage of excess of per-share offer value upon target's share price at a certain time before the announcement date, considering such share price is unaffected by insiders' behavior. Generally speaking, premium is related to asymmetrical information regarding the valuation of the target firm from an outside perspective. Additionally, according to the bidding theory, premium reflects the potential takeover competition, hence includes in many cases the additional costs winning bidder is willing to pay to deter potential competing bidders[32]. An additional driver of premium concerns the strategic valuation of the target firm and to creation of synergies with the acquiring company: this leads buyer to pay a higher price than the target standalone value. Premium is generally expected to negatively affect value creation[33]. This inverse relationship relates to the general argument of sought-after synergies in M&A. In fact, market sentiment tends to recognize lower value of synergies for higher premia paid to gain control of the target. Additionally, premium, in general, is likely to be somewhat correlated to deal value, but the magnitude of this correlation may lead to uncertain conclusions since price misperception often occurs for relatively small target.

*Diversification*

Analysis referred to positive (or negative) returns due to the relatedness between buyer and target firms are various and have investigated for long time. First, differences between two

[29] Roll, R. (1986). The Hubris Hypothesis of Corporate Takeovers. The Journal of Business 59(2), 197-216.

[30] Alexandridis, G., Mavrovitis, C. F., Travlos, N. G. (2013). How have M&A changed? Evidence from the sixth merger wave. The European Journal of Finance, 18 (8), 663-688.

[31] Alexandridis, G., Antypas, N. Travlos, N. (2017). Value Creation from M&As: New Evidence. Journal of Corporate Finance, 45, 632-650.

[32] Fishman, M. J. (1988). A theory of preemptive takeover bidding. The RAND Journal of Economics, 19(1), 88 - 101.

[33] Alexandridis, G., Antoniou, A., Zhao, H. (2008). Belief asymmetry and gains from acquisitions. Journal of Multinational Financial Management, 18 (5), 443-460.

companies' core businesses may lead to uncertainty, information asymmetry and diverging opinions in terms of risk. This consideration could be directly quantified through the price paid by acquirer to target company: when there is no core-relation between two companies' businesses, premium tend to be higher[34]. Second, moving to post-transaction performance, when relatedness is captured by measures such as corporate focus, strategic similarities or industry relatedness, post-merger performance is better than diversified deals both in the short-term[35] and long-term[36]. Nonetheless, when relatedness comes at the cost of resource substitution, non-diversified M&A fails to deliver on expected value creation[37].

*Payment*

Studies generally refer to payment as cash opposed to stock and other means of payment, whereby in many circumstances M&A may include a mixture of cash, stocks and future contingent payments. Studies involving this variable shows a mixed background as it may be influenced by market behavior or contingent excess of liquidity of the bidder firm. More specifically, when acquirer believes its shares overvalued, it will be more likely to engage in stock-financed acquisitions[38]. Though stock payments may be underpinned by high stock valuations, they leave target shareholders able to grasp future synergies. Focusing on the post-merger performance, cash-based transactions are generally associated to better operating results[39].

*Company Size*

The metric of company size can be studied under different aspects. Researches may account for both measures in absolute terms (i.e. market capitalization, total value of assets or sales) and measures capturing the relative size of between buyer and target (i.e. relative market

[34] Flanagan, D. J., O'Shaughnessey, K. C. (2003). Core-related acquisitions, multiple bidders and tender offer premiums. Journal of Business Research, 56, 573-585.

[35] Megginson, W. L., Morgan, A., Nail, L. (2004). The determinants of positive long-term performance in strategic mergers: Corporate focus and cash. Journal of Banking & Finance, 28(3), 523-552.

[36] Alhenawi, Y., Krishnaswami, S. (2015). Long-term Impact of Merger Synergies on Performance and Value. Quarterly Review of Economics and Finance.

[37] Homberg, F., Rost, K., Osterloh, M. (2009). Do synergies exist in related acquisitions? A meta-analysis of acquisition studies. Review of Managerial Science, 3(2), 75-116.

[38] Savor, P. G., Lu, Q. (2009). Do Stock Mergers Create Value for Acquirers? The Journal of Finance, 64 (3), 1061-1097.

[39] Linn, S. C., Switzer, J. A. (2001). Are cash acquisitions associated with better post-combination operating performance than stock acquisitions?. Journal of Banking & Finance, 25(6), 1113-1138.

capitalization size). Contrasting findings support either positive effect[40] or negative influence[41] for higher relative size in terms of market capitalization on value creation. One plausible clue refers to the fact that high values of the ratio (relatively smaller target size) should have a positive effect on abnormal returns because of the small risk undertaken by the target firm.

*Financial Leverage*

Financial conditions of the acquirer are closely scrutinized following the announcement as analyst are interested in determining the financial feasibility of the deal. Low financial leverage can be considered a significant predictor of higher M&A activity as acquirer may deploy resources it has on its balance sheet[42] [43]. At the same time, they contend that financial leverage can be adopted as a predictor of M&A success.

*Acquisition Experience*

Acquisition experience prior to a given transaction is a factor which analysts take into consideration in order to predict the acquirer's capability to integrate a new business. Even though a clear relationship pattern between Acquirer acquisition experience and post-merger performance cannot be inferred, such a variable is expected to somewhat influence value creation mainly in industries inherently characterized by M&A activity. General acquisition experience increases the M&A success in terms of post-acquisition patenting speed[44].

*R&D Investments*

An important determinant refers to the target's pre-acquisition level of patents and R&D spending (collectively referred to innovation content). In today's business environment, increasingly featured by a high innovation content across industries, M&A activity is directed in many cases to integrate R&D and concepts for future technologies. Evidence provides support that acquiring innovative firms with a meaningful innovation content positively relates

[40] Mantravadi, P., Reddy, A. V. (2007). Relative size in mergers and operating performance: Indian experience. Economic and Political weekly, 3936-3942.

[41] Kusewitt, J. B. (1985). An exploratory study of strategic acquisition factors relating to performance. Strategic Management Journal, 6(2), 151-169.

[42] Das, A., Kapil, S. (2015). Inorganic growth of technology sector firms in emerging markets: influence of firm-specific factors in Indian firm's M&A activities. International Journal of Emerging Markets, 10(1), 52-72.

[43] Wagner, M. (2008). Determinants of the acquisition of smaller firms by larger incumbents in high-tech industries: are they related to innovation and technology sourcing?. Discussion Paper, Technical University of Munich SFB, München, available at: http://ideas.repec.org/ p/hum/wpaper/sfb649dp2007-063.html.

[44] Al-Laham, A., Schweizer, L., Amburgey, T. L. (2010). Dating before marriage? Analyzing the influence of pre-acquisition experience and target familiarity on acquisition success in the "M&A as R&D" type of acquisition. Scandinavian Journal of Management, 26(1), 25-37.

to abnormal returns around the announcement date and long-term stock performance after completion for the acquiring firm[45].

[45] Sevilir, M., Tian, X. (2010). Acquiring Innovation. AFA 2012 Chicago Meeting Paper.

# 4 CROSS BORDER M&A AS INSTRUMENT TO VALUE CREATION

## *4.1 Rationale*

The possible impact of a M&A transaction being cross-border rather than domestic lies on the opportunity to access knowledge and increase technology capabilities. The multiple extents to what this point may raise importance refer not only to the relocation of R&D activities, but also firm's size, market share, new technological opportunities and external knowledge sources. Also, M&A transactions offer the possibility to access new markets and higher value-added capabilities or lower cost resources[46]. However, cross-border deals not always are value-accretive as poor long-term performance may be associated to M&A conducted overseas[47]. Moreover, cross-border deals pose incremental challenges when accounting for substitutability between bidder and target resources, when cultural distance raises integration barriers[48] and because of distortions in valuation stage, due to different costs of capital[49]. M&A involving companies from different countries poses substantial barriers to successful integration such as local regulations and industry standards and culture[50].

## *4.2 Pros and Cons*

With the aim to provide an overview on the topic and based on existing studies and research, below a summary of key advantages and disadvantages to pursue a cross-border M&A is outlined.

*Pros*

Several opportunities of value creation may be sought in cross-border M&A as opposed to domestic transactions. More specifically, these refer mainly to comparative advantage, product life cycle and market imperfection[51]. These motivations are following detailed.

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[46] Stiebale, J., Trax, M. (2011). The effects of cross-border M&A on the acquirers' domestic performance: firm-level evidence. Canadian Journal of Economics/Revue Canadienne d'économique, 44(3), 957-990.

[47] Carnes, T. A., Black, E. L., Jandik, T. (2001). The long-term success of cross-border mergers and acquisitions. Available at SSRN 270288.

[48] Aybar, B., Ficici, A. (2009). Cross-border acquisitions and firm value: An analysis of emerging-market multinationals. Journal of International Business Studies, 40(8), 1317-1338.

[49] Stiebale, J. (2013). The impact of cross-border mergers and acquisitions on the acquirers' R&D – Firm-level evidence. International Journal of Industrial Organization, 13, pp. 307-321.

[50] Warter, L., Warter, I. (2016). The Phenomenon of Mergers and Acquisitions within the Automotive Industry. Proceedings of North International Conference on Economics, 1st Issue 2016.

[51] Madura, J. (2012). International Financial Management, 11th Edition, Cengage Learning.

*Theory of Comparative Advantage*

The basis of this theory relates to the level of resources and competences featuring the specialization of a given country in terms of technology advancements or labor costs regarding a specific process or product. This kind of advantage cannot be easily and quickly transferred across borders due to the country-specific characteristics that makes a domestic economy specialized in producing certain goods and services and less efficient in other areas. The result is that companies, through cross-border M&A, seek access to this comparative advantage as this would not be otherwise available.

*Product Cycle Theory*

Companies establish their activities in a determined country as result of a perceived need in respect of the produced goods. When demand grow also abroad, the company can fulfill it through exports at least initially. However, over the time with increasing competition, the company may perceive the establishment of integrated operations in the foreign country as the only option to maintain advantage over competitors.

*Imperfect Markets Theory*

The reality of today's markets, production factors are not fully and easily transferrable. Imperfect market conditions impose costs and restrictions to the possibility of move labor and other resources needed for production. Cross-border M&A offer acquiring companies an actual opportunity to capitalize on such conditions and gain from the reduction of transaction costs otherwise emerging cross-border operations. Three main theories are generally adopted to explain the phenomenon of cross-border M&A under the lights of imperfect markets conditions. First, the International Diversification Theory proposes that cross-border M&A are an effective tool to take advantage of capital markets imperfections (governmental restrictions on individual portfolio investments or information asymmetry) as corporate international diversification provide better returns and help reduce earnings volatility[52]. Second, according to the Internalization Theory, the main reason to pursue cross-border M&A is the possibility to internalize intangible assets based on proprietary information difficult to organize from scratch[53]. Once internalized, the value of these assets can be scaled up and replicated to every market in which the acquiring company operates. Third, the Exchange Rate Theory proposes

[52] Kohli, R., Mann, B.J.S. (2011). Analyzing determinants of value creation in domestic and cross border acquisitions in India. International Business Review, 21, 998-1016.

[53] Morck, R., Yeung, B. (1991). Why investors value multi-nationality, Journal of Business, 64(2), 165-187.

how cross-border M&A are influenced by imperfections in exchange rate markets. Based on this assumption, cross-border M&A can be often motivated by the relative undervaluation of target company due to target's country currency depreciation (compared to the acquirer's currency).

Other reasons may be conducive to cross-border M&A value creation. Specific regulatory characteristics of the target's country in terms of corporate control can translate into better returns for acquirers in countries where there is poor shareholders protection. Geographic reach and organizational learning allow markets expansion and access to geographically distributed knowledge and favorite innovation through networks of relationships with firms, suppliers and institutions. Finally, corporate tax rate advantages are sometimes an effective tool to attract capitals from abroad.

*Cons*

M&A literature founds two main factors negatively affecting cross-border M&A value creation: the so-called Liability of Foreignness and the Double-Layered Acculturation. Both items are discussed here below.

*Liability of Foreignness*

The definition entails the additional costs borne from a foreign acquiring company to operate in an overseas market, which a domestic company would not sustain[54]. Such costs are associated to the following factors:

- Spatial distance (travel costs, transportation, coordination across distance and time zones);
- Lack of knowledge on local market environment;
- Possible backlash due to host country environment (i.e. lack of legitimacy as foreign company or economic nationalism);
- Restrictions related to the home country environment (i.e. limitation on technology transfer to certain countries).

Substantially in line with the above background, the cost of doing business abroad can be expressed as function of the categories: Activity-Based Costs (transportation, communication,

[54] Zaheer, S. (1995). Overcoming the liability of foreignness. Academy of Management Journal, 38(2), 341–363.

trade barriers) and Liability of Foreignness[55]. This second category is further broken down into three hazards. Unfamiliarity Hazards reflect the lack of knowledge or previous experience in target's country, a factor posing acquired in disadvantageous position compared to local entities. Discrimination Hazards are the discriminatory treatment toward the acquiring firm from government and customers and materialize in the cost of the challenges to obtain legitimacy rather than being treated as an outsider firm. Finally, Relational Hazards are related to the lack of foreign firm's of local network and linkages with local actors, resulting into a poor and difficult access to key resources.

*Double-Layered Acculturation*

The combination of two entities having different cultures creates the need for the acquired to adapt to new cultural system, an effort which inability may hamper M&A integration success. Despite univocal conclusions are not determined in literature, a hurdle typically emerging in cross-border M&A refers the cultural distance between target and acquirer resulting in cultural clashes which can reduce the value of the deal[56].

### *4.3 Value Creation Comparative Analysis Between Domestic and Cross-Border M&A*

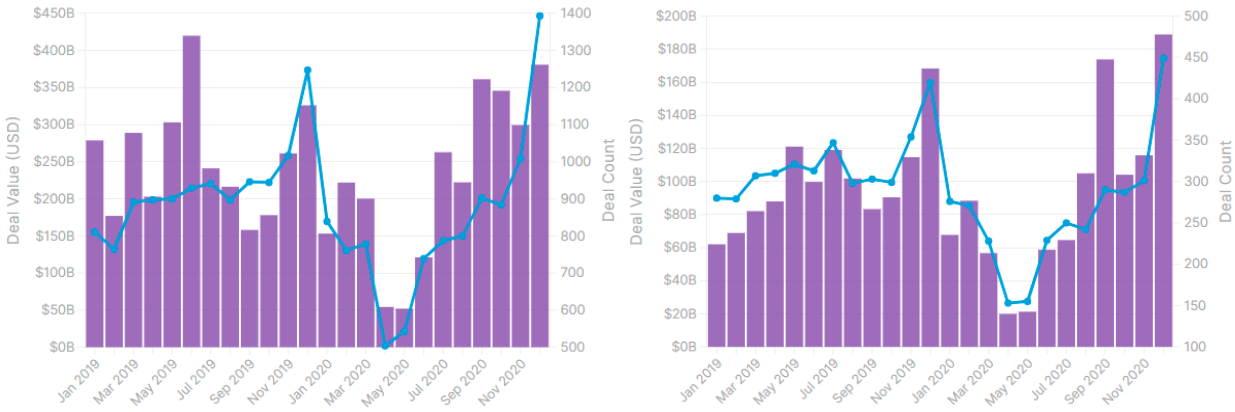
As for global deal making activity, cross-border M&A featured substantial variations over the recent years. While 2020 saw the lowest level of cross-border mergers and acquisitions deals since 2013, in terms of both volume and count, the share of cross-border deals out of global M&A activity essentially remained the same across 2019-2020. According to Bloomberg, in 2020, there were 3,131 announcements of currently pending or completed cross-border mergers and acquisitions deals valued at $1 million or greater resulting in the change of control of the acquired company or assets, for an aggregate value of $1.06 trillion. This cross-border deal volume accounted for some 40% of the global M&A volume in 2020 substantially in line with the market share of cross-border deals recorded in 2019. From the monthly evolution of deals in the 2019-2020 period, it appears clearly how the slowdown corresponding to the outbreak of Covid19 pandemic affected both global and cross-border M&A. After this slowdown, a substantial recovery of M&A activity has is observed in the following months. Based on this

[55] Eden, L., Miller, S.R. (2004). Distance matters: Liability of foreignness, institutional distance and ownership. Advances in International Management, 16, 187–221.

[56] Datta, D., Puia, G. (1995). Cross-border acquisitions: an examination of the influence of relatedness and cultural fit on shareholder value creation in U.S. acquiring firms. Management International Review, 35, 337–359.

