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THE STELLANTIS MERGER – FCA´S MASTERPIECE?

Call for Consolidation: Was PSA FCA´s Last Chance?

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Abstract

The case study examines the merger of equals between Fiat Chrysler Automobiles and Peugeot S.A., which created the world's third-largest automaker. It examines whether the merger was sensible for FCA, looking at strategic, valuation, and corporate governance dimensions. The analysis confirmed that the merger makes sense for FCA in every respect. The analysis in the second individual part explores whether PSA represents FCA's ultimate consolidation opportunity, revealing that post-PSA, Ford would have been the last remaining option for a merger of equals.

Keywords

Mergers & Acquisitions, Merger of Equals, Fiat Chrysler Automobiles, Peugeot S.A., Company Valuation, Trading Multiples, Discounted Cash Flows, Event Studies, Strategic Analysis

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Case A: The Stellantis Merger - FCA's Masterpiece?

At the end of 2019, the global automotive industry experienced a significant event with the announcement of Fiat Chrysler Automobiles' (FCA) offer for a merger of equals with Peugeot S.A. (PSA). The proposed merger is notable not only for its ambition but also for its impact on the global automotive landscape.

The path to this merger began on October 31, 2019, when the two automotive giants FCA and PSA stated their intention to explore the possibility of a merger (Stellantis, 2019c). This resulted in the announcement of the first draft of the merger agreement on December 18, 2019, setting the stage for one of the most talked-about developments in the industry (Stellantis 2019b).

Upon completion of the merger the NewCo, named “Stellantis”, would become the fourth largest automaker in the world by volume and the third largest by revenue (€169 bn). The merger is expected to generate annual synergies of €3.7 bn, giving both companies a stronger position in the increasingly competitive and dynamic global automotive market. (Stellantis 2019b)

In order to achieve the 50/50 ownership structure, PSA shareholders would receive 1.742 NewCo shares for each of their PSA shares, while FCA shareholders would receive one NewCo share for each of their FCA shares (Stellantis 2019b). In addition, several compensation payments would be made to both PSA and FCA shareholders (Stellantis 2019b). However, PSA would receive the majority of the board and PSA CEO Carlos Tavares would become CEO of Stellantis (Stellantis 2019b). FCA CEO Michael Manley, on the other hand, is not to be given a board seat at all (Piovaccari 2020). However, it is questionable whether FCA and PSA will really be on an equal footing and whether the merger makes strategic sense for FCA.

The Global Automotive Industry

The automotive industry, one of the world's most important industries for decades, recorded

sales of $2.9 tn in 2019, with a total of 81.4 m vehicles sold (Deloitte 2022; IBISWorld 2023). Although sales had been steadily increasing in previous years, they recorded a declining trend since 2017 (Deloitte 2022). In recent years, the market has become increasingly concentrated (Khalaf 2019). In 2019, 87% of all vehicles were sold by the top ten automakers (Exhibit A1). With a market share of 33.3%, China maintained its position as the largest sales market, followed by Europe with 24.2% and North America with 21.4% (Exhibit A2) (Statista 2023). A particular focus is on SUVs, which represent the largest vehicle segment and enjoyed increasing popularity internationally (Statista 2022). At the same time, SUVs provide manufacturers with high-profit margins (Voelk 2020; Statista 2022).

"The automotive industry is going through a transformation of unprecedented magnitude", according to Faurecia CEO Patrick Koller (Koller 2018). The challenges include managing geopolitical risks as well as technical issues around connectivity, shared mobility solutions, autonomous driving, and electrification (McKinsey 2019; Pandey 2019).

Global trade conflicts, particularly between the USA and China, are having a significant impact on the automotive industry (Pandey 2019). Uncertainties around tariffs and trade restrictions are disrupting supply chains and forcing manufacturers to adjust their business plans (Pandey 2019). This also applies to Brexit, which brings uncertainties for companies with plants in the UK and supply chains crossing Europe (Deloitte 2020, 1).

Probably the biggest challenge facing the automotive industry, however, is electrification (McKinsey 2021). Stricter emissions regulations, especially in the EU, and growing environmental awareness among consumers are forcing manufacturers to invest more heavily in the development of battery technologies and the expansion of the charging infrastructure (Pooler and Miller 2019). At the same time, new players specializing exclusively in electric cars are increasingly entering the market and presenting established automakers with new competitive conditions (Deloitte 2019, 10). Two of them, Tesla from the US and BYD from

China have already been able to establish themselves and dominate the emerging market for electric vehicles (Exhibit A3).

The COVID-19 pandemic that hit the world in 2020 has far-reaching implications for the automotive industry (Becker 2020). Supply chains stalled as global transportation routes were affected (Becker 2020). As a result, sourcing of parts and components became more difficult, leading to delays in production and increases in material costs (Korsh 2022). The uncertainty and economic impact of the pandemic led to a significant drop in demand for new vehicles (Oliver Wyman 2020). Many people either were reluctant to make large financial commitments or were unable to purchase a new car due to job losses or loss of income (Iyer 2022). In light of this, many automakers have been forced to take drastic cost-cutting measures (Vaswani 2020). This has resulted in restructuring such as plant closures and layoffs (Economist Intelligence 2020).

Peugeot S.A.

PSA is a renowned French automotive manufacturer with a rich history dating back to 1810 when it was founded as a family-run business producing coffee mills and bicycles. Over the decades, the company transitioned into the automaker industry, becoming one of the pioneers of the French automobile sector. (Scalera 2011, 1245)

Since the company was founded, the Peugeot family has been the main shareholder of PSA. However, the family reduced their 25% share to 14% in 2014. At the same time, PSA's long-term Chinese joint-venture partner Dongfeng Motor acquired 14% of PSA. Both companies hoped that a deepened partnership would gain them access to the other's market. To balance Dongfeng's stake, the French government acquired 14% of PSA, too, mainly to ensure that French control over PSA was not lost to the Chinese group. PSA is not only a figurehead of engineering and national identity for France, but also an essential player in the French economy

and a major employer. The French government is therefore keen to protect national interests, for example by maintaining jobs and factories in France. As a result, Dongfeng and the French state tied the Peugeot family as the biggest shareholders of PSA. (Jolly 2014)

The automaker has been managed by Carlos Tavares since 2014 (Stellantis 2023b). His record in turning around companies is impressive (Bryant 2019). He transformed PSA and then repeated the trick with the Opel/Vauxhall unit acquired from General Motors in 2017 to create a stronger presence in the European automotive market and achieve economies of scale (Ruddick 2017; Bryant 2019).

The group had revenues of €74.7 bn in 2019 and is the ninth-largest automaker by the number of vehicles sold (Exhibit A1). Its focus region is Europe, which accounted for 78.6% of its revenue in 2019, followed by China with 4.8% (Exhibit A5). In the third largest automotive market, North America, PSA is not present at all (Exhibit A5). The French automaker sells premium cars through DS Automobiles and mainstream passenger cars through its brands Peugeot, Citroën, Opel, and Vauxhall (Exhibit A7).

Having encountered several challenges when dealing with EU regulations on electric vehicles in recent years, PSA had to overhaul its product lineup to meet stringent emission targets and invest heavily in electric vehicle technology (Keohane 2018; Pooler and Miller 2019).

Fiat Chrysler Automobiles

FCA is a prominent player in the global automotive industry. The company´s roots can be traced to the founding of Fiat in 1899 and the establishment of Chrysler in the United States in 1925 (Stellantis 2023a; Kollewe 2009). Through its brands, including Fiat, Chrysler, Dodge, Jeep, and Ram, the company generated €108.2 bn in revenues in 2019 and is the eighth-largest automaker by the number of vehicles sold (Exhibit A1; Exhibit A7). In 2019, FCA generated most of its revenues in North America (58.0%), while Europe, Fiat´s home market, accounted

for just 26.1% (Exhibit A6).

With 28.5% of the shares in FCA and 44.4% of the voting rights, Exor N.V. is by far the largest shareholder (Bloomberg 2023a). Exor is an investment company under the control of the Italian Agnelli family, the descendants of one of the founders of Fiat (Exor 2023). Through its CEO John Elkann, who is also chairman of FCA, they exert direct control over the car manufacturer (S&P Capital IQ 2023). FCA had been led by the experienced Sergio Marchionne for over a decade, but he died suddenly in 2018 (Boudette and Povoledo 2018). Michael Manley, who had previously been CEO of FCA's subsidiary Jeep, then took over the helm (Boudette and Povoledo 2018).

Fiat gained influence in the North American market through the acquisition of Chrysler, which was a strategic move that began with a 20% stake purchase in 2009 and culminated in the takeover of Chrysler in 2014, forming FCA. This acquisition allowed Fiat to expand its global reach and gain access to Chrysler´s North American market share. It also facilitated the sharing of resources, leading to cost savings and enhanced competitiveness in the automotive industry. (Wright and Foy 2014)

As the industry shifted towards sustainable mobility solutions such as the development of electric cars and plug-in hybrids, FCA is lagging behind other automakers. To close this gap, and to tackle increasing costs, FCA is actively looking for a strong partner in the automotive industry to merge with. (DeBord 2019)

Merger Talks with Renault

Prior to the merger plans with PSA, in May 2019, FCA approached Renault intending to forge a merger in a bid to confront the various challenges facing the global automotive industry. Such a merger would have provided numerous advantages for both companies, including synergies in research and development, cost savings through shared technologies and platforms, and a

stronger global market presence. The NewCo would have been the world´s third-largest automaker by number of vehicles sold. The proposed deal would have been structured as a merger of equals, with each company maintaining its existing brand identity while collectively harnessing its strengths to navigate the evolving automotive landscape. (Stellantis 2019a; Piovaccari and Frost 2019)

Just ten days later, however, the talks ultimately failed due to several factors, most notably the concerns of the French government, which held a 15% stake in Renault. The government would have agreed to the merger with the explicit support of Renault´s long-time alliance partner, the Japanese automaker Nissan. This was not a given, as Nissan abstained from the decision. As the relationship was already strained due to former Renault CEO Carlos Ghosn being arrested in Japan for treason, it was unclear how the merger would have affected that alliance (Kar-Gupta 2019; Kiley 2019).

Merger Talks with PSA

After the talks with Renault failed, FCA was once again on the lookout for a suitable merger partner and finally approached PSA (Stellantis 2019d). Both companies already had a long-standing joint venture in commercial vehicle construction, so they already knew each other very well (Sanderson, Campbell, and Keohane 2019). Michael Manley even described the joint venture as "one of the best relationships we have" (Sanderson, Campbell, and Keohane 2019).

With an increase in market share in Europe of 16% on average over the last four years, PSA will help FCA become less dependent on the stagnating US market (Winton 2019). At the same time, they will fulfill FCA's long-awaited desire to expand its currently weak presence in its home market of Europe (Malan 2018). In addition, PSA is further along in the development of EVs, an area where FCA is lagging heavily (Krisher, Barry, and Charlton 2019). So much so that they are currently unable to meet the European Union's emissions targets and therefore

have to buy billions in emissions certificates from Tesla every year to compensate (Campbell and Keohane 2021). Together, FCA and PSA would have great resources to master the major technological challenges in the automotive industry. PSA will also benefit from FCA's highly profitable North American business, where they generate 2/3 of their sales, while PSA is not represented there at all (Exhibit A2).

The announcement of the preliminary merger terms in October 2019 was followed by a year of intensive negotiations. An amended offer was finally published on September 14, 2020. To compensate for the valuation differences, FCA shareholders will now receive a special dividend of €2.9 bn before closing, instead of €5.5 bn as previously announced. PSA, on the other hand, is selling 7% of its Faurecia stake, the proceeds of which amounting to €308 m will be distributed equally to FCA and PSA shareholders after closing. While synergies were still estimated at €3.5 bn annually one year ago, new calculations put them at €5 bn annually and are expected to be fully realized for the first time in 2024. The majority of the synergies, amounting to €2 bn per year, are generated through savings in capital expenditure, while the remaining synergies are achieved through further cost savings (Exhibit A9). At the same time, the projected implementation costs increased from €2.8 bn to €4.0 bn. (Stellantis 2020a)

After the merger talks with Renault failed due to the French government, the latter is now showing more willingness to cooperate (Eisenstein 2019). However, in order for the French government to approve the merger, FCA and PSA have agreed to preserve jobs in France and rule out plant closures (Eisenstein 2019). In addition, they would appoint the highly experienced Carlos Tavares as CEO of NewCo and PSA would obtain a majority on the board, which is favored by the French government (Stellantis 2020a). In return, FCA chairman Elkann would remain in his position (Stellantis 2020a). However, FCA CEO Manley would only become head of the North American operations in NewCo (Piovaccari 2020).

Exhibit A1 Ten Largest Automakers Globally in 2019

#	Company	Headquarters	Vehicles Sold (in m)	Revenue (in €bn)	Profits (in €bn)
1	Volkswagen	Germany	10.8	252.6	13.9
2	Toyota	Japan	10.5	235.5	14.6
3	Renault-Nissan-Mitsubishi Alliance	Netherlands	10.3	109.8	3.4
4	General Motors	US	8.7	122.6	5.9
5	Hyundai Motors Group	South Korea	7.5	81.1	1.8
6	Ford	US	5.7	139.3	0.0
7	Honda Motor Group	Japan	5.2	123.8	4.8
8	FCA	Netherlands, UK	4.8	108.2	6.6
9	PSA	France	4.1	74.7	3.2
10	Suzuki	Japan	3.2	30.2	1.4

Source: Bloomberg 2023c

Exhibit A2 Market Shares by Region and Automaker in 2019

Region and Its Market Player	Market Share
China	33.3%
Volkswagen (FAW)	7.9%
Volkswagen (SAIC)	7.8%
General Motors (SAIC)	6.2%
Geely	5.3%
Nissan (Dongfeng)	5.0%
Wuling (SAIC/GM)	4.8%
Great Wall	3.6%
Changan	3.2%
Honda (Dongfeng)	3.1%
Honda (GAC)	3.0%
Other	50.2%
Europe	24.2%
Volkswagen	24.6%
PSA	15.6%
Renault	10.5%
Hyundai/Kia	6.7%
BMW	6.6%

Daimler	6.4%
Ford	6.1%
FCA	6.0%
Toyota	5.1%
Other	12.4%
North America	21.4%
General Motors	16.5%
Ford	13.8%
Toyota	13.6%
FCA	12.6%
Honda	9.2%
Hyundai/Kia	7.6%
Nissan	7.7%
Other	19.0%
Other Regions	21.1%

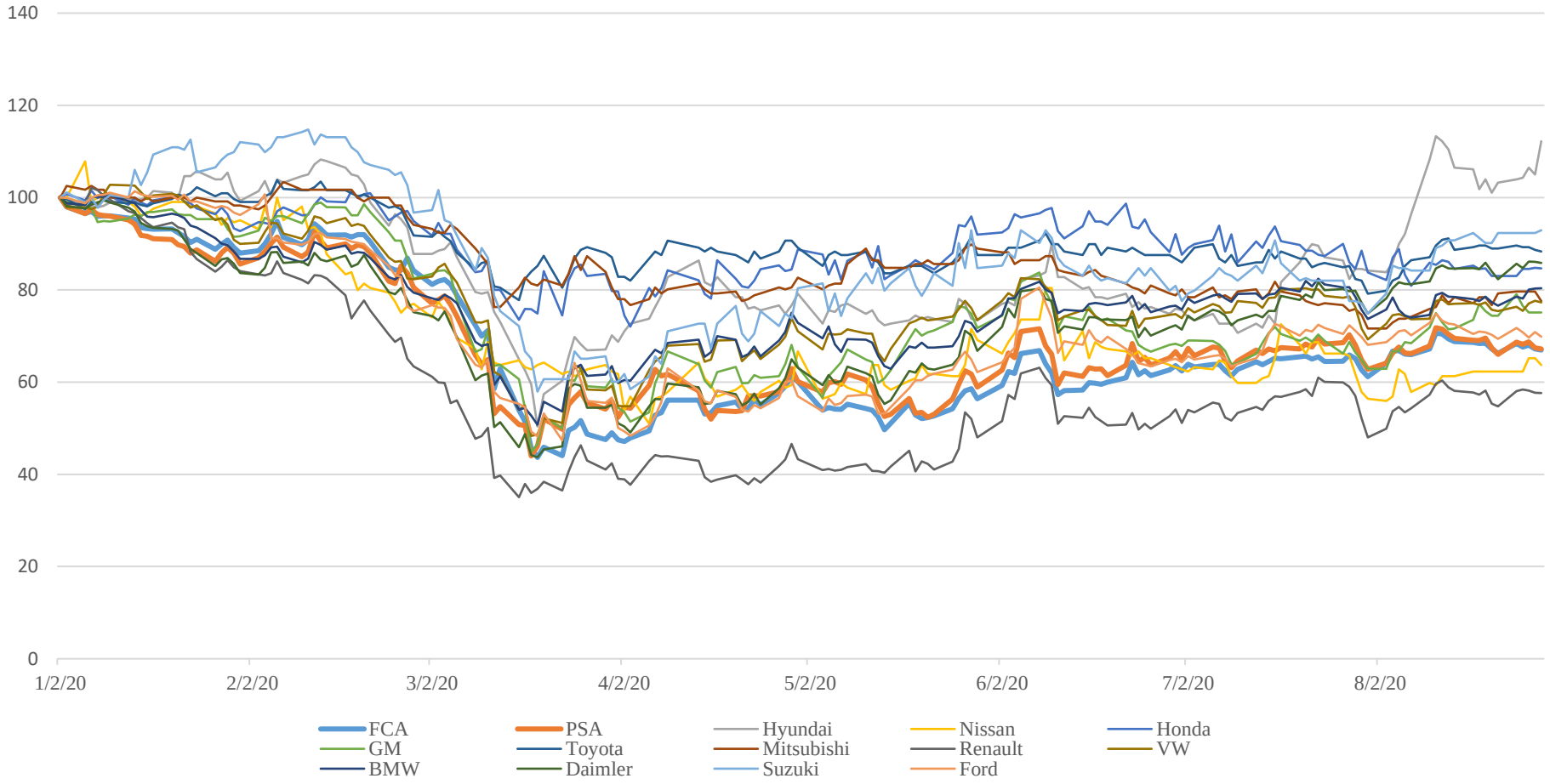
Source: Bloomberg 2023c; Stellantis 2020b

Exhibit A3 Market Shares in the Electric Vehicle Industry in 2019

Company	**Market share**
Tesla	16.2%
BYD	10.0%
BJEV	7.1%
BMW	5.9%
Nissan	3.9%
Volkswagen	3.7%
SAIC	3.4%
Geely	3.4%
Hyundai	3.2%
Renault	2.7%
Other	40.5%

Source: McKinsey 2020

Exhibit A4 Share Price Development of the Largest Automakers (Indexed, base = 100)



Source: Own representative based on data from Bloomberg 2023b

Exhibit A5 PSA´s Revenue per Region in FY 2019

Region	Revenue in €m	% of Total Revenue
Europe	64,378	78.6%
North America	0	0.0%
China	3,624	4.8%
Other	6,729	9.0%
Total	74,731	100.0%

Source: Stellantis 2020b, 35

Exhibit A6 FCA´s Revenue per Region in FY 2019

Region	Revenue in €m	% of Total Revenue
Europe	28,229	26.1%
China	2,226	2.1%
North America	62,787	58.0%
Other	14,944	13.8%
Total	108,187	100.0%

Source: Stellantis 2020c, 43ff.

Exhibit A7 Brand Portfolio FCA and PSA

	Luxury	Premium	Mainstream		
			SUV	Pass Car/ CUV/MPV	Truck/LCV
FCA FIAT CHRYSLER AUTOMOBILES	MASERATI	ALFA ROMEO	Jeep	FIAT, LANCIA, DODGE, CHRYSLER	RAM, FIAT PROFESSIONAL
PSA GROUPE		DS AUTOMOBILES		PEUGEOT, OPEL	CITROËN, VAUXHALL

Source: Stellantis 2019d

Exhibit A8 Peer Group and Its Financial Data

in €m	EV[1)]	Sales[2)]	EBITDA[2)]	EBIT[2)]
Volkswagen	70,719	223,569	29,662	4,217
Toyota	288,290	223,758	27,356	13,993
Renault	5,961	55,537	5,914	2,105
Nissan	13,816	72,622	5,341	(1,640)
Mitsubishi	4,045	16,428	256	(372)
Daimler	12,010	157,804	10,422	1,939
BMW	22,821	99,258	16,257	5,363
General Motors	40,669	104,731	13,145	1,079
Hyundai	65,686	77,177	5,505	2,268
Ford	21,753	117,946	3,080	(4,554)
Honda	82,867	109,248	7,921	2,238
Suzuki	16,244	25,150	2,586	1,286

[1)] as of June 30, 2020

[2)] July 1, 2019 - June 30, 2020

Source: Bloomberg 2023c

Exhibit A9 Expected Annual Synergies

Expected Annual Synergies (in €m)	**5,000**
Savings in capital expenditures	2,000
Savings on purchases	1,750
Savings on sales operations and general expenses	350
Other cost savings	900

Source: Stellantis (2020a); Case writers assumptions

Exhibit A10 FCA and PSA and Its Financial Data

	FCA	PSA
Sales (in €m)[1)]	89,239	74,731
EBITDA (in €m)[1)]	6,339	8,056
EBIT (in €m)[1)]	1,090	3,168
Cash & Equivalents (in €m)[2)]	15,591	19,232
Minority Interest (in €m)[2)]	138	2,727
Total Debt[2)]	12,918	11,415
Debt/Total Assets[2)]	49.5%	40.6%
Cost of Debt	1.48%	1.44%
Market Return	8.55%	8.55%
Tax Rate	30%	30%
Terminal Growth Rate	0.9%	0.9%

[1)] July 1, 2019 - June 30, 2020 [2)] as of December 31, 2019

Free Cash Flows (€m)	2020F	2021F	2022F	2023F	2024F	2025F
FCA	(3,368)	2,146	(1,071)	2,192	1,827	1,153
PSA	(176)	426	1,321	296	634	1,179