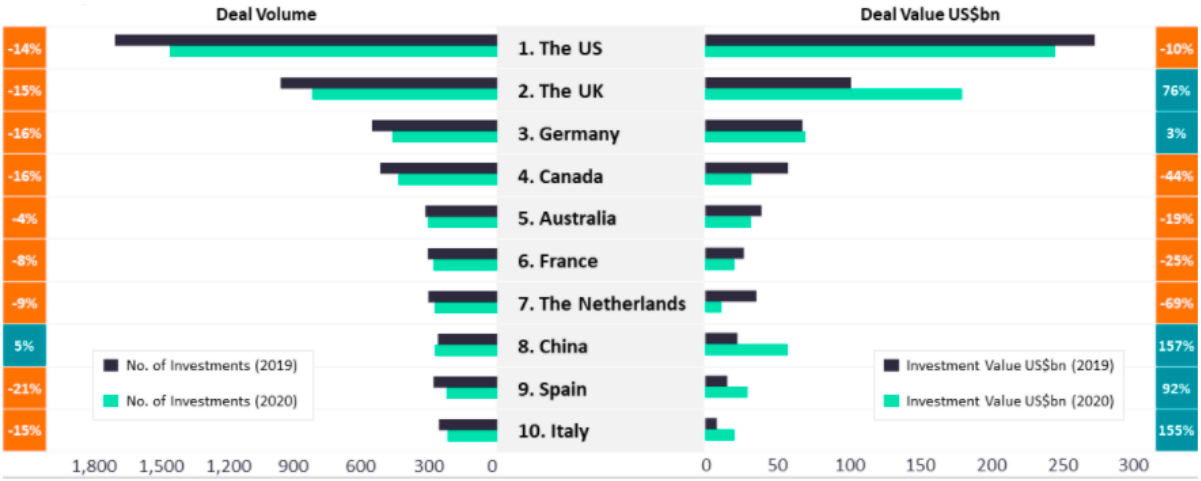
evidence, it can be argued that the pandemic did not cause deal-makers to prefer domestic M&A activity over cross-border deals any more than they did prior to the crisis.

*Figure 4 - Global vs. Cross-Border Monthly M&A Activity 2019-2020 (Bloomberg)*




The US market emerged as the major destination for cross-border M&A deals, with 1,453 transactions accounting for $246.2 billion in 2020 (Figure 5). Values witnessed a decline of 14% and 10% respectively in volume and value in 2020, compared to 2019 levels. Other key markets are the UK, Germany, Canada and Australia. Notably, all countries but China feature a decline in both deal count and volume, a sign of the readier response to pandemic outbreak.

*Figure 5 – Top 10 Countries by inbound M&A Activity 2020 vs 2019 (GobalData Financial Deals Database)*




As discussed in the previous section, acquirer firm needs to carefully weigh up pros and cons before conducting cross-border M&A transactions. In recent decades, an extensive amount of academic studies has been dedicated to the analysis of such deals as opposed to domestic ones. Even though different nuances of deal success are analyzed, recent contributions find that

following deal announcement, cross-border M&A lead to value creation for acquirer's shareholders[57] [58]. Among the key factors considered in dedicated literature, it is possible to find previous buyer's experience, the choice of cash or stocks as payment method and the degree of cultural distance entailing the transaction. The discussion of this section is rolled out considering acquirers' returns through compared domestic and cross-border M&A.

*US and North American Market*

The majority of studies has been historically focused on the US market. Moeller and Schilingemann (2005)[59] analyze transactions occurred between 1985 and 1995 and find that US firms acquiring cross-border targets experience significantly lower announcement stock returns of approximately 1% and significantly lower changes in operating performance relative to those that acquire domestic targets. Black *et al.*[60], in a long-term value creation analysis, find that US acquirers in cross-border mergers experience significantly negative long-term abnormal returns post-merger. These returns also are significantly more negative than those realized by a matched sample of US acquirers that acquired US targets. In summary, findings support that US acquirers carry out significantly lower returns in cross-border M&A than in domestic transactions. On Canadian market, findings show how cross-border deals conducted by US firms gain less than domestic Canadian acquires[61]. In particular, domestic acquirers gain significantly positive abnormal returns, while U.S. bidder returns are close to zero. Similar conclusions are reached with respect to the U.S. market for cross-border acquisitions conducted by foreign firms[62]. Over the years however, this wisdom has changes with increasing evidence is supportive toward cross-border M&A value creation. Francis *et al.*[63], contend that value creation is associated to a combination of firms with different financial market integration

[57] Andriuskevicius, K. (2019). Comparison of Value Creation through M&A in European Union. Engineering Economics, 30(2), 187-194.

[58] Chalencon, L., Mayrhofer, U. (2018). Do cross-border mergers-acquisitions in mature and emerging markets create similar value? Journal of Organizational Change Management, 31(4), 944-958.

[59] Moeller, S.B., Schlingemann, F.P. (2005). Global Diversification and Bidder Gains: A Comparison between Cross-Border and Domestic Acquisitions. Journal of Banking & Finance, 29(3), 533–64.

[60] Black, E.L., Carnes, T.A., Jandik, T., Henderson, B.C. (2007). The Relevance of Target Accounting Quality to the Long-Term Success of Cross-Border Mergers. Journal of Business Finance & Accounting, 34(1&2), 139–68.

[61] Eckbo, B.E., Thorburn, K.S. (2000). Gains to Bidder Firms Revisited: Domestic and Foreign Acquisitions in Canada. Journal of Financial and Quantitative Analysis, 35(1), 1–25.

[62] Starks, L., Wei, K.D. (2004). Cross-Border Mergers and Differences in Corporate Governance. Paper presented at Financial Management Association Conference.

[63] Francis, B.B., Hasan, I., Sun, X., (2008). Financial Market Integration and the Value of Global Diversification: Evidence for US Acquirers in Cross-Border Mergers and Acquisitions. Journal of Banking & Finance, 32, 1522–1540.

status, in which funds are provided to high cost firm. Dutta *et al.*[64] find a positive association between abnormal returns and stock payment for transactions featuring Canadian acquirers.

*European Market*

A similarly to what observed in the North American, mixed evidence is found in the European market. In particular, in a study of European transactions, abnormal returns for acquiring firms are negative and significant in cross-border deals, while positive but not significant for domestic ones[65]. In the UK market conclude that acquirers carrying out domestic deals enjoy better returns than their peers engaged in cross-border deals on U.S. targets[66]. More recently however, results seem contradict earlier evidence, with European acquires recording in cross-border deals cumulative abnormal returns twice as much as those occurring in domestic M&A[67]. Danbolt and Maciver[68], extending the perspective to both acquirer and bidder's shareholders value creation in M&A conducted into and out of the UK, find that cross-border M&A imply higher value creation than domestic transactions. Additionally, targets' shareholders enjoy better returns. Cioli *et al.*[69] conclude that cultural distance has a positive effect on bidder's post-transaction performance.

*Emerging Economies*

An interesting perspective about cross-border deals conducted in emerging markets is provided by Zhu and Jog[70]. They find that cross-border M&A tend to create more value than domestic ones as the former can bring substantial reduction in the risk profile of the target firms due to the change of shareholding base. To the same extent, it is demonstrated that markets anticipate value creation for both target and acquirer in cross-border M&A toward emerging markets in

[64] Dutta, S., Saadi, S., PengCheng, Z. (2013). Does payment method matter in cross-border acquisitions?. International Review of Economics and Finance, 25, 91-107.

[65] Campa, J.M., Hernando, I. (2004). Shareholder Value Creation in European M&As. European Financial Management, 10(1), 47-81.

[66] Aw, M., Chatterjee, R. (2004). The performance of UK firms acquiring large cross border and domestic takeover targets. Applied Financial Economics, 14, 337-349.

[67] Feito-Ruiz, I., Menéndez-Requejo, S. (2011). Cross-border mergers and acquisitions in different legal environments. International Review of law and Economics, 31, 169-187.

[68] Danbolt, J., Maciver, G. (2012). Cross-border versus domestic acquisition and the impact on shareholder wealth. Journal of Business Finance & Accounting, 39, (7&8), 1028-1067.

[69] Cioli, V., Giannozzi, A., Ippoliti, V., Roggi, O. (2020). Cross-Border M&A and Financial Performance: Empirical Evidence on Bidder/Target Companies. International Journal of Business Management, 15(4), 67-86.

[70] Zhu, P. C., Jog, V. (2014). Impact on Target Firm Risk-Return Characteristics of Domestic and Cross-Border Mergers and Acquisitions in Emerging Markets. Emerging Markets Finance and Trade, 48(4), 79-101.

terms of average monthly returns[71]. Li *et al.*[72] in respect to Chinese companies' overseas acquisitions, find that positive shareholders returns are mediated by cultural differences. Mixed conclusions are drawn by Otto *et al.*[73] who compare domestic and cross-border M&A in both developed and emerging countries. In respect to the latter category, they find that emerging-market bidders gain from after announcements of domestic acquisitions, while lose substantially when news are announced on cross-border acquisitions. In some cases although carrying positive returns, post-announcement performance of cross-border deals targeting companies in emerging markets are moderately lower than those recorder for M&A conducted in advanced economies, suggesting the need for an accurate selection of the target country[74].

[71] Chari, A., Ouimet, P., Tesar, L. L. (2004). Cross Border Mergers and Acquisitions in Emerging Markets: The Stock Market Valuation of Corporate Control. Working Paper, University of Michigan.

[72] Li, J., Li. P., Wang, B. (2015). Do Cross-Border Acquisitions Create Value? Evidence from Overseas Acquisitions by Chinese Firms. International Business Review 25(2), 471-483.

[73] Otto, F., Sampaio, J. O., Brunassi Silva, V. A. (2021). Domestic and Cross-Border Effect of Acquisition Announcements: A Short-Term Study for Developed and Emerging Countries. Finance Research Letters, 38(2).

[74] Chalencon, L., Mayrhofer, U. (2018). Do cross-border mergers-acquisitions in mature and emerging markets create similar value? Journal of Organizational Change Management, 31(4), 944-958.

# 5 CROSS BORDER M&A IN THE AUTOMOTIVE SECTOR: FCA-PSA CASE STUDY

## 5.1 Industry Analysis

*Overview*

Over the last decade, extensive technological developments have featured automotive. Automakers are increasingly striving to implement strategies to accelerate innovation and translate it into manufacturing activities in a faster way. In light of this, technological advancements depend on four key factors: demand for new vehicles with improved characteristics associated with competition to satisfy customers, quest for increase sales margins, development of engine technologies in line with environmental and sustainability standards and commitment to improve safety for both vehicles' occupants and pedestrians[75].

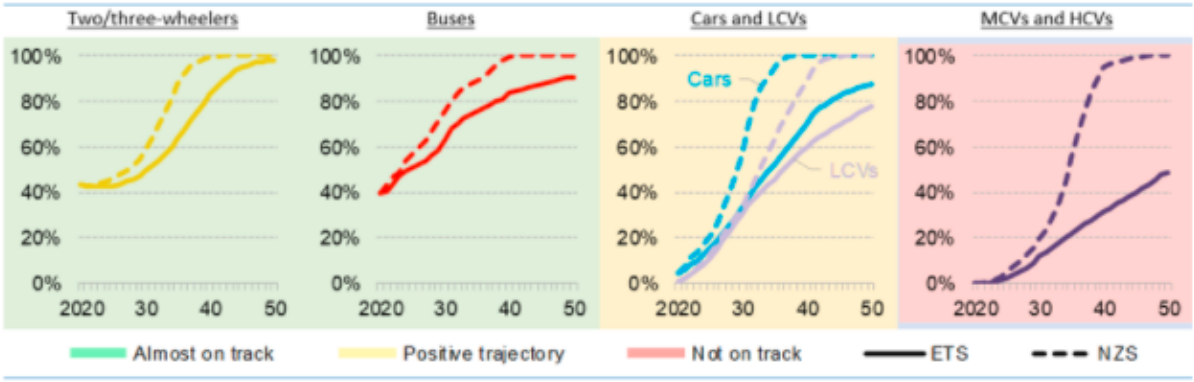
OEM constantly look for the streamlining of their platforms to achieve cost savings, shed low-value manufacturing assets and free up capital for higher-value added hardware and software features. Automakers share production platforms since the development of new vehicle platforms is expensive and requires a minimum sales threshold to be achieved before engineering and equipment costs are recouped. Accordingly, there is a key driver for automakers to minimize the number of platforms configurations in their portfolio, emphasizing the importance of global platforms to produce the largest number of models, improving profitability. However, this is sometimes difficult to implement, as several regulations and requirements worldwide poses hurdles to the adoption of a single platform. An automaker must design platforms' entire architecture to be compliant with the rules in every market it intends to sell the vehicle. For instance, some auto parts (i.e. dash screens) may be compliant with a certain country safety standards, but other countries rules may not provide the same. This forces the carmaker to retool the interior for it to be sold in certain countries.

The increasing environmental concerns are defining new trends for shifting powertrains from petrol and diesel to clean fuel engines. The target of reducing pollution and other gaseous environmentally harmful emissions is taking place across vehicles categories (Figure 4). Policymakers play an important role in this pattern. The European Commission, for instance, is on forefront on the transition towards clean energy, with the goal established in the *2030*

[75] Chanaron J.J., MacNeill, S. (2005). rends and drivers of change in the European automotive industry: (I) mapping the current situation. International Journal of Automotive Technology and Management, 5(5), 83-106.

*Climate & Energy Framework* to abate greenhouse gases of at least 55% by 2030. The role of automotive industry, a key contributor to environmental emissions, is crucial in the achievement of such goals.

*Figure 4 - Global Zero-Emission Vehicles Share Outlook (ETS vs NZS – BloombergNEF)*




Under the European Green Deal, emissions targets are being tightened in Europe. The current proposal states that car manufacturing would be deemed as a "sustainable investment" only for vehicles emitting less than 50g of $CO_2$/km, lower than the current EU targets for OEM, (providing an average of 95g $CO_2$/km or less to avoid fines). Standards for emission rules is set to become stricter over time, and starting from 2026, only zero-emissions vehicles would be classified as a sustainable investment. Accordingly, PHEV are set to lose their "green" label, with direct implications for ESG funds and for OEM in respect to green financing.

In the US, under the new Biden administration, many of the Trump administration's environmental rollbacks are being cancelled. The Growing Renewable Energy and Efficiency Now (GREEN) Act proposes a tripling of the EV tax credit cap to 600,000 cars from the current 200,000 threshold, with a slightly lower $7,000/car after the first 200,000 EVs are sold ($7,500/car up to 200,000 sold). The proposal is part of the $2 trillion infrastructure plan unveiled at the end of March 2021, including $174 billion spending to boost the EV market and shift away from gasoline powered cars. The proposals are specifically intended to benefit US-based manufacturers.

For the purpose of the present study, the European political and market regulatory environment is analyzed. European Commission has taken a leading role not only in the setup of environmentally friendly regulations, but also in defining the rules for maintaining an adequate level of competition in M&A transactions. The main considerations refer the application of the European Commission Regulation No. 139/2004 on Merger Procedure to the degree of vertical integration and horizontal concentration resulting from the deal. To this extent, the role of the

Commission regards the balancing of market competition on the one side and the fostering of R&D investments through economies of scale on the other side. In particular, the Commission may rule in favor or against the proposed transaction or requiring specific actions (disposal of business units or commitments to enact with anti-competitive behaviors) to seek remedy against possible threats to competition arising from the deal.

Additionally, the role of regulatory bodies extends to the overview of public financing to automakers. Automotive is a strategic sector for many countries. For instance, in Europe, the industry provides direct and indirect occupation to nearly 14 million individuals (3.5 in manufacturing, 4.5 in sales and maintenance and 5.1 in transportation), or 6.1% of the total European employment, as of 2021. The overall turnover generated by the sectors stands above the 7% of the European GDP. The EU is one of the main manufacturing areas of automobiles and constitutes the largest private investor in R&D activities[76]. However, following economic downturn periods, certain segments of the industry may face significant overcapacity. In light of the above considerations, national governments are keen to maintain occupation levels and are prone to subsidize and finance automotive operations through difficult periods. State-related financing to automotive between 2007 and 2014 subject to European Commission review amounted to nearly €1 billion[77]. A series of multi-billion state-backed packages have been approved to automakers during Covid19 pandemic. In all these cases, the European Commission is in charge to evaluate possible oversupply issues, market forecasts and feasibility of restructuring plan and/or covenants associated with the aid.