Source: Bloomberg 2023c; Case writers assumptions

Exhibit A11 Historical Share Prices FCA and PSA, Weekly

Date	FCA Price (€)	PSA Price (€)	Date	FCA Price (€)	PSA Price (€)	Date	FCA Price (€)	PSA Price (€)
9/11/20	9.41	16.07	9/13/19	11.94	24.06	9/14/18	14.22	23.79
9/4/20	8.95	15.15	9/6/19	11.97	22.10	9/7/18	13.65	23.31
8/28/20	8.91	14.61	8/30/19	11.22	20.33	8/31/18	13.82	23.70
8/21/20	8.82	14.36	8/23/19	10.72	18.90	8/24/18	13.74	23.38
8/14/20	9.18	15.10	8/16/19	10.46	19.01	8/17/18	13.00	24.41
8/7/20	8.79	14.39	8/9/19	11.01	19.83	8/10/18	13.50	24.95
7/31/20	8.21	13.64	8/2/19	11.11	20.36	8/3/18	13.78	24.23
7/24/20	8.60	14.84	7/26/19	11.68	22.50	7/27/18	13.67	24.02
7/17/20	8.68	14.67	7/19/19	11.42	21.90	7/20/18	15.56	20.67
7/10/20	8.37	14.04	7/12/19	11.92	22.03	7/13/18	15.81	21.05
7/3/20	8.58	14.29	7/5/19	11.97	22.05	7/6/18	16.06	20.65
6/26/20	8.20	13.85	6/28/19	11.62	21.67	6/29/18	15.52	19.56
6/19/20	7.98	13.36	6/21/19	11.67	21.68	6/22/18	15.63	20.45
6/12/20	7.72	13.47	6/14/19	11.22	20.72	6/15/18	17.01	21.13

6/5/20	8.85	15.43	6/7/19	11.07	20.54	6/8/18	17.03	20.60
5/29/20	7.51	12.81	5/31/19	10.86	19.97	6/1/18	18.64	20.13
5/22/20	7.01	11.53	5/24/19	10.88	20.59	5/25/18	17.67	20.68
5/15/20	6.83	11.52	5/17/19	12.67	21.37	5/18/18	17.64	20.65
5/8/20	7.35	13.43	5/10/19	12.28	21.16	5/11/18	18.02	20.08
5/1/20	7.63	13.08	5/3/19	13.44	22.64	5/4/18	18.14	20.10
4/24/20	6.99	12.39	4/26/19	13.15	23.27	4/27/18	18.01	20.35
4/17/20	6.94	11.70	4/19/19	13.94	24.83	4/20/18	18.32	20.78
4/10/20	7.10	13.42	4/12/19	13.47	23.93	4/13/18	18.06	20.40
4/3/20	5.92	11.82	4/5/19	13.03	23.23	4/6/18	17.38	19.99
3/27/20	6.24	12.07	3/29/19	12.58	21.74	3/30/18	15.71	19.55
3/20/20	5.77	11.31	3/22/19	12.13	21.75	3/23/18	15.82	18.61
3/13/20	8.02	11.89	3/15/19	12.01	22.16	3/16/18	16.32	19.00
3/6/20	9.98	16.15	3/8/19	12.14	21.13	3/9/18	16.28	19.27
2/28/20	10.67	17.51	3/1/19	12.27	22.81	3/2/18	15.30	19.06
2/21/20	11.46	19.14	2/22/19	12.46	22.31	2/23/18	16.70	17.93
2/14/20	11.62	19.37	2/15/19	12.34	21.29	2/16/18	17.19	18.05
2/7/20	11.58	19.40	2/8/19	12.31	20.62	2/9/18	16.46	17.53
1/31/20	11.13	18.61	2/1/19	14.28	22.24	2/2/18	17.84	18.65
1/24/20	11.50	19.27	1/25/19	13.93	21.93	1/26/18	18.75	18.38
1/17/20	11.80	19.80	1/18/19	14.01	21.33	1/19/18	18.41	18.47
1/10/20	12.16	20.87	1/11/19	13.47	20.31	1/12/18	18.12	18.02
1/3/20	12.40	21.32	1/4/19	12.39	18.91	1/5/18	17.04	18.11
12/27/19	12.71	21.82	12/28/18	12.19	18.26	12/29/17	14.42	16.96
12/20/19	12.95	22.26	12/21/18	12.42	18.60	12/22/17	14.65	17.10
12/13/19	12.66	21.89	12/14/18	13.16	18.24	12/15/17	14.24	17.20
12/6/19	12.58	21.51	12/7/18	13.08	17.92	12/8/17	13.77	16.91
11/29/19	12.73	21.92	11/30/18	13.85	19.40	12/1/17	13.42	16.90
11/22/19	12.69	22.55	11/23/18	13.39	19.30	11/24/17	14.07	18.12
11/15/19	13.78	23.79	11/16/18	13.65	19.82	11/17/17	13.99	18.61
11/8/19	13.87	24.12	11/9/18	13.55	20.68	11/10/17	14.06	18.92
11/1/19	13.28	23.36	11/2/18	13.42	21.06	11/3/17	14.85	20.61
10/25/19	11.22	24.84	10/26/18	13.39	20.57	10/27/17	14.01	20.25
10/18/19	11.23	23.66	10/19/18	12.75	20.16	10/20/17	13.48	20.21
10/11/19	11.26	23.03	10/12/18	13.27	21.15	10/13/17	14.28	20.27
10/4/19	10.66	21.62	10/5/18	14.37	21.91	10/6/17	14.21	20.71
9/27/19	11.25	23.00	9/28/18	14.42	23.23			
9/20/19	11.69	24.02	9/21/18	14.77	24.57			

Source: Bloomberg 2023c

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Case A: The Stellantis Merger - FCA's Masterpiece?

Teaching Note

1. Synopsis

On December 18, 2019, Fiat Chrysler Automobiles (FCA) and Peugeot S.A. (PSA), the world's eighth and ninth largest automakers by number of vehicles sold, announced their intention to merge as part of a merger of equals valued at approximately $52 bn. The NewCo, which will later be named "Stellantis", would become the fourth largest automaker in the world with annual sales of €168 bn. To achieve the 50/50 ownership structure, adjustments will be made to both FCA and PSA shareholders. However, PSA will receive the majority of the board and PSA CEO Carlos Tavares will become CEO of Stellantis. In return, John Elkann, CEO of Exor, FCA's largest shareholder, will become chairman of Stellantis. FCA CEO Michael Manley will not receive a board seat. This case study analyzes the two initial situations of FCA and PSA and also includes the merger talks of FCA with Renault and the initial deal terms regarding power distribution and strategic implications.

2. Positioning

This case is used in a module for Mergers & Acquisition, an advanced finance course for Master’s students. In preparation for the case, it helps if students have a good understanding of general reasons why mergers occur and valuation concepts. Students should also be familiar with the different stakeholders of a company. The case is designed to be taught in a standard 80-minute class.

3. Pedagogical Objectives

The case has four pedagogical objectives:

1. The case provides the opportunity to learn and discuss the reasons why mergers of equals occur and what the advantages and disadvantages are.
2. Students should learn how to carry out a strategic analysis of companies and how to assess whether companies fit together strategically.
3. The specifics of valuation in a merger of equals can be learned by conducting a DCF valuation of the two companies. In addition, students should learn the limitations of multiple valuations.
4. By analyzing the question of whether both companies actually have equal influence in this merger of equals, students should be sensitized to the challenges of this merger concept and learn that it is difficult to achieve an equal power distribution by discussing post-merger organization and corporate governance.

4. Substantive Analysis

The analysis of the case can be broken down into three parts. First, the merger is evaluated from FCA´s strategic perspective. For this, students must analyze the current challenges of FCA and discuss the principle of a merger of equals. The next part of the class focuses on the valuation of both companies considering synergies and adjustment measures to assess whether one of the two companies is overpaying. In the third part, students should discuss whether the power of the two companies in the NewCo will indeed be equally distributed. The class should end with the instructor asking the students if the merger of equals with PSA made sense for FCA.

4.1 Analysis of the Strategic Implications behind the Merger

Begin the discussion by asking students what the general reasons are for pursuing a merger of equals and which challenges it entails. This question will lead to a discussion about the rationale for merger of equals and thus provide an important basis of understanding for further analysis.

A merger of equals is a very rare phenomenon among mergers (Alluru and Thomas 2016). However, there are still reasons that favor such a merger. As both companies merge as equals, neither of them must use debt financing to cover the merger. This enables companies who would not have been able to finance a takeover to pursue the merger (Crofton 2023).

Probably the greatest advantage of a merger of equals, however, involves psychological benefits. A takeover can lead to concerns and dissatisfaction among the target's workforce. This leads to negative synergies by lowering work motivation. In a merger of equals, concerns, and dissatisfactions are usually lower because both are acting as equal partners. In addition, a merger of equals helps to convince anxious shareholders of the benefits of the merger, especially those of the "weaker" partner, as it gives shareholders the feeling of being equal and not losing influence. (Alluru and Thomas 2016)

However, in a merger of equals, the major challenge is to unite the two companies. Emotions tend to run high, perceptions of fairness and unfairness are strongly related to identification with the former organization, and the idea of "equality" can backfire, as integration can never be equal in all aspects. (Alluru and Thomas 2016)

In the past, the merger of equals was often used for purely psychological reasons, while in truth one received more influence than the other. A prominent example of this is the last major merger in the automotive industry between Daimler and Chrysler. Former Chrysler CEO Jürgen Schrempp claimed that equality was just a word to make the deal appealing to Chrysler. The idea was a takeover by Daimler from the very beginning. This merger of equals ultimately failed

years later, especially since Daimler was the dominant force and wanted to impose its culture. (Alluru and Thomas 2016)

After finding out what the common reasons and challenges of a merger of equals are, steer the discussion to FCA: What was FCA's situation before the merger? What were its weaknesses? Before analyzing FCA's challenges in more depth, it is recommended to gather key facts about FCA together and write them down on the board. This will facilitate subsequent analysis for students. An example board plan is given in Exhibit TN-A1. This board plan serves as a basic structure and can be adapted depending on the class discussion.

Consolidating this information should lead to the conclusion that FCA is very dependent on the North American market, has little market share in Fiat's home market Europe, and is also an irrelevant player in the Asian market. Moreover, FCA lags in EV development and thus has a very low market share in the rising EV market.

Students should identify that it would be beneficial for FCA to find a partner with a strong presence outside North America to achieve geographical diversification, as FCA's high dependence on one stagnating market poses risks due to potential market volatility or regulatory changes among others. In contrast, geographical diversification can also be risky and costly if companies pursue it on their own. This is due to geopolitical risks and challenges in navigating varied regulatory environments, adapting to diverse cultural and consumer preferences, and operational expenses for having a presence in multiple regions. Moreover, there is a financial risk of operating in foreign currencies. However, if FCA merges with another company present in new markets, the majority of these factors would not be relevant anymore, as the company has already adapted to these markets. (Zwilling 2016)

In addition, merging with an automaker with a strong focus on EVs could be fortunate, as it would help them to establish themselves in the EV market. Additionally, this would help FCA meet EU regulations by combining EV technologies.

Now that the current situation of FCA has been examined, lead the discussion to the question of why FCA sought a merger of equals. Mainly due to declining market share and large electrification deficits, FCA is too weak to execute a takeover that would help the company solve its current problems. Moreover, the founding family Agnelli, through Exor, is the largest shareholder in FCA with 44% of the voting rights and has a strong personal interest in maintaining influence in FCA due to the family history. Therefore, a merger of equals is the only way left for FCA to position itself stronger for the future.

Now that FCA's reasons for a merger of equals have been discussed, the discussion will turn to whether PSA is a sensible partner for FCA from a strategic perspective. To do this, it is useful to first gather the relevant information on PSA and add it on the whiteboard so that students can compare the two companies briefly (Board Plan Exhibit TN-A1).