*Porter's Five Force Model*

In order to conduct the strategic assessment of the automotive industry, the Michael Porter's Five Force model is adopted. The premise of this approach lies its foundation in the consideration that the core of any strategic assessment needs a close understanding of competition[78]. The degree of competition within a certain industry includes, but it is certainly not limited to direct competitors. In fact, customers, suppliers, potential entrants and potential substitute products all account for a high level of attention, since they can become at a certain point in time direct competitors. Accordingly, the competitive evaluation of an industry

[76] European Commission. Internal Market, Industry, Entrepreneurship and SMEs: Automotive Industry.
[77] European Commission. Competition Policy Brief: State aid in the automotive sector: an overview.
[78] Porter, M.E. (1979). How Competitive Forces Shape Strategy. Harvard Business Review, March 1979.

depends on these five basic forces which collective strength ultimately results into the profitability of the industry.

*Bargaining power of suppliers (Low)*

The premise of bargaining power of suppliers relates to the amount of possible alternative suppliers for a company. The higher the number, the lower the level of their bargaining power. In automotive sector, where a moderate number of large players dominate the market, contractual terms agreed with suppliers are likely to leave margin of flexibility to automakers, that can enjoy a large choice and replace suppliers based on better quality or lower price. The issue of benefits deriving from different relative size can be limited in peculiar cases in which few suppliers produce specialized or high-value-added items difficult to replicate. In such cases, the bargaining power of these suppliers can grow to moderate as the automaker is left with few options or no alternative option at all.

*Bargaining power of customers (Moderate)*

A general consideration is needed in this respect. Automotive industry is inherently defined as a cyclical industry, that is, it is associated with higher sales and profitability during periods of economic expansion, whereas it operates in overcapacity conditions during downturns (i.e. in the aftermath of the economic downturn caused by the Covid19 pandemic). It is clear how, in the first case, and being other market conditions unchanged, the bargaining power of customers would be quite low. However, in recent periods of constantly changing customers preferences, evolving environmental regulations and economic headwinds (uncertain GDP growth rate and high unemployment rate), automakers need to carefully tailor market strategies to win competition. Auto manufacturers offer a product substantially similar to the others, with limited degree of price differences. In fact, different price policies would lead to immediate arbitrage behavior from customers, correcting possible divergence. In summary, the quest for market share from automakers, unavoidably reflects into a reduction of sales margin.

*Rivalry Between Existing Players (High)*

Rivalry pressure among existing automakers is meaningful and with competition reflecting into the historically high level of M&A in automotive. OEMs tend to grow seeking a global presence in the search for economies of scope and scale and market share. The high levels of investments in production and R&D are a constant for automakers in order to meet customers' needs and progress along with regulatory and environmental advancements. Innovation, adaption and

efficiency are all key factors to survive in the industry, often representing the difference in being a target or an acquirer.

*Threat of Substitutes (Low)*

The primary function of vehicles refers to the mobility and transportation needs of people. Substitutes can be categorized according to the context: urban areas (i.e. public transportation systems), long haul (railways and airways) and subjective preferences (bike or scooter). However, vehicles destinated to transportation of people retain a substantial resilience as the main way of transportation. It is interesting to understand the implications of recent evolution of the need of a personal vehicle. As discussed in Paragraph 2.3, new uses of vehicles are emerging and are expected to gain popularity over the next years. Shared mobility or mobility on demand, for instance, fulfill the need of transportation through vehicles, but has the potential to curb the need for a personal vehicle, putting a cap on the global sales of automobiles.

*Threat of New Entrants (Low)*

The automotive sector can be adopted as a quintessential example of high entry barriers to the market. High investments required in terms of capital expenditure, R&D and brand recognition are a substantial deterrent for new entrants. Companies can enter the market through innovative business models, but the incumbent players tend to curb new competition through M&A. Some cases of new entrants may be present in specific situations of developing countries, where national champions are incentivized and protected in domestic market. These automakers can quickly gain scale and mature the necessary know how to compete on global scale (i.e. the Chinese automakers). Nonetheless, these circumstances are quite peculiar and connected to specific contexts to alter the general considerations on the threat of new entrants.

## 5.2 Companies Involved

*FCA*

Fiat Chrysler Automobiles N.V. (FCA) is an OEM company resulting from the merger between Fiat S.p.A. and Chrysler LLC completed in 2014. FCA is engaged in: engineering, design, manufacturing, distribution and sale of vehicles, components and production systems on a worldwide scale. At the time of the deal, FCA is headquartered in London and counted nearly 200,000 employees. Its automotive brands portfolio included: Abarth, Alfa Romeo, Chrysler, Dodge, Fiat, Fiat Professional, Jeep, Lancia, Maserati, Mopar, Ram and SRT. Activities in

components and production systems sectors are conducted through Teksid and Comau. In 2019, FCA shipped 4.4 million vehicles[79].

As mentioned, the predecessor of FCA was Fiat S.p.a. (*Fabbrica Italiana Automobili Torino*) an automobile manufacturer founded on July, 11th 1899 in Turin, Italy. In 1902, Giovanni Agnelli, Fiat S.p.A.'s founder became the first Managing Director of the company. Over the first decades of the 20th Century, Fiat served as an important supplier for military industry. In 1923 the company embraced the system of industrialized production, drastically transforming its production activities. Over these years production spanned from automobile to aircrafts, marine and industry. In 1930, Fiat made its first forays abroad in France, Spain and Poland.

After consolidation under fascist regime, the Fiat Group represented a core part of the Italian economic boom post-World War Two. In the following years, the group's activities are fueled by economic recovery and international expansion is conducted through direct investments in production plants in South Africa, Turkey, Argentina, Mexico, URSS and Brazil and joint ventures in India and China. At the beginning of 2000s, the crisis affecting the sector led to a strategic rethinking of the group. On June 1st, 2004, Sergio Marchionne is appointed as Fiat CEO, leading a new phase of cost rationalization and relaunch of group's activities. In 2005 the Fiat Group returns to profits and the positive results of the following years pose the basis for the acquisition of Chrysler Group.

On January the 20th 2009, on the wake of the global financial crisis of 2008, Fiat S.p.A. and Chrysler LLC entered into a preliminary agreement for a global strategic alliance, completed on June 10th 2009. The deal entails a minority 20% stake of Fiat S.p.A. into Chrysler Group, with upside to reach 35% upon fulfillment of predetermined results. Furthermore, it is provided an option to Fiat S.p.A. to reach 51% of Chrysler but not until the occurrence of full repayment of the outstanding public financing received from the US carmaker. Between 2009 and 2014, Fiat S.p.A. expands its ownership into Chrysler Group from 20% to 100%, and on October 12th, 2014, Fiat completes a corporate reorganization leading to the establishment of FCA as the parent company of the Group, headquartered in London and which shares are exchanged on Milan's Mercato Telematico Azionario (MTA) and New York Stock Exchange (NYSE). Following the combination, under the guidance of CEO Sergio Marchionne, some important strategic operations has been conducted:

[79] As per FCA 2019 Annual Report and Form 20-F.

- In January 2011, Fiat S.p.A non-automotive goods business are separated from the rest of the company, leading to the creation of Fiat Industrial, renamed CNH Industrial N.V.;
- In January 2016, the spin-off of Ferrari N.V. from the Group was completed. The assets and liabilities of the Ferrari segment were distributed to holders of FCA shares and mandatory convertible securities;
- In October 2018, a definitive agreement to sell Magneti Marelli's business to CK Holdings Co., Ltd, was announced (the deal was completed on May 2nd, 2019).

*PSA*

The Peugeot Société Anonyme (PSA) Group at the time of merger with FCA, is the major French automaker, with shares listed on Paris Stock Exchange (CAC 40). The Group employed about 208,000 headcount and accounted for 3.5[80] million vehicles sold on annual basis. PSA Group activities include:

- Automotive: design, manufacturing and sale of small and commercial vehicles under the brands Peugeot, Citroen, Vauxhall, Opel and DS;
- Automotive Equipment: PSA controls Faurecia, a company specialized in production of internal components, electronics, software and advanced driving systems. Faurecia supplies PSA Group and other leading OEM worldwide;
- Financial Services: Banque PSA provides financing to final customers for the purchase of PSA vehicles.

The company was founded in 1896, and through the first half of the 20th century was primarily engaged in manufacturing and sales of vehicles. In 1965, in the midst of a corporate and financial reorganization, the company was turned into a holding entity, and the operating activities were conducted by Automobiles Peugeot. In 1974, Peugeot Group acquired an initial stake of 38.2% in Citroen, increasing to 89.95% in 1976, mainly because of the poor financial conditions of Citroen. The business combination between the two entities was completed in the same year.

During 1980s and 1990s the group is led by Jacques Calvet and Jean-Martin Folz in a phase of extensive business restructuring. The main drivers are related to the establishment of production platforms common to the two brands, reduction of production expenditures and R&D through the streamlining of the corporate functions. These changes are accompanied by the quest to

[80] As per FCA 2019 Annual Report and Form 20-F.

grow in terms of international presence, targeting China and Brazil through strategic alliances such as the joint venture with Dongfeng Motors necessary for the setup of production operations in China. Over these years, other alliances have been agreed with Toyota (manufacturing operations in Czech Republic), Mitsubishi Motors (manufacturing operations in Russia) and Fiat Group (manufacturing operations in Italy and France). In 2012, PSA entered into a strategic alliance with General Motors in respect to development and sharing of platforms, components and other technologies, leading General Motors to acquire a 7% stake into PSA[81].

In 2014, both the French government and Dongfeng Motor acquired minority stakes in the share capital of the company. In the same year, Carlos Tavares is appointed as the Group CEO. In March 2017, PSA acquired from General Motors the brands Opel and Vauxhall for a total consideration of €2.2 billion[82] leading to a successful turnaround of the two loss-making brands. The deal allowed PSA to stand out as the second European automaker with 2.5 million units sold, trailing only Volkswagen (3.6 million units sold) as of 2016 figures.

### 5.3 The Merger: Key Terms and Strategic Rationale

The transaction, announced in October 2019, reached completion on January 2021, after the two companies agreed on remedies to clear European Commission concerns over alteration of market competition. As of announcement financials, the merger between FCA and PSA entails a company with overall revenues of nearly €170 billion, vehicle sales of 8.7 million units and combined market capitalization of €43.4 billion. The deal accounts for one of the main transactions of 2020/2021. This Paragraph 5.3 focuses on the analysis of the key terms of the transaction and provides the main business assumptions underlying the strategic rationale of the deal[83] [84].

[81] The stake was sold off by General Motors in 2013.

[82] €1.3 billion for the automotive division only, while the remaining €0.9 billion are devoted to the acquisition of GM Financial's European operations by special purposes 50%/50% JV between PSA and BNP Paribas.

[83] Data displayed under this Paragraph 5.3 are collected from the joint presentation: PSA-FCA Proposed Merger - Building a Leader for a new era in Sustainable Mobility, December 18th, 2019.

[84] Projections based on 2018 sales.

*Table 1 –Key Merger Terms and Transaction Structure*

| | |
|---|---|
| **Proposed Transaction Structure** | - All stock cross-border merger of PSA and FCA resulting in a Dutch Company (DutchCo)<br>- Resulting Ownership: 50-50 between PSA and FCA shareholders |
| **Exchange Ratio[85]** | - PSA shareholders to receive 1.742 DutchCo shares for 1 PSA share<br>- FCA shareholders to receive 1 DutchCo share for 1 FCA share |
| **Ordinary Dividends** | Each company will distribute a €1.1billion dividend in 2020 related to FY2019, subject to approval of each company's BoD and shareholders |
| **Extraordinary Dividends and Proceeds** | - Prior transaction completion, each company's shareholders to receive:<br>o PSA shareholders: PSA's 46% stake in Faurecia<br>o FCA shareholders: €5.5 billion extraordinary dividends<br>- After closing, Comau to the separated from the DutchCo |
| **Major Shareholders** | Resulting main shareholding in DutchCo:<br>- Exor N.V.: ca. 14%<br>- EPF/FFP: ca. 6%<br>- Bpifrance Pariticipations SA: ca. 6%<br>- Dongfeng Motor Group (DFG): ca. 6% |

The deal is designed as an all-stock merger leading to a 50-50 ownership of FCA-PSA in the merged DutchCo entity. In the immediate aftermath of the announcement, the terms of the proposed tie-up are more value additive for FCA shareholders[86] who receive ordinary dividend plus €5.5 billion extraordinary dividend related to distribution of existing cash plus the proceeds from the sale of Comau robot-making business (estimated at €200-€300 million). PSA shareholders are instead recognized the distribution of the 46% stake in auto part maker Faurecia (estimated at €2.7 billion). These adjustments have been made necessary in order to balance the enterprise value of the two entities.

[85] The implied price consideration of a 50-50 ownership structure suggests a 32% premium recognized by PSA to FCA Shareholders (Financial Times).

[86] Upon announcement, FCA gained 8.7%, whereas PSA share lost 12.8% (Financial Times). This is because of the perceived immediate cash recognition to FCA shareholders, compared to PSA shareholders.

*Table 2 – Key Governance Terms*

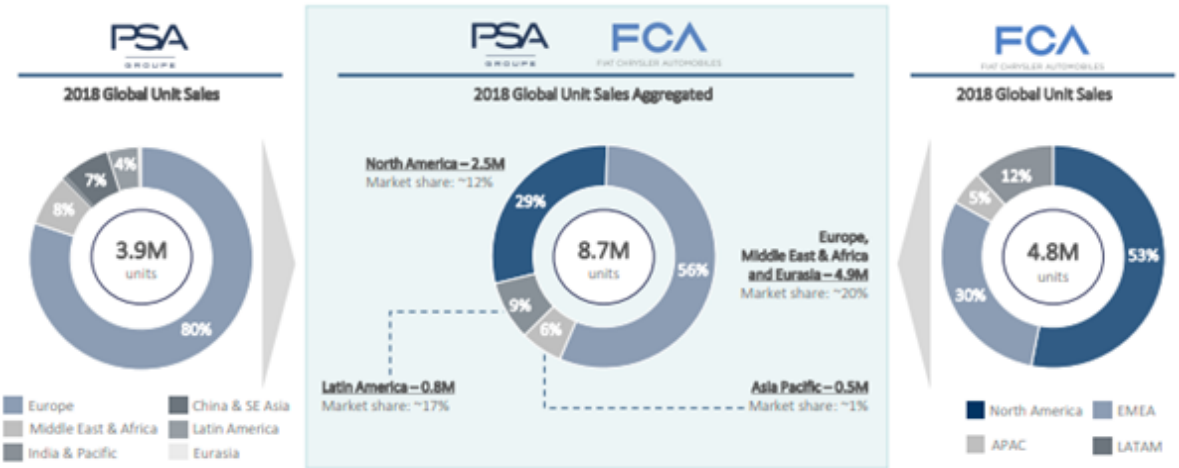
| | |
|---|---|
| **Governance** | - Chairman: John Elkan (former FCA Chairman), initial term: 5 years<br>- CEO: Carlos Tavares (former PSA CEO), initial term: 5 years |
| **Board of Directors (BoD)** | - BoD initially consists of 11 members, with majority of non-executive members to be independent<br>  o 5 members nominated by PSA, including a Senior Independent Director and Vice Chairman, comprised of nominees from Groupe PSA (2 members), Bpifrance Participations SA (1 member), EPF/FFP (1 member) and employees (1 member)<br>  o 5 members nominated by FCA comprised of nominees from FCA (2 members), EXOR N.V. (2 members, including Chairman) and employees (1 member)<br>  o CEO<br>- Senior Independent Director and Vice Chairman initial terms: 5 years. Other directors' initial term: 4 years (additional terms: 2 year each) |
| **Corporate Structure** | - DutchCo headquartered in the Netherlands<br>- Operational headquarters in France, Italy and the US |
| **Voting Rights** | - No carryover of existing double voting rights assigned to FCA or PSA shareholders<br>- Double voting rights through loyalty shares available to all shareholders holding shares in DutchCo for 3 years after completion of merger<br>- Loyalty voting program will not operate to grant voting rights to any single shareholder exceeding 30% of the total votes cast in a shareholders meeting |
| **Shareholders Restrictions** | - 7-year standstill applied to EXOR N.V., Bpifrance Participations SA, DFG and EPF/FFP<br>- 3-year lock-up applied to EXOR N.V., Bpifrance Participations SA and EPF/FFP |
| **Stock Listing** | Euronext (Paris), Borsa Italiana (Milan) and NYSE (New York) |

PSA CEO Carlos Tavares will serve as the merged company CEO, whereas John Elkann, FCA Chairman will serve as the group Chairman. The BoD, as per initial setting, will be evenly split between, as FCA and PSA can nominate 5 members each. The DutchCo is legally headquartered in the Netherlands, however, operating headquarters are maintained in Italy, France and the US. After the examination of the main terms of the deal, the analysis proceeds with the assessment of the strategic rationale underlying the combination. Figure 5 summarizes the main strengths brought from FCA and PCA, outlining the opportunities and the challenges resulting from the deal.