PSA generates a large part of its sales in Europe, where it also has the second-highest market share in Europe after Volkswagen (Exhibit A2). A NewCo resulting of PSA and FCA would therefore balance FCA's high US market share with PSA's high European market share, which reduces dependences for both companies. The two companies also complement each other very well in the portfolio. Both companies focus on passenger cars and offer equivalent products, which could lead to tremendous cost savings. Some students might argue that the comparable brands of FCA and PSA could lead to cannibalization. However, cannibalization already exists, simply because there are several competing brands in the same car category. This cannibalization will not be increased or decreased by the merger, as both companies agreed to keep all brands separately. Thus, the offer for the customers remains unchanged. Nonetheless, internal competition can lead to conflicts, as employees and executives often have a sense of belonging to their original brands. In addition, profitability is severely impaired as the NewCo has to bear the respective overhead costs for each brand, which could be bundled if you combine competing brands into one brand.

PSA is also lagging in electric mobility but is further ahead than FCA. A joint EV strategy could solve FCA's EU regulation problems and the NewCo would particularly benefit from the combined research & development budget. In addition, PSA is a European company with a European management, which mitigates the risk of a culture clash. Cultural alignment is one of many critical success factors in any value-creating transaction since it facilitates the integration of both companies and reduces the risk of failure (Fernandes 2019).

Moreover, the market capitalization of PSA is as high as that of FCA, so hardly any adjustments would be necessary here to enter a merger of equals as equivalent companies. In addition, PSA has already gained experience in integrating other companies into its processes, having successfully integrated Opel and Vauxhall years ago.

4.2 Valuation of FCA and PSA

After analyzing whether PSA was strategically a sensible partner to merge with FCA, lead the discussion to the next section on deal structure and the value of FCA and PSA to answer the question of whether one firm is overpaying.

Before estimating the value of both companies, it is helpful to first examine the structure of this merger of equals. Two things are formally required in a merger of equals. First, a 50/50 ownership structure must be created through an exchange ratio of old shares to new shares. Second, measures must be taken to compensate for any differences in value, such as dividend payments. For a better understanding, it is helpful to write down the deal structure on the board. An example board plan is given in Exhibit TN-A2.

As of September 14, 2020, FCA had 1,574.15 m shares outstanding with a market capitalization of €15,611 m, while PSA had 903.65 m with a market capitalization of €14,541 m. As the FCA share will be converted into the Stellantis share, PSA shareholders will therefore receive 1.742 NewCo shares for each of their PSA shares, while FCA shareholders will receive one NewCo

share for each of their FCA shares. Based on market capitalizations, the value of PSA is 6.8% slightly lower than that of FCA. To compensate for the valuation differences, FCA shareholders are to receive a special dividend of €2.9 bn. PSA, on the other hand, is contributing its shares in Faurecia, 7% of which are to be sold at €308 m. The proceeds from the share sale are to be distributed equally to FCA and PSA shareholders after closing. However, it should be noted that the valuation adjustments are not based on market capitalization, but on a comprehensive company valuation. In this case, the students are asked to determine the value of the two companies based on the discounted cash flow method and a multiple valuation to assess whether one company is overpaying.

4.2.1 Discounted Cash-Flow Method

Based on the free cash flows given in Exhibit A10, students can use the DCF valuation method to determine the enterprise values of both companies. Therefore, students must determine an appropriate discount rate for both companies. The WACC approach is the most used valuation method (Dreher and Ernst 2022). The WACC consists of three main components: the cost of equity, the after-tax cost of debt, and the target capital structure of the company. Accurately estimating WACC is difficult because there is no way to directly measure an investor's opportunity cost, especially the cost of equity (Koller, Goedhart, and Wessels 2020). Therefore, students will calculate various discount rates, all of which may be appropriate.

From Exhibit A10, the cost of debt for both companies can be obtained, as well as the tax rates. The cost of equity is to be calculated by the students. There are several competing models for estimating the equity risk premium (De Luca 2018). The best-known of these is the equilibrium Capital Asset Pricing Model (CAPM) (De Luca 2018). The expected return on equity and thus the cost of equity is equal to the risk-free rate plus the equity risk premium, which is equal to the coefficient beta (ß), multiplied by the difference between the expected return on the equity

market, as measured by the market portfolio, and the return (certain) on risk-free assets, as measured by the risk-free rate (De Luca 2018). While the expected return on the stock market is given in Exhibit A10, students are asked to determine a risk-free rate and beta themselves.

Suitable risk-free rates are the yields of triple-A-rated government bonds with a maturity of ten or 30 years. The only European government bonds with this rating are Germany, Luxembourg, and the Netherlands. The risk-free rate used for the WACC calculation in Exhibit TN-A5 is based on the returns of the 30-year German government bond. Some students may think negative risk-free rates are not appropriate and hence, use a 0% risk-free rate instead. However, the CAPM does allow negative risk-free rates. Some students may also use the real risk-free rate, i.e. an inflation-adjusted risk-free rate. However, since the cost of equity is expressed in nominal terms, meaning it takes into account expected inflation, it would only be consistent to use a nominal risk-free rate.

For the determination of the beta, the historical stock prices of both companies are given in Exhibit A11. Students are asked to decide on their own which stock index is best suited as a proxy for the market portfolio. For the beta calculations in Exhibit TN-A5, the Stoxx Europe 600 Index (SXXP) is used because it includes the largest 600 listed European companies, and both FCA and PSA are European companies. However, it is important to note that other stock indices could also be appropriate to determine the stock betas.

According to the calculations in Exhibit TN-A7 and Exhibit TN-A8, FCA has a stand-alone enterprise value of €15,254 m and a stand-alone equity value of €17,789 m. PSA, on the other hand, has a stand-alone enterprise value of €13,653 m and a stand-alone equity value of €18,743 m.

The synergies are exclusively cost synergies. As these are easier to achieve and are most certain, a lower discount rate should also be applied to these synergies due to the lower risk (Gaughan 2018, 103). A rate close to the risk-free rate or cost of debt is appropriate (Gaughan 2018, 103).

The calculation in Exhibit TN-A6 uses the latter. The synergies will be achieved in full for the first time in 2024. In the calculation in Exhibit TN-A6, it is assumed that synergies will increase linearly until then. These assumptions result in a present value of synergies of €33,403 m for FCA and €33,469 m for PSA. After adding these present values of the synergies and considering the adjustment measures under the final merger terms, the equity value for FCA is €49,191 m and for PSA €51,905 m (Exhibit TN-A7 and Exhibit TN-A8).

As the WACC and the terminal growth rate have the greatest influence on the equity value, it is advisable to carry out a scenario analysis in order to take various possible developments into account. In Exhibit TN-A9, FCA's equity value including synergies and adjustment measures is calculated at a WACC of between 5.19% and 8.19%, and PSA's value at a WACC of between 6.30% and 9.30%. At the same time, the terminal growth rate varied between 0.75% and 1.05% for both companies. This results in an equity value including synergies and adjustment measures of between €45.092 million and €56.568 m for FCA and a value between €48.914 m and €56.813 million for PSA.

Based on the baseline scenario, PSA will enter the NewCo with a 5.5% higher value, whereas it was stand-alone valued at 6.8% lower than FCA on the market. However, students should conclude that the two equity values after consideration of the synergies and the adjustment measures are roughly equal. Such small valuation differences do not indicate that PSA is overpaying, as the DCF valuation only allows an estimate of the equity value. Overpayment can only be concluded if the differences are larger. Hence, it seems neither FCA nor PSA is overpaying.

4.2.2 Multiple Valuation

In addition, students should perform a multiple valuation to better classify the equity values calculated in the DCF valuation. According to the multiple valuation in Exhibit TN-A10, FCA

has a stand-alone equity value between €20,814 m and €32,253 m. PSA, on the other hand, has a stand-alone equity value between €26,110 m and €58,217 m. Accordingly, the stand-alone equity values from the DCF valuation (FCA: €17,789 m; PSA: €18,743 m) are both below the lower range from the multiple valuation.

Ask the students for reasons why the equity values from the multiple valuations are so high. The multiple valuation is based on the latest available data, June 30, 2020, which is during the COVID-19 pandemic. The automotive industry is strongly affected by the pandemic. Supply bottlenecks and falling sales figures have had a negative impact on the income statements. In contrast, since April 2020, equity markets have been recovering rapidly after plunging precipitously in February 2020 (Exhibit TN-A4). These distortions lead to higher enterprise values and correspondingly to higher equity values in the multiple valuations. If students do not come up with this limitation on their own, it is recommended to refer to Exhibit A4.

In addition, the new trends of connectivity, shared mobility, autonomous driving, and electrification ("CASE") pose major challenges for the automotive industry. The stock market considers how well an automaker masters this transformation process. At present, however, these future trends do not yet have a meaningful impact on the income statement. This also leads to distortions within the company valuation through trading multiples.

Students should conclude that trading multiples are not appropriate at this time to adequately determine enterprise values or equity values for FCA and PSA due to high distortions. For this reason, it makes more sense to focus on forward-looking valuation methods such as DCF.

4.3 Analysis of Power Distribution

Since previous discussions have already addressed the question of whether this merger makes strategic sense for FCA and whether one company is overpaying, the question arises as to

whether power is equally distributed between both companies. For this purpose, the distribution of board seats and the filling of key positions at the NewCo should be considered.

According to the final merger terms, PSA will have the majority of the board and Carlos Tavares remains CEO of the NewCo. FCA CEO Michael Manley, on the other hand, will not get a board seat at all. Exor CEO and FCA chairman John Elkann will be the chairman at the NewCo. The question can be raised here as to why PSA is given such an advantage on the board of directors, while FCA can only occupy the position of chairman. What measures will ensure that it is still a merger of equals and that FCA is not disadvantaged? The students should stimulate the discussion here and learn about the bodies of companies and their tasks. This also helps to analyze how equal FCA and PSA really are in this merger.

The students should work out that Carlos Tavares has already proven himself during the integration of Opel and Vauxhall into PSA and is considered an experienced cost saver. Therefore, he has a clear advantage over Michael Manley for the NewCo CEO position, as Manley has been CEO of FCA for a short time and only because of the death of former CEO Sergio Marchionne. To balance the important position of the CEO, it is very fitting for FCA to make its chair John Elkann the NewCo chairman. For Elkann and FCA, this is the desired solution, as it allows them to continue to exert influence while the operational fortunes of the NewCo will be controlled by the experienced Tavares.

Now the discussion should be directed to the board seats - why will PSA get the majority here? To answer this question, it should be considered how much negotiating power both entered the talks with. Prior to the merger talks with PSA, FCA negotiated with Renault, but these failed after a short time. The small number of potential partners for a merger of equals therefore significantly weakened FCA's negotiating position. PSA was able to take advantage of this and secure a majority on the board.

As for whether both companies will get equal influence in NewCo, there are indications that PSA will get more influence than FCA because of its majority on the board. Either way, there is no clear answer to this question. Students may have different views on the distribution of power. The important thing is that they give adequate arguments for their answer. The instructor could end the discussion on this topic by asking students to vote by raising their hands on whether they think this is truly a merger of equals or not, to get a sense of the students' assessments.

4.4 Conclusion

After the discussion, the instructor should end the session by asking whether the merger with PSA makes sense for FCA. From a strategic point of view, the deal makes sense for FCA, as PSA, after a thorough evaluation of different criteria, is a suitable partner with whom FCA can enter the merger on an equal footing, and which enables geographical diversification and helps to catch up in the EV market. The DCF valuation shows that the equity values of both companies are approximately the same, considering the adjustment measures and synergies. Consequently, the merger is fair in terms of valuation. It seems that neither FCA nor PSA is overpaying. Students will probably be undecided as to whether this is truly a merger of equals, especially given the clear majority on the board of directors for PSA.