*Figure 5 – Merger Strategic Rationale*

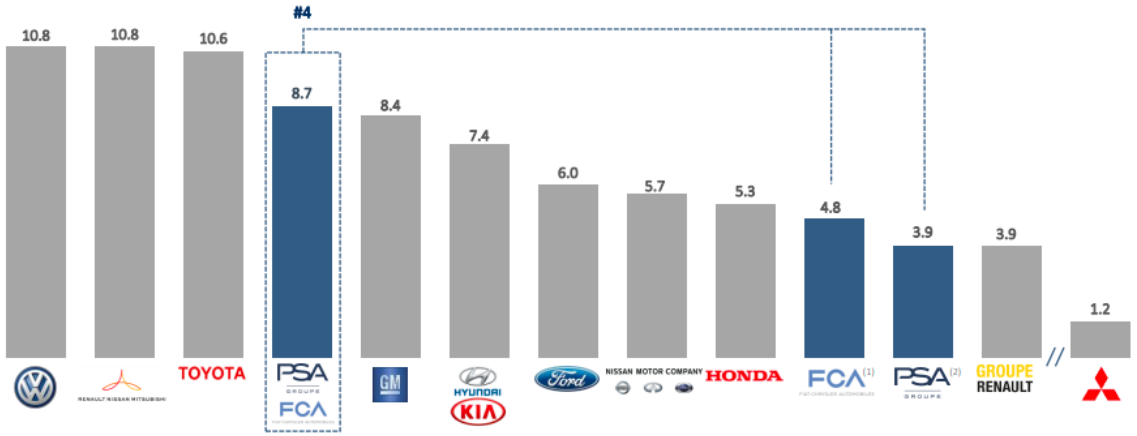

The main reasons for the deal refer to: balancing global presence, optimizing platforms, scaling-up procurement and CAPEX and accelerating development in all technologies and news businesses. FCA on its side enjoys hefty margin in Americas and a strong footprint in SUV and Premium/luxury segments. However, prior to the deal FCA looked a laggard in electrification, connectivity and mobility and had a substantial risk of not meeting the $CO_2$ with the risk of incurring in fines. On the other side, PSA is an industry leader in terms of profitability and has in-house solutions to address $CO_2$. As discussed in Paragraph 5.2, both companies have a significant recent track record in terms of post-M&A integration. Nonetheless, both companies show a key challenge in catching long-term automotive trends, an area needing a prompt intervention to survive the industry. In particular, combination, restructuring and streamlining global operations, may hold back the need to address current industry-disruptive changes.

*Figure 6 – FCA-PSA Regional Presence*



The first and more prominent benefit from combination is expected to come from the complementarity in global presence. Figure 6 shows that PSA has a strong footprint in Europe (80% of global sales), whereas more than half (53%) of FCA's sales accrue in North America and 30% from EMEA region. The combined group would achieve a more balanced global presence with 56% of sales coming from Europe, Middle East, Africa and Eurasia, 29% from North America, 9% from Latin America and 6% from Asia Pacific.

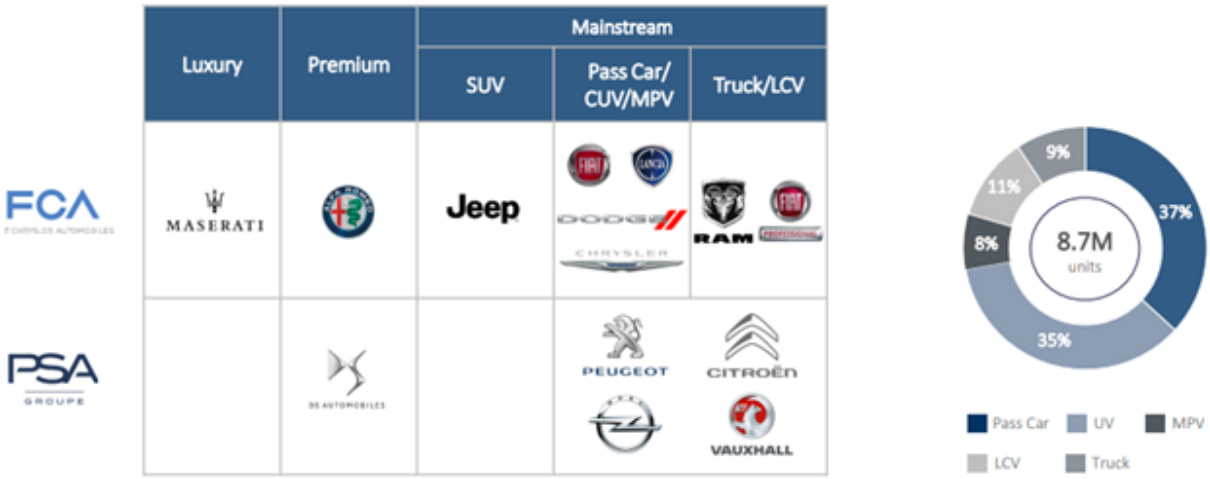
*Figure 7 – Global Sales of Combined Entity*




Accounting for sales, the combined entity is expected to stand as the fourth global OEM player with 8.7 million vehicles, 4.8 million from FCA and 3.9 million from PSA (Figure 7). The tie-up of FCA and PSA, according to analysts and industry experts, makes sense as together they become instantly a leading player competing for volume, market share and technology.

The large number of well-established brands in the group portfolio is seen as a clear important competitive advantage in merger evaluation as this makes combined group operating in all key market segments (Figure 8).

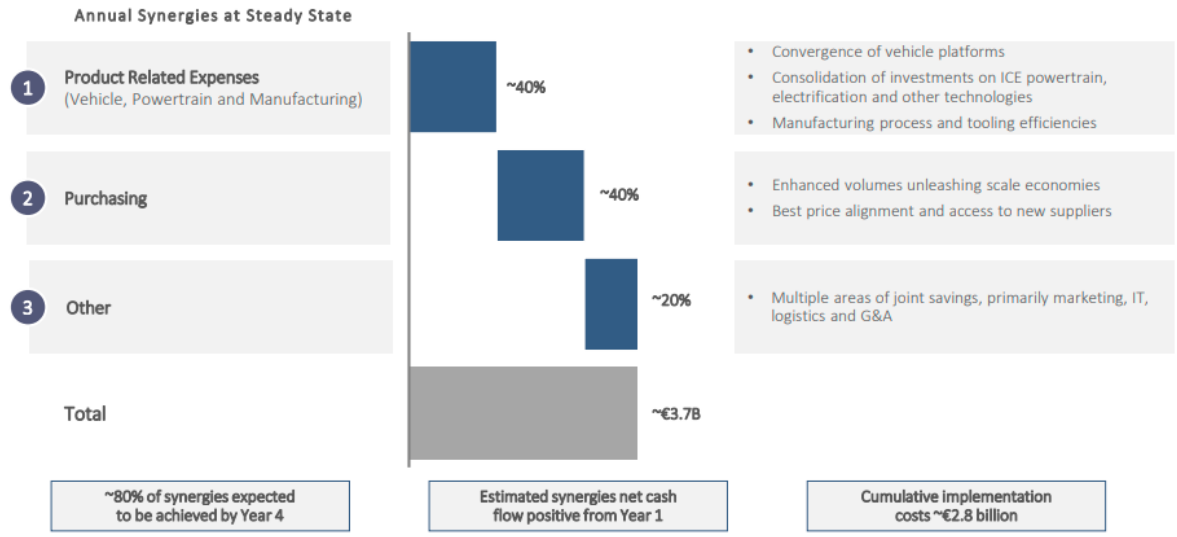
*Figure 8 – Combined Brands Portfolio*



Mainly thanks to FCA experience, the company will leverage on SUV, Pickups, and Premium and Luxury brands. At the same time, careful considerations should be made. Electrification process of these brands could prove to be difficult, therefore their ICE equivalents would need to at least fill in the gap and subsidize future capital expenditures. Additionally, adapting the changing customer behaviors will be a key challenge.

Synergies represent a key part of M&A considerations as the increase in scale, is often a sought-after leverage for OEMs in their attempt to gain an advantage over competitors. From preliminary evaluations, the combined entity is expected to achieve annual cost synergies of €3.7 billion upon full integration of activities (with the 80% expected to accrue by the end of 2024, excluding any plant closure resulting from the transaction). The costs of integration are expected to reach €2.8 billion (Figure 9).

*Figure 9 – Expected Merger Synergies*



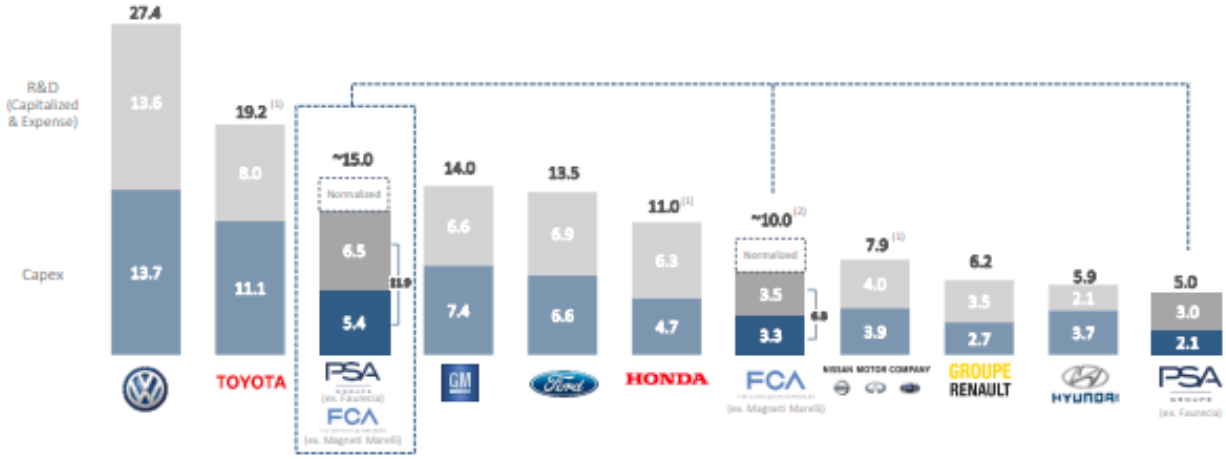

The main areas of savings are Product Related Expenses and Purchasing, accounting for 40% of total synergies each. Product Related Expenses, are related to convergence of vehicle platforms, streamlining of investments on ICE powertrain, electrification and other technologies and other manufacturing process. Actions in purchasing are intended to achieve enhanced volumes and price alignment and access to new suppliers. Other areas of savings, accounting for ca. 20% are: marketing, logistics, IT and G&A.

An important operating aspect refers to the convergence plans regarding platforms and powertrain. To this extent, the FCA-PSA combination is meant to achieve synergies and scale from convergence and a higher degree of parts commonization. This will allow to continue to serve customer needs while optimizing number of platforms and powertrain families. Such

results are pursued through the main two platforms (Compact/Mid-Size platform and Small platform) representing on aggregate a volume of more than 5.6 million units (or about 2/3 of the combined company's steady state volumes). A similar scale for each of the two platforms is aligned to industry benchmark levels and will make possible improved manufacturing and R&D efficiency.

Synergies to optimize combined spending and address effectively new mobility trends: new mobility solutions, connected cars, electric vehicles and autonomous vehicles. The combined entity is projected to account for about €15 billion in CAPEX and R&D Capitalized & Expense (€10 billion from FCA[87] and €5 billion from PSA) accounting for the third group worldwide behind Volkswagen and Toyota (Figure 10). A core part of these investments is expected to be devoted to electrification and autonomous driving features. However, additional efforts towards R&D expenditures are expected to be in line with industry peers (FCA + PSA R&D: €6.5 billion vs Toyota R&D: €8 billion GM R&D: €6.6 billion and Ford R&D: €6.9 billion) to sustain these trends.

*Figure 10 – Combined Investment Spending*




## 5.4 The Result of the Deal[88]

On January 18th 2021 the business combination between FCA and PSA officially takes the name of Stellantis, which share starts to be traded on stock exchanges. In his first press release as Stellantis CEO, Carlos Tavares outlined the goal of the new company of becoming a "*new*

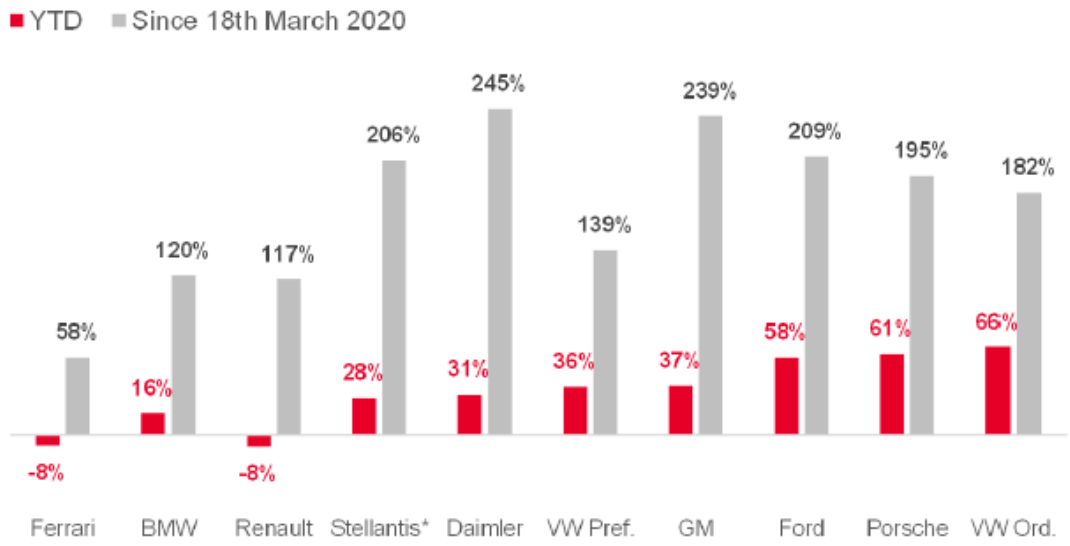
[87] The overall value is estimated based on normalized levels, due to the low spending level carried out in FY 2018.

[88] Data displayed in this Paragraph 5.4 are collected from Datastream, Equity Research Reports and Company Presentations.

*world leader in sustainable mobility*". Additionally, emphasis has been directed on the concept of performance over dimension, an emerging mantra in the industry as shown in other cases (i.e. Daimler). Looking at the market performance, Figure 11 displays the pattern of Stellantis share Year-To-Date (YTD) and since March 18th 2020, against a set of European and US peers.

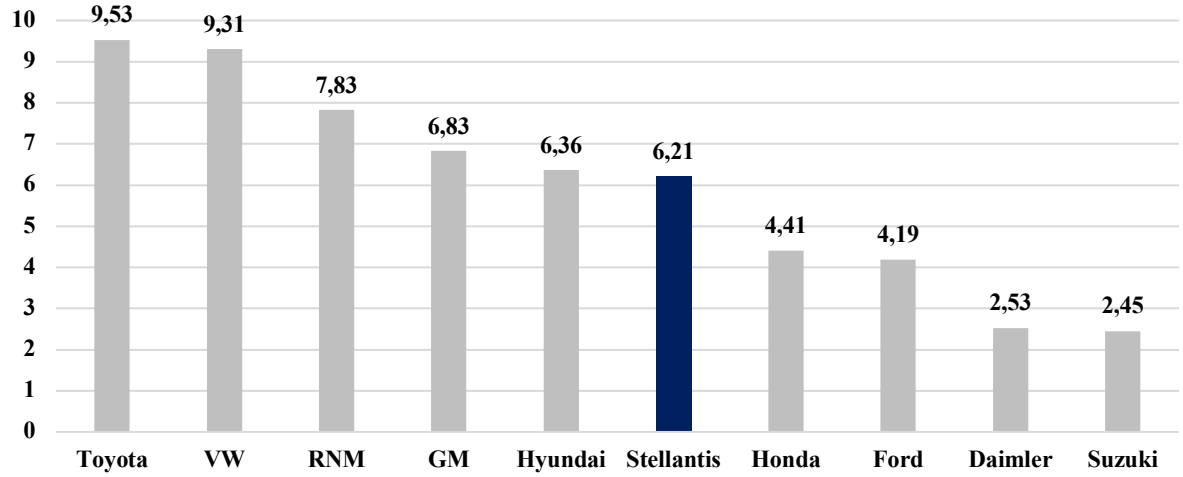
*Company Evaluation*

*Figure 11 – Stellantis Share Price Performance[89] vs EU and US Peers*




Stellantis records a positive performance both YTD (+28%) and since March 18th, 2020 (+206%). Share performance is substantially in line with industry peers in the latter case, however, the performance YTD lags behind the majority of comparable companies.

*Figure 12 – Global Automakers Sales FY 2020*




[89] Prior to January 18th 2021, FCA share is considered.

*Figure 13 – Carmakers Market Capitalization (as of August 1st, 2021)*

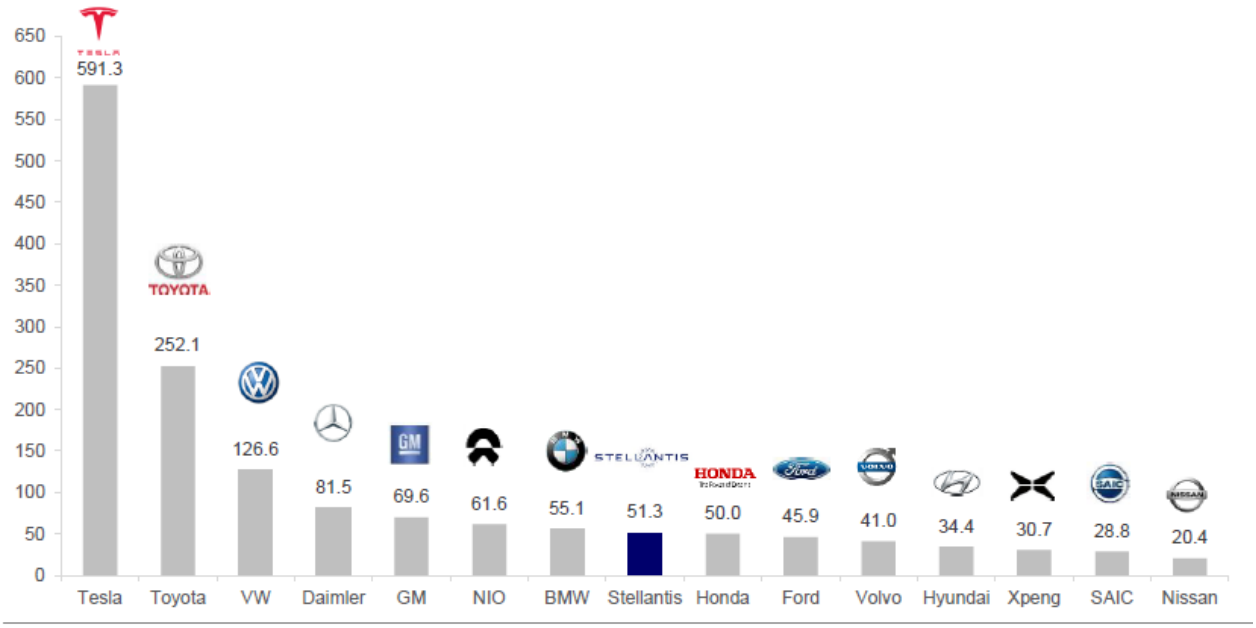



Figure 12 and Figure 13 highlight respectively the global volumes sold in 2020 and market capitalization of Stellantis. While the combination of FCA and PSA sales leading to Stellantis accounts for the sixth-largest global auto maker with 6.21 million units sold (a marked decline versus the 7.91 million units recorded in 2019), Stellantis' market valuation trails far behind its legacy peers (eight-largest market capitalization), and with €51.3 billion, it represents only a fraction of Tesla value.

Comparing the valuation levels of Stellantis and its legacy carmaker peers to those of the new EV players (the main are Tesla and the Chinese BEV NIO, the latter listed in September 2018) a glaring difference emerges as these recorded in 2020 respectively 499,500 and 43,728 vehicles sold. It can be argued that, as of today, it would make little sense for legacy carmakers to radically shift towards electric vehicles when BEVs and PHEVs only constituted 2.4% and 3.5% of the European market in 2018 and 2019 (percentages have since increased with Europe averaging 11.5% in 2020) and only 2% of the US market. However, EV growth vector has been accelerated by the Covid19 pandemic and governmental stimulus measures focused on promoting zero-emission vehicles, a trend setting the future of the industry, which legacy automakers cannot ignore.

*Figure 14 – FCA-PSA vs Stellantis Multiples Comparison*

*FCA*

| Ratios | 12/19 | 12/20e | 12/21e | 12/22e |
|---|---|---|---|---|
| P/E (x) | 4.7 | NM | 5.8 | 4.5 |
| FCF yield (/EV) (%) | 8.2 | -25.0 | 9.9 | 10.3 |
| Dividend yield (%) | 0.0 | 0.0 | 4.8 | 7.2 |
| Price/book value (x) | 0.71 | 0.61 | 0.57 | 0.52 |
| EV/revenues (x) | 0.23 | 0.25 | 0.22 | 0.21 |
| EV/EBIT (x) | 5.01 | NM | 4.25 | 3.43 |
| EV/IC (x) | 0.8 | 0.6 | 0.6 | 0.6 |
| ROIC/WACC (x) | 1.4 | -0.1 | 1.3 | 1.6 |
| Net Debt/EBITDA (x) | 0.00 | 0.00 | 0.00 | 0.00 |

*PSA*

| Ratios | 12/19 | 12/20e | 12/21e | 12/22e |
|---|---|---|---|---|
| P/E (x) | 6.4 | 7.5 | 4.9 | 3.7 |
| FCF yield (/EV) (%) | 32.0 | 18.2 | 46.6 | 80.7 |
| Dividend yield (%) | 0.0 | 3.3 | 4.9 | 8.2 |
| Price/book value (x) | 1.08 | 0.68 | 0.61 | 0.53 |
| EV/revenues (x) | 0.16 | 0.12 | 0.087 | 0.056 |
| EV/EBIT (x) | 2.62 | 3.27 | 1.48 | 0.78 |
| EV/IC (x) | 0.8 | 0.4 | 0.3 | 0.2 |
| ROIC/WACC (x) | 2.9 | 1.2 | 2.1 | 2.6 |
| Net Debt/EBITDA (x) | NM | NM | NM | NM |

*Stellantis*

| Ratios | 12/20 | 12/21e | 12/22e | 12/23e |
|---|---|---|---|---|
| P/E (x) | 13.4 | 4.9 | 4.7 | 4.5 |
| FCF yield (/EV) (%) | 22.4 | 14.5 | 32.0 | 53.9 |
| Dividend yield (%) | 3.2 | 6.0 | 6.4 | 6.8 |
| Price/book value (x) | 0.81 | 1.03 | 0.82 | 0.67 |
| EV/revenues (x) | 0.11 | 0.16 | 0.13 | 0.093 |
| EV/EBIT (x) | 2.68 | 1.73 | 1.34 | 0.95 |
| EV/IC (x) | 0.4 | 0.8 | 0.5 | 0.3 |
| ROIC/WACC (x) | 1.2 | 4.0 | 4.2 | 3.5 |
| Net Debt/EBITDA (x) | NM | NM | NM | NM |

Figure 14 compares FCA and PSA last available standalone valuation multiples (actual and expected as of 2020) with Stellantis valuation multiples (actual and expected, as of 2021). For the scope of this analysis, expected values for 2021e and 2022e are considered. P/E shows a convergence towards 4.9x in 2021e, the lower value expected from the two companies on a standalone basis (FCA: 5.8x, PSA: 4.9x) whereas is 4.7x in 2022e (FCA: 4.5x, PSA: 3.7x). Price/Book Value records a marked improvement on both years, with 1.03x (2021e) and 0.82x (2022e) compared to the separate entities (FCA: 0.57x and 0.52x, PSA: 0.61x and 0.53x). Finally, EV/EBIT multiple, a key valuation metric for the industry, shows a tendency towards the lower expected values with 1.73x (2021e) and 1.34x (2022e) (FCA: 4.25x and 3.43x, PSA: 1.48x and 0.78x).

*The Challenge of Electrification*

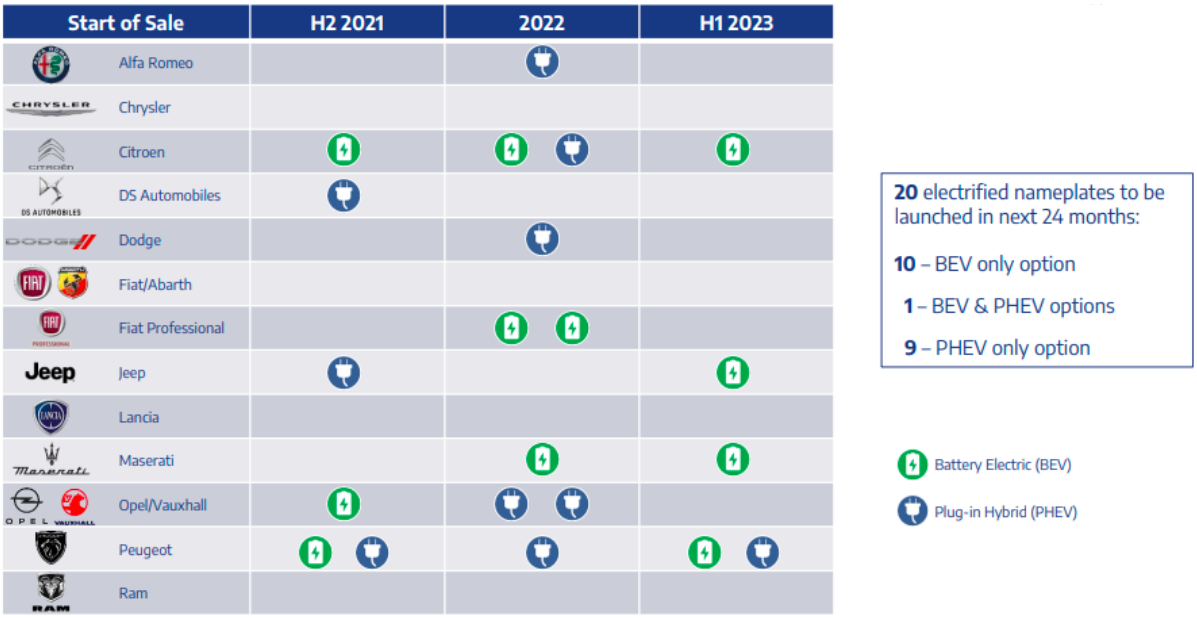
An important date of the new group was the July 8th, 2021, the day in which CEO Carlos Tavares and his team rolled out Stellantis' EV plans through a dedicated event. The main message addressed is that the strategic route of the carmaker is to become a new energy vehicle leader without sacrificing margins (an important issue, since the margins still come from ICE vehicles). More than €30 billion on investments are planned through 2025 in electrification and

software development. The sum includes also equity investments to fund joint ventures activities. The overall target is to be 30% more efficient than industry peers with respect to total CAPEX and R&D expenditure on revenues basis.

A core part of this strategy deals with the cost of the battery pack, an area in which improvements in chemistry and packaging would drive substantial savings. EV battery pack costs are targeted to be reduced by more than 40% from 2020 to 2024 and by more than an additional 20% by 2030. These savings will be achieved by optimizing the overall pack, simplifying the format of the modules, increasing the size of the battery cells and upgrading the battery chemistry.

At the same time, Stellantis delivered updates on its EV plans. In addition to the 11 BEVs it currently produces, Stellantis plans to add at least another 11 BEVs during the two-year timeframe (Figure 15). Looking at this promising plan, a key challenge remains on the actual execution and market deliverability, in such fast-moving industry environment.

*Figure 15 – Stellantis PHEV Launches H22021-H12023*



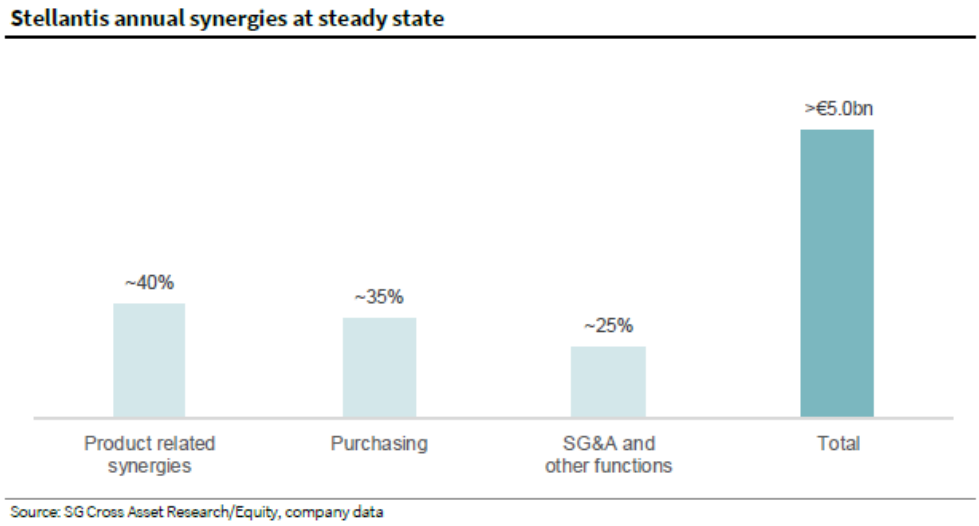

*Synergies*

Following tie-up, the targeted amount of annual synergies has been reviewed upward. As per new assumptions, Stellantis is expecting to reach over €5 billion of annual synergies from the combination and new business opportunities. Additionally, the group disclosed €1.3 billion in cash synergies already accrued during 1H2021 (of which around €600 million had impacted the P&L during that period). Further to pre-merger assumptions, synergies will materialize as:

- Product-related synergies (planning, engineering, manufacturing and module systems - ca. 40%): Convergence of vehicle platforms, modules and systems. Consolidation of investments in ICE powertrains, electrification and other technologies. Manufacturing process and tooling efficiencies;
- Purchasing (direct and indirect materials - ca. 35%): Leverage larger scale to improve product cost, in particular with respect to electric and high-tech components;
- SG&A and other functions (ca. 25%): Savings from integrating functions, such as sales and marketing, IT, logistics, supply chain, quality and after-market operations. Finally, efforts will be deployed to optimize costs in regions where both companies have a well-established presence.

Stellantis confirmed that more than 80% of steady-state synergies are expected to accrue by the end of 2024, whereby cumulative one-time implementation costs estimation has been upgraded to about €4.0 billion (though Stellantis will work to optimize this). The estimated synergies net cash flow is expected to be positive from 2021.

*Figure 16 – Stellantis updates estimation of annual synergies at*



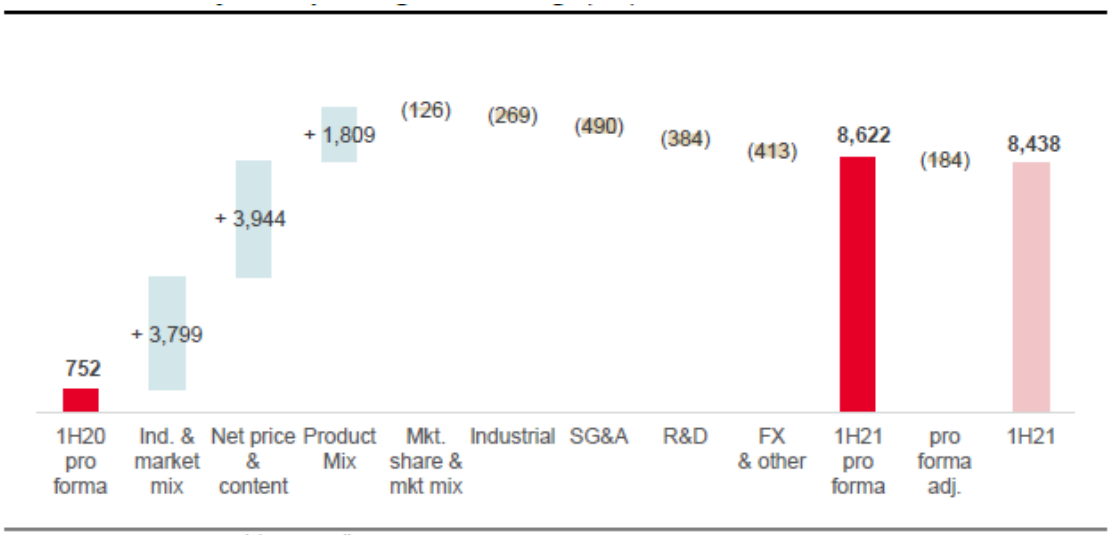

### 5.5 Key Performance Indicators

The purpose of this Paragraph 5.5 is to provide an overview on the last available data of Stellantis N.V. to evaluate the performance of the group in the first semester of activity.