All in all, after the students have processed and consolidated all the results from the various questions throughout the case, they should be able to use their acquired knowledge to assess whether FCA has reached a sensible deal here.

5. Suggested Assignment Questions

1. Was the merger sensible for FCA from a strategic perspective?
    a. Search for arguments as to why FCA sought a merger of equals.
    b. Determine the strategic fit of FCA and PSA.
2. Is one of the two companies overpaying?
    a. Determine how much FCA and PSA are worth using the DCF valuation method, taking synergies into account.
    b. In addition, perform a multiple valuation and compare the values with those from the DCF valuation.
3. Do both companies receive an equal power distribution?

6. Suggested Teaching Plan

25 minutes	1. Introduction: Was the merger sensible for FCA from a strategic perspective? What the reasons are for doing a merger of equals? What was FCA's situation before the merger? Why FCA sought a merger of equals? Is PSA strategically a sensible partner for FCA?
35 minutes	2. How much are FCA and PSA worth according to DCF and trading multiple valuation after considering adjustment measures and synergies? Is one company overpaying? What are the limitations of this multiple valuation?
15 minutes	3. Was it really a merger of equals?
5 minutes	4. Conclusion: Was the merger with PSA sensible for FCA?

Exhibit TN-A1: Board Plan Company Analysis

	Fiat Chrysler Automobiles	**Peugeot S.A.[1)]**
Headquarters	Netherlands	France
CEO	Michael Manley (former CEO Marchionne died unexpectedly in 2018)	Carlos Tavares (highly experienced turnaround boss)
Chairman	John Elkann	
MarketCap	€15,611.7 m	€14,540.6 m
Vehicles sold	4.8 m (8th largest automaker)	4.1 m (9th largest automaker)
Revenues	€108.2 bn (7th largest automaker)	€74.7 bn (9th largest automaker)
Revenue share / market share per region		
Europe	26.1% / 6.0% ↘	86.1% / 16.6% ↗
China	2.1% / 0.4% ↗	4.8% / 0.6% ↘
North America	58.0% / 12.6% →	0.0% / 0.0% →
Other	13.8% / 2.8% ↗	9.0% / 1.1% ↘
Gross margin	13.9%	20.9%
Portfolio	Mainstream: 7 brands Premium: 1 brand Luxury: 1 brand	Mainstream: 4 brands Premium: 1 brand
EV technology	Low market share, barely advanced in development	Low market share, far advanced in development
Important shareholders	Exor (Agnelli Family), 28.5%, 44.4% of voting rights	Peugeot Family, 14.0% French government, 14.0%

All information is as of the end of 2019

[1)] Peugeot S.A. will be added later in the lesson after FCA

Exhibit TN-A2: Board Plan Deal Structure

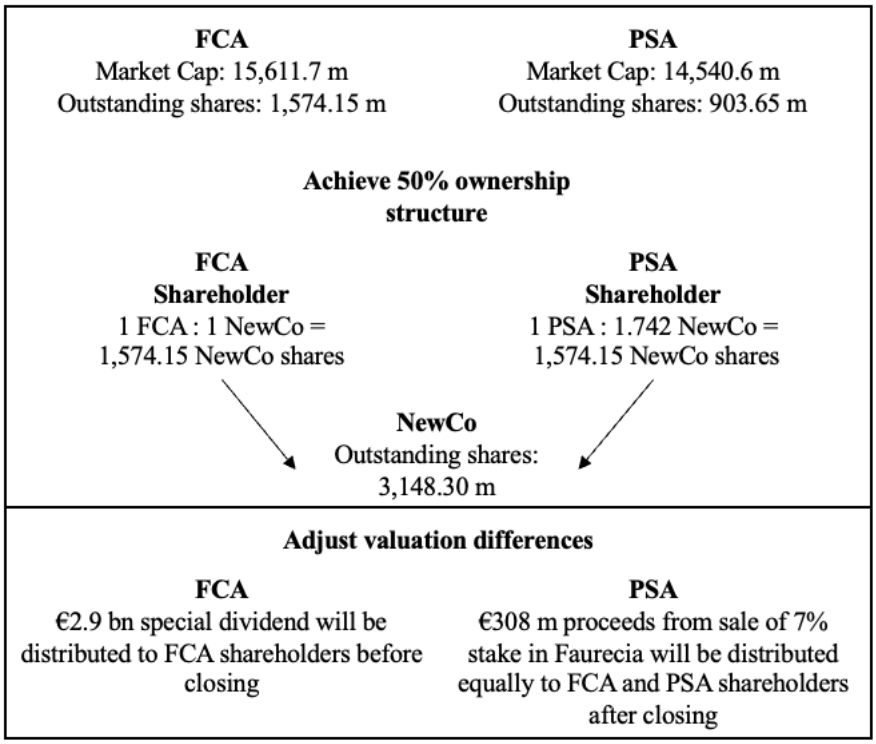


Exhibit TN-A3: Board Plan Corporate Governance Structure

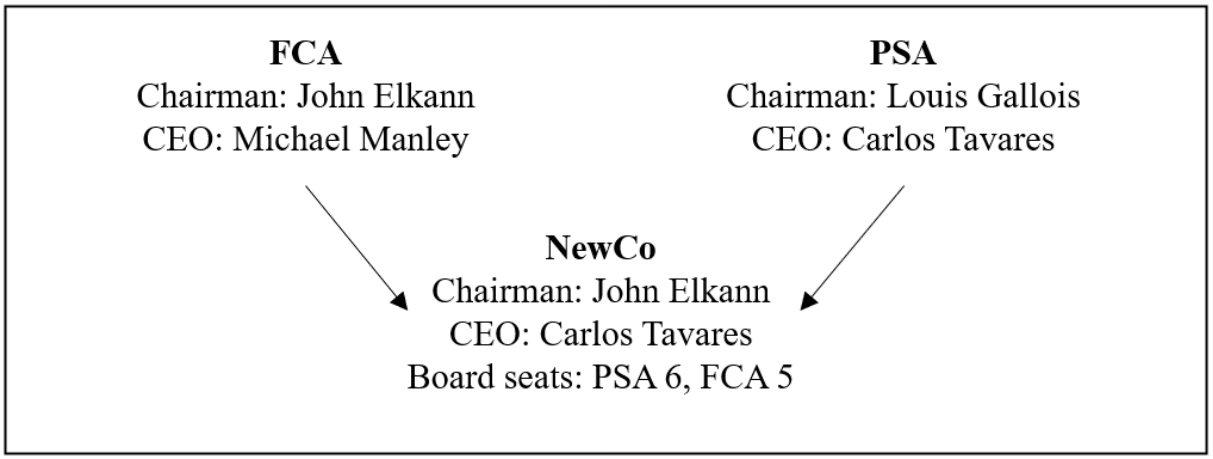
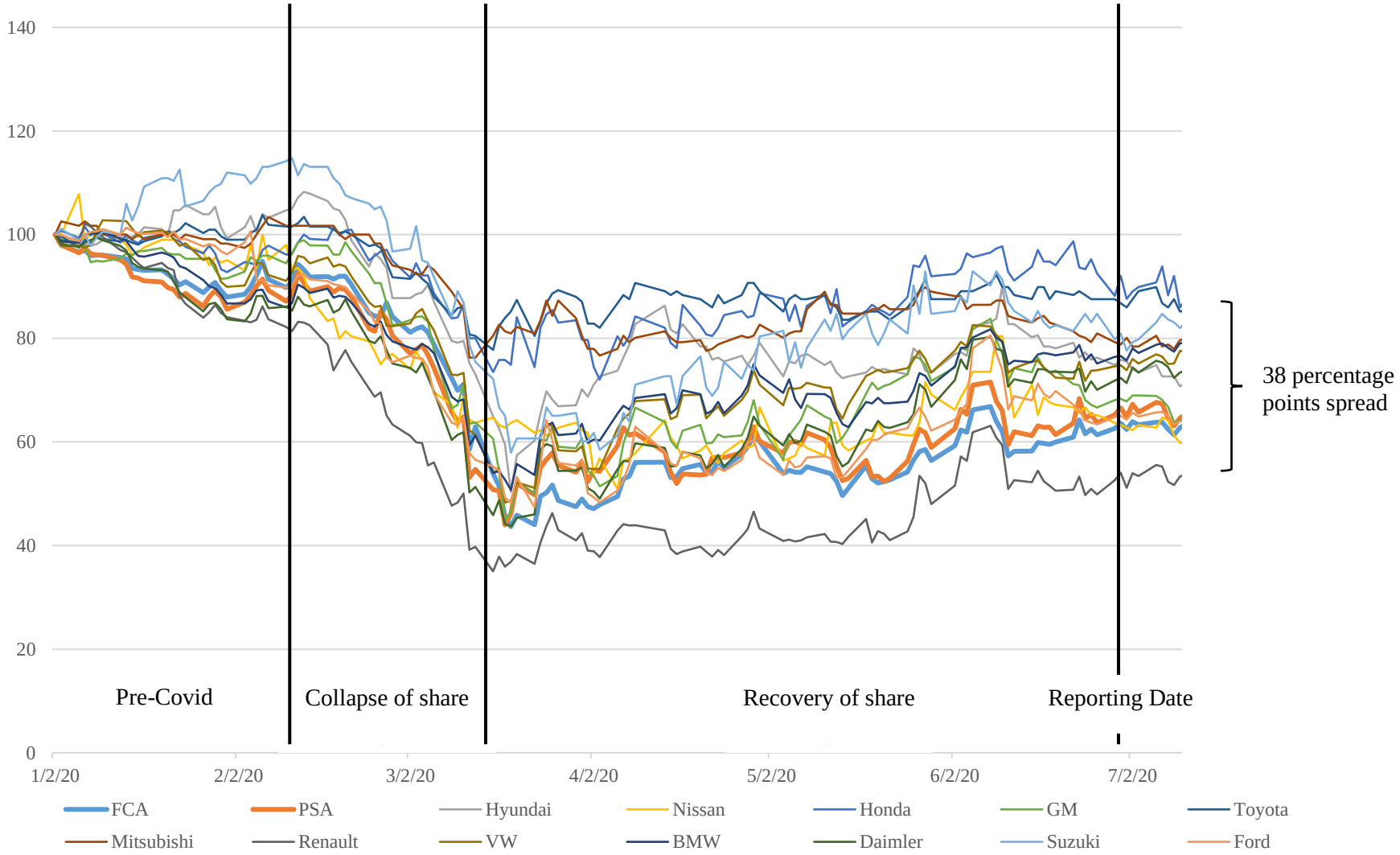


Exhibit TN-A4: Share Price Development of the Largest Automaker (Indexed, base = 100)



Source: Own representation based on data from Bloomberg 2023

Exhibit TN-A5: WACC Calculation

Beta FCA: 1.43

Beta PSA: 1.45

Risk-free rate: -0.078% (30 years German government bond yield)

FCA	Weight	Cost	W x C
Debt	49.5%	1.03%	0.51%
Equity	50.5%	12.24%	6.18%
WACC			**6.69%**

PSA	Weight	Cost	W x C
Debt	40.6%	1.01%	0.41%
Equity	59.4%	12.44%	7.39%
WACC			**7.80%**

Exhibit TN-A6: Present Value of Synergies

Synergies FCA in €m	**2020**	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**	**TV**
Cost Savings (after tax)		263	525	788	1,050	1,050	
Savings in Capital Expenditures		250	500	750	1,000	1,000	
Implementation Costs (after tax)		-1,400					
Free Cash Flows		-888	1,025	1,538	2,050	2,050	30,632
Discount Factor[1)]		0.97	0.96	0.94	0.93	0.92	0.92
Present Value		-862	981	1,450	1,905	1,877	28,052
Net Present Value	33,403						

Synergies PSA in €m	**2020**	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**	**TV**
Cost Savings (after tax)		263	525	788	1,050	1,050	
Savings in Capital Expenditures		250	500	750	1,000	1,000	
Implementation Costs (after tax)		-1,400					
Free Cash Flows		-888	1,025	1,538	2,050	2,050	30,632
Discount Factor[1)]		0.97	0.96	0.94	0.93	0.92	0.92
Present Value		-862	982	1,452	1,908	1,881	28,109
Net Present Value	33,469						

[1)] The cost of debt was used as the discount rate

Source: Stellantis 2020; Case writers' assumption

Exhibit TN-A7: DCF-Valuation FCA

WACC		6.69%						
Terminal Growth		0.90%						
		1	2	3	4	5	6	6
in €m	2019	2020F	2021F	2022F	2023F	2024F	2025F	TV
Free Cash Flows		-3,368	2,146	-1,071	2,192	1,827	1,153	20,078
Discount Factor		0.94	0.88	0.82	0.77	0.72	0.68	0.68
Present Value		-3,157	1,885	-882	1,692	1,322	781	13,612
Enterprise Value (Stand-alone)								**15,254**
Enterprise Value (with Synergies)								48,656
Cash & Equivalents	15,591							
Minority Interest	138							
Total Debt	12,918							
Equity Value (Stand-alone)								**17,789**
Equity Value (with Synergies)								51,191
Special dividend								2,000
Equity Value (with synergies, after adjustment measures)								**49,191**

Exhibit TN-A8: DCF-Valuation PSA

WACC		7.80%
Terminal Growth		0.90%

		1	2	3	4	5	6	6
in €m	2019	2020F	2021F	2022F	2023F	2024F	2025F	TV
Free Cash Flows		-176	426	1,321	296	634	1,179	17,246
Discount Factor		0.93	0.86	0.80	0.74	0.69	0.64	0.64
Present Value		-164	366	1,054	219	436	751	10,990
Enterprise Value (Stand-alone)								**13,653**
Enterprise Value (with Synergies)								47,123
Cash & Equivalents	19,232							
Minority Interest	2,727							
Total Debt	11,415							
Equity Value (Stand-alone)								**18,743**
Equity Value (with Synergies)								52,213
Faurecia shares distributed post-closing to all Stellantis shareholders								308
Equity Value (with synergies, after adjustment measures)								**51,905**

Exhibit TN-A9: Scenario Analysis

Scenario Analysis: Equity Value with Synergies and after Adjustment Measures FCA
in €m

Terminal Growth \ Cost of Capital	5.19%	5.69%	6.19%	6.69%	7.19%	7.69%	8.19%
1.05%	56,568	53,732	51,450	49,574	48,005	46,674	45,531
1.00%	56,310	53,532	51,290	49,444	47,898	46,585	45,455
0.95%	56,059	53,335	51,133	49,317	47,793	46,496	45,380
0.90%	55,813	53,143	50,980	49,191	47,689	46,410	45,307
0.85%	55,573	52,955	50,829	49,068	47,587	46,324	45,234
0.80%	55,338	52,770	50,681	48,947	47,487	46,240	45,163
0.75%	55,109	52,590	50,535	48,828	47,388	46,156	45,092

Scenario Analysis: Equity Value with Synergies and after Adjustment Measures PSA
in €m

Terminal Growth \ Cost of Capital	6.30%	6.80%	7.30%	7.80%	8.30%	8.80%	9.30%
1.05%	56,813	54,990	53,463	52,166	51,051	50,083	49,236
1.00%	56,657	54,863	53,357	52,077	50,976	50,019	49,181
0.95%	56,504	54,738	53,254	51,990	50,902	49,956	49,126
0.90%	56,354	54,615	53,152	51,905	50,830	49,894	49,072
0.85%	56,206	54,494	53,051	51,820	50,758	49,832	49,019
0.80%	56,061	54,375	52,952	51,737	50,687	49,771	48,966
0.75%	55,918	54,258	52,855	51,655	50,617	49,711	48,914

Exhibit TN-A10: Trading Multiples

in €m	EV[1)]	Sales[2)]	EBITDA[2)]	EBIT[2)]	EV/Sales	EV/EBITDA	EV/EBIT
Fiat Chrysler		89,239	6,339	1,090			
Peugeot		74,731	8,056	3,168			
Volkswagen	70,719	223,569	29,662	4,217	0.32	2.38	16.77
Toyota	288,290	223,758	27,356	13,993	1.29	10.54	20.60
Renault	5,961	55,537	5,914	2,105	0.11	1.01	2.83
Nissan	13,816	72,622	5,341	(1,640)	0.19	2.59	
Mitsubishi	4,045	16,428	256	(372)	0.25	15.79	
Daimler	12,010	157,804	10,422	1,939	0.08	1.15	6.19
BMW	22,821	99,258	16,257	5,363	0.23	1.40	4.26
General Motors	40,669	104,731	13,145	1,079	0.39	3.09	37.69
Hyundai	65,686	77,177	5,505	2,268	0.85	11.93	28.96
Ford	21,753	117,946	3,080	(4,554)	0.18	7.06	
Honda	82,867	109,248	7,921	2,238	0.76	10.46	37.03
Suzuki	16,244	25,150	2,586	1,286	0.65	6.28	12.63
Median					0.28	4.69	16.77

[1)] as of June 30, 2020

[2)] July 1, 2019 - June 30, 2020

EV/Sales Multiple	**FCA**	**PSA**
Enterprise Value	25,101	21,020
Cash & Equivalents	15,591	19,232
Minority Interest	138	2,727
Total Debt	12,918	11,415
Equity Value	27,636	26,110

EV/EBITDA	**FCA**	**PSA**
Enterprise Value	29,718	37,767
Cash & Equivalents	15,591	19,232
Minority Interest	138	2,727
Total Debt	12,918	11,415
Equity Value	32,253	42,857

EV/EBIT	**FCA**	**PSA**
Enterprise Value	18,279	53,127
Cash & Equivalents	15,591	19,232
Minority Interest	138	2,727
Total Debt	12,918	11,415
Equity Value	20,814	58,217

Total Range	**FCA**	**PSA**
Equity Value min	20,814	26,110
Equity Value max	32,253	58,217

all values in €m

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Case C: Call for Consolidation – Was PSA FCA's Last Chance?

Already many years before FCA started merger talks with Renault and PSA, Sergio Marchionne, former FCA CEO, claimed that consolidation in the automaker industry would be the only solution to master the transformation in the automotive industry (Clothier 2015). FCA was looking for a strategic move that would improve its position a lot. Thus, it was looking for a large automaker to merge with, which excludes a potential acquisition of a smaller automaker from FCA´s options. (Pollard 2016)

In May 2019, FCA approached French automaker Renault to discuss a potential merger. The preliminary deal terms would see the two companies merge as equals, and FCA chairman John Elkann would remain chairman of the NewCo (Frost and Piovaccari 2019). This would have been a perfect solution for Elkann, who is also CEO of Exor, the largest shareholder in FCA, as he wanted to keep his power and influence in the NewCo (Sanderson, Campbell, and Keohane 2019).

However, after ten days, the talks failed and FCA would now have to look for other options (Granville 2019). This is a difficult task, as the automotive industry is already very concentrated (Exhibit C5-C7). In addition, mergers of equals are risky and complex, which is why not many automakers would take such a risk to capture potential synergies.

FCA is in an unfavorable position, as it is at the lower end of the peer group in terms of market capitalization (Exhibit C1) and revenue (Exhibit C2). Thus, it is very difficult for FCA to find a partner that would merge with a smaller automaker but still give FCA the concessions it was looking for. It is particularly critical that FCA would prefer to have a merger of equals, but due to the different basic requirements with most of its peer group, this is hardly possible. However, a merger of equals seems like the only suitable option for FCA, as it needs to avoid a potential takeover by larger automakers, but still wants to escape its problems through consolidation. FCA is therefore walking a fine line between achieving the overarching goal of consolidation

with a major automaker and losing its own identity and influence as the weaker partner in a potentially unequal merger, labeled as a merger of equals.

In October of the same year, FCA announced that they started talks with French automaker PSA, the main rival of Renault, to merge as equals to create the largest automaker in Europe by vehicles sold (Keohane, Massoudi, and Fontanella-Khan 2019). Although FCA has found another potential partner for a merger of equals, the question can be raised as to which other options FCA has, to better understand its negotiating power. Are there any? Or is PSA FCA's last chance to merge to survive in the automaker industry?

Exhibit C1: Market Capitalization by Automaker as of December 31, 2018

Automaker	Market Capitalization (€m)
Toyota	145,229
Volkswagen	69,730
Daimler	49,123
BMW	46,492
General Motors	40,892
Honda	40,555
Nissan	27,427
Ford	26,620
Suzuki	20,446
FCA	19,579
Hyundai	18,989
PSA	16,871
Renault	16,132
Mitsubishi	7,134

Source: Bloomberg 2023b

Exhibit C2: Revenue and CAGR by automaker in 2018

Automaker	Revenue (€m)	CAGR 16-18
Volkswagen	235,849	4.2%
Toyota[1)]	226,838	2.8%
Daimler	167,362	4.5%
Ford	135,881	-0.5%
General Motors	124,619	-3.9%
Honda	118,602	3.7%
FCA	110,412	-0.3%
BMW	96,855	1.4%
Nissan[1)]	92,275	0.1%
Hyundai	74,546	1.1%
PSA	74,027	17.1%
Renault	57,419	5.9%
Suzuki[1)]	29,009	9.9%
Mitsubishi[1)]	16,927	-0.6%

[1)] Numbers as of March 31, 2019, as these automakers are following the Japanese fiscal year

Source: Bloomberg 2023c

Exhibit C3: Average Profit Margin and Average Annual Growth Rate by Automaker 2016-2018

Automaker	Average Profit Margin 16-18	Average Annual Growth Rate 16-18
Toyota[1)]	8.2%	2.0%
BMW	7.8%	-0.5%
Renault	7.4%	-1.6%
General Motors	6.9%	0.4%
Volkswagen	6.0%	9.4%
Daimler	5.6%	-16.0%
Nissan[1)]	5.3%	20.8%
Honda	4.6%	66.5%
Suzuki[1)]	4.5%	40.1%
PSA	4.2%	18.0%
Hyundai	4.0%	-45.6%
Ford	3.9%	-21.2%
FCA	3.3%	32.6%
Mitsubishi[1)2)]	2.3%	-

[1)] Numbers as of March 31, 2019, as these automakers are following the Japanese fiscal year

[2)]Mitsubishi had a negative profit margin in 2018, therefore no average annual growth rate can be calculated