*Profitability*

As shown in Figure 17, Stellantis had a strong debut to 1H2021. On a pro forma basis, the group has been able to achieve a record level of profitability with an 11.4% adjusted operating income margin (€8.44 billion adjusted operating income over €72.6 billion revenue). This result is mainly driven by an absolutely strong performance in North America region with a 16.1% adjusted operating income margin, supported by a very robust Enlarged Europe's 8.8% adjusted operating income margin. Hence, the two core markets of Stellantis, North America and Europe, are driving the company, to support the 11.4% record profitability.

*Figure 17 – Stellantis 1H2021 Adjusted Operating Income Bridge*



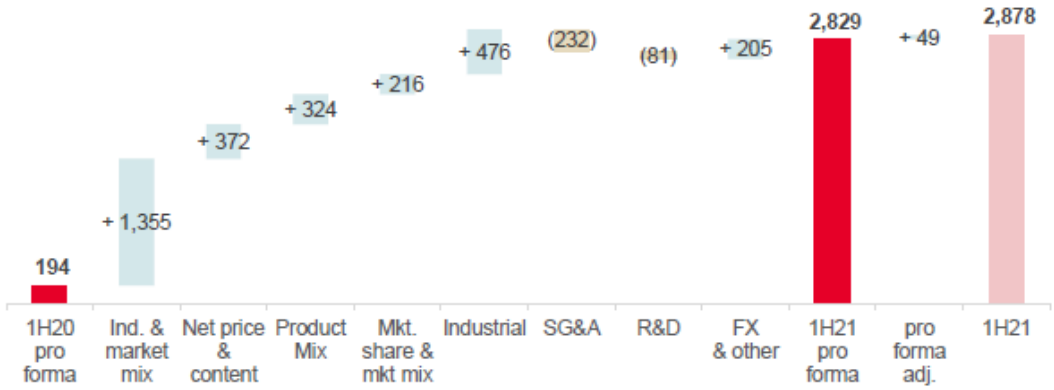

Operations in North America recorded an outstanding performance as net revenues topped €32.4 billion (up 42% vs 1H2020). The performance has been sustained by post Covid19 pandemic volumes recovery (net shipments +25%) as well as favorable vehicle mix and market mix. Despite supply constraints related to the continuing semiconductor shortage, shipments of key brands including Jeep and RAM posted a strong performance (respectively +20% and +56%). The region had its best-ever adjusted operating income margin at 16.1% for 1H2021 (compared to a 3.8% margin in 1H2020).

This materialized despite industrial costs related to raw material price inflation and operational inefficiency related to semiconductor shortages, thanks to partial offsetting of purchasing savings and lower warranty accruals. R&D spending returned to more normal levels and the negative FX impact was partly offset by improved profitability in parts & services.

*Figure 18 – North America Adjusted Operating Income Bridge*


European operations posted revenue of €32 billion (up 41% on 1H2020 revenue of €22.7 billion). Performance was driven by higher volumes (shipments +41%) as well as improved vehicle mix, pricing and an increased parts and services and used car business. Shipments rose by 41%, driven by the Citroen C4 and the Fiat 500e. Adjusted operating income reached €2.8 billion for a margin of 8.8%, (substantially improved from 0.9% margin of 1H2020). Similarly to North America, results leveraged on a recovery in volumes, positive product mix and pricing. Additionally, €476 million positive impact from industrial efficiencies materialized from purchasing and supply chain, all elements offsetting inflationary trends in raw material.

*Figure 19 – Europe Adjusted Operating Income Bridge*

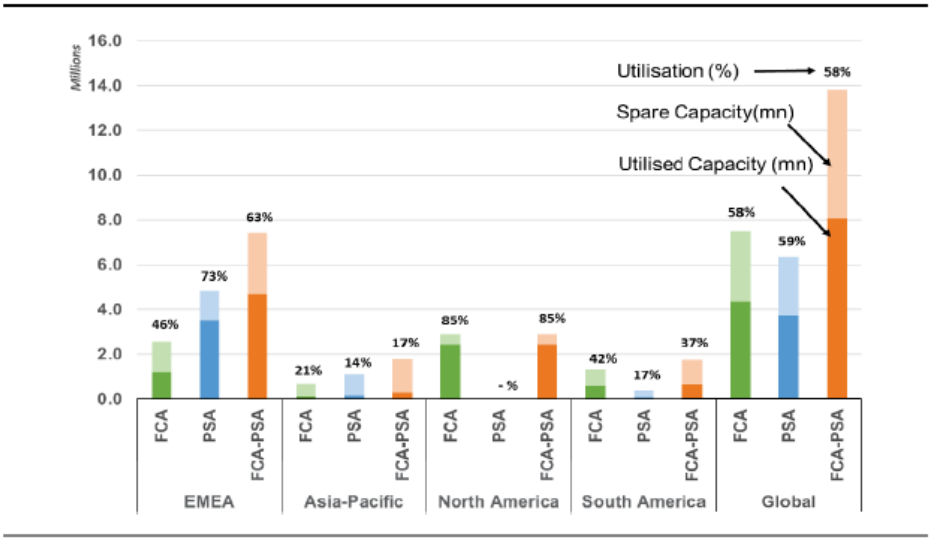


Accounting for other regions, South America recorded revenues of €4.9 billion in 1H2021 from €2.2 billion of 1H2020, a performance led by increased volumes (shipments +128%) and higher pricing. Operations were not affected by shortage of semiconductors. Adjusted operating profit was €326 million (6.6% margin). Revenues in Middle East & Africa increased to €2.5 billion in 1H2021 up from €1.8 billion in 1H2020, led by volumes (shipments +48%), pricing as well as improved market mix. Adjusted operating income reached €247 million for a 9.7% margin in 1H2021. Finally, revenues in China, India and APAC rose to €1.9 billion on volumes (+69%), pricing and market mix. Adjusted operating income stood at €206 million or 10.9% in 1H2021.

*Operating Efficiency*

An underlying consideration regarding synergies is that they will be targeting substantial capacity reductions. Before combination. the global utilization percentage stood at 58%. According to estimates, FCA operated its Italian plants at around 46% utilization levels in 2019 (compared to the 75% profitability threshold) well below US operations utilization average of 85%. On the other side, PSA recorded a much higher plant utilization mainly thanks to compacted/reduced number of installed assembly lines. PSA's main European plants operated at around the 73% utilization level in 2019.

*Figure 20 – Estimated Capacity utilization*




Considering the above-mentioned profitability threshold of 75%, an overall utilization of 58% sheds lights on platform integration opportunities. From this point of view, there is a compelling case for integrating FCA's European and Latin American products with those of PSA, which have now almost entirely transitioned to PSA's lightweight and highly efficient multi-drivetrain platforms. Taking the perspective of electrification trends, it can be envisaged more NAFTA

demand for efficient high-performance four-cylinder engines and the electric vehicle technology being developed by PSA in Europe and China.

In the Europe and Latin America regions, and in Mexico, FCA was still heavily reliant on the small platform, or “SCCS platform” (small common components and systems platform), or on derivatives thereof. This platform, pivotal to Stellantis operations, was co-developed by Fiat and GM from 2002 onwards for subcompact, front-wheel drive, and four-wheel drive cars. Today, the Small Wide LWB derivative of the SCCS platform continues to be adopted for the Fiat 500L, Fiat Tipo, Fiat Toro, while the Small Wide 4x4 version underpins the current Jeep Renegade and Fiat 500X. The Small Wide 4x4 LWB version underpins the Jeep Compass produced in Mexico, Brazil, China and India.

# 6. EMPIRICAL ANALYSIS WITHIN THE AUTOMOTIVE SECTOR: EVIDENCE FROM A DATASET OF M&A DEALS

## 6.1 Research Goal and Focus

In the previous chapters a thorough description of major dynamics featuring M&A in automotive has been rolled out. Against this background, the key research question addressed through the analysis conducted in this chapter is:

*Given the prominent role of M&A as a strategic option in automotive industry, does acquirers' share prices show an increase following transaction announcement?*

A sample of M&A completed worldwide between 2010 and 2021 is collected to capture the main transactions occurred over the period. The analysis is conducted through an Ordinary Least Squares (OLS) regression model on the main drivers affecting shareholders return following the announcement of a portfolio disposal. The focus is centered around the following main variables of study: geographical diversification (Cross-Border vs Domestic), business diversification (focus vs diversified), deal value of the transaction, percentage involved and payment method adopted.

*Research Hypothesis – Acquiring company shareholders' returns following transaction announcement can be explained by the cross-border geographical extent of the deal.*

## 6.2 Research Methodology

Common to the research hypothesis, an event study analysis is conducted to investigate the effects of deal announcement on the daily stock returns of the acquirer. Event study is a largely adopted methodology to analyze the behavior of a time series in a given period close to event studied[90]. Particularly useful in economics and finance researches, event study requires some major steps to be performed.

First, it is necessary to determine the event of interest and the period in which the event will be examined (the event window). As stated, the event of interest regards the detection of daily stock returns as response to a particular announcement. It is worth to make some clarification about the determination of event windows. Because of the large applicability of this

[90] MacKinlay. A. C. (1997). Event studies in economics and finance. Journal of Economic Literature 35(1), 13-39.

methodology, event windows arising from existing literature may vary from few days surrounding the event to years-long periods of study. The market reaction is expected to occur in the same day of announcement, and a few following days.

Since the hereby described event study is intended to detect short-term reactions and considering the warning of using event study in the long-run, a set of different event windows are considered within the interval of [-10;+10] around the date of transaction announcement (day 0). This time interval is assumed robust enough to absorb any information leakage before the announcement date, and to neutralize any overstatement following the bid. In this time lapse, the event study will compare the actual stock returns against the predicted returns and determine, when realized, any abnormal return. According to the suggested approach[91], for the purpose of the proposed analysis, the market model return is chosen (that is with $X_t$ standing for the market return), as a stable linear relation between the market return and the firm's stock return is assumed.

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

$$E(\varepsilon_{it} = 0); \; var(\varepsilon_{it}) = \hat{\sigma}^2_{\varepsilon_i}$$

Where:

$R_{it}$ is the period $t$ return on security $i$;

$R_{m,t}$ is the period $t$ return on market portfolio;

$\alpha,\beta$ are the market model parameters for security $i$;

$\sigma^2_{\epsilon i}$ is the zero mean disturbance term.

Second, for the "normal return" of the firm's stock to be determined, an "estimation window" must be defined. To avoid influence between estimation period and event period, the former should not overlap the latter. In general, the estimation model is defined before the event study. To assess the normal return for firm's stock the estimation period is set to be [-110;-11] from the announcement date. Described in next steps, the longer the estimation window, the higher the influence of the disturbance error on variance. Abnormal returns are so determined as:

$$AR_{it} = R_{it} - E(R_{it}|X_t)$$

[91] MacKinlay. A. C. (1997). Event studies in economics and finance. Journal of Economic Literature 35(1), 13-39.

Where:

$AR_{it}$ is the abnormal return for security *i* at time *t*;

$R_{it}$ is the actual return for security *i* at time *t*;

$E(R_{it} \mid X_t)$ is the normal return for security *i* at time t given the market return in time *t*.

*Regression Model*

Within this section, a quantitative analysis, conducted on empirical data, is developed adopting the multiple linear regression model. The model, estimated through the method of the ordinary least squares (OLS), assumes that between the dependent variable (Y) and the independent or explicative variables (X) there is a linear relationship. It is assumed that, from uncorrelated sample data observations, it can be estimated a number of relationships corresponding to the single variables featuring the sample. Hence, the result will feature a series of $\beta$ coefficients measuring the variation of dependent variable in function to the unit variation of each independent variable, being the other variables kept constant.

The analytical section is complemented with the commentary on the results for each $\beta$ coefficient their respective significance and finally it is evaluated the general fit of the regression model. Here below, the model is expressed:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \ldots + \beta_n X_{ni} + \varepsilon_i$$

$$E(\varepsilon_i) = 0$$

Where:

$Y_i$ is the dependent variable (where $y_i$ represents the *i-th* sample observation of the dependent variable);

$\beta_n$ is the slope corresponding to the *n-th* dependent variable $X_n$ keeping constant the other dependent variables (where $\beta_0$ represents the regression intercept);

$X_{ni}$ is the n-the independent variable (where $x_{ni}$ represents the sample observation of the n-the variable subject to the analysis in respect to the *i-th* observation);

$\varepsilon_i$ is the *i-th* error component of the model (where the expected value of the average of the errors of the model is equal to 0);

$n = 0, \ldots, N$ identify the regression coefficients;

$i = 0, \ldots, I$ identify the single observation.

*CAR Calculation*

The empirical analysis is conducted to determine the impact of a series of variables of interest on the CAR resulting around the announcement date of M&A transactions. As discussed in the previous paragraphs, through the analysis of CAR, it is possible to perform an event study analysis to determine the impact of a given event (gathering the interest of the study) on selected metrics chosen to investigate the value creation for the acquiring firms (in terms of value to shareholders).

Different variables are included in the model with the aim to understand how deal-specific and company-specific characteristics affects returns for shareholders in connection to a M&A transaction announcement. Considering that the composition of the sample includes transactions conducted within on a worldwide, abnormal returns are determined comparing acquirer's share prices with the closing values of the relevant stock exchange whereby acquirer's shares were listed at the announcement date.

While determining CAR, a meaningful consideration refers to the time frame for CAR calculation. The available literature to date analyses a multitude of available options, in terms of both time extension and window definition (before, after or alternatively around the event analyzed). The analysis proposed in the present study considers four windows: [-1;+1], [-2;+2], [-5;+5] and [-10;+10]. Hence, all windows include the event day plus 1, 2, 5 and 10 days before and after the event (expressed as day 0, that is the announcement date of the deal). The different lengths are aimed to capture the possible market reactions to transaction announcement not only in the following days, but also in the days prior to it, trying to capture possible information leakages being reflected in abnormal market behavior. Another choice refers to the length of the estimation period. To ensure a sufficient significance of the estimation, the interval of 100 days immediately before the CAR window is adopted.

As demonstrated in the Table 3, CAR are significant across all the considered windows. For the regression analysis proposed, results relative to the window [-1;+1] are considered for a series of reasons. First, not only the window includes the days following the deal announcement but also embraces the day before, to include prior market reactions due to potential rumors. Also the window [-1,+1], allows to factor in all information relevant for market operators, and it is fairly defined to avoid possible CAR dilution due to other co-founding effects, that may at the same time have some impact on the company market value capitalization.

The average CAR show an increasing pattern across windows. Results recorded in window [-1;+1] are 0.0301 (or 3.01%), in window [-2;+2] are 0.0385 (or 3.85%), in window [-5;+5] are 0.0589 (or 5.89%) and in window [-10;+10] are 0.0620 (or 6.20%). Results are significant in all windows at an $\alpha$ level of 0.05. Upon this evidence, it is possible to warrant the general hypothesis that the market tends to reward acquiring companies announcing M&A deals as a sound strategy to foster growth and improve operations within the industry. From a qualitative point of view, although increasing across windows, average CAR do not show a linear path. In fact, it can be argued that nearly half of the overall CAR of the [-10;+10] window are actually achieved in [-1;+1] window. This is explained by the fact that market reaction to announcement is more accentuated around the announcement date and tend to be more moderate along the time, because of market adjustment to previous overreaction or other cofounding effects. The implications of this, translate into a higher standard deviation for increasing window length.