Source: Bloomberg 2023c

Exhibit C4: Vehicles Sold and CAGR by Automaker in 2018

Automaker	Vehicles Sold (k Units)	CAGR 16-18
Volkswagen	10,834	2.6%
Toyota	8,964	1.6%
General Motors	8,386	-8.5%
Ford	5,982	-5.2%
FCA	4,655	1.9%
Hyundai	4,545	-2.1%
Suzuki	4,489	9.0%
Nissan	4,329	1.9%
Renault	3,884	10.5%
PSA	3,878	11.0%
Honda	3,689	4.7%
Daimler	3,352	5.7%
BMW	2,483	2.4%
Mitsubishi	1,260	0.8%

Source: Bloomberg 2023a

Exhibit C5: European Market Share and Average Annual Growth Rate by Automaker in 2018

Automaker	Market Share Europe	Average Annual Growth Rate 16-18
Volkswagen	23.7%	0.0%
PSA	16.8%	24.1%
Renault	14.2%	7.6%
Ford	8.3%	-2.4%
Daimler	7.3%	-0.8%
FCA	7.1%	-1.7%
BMW	5.9%	-2.0%
Toyota	5.2%	4.8%
Nissan	4.3%	0.6%
Hyundai	3.2%	-10.4%
Suzuki	1.7%	10.5%
Mitsubishi	1.2%	-6.5%
Honda	1.0%	4.9%
General Motors	0.0%	-94.1%

Source: Bloomberg 2023a

Exhibit C6: Asian Market Share and Average Annual Growth Rate by Automaker 2018

Automaker	Market Share Asia	Average Annual Growth Rate 16-18
Volkswagen	11.9%	0.7%
General Motors	11.0%	-6.5%
Toyota	9.9%	3.7%
Suzuki	9.9%	8.0%
Hyundai	7.2%	-3.4%
Honda	3.5%	4.7%
Daimler	2.9%	12.1%
Ford	2.8%	-14.0%
Nissan	2.5%	2.3%
BMW	2.3%	6.0%
Mitsubishi	1.7%	5.5%
Renault	0.9%	37.8%
PSA	0.8%	-33.9%
FCA	0.0%	0.0%

Source: Bloomberg 2023a

Exhibit C7: North American Market Share and Average Annual Growth Rate by Automaker in 2018

Automaker	Market Share NA	Average Annual Growth Rate 16-18
General Motors	17.3%	-1.2%
Ford	14.5%	-0.9%
Toyota	13.9%	0.2%
FCA	13.0%	1.6%
Nissan	10.1%	2.1%
Honda	9.4%	4.0%
Volkswagen	4.7%	1.7%
Hyundai	4.3%	0.9%
Daimler	3.0%	0.7%
BMW	2.3%	0.4%
Mitsubishi	0.9%	9.5%
Suzuki	0.2%	-2.3%
PSA	0.0%	0.0%
Renault	0.0%	0.0%

Source: Bloomberg 2023a

Exhibit C8: Cash and ST-investments by Automaker as of December 31, 2018

Automaker	Cash (€m)	ST-Investments (€m)
Toyota[1)]	28,759	18,130
Volkswagen	28,938	26,619
Daimler	15,853	11,210
BMW	10,979	6,675
General Motors	18,201	5,210
Honda	20,066	-
Nissan[1)]	12,762	4,122
Ford	14,598	15,048
Suzuki[1)]	4,101	1,521
FCA	12,450	332
Hyundai	7,147	13,870
PSA	15,426	971
Renault	14,777	1,585
Mitsubishi[1)]	4,030	-

[1)] Numbers as of March 31, 2019, as these automakers are following the Japanese fiscal year

Source: Bloomberg 2023c

Exhibit C9: Research & Development Expenses by Automaker in 2018

Automaker	R&D Expenses (€m)	R&D / Revenues
Volkswagen	13,640	5.8%
Daimler	9,107	5.4%
Toyota[1)]	8,217	3.6%
BMW	6,890	7.1%
General Motors	6,610	5.3%
Ford	6,494	4.8%
Honda	5,461	4.6%
PSA	3,914	5.3%
Nissan[1)]	3,828	4.1%
Renault	3,516	6.1%
FCA	3,051	2.8%
Hyundai	2,122	2.8%
Suzuki[1)]	1,076	3.7%
Mitsubishi[1)]	791	4.7%

[1)] Numbers as of March 31, 2019, as these automakers are following the Japanese fiscal year

Source: Bloomberg 2023e

Exhibit C10: Automakers and Their Origin

Automaker	**Origin**
VW	Germany
Daimler	Germany
Toyota	Japan
BMW	Germany
GM	USA
Ford	USA
Honda	Japan
PSA	France
Nissan	Japan
Renault	France
FCA	Italy
Hyundai	South Korea
Suzuki	Japan
Mitsubishi	Japan

Source: Bloomberg 2023a

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Case C: Call for Consolidation - Was PSA FCA's Last Chance?

Teaching Note

1. Synopsis

The global automaker industry is facing many challenges, including connectivity, shared mobility solutions, and electrification (Thomas 2019). Especially the latter causes many problems for automakers, as it requires significant investments to keep up with the competition and legal requirements. Sergio Marchionne, FCA's former CEO, was one of the first to realize that his company would not be able to tackle these problems on its own. Thus, he publicly demanded more consolidation in the automaker industry and FCA was actively looking for a merger to benefit from shared R&D resources and cost synergies to survive in the challenging industry (Sanderson, Campbell, and Keohane 2019). First talks with European competitor Renault failed, but in October 2019, FCA and PSA started their merger talks (Keohane, Massoudi, and Fontanella-Khan 2019). This case study seeks to further investigate FCA's search for a merger partner and tackles to answer the question of whether PSA was FCA's last chance for a merger or whether were there any other options for FCA to fulfill its goal of consolidation.

2. Positioning

This case is used in a module for Mergers & Acquisition, an advanced finance course for Master´s students. In preparation for the case, it helps if students have a good understanding of strategic reasons why companies merge. Students should know key financial metrics and what they mean for mergers. The case is designed to be taught in a standard 80-minute class.

3. Pedagogical Objectives

The case study has two pedagogical objectives:

1. The case study provides the opportunity for students to learn how to analyze key financial metrics
2. Through this case study, students will learn how to manage large amounts of data and identify and evaluate relevant key data

4. Substantive Analysis

Start the discussion by pointing out to the students that FCA approached both Renault and PSA in 2019 and the reasons have already been analyzed, but the question now is what other options FCA had when approaching PSA. This will help to further understand FCA´s negotiating power when talking to PSA after the failed Renault talks. The students should search the automaker industry for potential merger partners out of FCA´s perspective, based on data given in the Case C exhibits. The criteria they can use to find potential partners are the challenges and preconditions that have already been identified for FCA in Case A.

First, students should identify whether a merger of equals is possible, as this was a condition for John Elkann. Second, students should discuss financials, geographic diversification, EV technology, and cultural fit. The board can be used to create and fill out a decision matrix together with the students step by step, going through each relevant criterion. A sample of the board plan is given in Exhibit TN-C2. This helps students to finally decide which other options FCA had to merge as equals. If students find that several automakers would fit, they can rank them based on their evaluation.

4.1 Merger of Equals

Since John Elkann really wanted to have a merger of equals, it is the first criterion to be examined, as it can be seen as an exclusion criterion. Students should identify that for a merger of equals, both companies should have at least a similar valuation so any differences can be balanced with adjustment measures. Here, the market capitalizations given in Exhibit C1 can be used as a proxy for the values.

Students should conclude that a higher valued company would need to finance adjustments measures such as special dividends in order to merge with FCA as equals.

To check whether companies are able to do this, students must calculate the difference between FCA´s and the company's market capitalizations. They should carry out the assessment of whether the higher valued company has enough cash capacity, on the basis of the balance sheet data given in Exhibit C8 to balance the valuation difference. The students need to look at cash and short-term investments, as the latter can be liquidated quickly into cash to finance adjustment measures (Exhibit TN-C1). However, students should also realize that in practice, companies cannot use up all of their cash capacity and should therefore make a reasonable assumption as to what proportion could be used. Here it is assumed that a maximum of 50% of cash capacity can be used to equalize the value difference. Students might consider inventories or fixed assets to liquidate to cash, but inventories are hard to reduce as automakers produce usually just-in-time, and fixed assets are mostly necessary for business operations and are therefore not considered here.

After this assessment was made, students should conclude that most of the companies that are more highly valued than FCA such as Toyota, Volkswagen, Daimler, BMW, General Motors, and Honda are not able to cover the necessary compensatory measures to merge with FCA, which can be seen in Exhibit TN-C1.

However, Ford, Nissan, and Suzuki also have a higher valuation than FCA, but their valuation gap to FCA is lower and they have enough resources for adjustment measures to balance the valuation difference, which makes them potential partners for a merger of equals with FCA (Exhibit TN-C1).

Now that the higher-valued companies have been checked for suitability, students should evaluate the companies that are lower valued than FCA, namely Hyundai and Mitsubishi. Hyundai has a similar market capitalization as FCA. Therefore, barely any compensatory measures would be necessary. On the other hand, Mitsubishi has a very low valuation and FCA would have to use almost all of its cash and short-term investments to balance the company valuation, which is why only Hyundai is considered further.

In conclusion, a merger of equals for FCA would only be feasible with Ford, Nissan, Hyundai, and Suzuki. Therefore, these four companies are further examined on the basis of the previously defined criteria, while all other companies are not considered further in the analysis. This analysis can be shown on the board (Exhibit TN-C2).

4.2 Key Metrics

Now that the companies have been thinned out, the remaining ones are analyzed below using various criteria. First, the size of the companies will be analyzed based on the revenue and the number of vehicles sold in 2018, given in Exhibit C2 and Exhibit C4. Both measures are used to provide a more comprehensive assessment of size. In addition, utilizing the average profit margin between 2016 and 2018 (Exhibit C4) allows to assess the financial health of the companies by providing insights into their ability to generate sustainable profits.

Ford is the fourth-largest automaker in the world by revenue (€136 bn) and vehicles sold (6.0 m), exceeding FCA's revenue by €26 bn and vehicles sold by 1.3 m. Nissan and Hyundai are the ninth- and tenth-largest automakers by revenue, making €92 bn and €75 bn respectively. In

contrast, Suzuki has made just €29 bn in 2019. A NewCo with Ford and FCA would create the largest automaker by revenue and second-largest by vehicles sold, while a merger with Nissan or Hyundai would create the third-largest automaker by revenue and second-largest by vehicles sold.

In addition, a potential merger with Nissan would make the existing Nissan-Renault-Mitsubishi alliance the largest automaker in the world by revenue and vehicles sold, giving the alliance an enormous global market power.

Besides revenues and the number of vehicles sold, students should analyze the profit margin as it is a key financial metric in mergers, but especially in mergers of equals. As profit margins are volatile due to one-time effects, the average profit margin from 2016 to 2018 was used for comparison. All remaining potential merger partners had a higher average profit margin than FCA. Nissan had the highest margin with 5.3% and increased it on average by 21% per year since 2016. Suzuki had the second-highest margin with 4.5% and the highest annual increase with 40% on average. Ford (3.9%) and Hyundai (4.0%) had comparable average profit margins, but their margins declined on average by 21% and 46% annually from 2016 to 2018.

Students should argue that merging with an unprofitable automaker would mean for FCA that the financial health of the unprofitable company could affect the overall financial performance of the NewCo. If the unprofitable company has significant financial challenges, it may create a drag on the profitability of the combined organization. In contrast, a profitable business can have a direct positive impact on the new company and FCA could benefit from knowledge on efficiency improvement. In conclusion, Nissan and Suzuki show great development in their profit margin, while Ford and Hyundai show a downward trend.