*Table 3 – Summary of CAR Results*

| n=63 | CAR [-10;+10] | CAR [-5;+5] | CAR [-2;+2] | CAR [-1;+1] |
|---|---|---|---|---|
| **Min** | -0.5792 | -0.3277 | -0.2065 | -0.1383 |
| **Max** | 0,9306 | 1.0877 | 0.5723 | 0.5732 |
| **Mean** | 0.0620** | 0.0589** | 0.0385** | 0.0301** |
| **Median** | 0.0432 | 0.0231 | 0.0170 | 0.0151 |
| **Std. Dev** | 0.2044 | 0.1853 | 0.1195 | 0.0937 |

*Description of regression Variables*

The analysis on CAR is conducted through a regression model analyzing the variable *Cross Border*. Additionally, the model includes both deal specific (*Deal Value*, *Percentage* and *Payment*) and company specific variables (*Diversification*), in order to capture the different interactions on CAR.

*CAR*

Identifies the cumulative abnormal returns in the window [-1;+1] around the announcement day of the transaction, calculated as previously detailed. The reason for choosing [-1;+1] refers to the lower volatility of abnormal returns in the window and to the fact that in the day before announcement, the announcement day and the day after, are concentrated the most of abnormal returns.

*Cross-Border*

Captures the degree of geographical diversification of the deal. It takes value 0 for acquiring and target companies in the same country, whereas it takes value 1 for different countries of incorporation. For the purpose of the study it is expected to have a positive effect on CAR.

*Diversification*

Includes in the model the degree of focus or business diversification embedded in the deal. Diversification is determined on Bloomberg description of companies' Sector /Industry and takes 1 for different Sector Industry and 0 vice versa.

*Deal Value*

Refers to the announced value of the transaction, that is the amount paid by the bidder to acquire a certain ownership of the equity capital of the target company and it is expressed in $ million. Due to the dispersion of observation distribution, logarithmic transformation is applied to the original values.

*Percentage*

Includes in the model the percentage of the target company's shareholders equity involved in the transaction. It can take from 0 to 1, however it should be reminded that only transactions resulting into a majority shareholding are considered for the scope of the analysis.

*Payment*

Includes in the model the manner through which acquirer and bidder agree on the payment of transaction. The variable takes value between 0 a 1 meaning that 1 corresponds to 100% of transaction prices paid in cash, whereas 0 corresponds to 100% of transaction price paid with stocks. Intermediate values represent mixed payment methods.

### 6.3 Data Collection

Data are collected from Bloomberg platform. Selection is conducted on M&A, excluding other forms of equity investments and only completed transactions are included resulting into a post-transactions majority shareholding. Sample criteria are listed below:

- Deal Type: M&A;
- Deal Status: Completed;
- Announcement Date: from 01/01/2010 to 30/06/2021;
- Announced Deal Value: minimum 10$ million;
- Sector / Industry:
    - Auto Manufacturers: Auto-Cars/Lights Trucks, Auto, Medium and Heavy-Duty Trucks, Auto-Truck Trailers;
    - Auto Parts and Equipment: Auto / Trucks Parts and Equipment (Original), Auto / Trucks Parts and Equipment (Replacement), Rubber-Tires.

Therefore, from the combination of selection criteria, 117 transactions have been identified. All transactions involving privately held acquirers are removed, due to the scope of the analysis addressed at investigating market reaction. In addition, cases featuring missing values are removed. The final selection is made on 63 M&A deals, which characteristics are summarized in the below Table 4.

*Table 4 – Sample Summary*

| n=63 | Cross-Border | Diversification | Deal Value ($m) | Percentage | Payment |
|---|---|---|---|---|---|
| **Min** | 0 | 0 | 11,960 | 25.00 | 0.00 |
| **Max** | 1 | 1 | 9,151.820 | 100.00 | 1.00 |
| **Mean** | 0.476 | 0.413 | 869.068 | 80.851 | 0.778 |
| **Median** | 0 | 0 | 166.880 | 100.00 | 1.00 |
| **Std. Dev** | 0.503 | 0.496 | 1,843.531 | 25.70378821 | 0.419 |

## 6.4 Results

The results of the regression model are displayed in Table 5.

*Table 5 – Results of Regression Model*

**Panel A - Model Summary**

| R | R-Squared | R-Squared Adj. | Standard Error |
|---|---|---|---|
| .441 | .195 | .124 | .08766 |

**Panel B - ANOVA**

| | Sum of squares | df | Quadratic Mean | F | P-Value |
|---|---|---|---|---|---|
| Regression | .106 | 5 | .021 | 2.756 | .027** |
| Residuals | .438 | 57 | .008 | | |
| Total | .544 | 62 | | | |

**significant at α level of 0.05

**Panel C- Coefficients**

| | Unstandardized Coefficients | | Coefficients Standardized | t | P-Value. |
|---|---|---|---|---|---|
| | T | Std. Error | Beta | | |
| (Constant) | -.030 | .073 | | -.404 | .688 |
| Cross-Border | .053 | .023 | .287 | 2.344 | .023** |
| Diversification | .000 | .023 | -.002 | -.019 | .985 |
| ln Deal Value | .005 | .007 | .100 | .724 | .472 |
| Percentage | .001 | .000 | .166 | 1.332 | .188 |
| Payment | -.053 | .030 | -.237 | -1.798 | .077* |

*significant at α level of 0.10 **significant at α level of 0.05

From the output of the regression model, all variables apart from *Payment* have positive effect on the dependent variable CAR. In particular, looking at *Cross-Border* it can be observed an impact of +0.053 (or +5.3%) on CAR, with other variables being equal. The relationship is significant at an $\alpha$ level = 0.05. Accordingly, from results, it can be argued that transactions conducted cross-border create value for acquiring company's shareholders. A similar, but opposing effect is related to the mean of payment being 100% cash -0.053 (or -5.3%) which is significant at a $\alpha$ level = 0.10. The rationale of this can be related to the fact that markets see negatively full cash payments, considered as an acquiring company's wealth transfer towards target's shareholders. Instead, a more balanced payment structure may limit this effect linking

the target's shareholders to future company's performance. Other variables, *ln_Deal_Value*, *Diversification* and *Percentage* are all not significant on *CAR*.

Additionally, results are supported from F-test (2.756), significant at $\alpha$ = 0,05. From these values it is possible to conclude that at least an explicative variable in the model is actually significant. In respect to the overall model, the values related to $R^2$ (0.195) and $R^2$ adjusted (0.124) show a quite moderate fit of the regression model, however it should be considered the empirical nature of the study. Collinearity VIX test shows no issue among variables chosen (see Regression Collinearity Statistics).

# 7. CONCLUSIONS

The study has deployed an extensive analysis on the automotive industry, with the key aim to demonstrate how the cross-border characteristic of M&A transactions affects the value creation of acquiring company's shareholders. After a general overview on the industry fundamentals and recent trends, the discussion has been devoted to the features of M&A transactions and the cross-border dimension. The thesis concludes with the discussion of Stellantis merger case study and the empirical analysis conducted on a set of M&A deals to understand dynamics of value creation.

It is not possible to properly analyze automotive, without a thorough understanding of the evolution occurring over these years. The automotive industry is undergoing a phase of profound transformation at all levels of the supply chain. Several factors such as transition to cleaner energy sources, higher technological content and changing customers preferences are all reshaping the market. Automakers accordingly are adapting daily operations and setting the stage for new concept of the industry. Although specialized players engage in different activities along the value chain, (raw material suppliers, manufacturers, automakers, distributors and aftermarket services providers), pressures concentrate mainly on carmakers. This translates into a rethinking of the model as new players are joining the market with an innovative value proposition for final customers (i.e. Tesla).

M&A has been historically embedded in the DNA of the industry as mergers and acquisitions have always accounted for as a key lever to pursue growth. Combination between different companies represents a widespread option for carmakers, both in good times and during market downturns. To understand this phenomenon, it is sufficient to consider how the majority of the top OEMs worldwide are the results of mergers and acquisitions occurred over the time. Regardless of the economic cycle, business combinations (both at company or business levels) are increasingly focusing on developing global strategic partnerships (i.e. Renault-Nissan-Mitsubishi) or improving operating performance following turnaround (i.e. PSA acquisition of Opel and Vauxhall).

The analysis of the merger between FCA and PSA groups, which resulted in the creation of Stellantis, is the most appropriate case study to understand the business combinations dynamics in automotive. The reasons of balancing global presence, optimizing platforms, scaling-up procurement and CAPEX and accelerating technological developments all accounted for in the

discussion of the deal. Generally speaking, FCA brought in better margins in Americas and a strong presence in SUV and premium segments, but showed clear deficits in electrification, connectivity and mobility areas. PSA added to the combined entity of profitability and has in-house solutions to address $CO_2$. Several reasons stand in favor of the deal:

- Geographical complementarities: with PSA having operations concentrated in Europe (80% of global sales), and FCA having half of sales accruing in North America (53%) and 30% from EMEA region, it emerges clearly how Stellantis has a strong footprint in core European and North American markets, with a relevant presence in Latin American and Asian areas.
- Cost synergies: initially expected to ca. €4 billion, possible cost synergies may be up to €5 billion on annual basis versus a one-time cost of implementation of €4 billion. Synergies mainly relate to: product-related synergies (ca. 40%), purchasing (ca. 35%) and SG&A and other functions (ca. 25%). Overall, synergies are expected to accrue mainly at cost level, a factor which may facilitate actual accrual as compared to revenues synergies.
- Platform combination and Operating Efficiencies: FCA is still heavily reliant on the small platform, or SCCS platform and its derivatives. One of these, the Small Wide LWB continues to be adopted for the several models sold worldwide. Also, with a pre-combination utilization rate of 58% highlights platform integration opportunities in particular respect to FCA's European and Latin American products with those of PSA (lightweight and highly efficient multi-drivetrain platforms). Also looking at electrification demand for efficient high-performance four-cylinder engines and the electric vehicle technology may be addressed through PSA facilities in Europe and China.
- Brand Portfolio; Stellantis will leverage on SUV, Pickups, and Premium and Luxury brands. from FCA. Additionally, some of the models already produced will be adapted to new electrification needs with the accelerated launch of different electric and hybrid models until H1 2023.
- Track record: both companies have internal know how on integration of acquired companies. This can undoubtedly facilitate operations combination and streamlining of activities on global scale.

In summary, the FCA-PSA merger appears as the most rationale strategic option between the two companies (respectively the sixth and tenth largest carmaker on 2019 basis). The merged entity is better fit to compete on global scale vis-à-vis other leading automakers as it will

leverage on operating excellence and global presence. The key challenge for Stellantis will be how to reach the target of innovation, while maintain a high level of managerial attention on achieving a high level of cost synergies throughout global operations. It is important to remind that earlier discussions were held between FCA and Renault in respect to a possible merger of equals, leading to disagreement on final terms. This witnesses the pressure posed on automakers to combine operations to reach scale and improve operational efficiencies.

Shifting the focus to empirical results, from the quantitative analysis conducted on a set of transactions announced and completed between 2010 and 2021, it is possible to observe how Cross-Border transactions lead to value creation for acquiring company's shareholders (+0.053, significant at level of $\alpha = 0.05$). Such result has a twofold implication. On the one hand, this study remarks new evidence of the positive effect of geographical diversification in M&A, a much-debated issue in literature. On the other hand, in respect to the automotive industry, cross-border deals prove to be an affective choice for acquirers seeking access to new markets, technologies and production factors, not otherwise replicable.

The overall results above described constitute a good starting point in identifying and understanding the key drivers of success for shareholders value creation in automotive M&A transactions. However, the determinants of post-announcement value market reaction still seem not entirely unveiled. As specified in Chapter 6, the variables adopted in the empirical section are just a sub-set of the broader spectrum of possible variables to be considered in such type of analysis. To the same extent, measures used to explain the pattern of CAR are based on publicly available information and in some cases represent just a synthetic representation. A further elaboration of these points, intended to include more variables in the model, could undoubtedly provide more accurate evidence on the sources of value creation in M&A announcements.

Furthermore, the implementation of an analysis on a wider sample under a longer time perspective could provide a better understanding and help decouple possible cofounding effects. Additionally, longer-term measures of value-creation may be considered in order to assess whether carmakers actually gain and maintain value beyond the short-term period. Regardless of these points, findings are consistent with theoretical insights and result well-grounded from a statistical point a view. The analysis of automotive M&A dynamics is an extensive field of investigation that seems destinated to be developed over the future along with the evolution of the market. The interest towards the issue will follow this pattern.

In conclusion, it is possible to argue that M&A is an effective (probably the most effective) tool to accelerate carmakers' response to evolving competitive environment. Given the global scale of automotive activities, cross-borders deals enable carmakers to enjoy local competitive advantages and deploy their distinctive resource and competencies. It should be noted however how this is not a straightforward equation to success, as multiple factors need to be carefully considered. Cultural differences, information asymmetries and changing market conditions, can quickly and utterly revert automotive M&A success stories. Nonetheless, business combinations, will remain the wisest survival alternative in the future of automotive.

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## REGRESSION VARIABLES - CORRELATION MATRIX

| | CAR | Cross-Border | Diversification | ln Deal Value | Percentage | Payment |
|---|---|---|---|---|---|---|
| **CAR** | 1 | | | | | |
| **Cross-Border** | 0.293 | 1 | | | | |
| **Diversification** | -0.098 | -0.154 | 1 | | | |
| **ln Deal Value** | 0.141 | -0.096 | -0.179 | 1 | | |
| **Percentage** | 0.198 | 0.167 | -0.118 | -0.193 | 1 | |
| **Payment** | -0.267 | 0.051 | 0.060 | -0.422 | -0.015 | 1 |

# REGRESSION COLLINEARITY STATISTICS

| | Collinearity Statistics | |
|---|---|---|
| | **Tolerance** | **VIF** |
| Cross-Border | 0.944 | 1.059 |
| Diversification | 0.920 | 1.087 |
| ln_Deal_Value | 0.745 | 1.342 |
| Percentage | 0.911 | 1.098 |
| Payment | 0.811 | 1.233 |

**ABSTRACT**

Over the recent years, few sectors witnessed the same degree of profound transformation and tumultuous reshaping seen in the automotive industry. In particular, a series of concurrent factors, on the one hand are representing the main challenges for surviving the industry in the present environment, while on the other hand are indicating the direction of a new course.

In this context, featured by numerous moving pieces, the strategic choice of Mergers and Acquisitions (hereafter M&A), is increasingly identified as the most viable option to stay competitive. Historically, the automotive industry has represented a substantial part of the worldwide M&A volumes both in terms of deals value and count. The reasons refer to the evolutionary pattern of the sector, embracing in its early stages the benefit of scale of operations and later the quest for growth and access to new markets in the wake of the globalization. However, over recent years, the continuous search for production volumes and sales gradually left the stage to rationalization of business activities and higher attention to margins and profitability. Nonetheless, in each of these phases, M&A accompanies automotive companies in their path, representing the most immediate tool to address strategic goals. Starting from the existing theoretical foundations in the field, the objective of the study is threefold. First, an in-depth analysis is conducted on the industry dynamics in an evolving landscape. Second, an overview of the characteristics featuring the M&A activity in the sector is provided. Third, the empirical section, based on FCA-PSA case study and regression model, is developed to address the main research question of how value creation is sought in automotive.

Overall, automotive activities can be grouped into five main areas, with different relationships of relative power among them. A preliminary consideration refers to the fact that the automotive value chain can be defined as an automaker-driven network, mainly because of the concentration of capital and key competencies in this level. In particular, five layers can be identified in the automotive value chain:

- Raw Material Suppliers: provide a series of basic materials needed for parts and components production. Such materials generally include steel, metals, textiles, glasses, plastics, rubbers, chemicals and so on. Activities at this stage are generally decentralized and relate to single countries' availability of these basic resources.
- Manufacturing (Automotive Suppliers): their activities may markedly vary according to the degree of specification and/or requirements needed to deliver the required output necessary for the assembly of auto vehicles. Typical activities refer to the realization of

structure, engine, drivetrain, electronics and motor system, tires and glasses. Also, these suppliers may be categorized as Tier 1, Tier 2 and Tier 3 according to their proximity to automakers.

- Automakers (or OEMs): they dominate the entire value chain as in the fact that they are recognized as brands incorporating a broad set of values, built on sales and marketing, after-sales services and quality, all elements which are centered around final customers. They assemble the final vehicles near to the final markets, in order to exploit proximity in terms of logistics and market knowledge.
- Logistics and Distribution: Ensure the supply of vehicles to customers in local markets, taking care of sales and marketing activities and sometimes after-sales services as well. Typically, this area comprises activities such as transportation of vehicles, warehousing, import-export, wholesale and dealership.
- Aftermarket Services: comprise all those services and activities after the sales of the vehicle. Aftermarkets services can be general repair, car wash and auto detailing, collision, auto parts, second-hand market and car hire and rentals.

Until recently, the main focus of the industry has been devoted to sustaining growth, understanding of final customers market and maintaining stability along the value chain. However, today the perspective has drastically changed since a series of new trends (or megatrends), driven by the combined effect of digital technologies and higher sensitivity to climate change, are taking place together, forcing OEMs to reconsider their role ahead in a period of disruption in the market. These emerging forces can be referred to:

- Climate Change: new and tighter regulations and emission targets are forcing OEMs to look for efficiencies and cleaner generation in conventional drivetrains and modules;
- Flexible Drive Technology, related to the mix of different drive technologies available to fulfill the evolving mobility needs is expected to change the market in the next years (i.e. BEVs and PHEVs);
- Changes in Production Activities: players are striving to improve their processes and cooperate to fast-track innovation in light of the recent market developments. The need for acceleration is the result of IT technologies transforming the automotive industry on the wake of higher share of value related to the software part over the total vehicle value;
- Connectivity: the increasing convergence between vehicles and digital technologies is poised to revolutionize automotive and relates to the diffusion of Autonomous

Technologies that will increasingly allow cars to become a platform for drivers and passengers for a new travel experience;

- New Distribution and Use Model: trend of less individual usage in favor of more mobility-on-demand and shared-mobility solutions.

After the 2020 fall in vehicles sold worldwide, due to Covid19 outbreak, the expected recovery to pre-pandemic level will not occur until 2025, with a patchy growth outlook across regions. Given the contraction in volumes sold worldwide, posing the basis for tighter market conditions over the foreseeable future, for carmakers it is important to seek for revenues diversification. In this on-demand mobility services and data driven solutions are expected to contribute as the major driver to growth.

Different emerging trends are redetermining the competitive settings in automotive industry. On the one side, customers are increasingly demanding new characteristics, whereas regulators around the worlds are imposing stricter levels of adherence to environmental and safety standards. Additionally, new tech players, once considered far from automotive sector, are making their foray in the mobility industry, threatening the traditional dominance of OEMs. The answer to the above challenges, refers to a series of options available to automakers adopting the alternatives of organic growth (building in-house technologies) vs external growth (buying existing or development stage technologies, or partnering). The aim of this thesis is to investigate the peculiarities of the Buy option, that is the choice of M&A.

In typical acquisitions, an acquiring entity launches a cash and/or stock offer to gain control of the acquired (or target) firm that, upon completion of the transaction, ceases to exist via incorporation (i.e. company A and company B are incorporated into company A). Conversely, in the so-called mergers of equals there is no clear distinction between the acquirer and acquired firm as parties are similar in size prior to the combination and, upon a share-based transaction, create a unique business (i.e. company A and company B result in a brand-new company C). Hence M&A are combinations of two companies into a single entity taking the assets and liabilities of the merged company. Several key drivers lead to the occurrence of M&A in different industries:

- Growth: M&A constitutes a quick alternative to expand business when organic growth strategies are not viable or too uncertain to be carried out. Business growth via M&A occurs in different ways: expansion of geographical scope through cross-border

acquisitions, entry into new businesses via diversification or increase of market share within the same market via the acquisition of a direct competitor.

- Synergies: materialize in company combinations when two companies operating as a single entity perform better than they would do alone. Synergies are measured in terms of NAV, that is the residual value between the value of the combined entities and their value as standalone plus the premium and other proceeds paid in the transaction.
- Diversification: refers to the conduct of operations outside company's current industry sector. Regardless of the type of diversification (related or unrelated) this represents a strategy for having a leading position in different industries and to exploit presence in industries featured by better growth opportunities.
- Integration: can occur in two forms. Horizontal integration results into business combinations within the same industry with the goal to increase market share. Vertical integration instead, refers to the combination across activities at different levels and may take place either upward (integration of suppliers) or downward (integration of activities proximate to the final customers) along the value chain.
- CEO Hubris: the reasons behind this phenomenon refers to the fact that the possibility to gain control over another firm, makes acquiring firm's CEO more willing to pay a premium over the market price of the target firm.
- Taxes: in some cases, the rationale for combining two companies in not on strategic reasons but relates to fiscal synergies. Hence M&A based on tax benefits are relatively common and may prove reasonable from a price consideration point of view.
- Other Reasons: generally leading to improvement of target's management and access to R&D process.

Different methodologies can be applied to the evaluation of the target company:

- Book Value: focuses on the per-share value to which shareholders are entitled in case of the company's assets were liquidated for the values at which assets are carried in the book less the repayment of liabilities.
- Liquidation Value: reflects the per-share value of the company if all assets were disposed less the value of liabilities and it may be applied in special situations, whereby the going concern capability of the company to generate earnings is not considered.
- Discounted Cash Flow: is a fundamental valuation methodology very popular and widely adopted across industries. It focuses on target's operating characteristics as the

methodology compares the investment sustained to purchase the firm against the future cash flows generated discounted at a discount rate.

- Real Options: is an innovative approach applied to business decisions and is particularly useful in allowing modifications in the value of investments over time. This because alternatives are crucial in investment decisions in terms of postponement, delay, increase of even abandonment of an investment opportunity.
- Multiples: are construed as a ratio based on the relevant earning measure. This valuation approach sees two main steps: selection of the correct multiple and application to the chosen measure. After selecting the sample of comparable companies, the multiple for each is determined based on the past years (trailing multiples) or future estimate (forward multiples) and the average is calculated. Similarly to comparable analysis, precedent transactions analysis adopts multiples evaluations, but it considers as reference point precedent M&A transactions.

Having considered the antecedents and the methodologies involved in M&A deals, an overview of value creation dynamics is provided. The topic of M&A value creation is largely debated in literature, with the following main areas of study emerging in academical contributions:

- Deal Value: large acquisitions tend to destroy more value, turning as a costly option for shareholders. Academical studies focus on the issue of "Mega Mergers" to point out cases of value destruction transactions. However, the "winner's course" theory and recent evidence show a partial reversal on this assumption.
- Premium: is related to asymmetrical information regarding the valuation of the target firm from an outside perspective and to possible competitive behaviors in respect to the acquisition of control of target company. Premium is generally expected to negatively affect value creation as it erodes value from synergies.
- Diversification: differences between two companies' core businesses may lead to uncertainty, information asymmetry and diverging opinions in terms of risk. Also, unrelated companies may find hurdles in post-merger performance and integration.
- Payment: Studies generally refer to cash payment as opposed to stock and other means of payment (whereby in many circumstances M&A may include a mixture of cash, stocks and future contingent payments). Studies involving this variable shows a mixed background as it may be influenced by market behavior or contingent excess of liquidity of the bidder firm.

- Company Size: this metric can be analyzed both in absolute and relative terms. On the one side different dimension between buyer and target may lead to divergences in culture and asymmetrical information. On the other side, relatively smaller acquisitions are associated with lesser risks for buyer.
- Financial Leverage: the level of financial leverage can be considered a significant predictor of higher M&A activity and M&A success.
- Acquisition Experience: buyer's track record can be analyzed to predict its capability to integrate a new business. Even though a clear relationship pattern between Acquirer acquisition experience and post-merger performance cannot be inferred, such a variable is expected to somewhat influence value creation mainly in industries inherently characterized by M&A activity.
- R&D Investments: M&A activity is directed in many cases to integrate R&D and concepts for future technologies. Evidence provides support that acquiring innovative firms with a meaningful innovation content positively relates to abnormal returns around the announcement date and long-term stock performance after completion for the acquiring firm.

Cross-Border M&A are a key option for companies to gain access to knowledge and resources not otherwise available. The multiple extents to what this point may raise importance refer not only to the relocation of R&D activities, but also firm's size, market share, new technological opportunities and external knowledge sources. Also, cross-border transactions offer the possibility to access new markets and higher value-added capabilities or lower cost resources. However, cross-border deals not always are value-accretive as poor long-term performance may be associated to M&A conducted overseas. Moreover, cross-border deals pose incremental challenges when accounting for substitutability between bidder and target resources, when cultural distance raises integration barriers and because of distortions in valuation stage, due to different costs of capital. M&A involving companies from different countries poses substantial barriers to successful integration such as local regulations and industry standards and culture. Peculiar circumstances may lead to pros and cons for Cross-Border transaction. Pros are:

- Theory of Competitive Advantage: the basis of this theory relates to the level of resources and competences featuring the specialization of a given country in terms of technology advancements or labor costs regarding a specific process or product. This kind of advantage cannot be easily and quickly transferred across borders due to the

country-specific characteristics that makes a domestic economy specialized in producing certain goods and services and less efficient in other areas.

- Product Cycle Theory: companies establish their activities in a determined country as result of a perceived need in respect of the produced goods. When demand grow also abroad, the company can fulfill it through exports at least initially. However, over the time with increasing competition, the company may perceive the establishment of integrated operations in the foreign country as the only option to maintain advantage over competitors.
- Imperfect Markets Theory: the reality of today's markets, production factors are not fully and easily transferrable. Imperfect market conditions impose costs and restrictions to the possibility of move labor and other resources needed for production. Cross-border M&A offer acquiring companies an actual opportunity to capitalize on such conditions and gain from the reduction of transaction costs otherwise emerging cross-border operations.

At the same time, Cross-Border M&A poses additional issues compared to domestic ones:

- Liability of Foreignness: the definition entails the additional costs borne from a foreign acquiring company to operate in an overseas market, which a domestic company would not sustain. Such costs are associated to factors such as spatial distance, lack of knowledge on local market environment, possible backlash due to host country environment and restrictions related to the home country environment.
- Double Layered Acculturation: The combination of two entities having different cultures creates the need for the acquired to adapt to new cultural system, an effort which inability may hamper M&A integration success. Despite univocal conclusions are not determined in literature, a hurdle typically emerging in cross-border M&A refers the cultural distance between target and acquirer resulting in cultural clashes which can reduce the value of the deal.

Acquirer firm needs to carefully weigh up pros and cons before conducting cross-border M&A transactions. In recent decades, an extensive amount of academic studies has been dedicated to the analysis of such deals as opposed to domestic ones. Even though different nuances of deal success are analyzed, recent contributions find that following deal announcement, cross-border M&A lead to value creation for acquirer's shareholders. Among the key factors considered in dedicated literature, it is possible to find previous buyer's experience, the choice of cash or stocks as payment method and the degree of cultural distance entailing the transaction. The

extensive strand of research conducted so far has not highlighted a univocal evidence of value creation or destruction in Cross-Border M&A.

The merger between FCA and PSA, leading to the creation of Stellantis can be considered a major case of cross-border transaction. The deal has been analyzed under different perspectives. First of all, strategic rationale is discussed. The main reasons for the deal refer to: balancing of global presence, optimizing platforms, scaling-up procurement and CAPEX and accelerating development in all technologies and news businesses. FCA on its side enjoys hefty margin in Americas and a strong footprint in SUV and Premium/luxury segments. However, prior to the deal FCA looked a laggard in electrification, connectivity and mobility and had a substantial risk of not meeting the $CO_2$ with the risk of incurring in fines. On the other side, PSA is an industry leader in terms of profitability and has in-house solutions to address $CO_2$. Both companies have a significant recent track record in terms of post-M&A integration. Nonetheless, both companies show a key challenge in catching long-term automotive trends, an area needing a prompt intervention to survive the industry. In particular, combination, restructuring and streamlining global operations, may hold back the need to address current industry-disruptive changes.

The first and more prominent benefit from combination is expected to come from the complementarity in global presence. Before merger, PSA had a strong footprint in Europe (80% of global sales), whereas more than half (53%) of FCA's sales accrued in North America and 30% from EMEA region. The combined group would achieve a more balanced global presence with 56% of sales coming from Europe, Middle East, Africa and Eurasia, 29% from North America, 9% from Latin America and 6% from Asia Pacific.

Accounting for sales, the combined entity is expected to stand as the fourth global OEM player with 8.7 million vehicles, 4.8 million from FCA and 3.9 million from PSA. The tie-up of FCA and PSA, according to analysts and industry experts, makes sense as together they become instantly a leading player competing for volume, market share and technology. The large number of well-established brands in the group portfolio is seen as a clear important competitive advantage in merger evaluation as this makes combined group operating in all key market segments.

Following tie-up, the targeted amount of annual synergies has been reviewed upward. As per new assumptions, Stellantis is expecting to reach over €5 billion of annual synergies from the combination and new business opportunities. Additionally, the group disclosed €1.3 billion in

cash synergies already accrued during H1 2021 (of which around €600 million had impacted the P&L during that period). Synergies will materialize as: product-related synergies, purchasing and SG&A and other functions. More than 80% of steady-state synergies are expected to accrue by the end of 2024, whereby cumulative one-time implementation costs estimation has been upgraded to about €4.0 billion (though Stellantis will work to optimize this). The estimated synergies net cash flow is expected to be positive from 2021.

More than €30 billion on investments are planned through 2025 in electrification and software development. The sum includes also equity investments to fund joint ventures activities. The overall target is to be 30% more efficient than industry peers with respect to total CAPEX and R&D expenditure on revenues basis. A core part of this strategy deals with the cost of the battery pack, an area in which improvements in chemistry and packaging would drive substantial savings. EV battery pack costs are targeted to be reduced by more than 40% from 2020 to 2024 and by more than an additional 20% by 2030. These savings will be achieved by optimizing the overall pack, simplifying the format of the modules, increasing the size of the battery cells and upgrading the battery chemistry. At the same time, Stellantis delivered updates on its EV plans. In addition to the 11 BEVs it currently produces, Stellantis plans to add at least another 11 BEVs during the two-year timeframe. Looking at this promising plan, a key challenge remains on the actual execution and market deliverability, in such fast-moving industry environment.

However, while the combination of FCA and PSA sales leading to Stellantis accounts for the sixth-largest global auto maker with 6.21 million units sold (a marked decline versus the 7.91 million units recorded in 2019), Stellantis' market valuation trails far behind its legacy peers (eight-largest market capitalization), and with €51.3 billion, it represents only a fraction of Tesla value. Comparing the valuation levels of Stellantis and its legacy carmaker peers to those of the new EV players (the main are Tesla and the Chinese BEV NIO, the latter listed in September 2018) a glaring difference emerges as these recorded in 2020 respectively 499,500 and 43,728 vehicles sold. It can be argued that, as of today, it would make little sense for legacy carmakers to radically shift towards electric vehicles when BEVs and PHEVs only constituted 2.4% and 3.5% of the European market in 2018 and 2019 (percentages have since increased with Europe averaging 11.5% in 2020) and only 2% of the US market. In such context, EV growth vector has been accelerated by the Covid19 pandemic and governmental stimulus measures focused on promoting zero-emission vehicles, a trend setting the future of the industry, which legacy automakers cannot ignore.

Stellantis had a strong debut to H12021. On a pro forma basis, the group has been able to achieve a record level of profitability with an 11.4% adjusted operating income margin (€8.44 billion adjusted operating income over €72.6 billion revenue). This result is mainly driven by an absolutely strong performance in North America region and good operating results in Europe. Such positive results accrued in a phase of market recovery following the downturn caused by the Covid19 pandemic.

In respect to the empirical model conducted through a multiple regression model, it is possible to observe how on a sample of automotive M&A, Cross-Border transactions lead to value creation for acquiring company's shareholders (+0.053, significant at level of $\alpha = 0.05$). Such result has a twofold implication. On the one hand, this study remarks new evidence of the positive effect of geographical diversification in M&A, a much-debated issue in literature. On the other hand, in respect to the automotive industry, cross-border deals prove to be an affective choice for acquirers seeking access to new markets, technologies and production factors, not otherwise replicable.

In conclusion, it is possible to argue that M&A is an effective (probably the most effective) tool to accelerate carmakers' response to evolving competitive environment. Given the global scale of automotive activities, cross-borders deals enable carmakers to enjoy local competitive advantages and deploy their distinctive resource and competencies. It should be noted however how this is not a straightforward equation to success, as multiple factors need to be carefully considered. Cultural differences, information asymmetries and changing market conditions, can quickly and utterly revert automotive M&A success stories. Nonetheless, business combinations, will remain the wisest survival alternative in the future of automotive.