Another important metric is the potential R&D resources. The higher the R&D resources, the higher the chance to develop high-quality electric vehicles. To measure how much automakers value technology, the ratio of R&D expenses to revenues can be used. Based on Exhibit C9,

Students should identify that Hyundai and FCA had the same ratio, which is lower than the ratio of the other potential merger partners. Ford (4.8%) had the highest ratio and also by far the highest absolute R&D expenses (€6.5 bn), followed by Nissan (€3.8 bn), Hyundai (€2.1 bn) and Suzuki (€1.1 bn). As FCA's expenses were €3.1 bn, students should argue that a merger with Ford would triple FCA's expenses and would therefore be an excellent possibility to push electrification.

4.3 Geographic Markets

Besides financial metrics, another factor to evaluate a potential merger deal from FCA's strategic perspective is the geographical markets where potential merger partners are operating, and which market share they have respectively. FCA had a very high dependence on the US market while its market share in Europe decreased on average by 2% annually since 2016 down to 7.1% in 2018. This development makes it more difficult for FCA to achieve economies of scale in Fiat's home market.

Students could discuss whether seeking geographic diversification would be beneficial for FCA, as being present in several markets could cause several risks. First, the NewCo would need to face competition in each market and would have to adjust to each market characteristic, which needs both effort and resources. In contrast, focusing on penetrating one market is more efficient, as the company knows all market characteristics and can specialize exclusively in further increasing its market share.

Students could therefore argue that FCA would need to merge with a company with market share in Europe to strengthen its position. Moreover, as FCA was not present in Asia, the biggest car market in the world, students may conclude that FCA could seek to merge in order to get an entry into the Asian market to achieve geographic diversification. (Exhibit C6 and Exhibit C7)

Although Ford's market share in Europe decreased on average by 2% per year since 2016, the US automaker has a market share of 8.3% in Europe and a merger with FCA would create the third-largest automaker by vehicles sold in Europe, behind Volkswagen and PSA. Nissan (4.3%), Hyundai (3.2%) as well as Suzuki (1.7%) had a comparable low market share in Europe. Interestingly, Suzuki's market share increased on average by 11% per year since 2016, while other potential merger partners either lost market share or kept their share. Students should therefore identify that Ford would be the only company that could help FCA achieve significant economies of scale in Europe. (Exhibit C5)

FCA had no presence in the important Asian market. Students should identify that all potential merger partners have a market share in Asia, but only Suzuki (9.9%) and Hyundai (7.2%) have a significant market share. Moreover, Suzuki's market share in Asia increased on average by 8% per year since 2016. Hence, a merger with Suzuki and Hyundai would allow FCA to secure a strong position in the Asian market. (Exhibit C6)

Students could argue that the market shares of Ford (2.8%) and Nissan (2.5%) are comparably low, and this would prompt a discussion as to whether the business should still be maintained here after a merger, as it would require the NewCo a lot of effort to compete against the big competition and such a low market share in Asia would have less impact on geographical diversification.

As FCA's key market is North America, increasing the market share would not benefit diversification, but would boost market penetration. Hyundai (4.3%) has a moderate market share in North America, while Suzuki (0.2%) is not relevant in this market at all. Both Ford (14.5%) and Nissan (10.1%) have a comparable high market share in North America, like FCA with 13.0%. Students should identify that this could cause contrasting effects. If FCA merges with a direct competitor in the US market, it would eliminate certain competition and therefore boost market penetration and pricing power among other synergies. On the other hand, this

could violate antitrust regulations and antitrust authorities also slow down, hinder, and potentially stop the merger process. (Exhibit C7) All in all, Ford helps to increase market share in the European home market of FCA, while Suzuki and Hyundai would give FCA an entry into the Asian market. Ford and Nissan could also further increase FCA´s high market share in North America, although this likely entails antitrust risks.

4.4 EV-Technology

With regard to EV technology, FCA was lagging behind and was in need of catching up with the industry, especially in the European market, where EU regulations have pushed automakers to shift towards electrification and FCA was not able to meet EU emissions requirements, which increases the demand for EV technology. Therefore, strengthening electrification is a key strategic goal for FCA, as it was needed to find a merger partner that has an immediate big effect in this area.

Based on Exhibit A3, among the potential merger partners, only Nissan and Hyundai were globally relevant in the EV market, as the fifth-and ninth-largest automakers by electric vehicles sold. Ford as well as Suzuki were also considered laggards in the EV market and would therefore have no significant impact on the NewCo´s EV market share. Students could argue that the NewCo would benefit in either way, as consolidation of knowledge and resources would automatically lead to more opportunities to drive the EV technology forward. However, a merger with Nissan or Hyundai would be favorable, as it would directly make the NewCo a relevant player in the EV market.

4.5 Risk of Culture Clash

One of the reasons why mergers fail is culture clash (Fernandes 2019). This could happen when merging companies, despite similar size and status, encounter difficulties aligning their

organizational values, work styles, and communication norms, leading to discord and hindered collaboration.

As intercultural mergers have the risk of a certain culture clash, students should identify that Nissan, Hyundai, and Suzuki are from Asia, while FCA is a European company. Merging with one of them could therefore induce a culture clash on all levels. Moreover, in terms of Nissan, the alliance between Nissan, Renault, and Mitsubishi could cause conflicts, as Renault is a direct competitor of FCA in the European market and could potentially disagree with a planned merger. Although Renault is not able to prevent the deal, a potential merger of equals could have dire consequences for the alliance. (Exhibit C10)

Students could conclude that a merger of equals with Ford would likely not result in a culture clash, as Ford is an American company and Fiat had managed to fully integrate the American automaker Chrysler, making FCA an Italian-American company that blends both cultures at all levels.

4.6 Conclusion

After the discussion, the decision matrix can (Exhibit TN-C2) be used for a final evaluation of all companies. Summarizing the findings of the analysis, Ford, Nissan, Hyundai, and Suzuki are the only companies FCA could potentially merge with as equals. Nevertheless, the decision matrix shows that some of these companies perform better in important categories than others, and no one meets FCA's needs in every category.

Although Nissan had high revenues, a high profit margin, and especially a high EV market share, students should identify that the risk of culture clash is high. Although merging into the Renault-Nissan-Mitsubishi alliance would bring huge market power, the alliance itself is probably a dealbreaker, as too many different stakeholders would have to be satisfied. Therefore, Nissan is no favorable option for FCA.

Hyundai would help FCA to gain EV market share and access to the Asian market but has a drastic decline in its profit margin. Moreover, merging with the Asian automaker would potentially cause a culture clash. Therefore, Hyundai would not be a good option for a merger of equals with FCA.

Suzuki stands out as it has less than 30% of FCA's revenue. Moreover, Suzuki has little market share in Europe, is no large player in the EV market, and brings little R&D capacity with it. Its growth rates are larger than those of other potential partners, but overall, a merger with Suzuki would not help FCA medium-term and would not fulfill FCA's need for consolidation.

Although Fords's profit margin is moderate and shows a high declining trend and the company is a laggard in the EV market, it is the only company without a high risk of culture clash and has high revenues and market power in Europe. Moreover, its high R&D expenses create huge chances for a NewCo to master the challenges in the automotive industry. All in all, weighing up the results, merging with Ford would be a great chance for FCA to solve its problems and survive in the industry.

To finish the class, the instructor should then pose the question whether FCA had a strong negotiating power in the PSA merger talks. For this, students should conclude that FCA's negotiating power has already been weakened because of the failed merger talks with Renault. Moreover, depending on the discussions, students should identify that FCA had Ford, besides PSA, as another suitable option for a merger. Therefore, PSA is FCA's last chance to negotiate a merger on an about equal footing. If the negotiations with PSA were to fail, Fiat, as the weaker merger partner, would be forced to submit to Ford´s conditions.

5. Suggested Assignment Questions

1. Which other automakers are potential merger partners for FCA, besides Renault and FCA?
    a. Which automaker could financially merge as equals with FCA and why was FCA looking for a merger of equals?
    b. Which of the chosen automakers would fit best to FCA, based on financial and strategic metrics?
    c. Conclusion: Was PSA FCA´s last chance for a merger of equals?
    d. Bonus: What is FCA's negotiating power when going into the PSA talks?

6. Suggested Teaching Plan

15 minutes	1. Which automaker could financially merge as equals with FCA and why was FCA looking for a merger of equals?
40 minutes	2. Which of the chosen automakers would fit best to FCA in certain categories, based on financial and strategic metrics?
20 minutes	3. Conclusion: Was PSA FCA´s last chance for a merger equals?
5 minutes	4. Bonus: What is FCA's negotiating power when going into the PSA talks?

Exhibit TN-C1: Analysis of Potential Merger of Equals

Automaker	Market Cap Difference to FCA (in €m)	Sum of Cash And ST-Investments (in €m)	Adjustments Made by	Cash + ST-Investments - Market Cap (in €m)	Utilization of Cash + ST-Investments
Toyota	125,650	46,889	Toyota	-78,761	268%
VW	50,151	55,557	VW	5,406	90%
Daimler	29,544	27,063	Daimler	-2,481	109%
BMW	26,913	17,654	BMW	-9,259	152%
GM	21,313	23,411	GM	2,098	91%
Honda	20,976	20,066	Honda	-910	105%
Nissan	7,848	16,884	Nissan	9,036	46%
Ford	7,041	29,646	Ford	22,605	24%
Suzuki	867	5,622	Suzuki	4,755	15%
FCA	-	12,782	-	-	-
Hyundai	590	21,017	FCA	12,192	5%
PSA	2,708	16,397	FCA	10,074	21%
Renault	3,447	16,362	FCA	9,335	27%
Mitsubishi	12,445	4,030	FCA	337	97%

Source: Bloomberg 2023b; Bloomberg 2023c

Exhibit TN-C2: Board Plan: Decision Matrix

Automaker	Merger Of Equals Financially Possible?	Revenue (€m)	CAGR 16-18	Vehicles Sold (in k units)	CAGR 16-18	Average Profit Margin	Annual Growth Rate 16-18	MS Europe	Annual Growth Rate 16-18	MS Asia	Annual Growth Rate 16-18	MS NA	Annual Growth Rate 16-18	MS EV-Market	R&D Expenses (€m)	R&D Ratio	Risk of Culture Clash	Open Discussion
FCA		110,412	0%	8.386	-8%	3.29%	33%	7.1%	-2%	0%	0%	13%	2%	low	3,051	2.8%		
Nissan	Yes	92,275	0%	3.884	10%	5.30%	21%	4.3%	1%	2%	2%	10%	2%	4%	3,828	4.1%	Yes	
Ford	Yes	135,881	0%	5.982	-5%	3.90%	-21%	8.3%	-2%	3%	-14%	14%	-1%	low	6,494	4.8%	No	
Suzuki	Yes	29,009	10%	3.352	6%	4.50%	40%	1.7%	11%	10%	8%	0%	-2%	low	1,076	3.7%	Yes	
Hyundai	Yes	74,546	1%	4.489	9%	4.00%	-46%	3.2%	-10%	7%	-3%	4%	1%	3%	2,122	2.8%	Yes	
GM	No																	
Honda	No																	
Toyota	No																	
Volkswagen	No																	
Daimler	No																	
Mitsubishi	No																	
BMW	No																	

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Appendix 1: Event Study FCA - Renault Announcement | Reaction Renault

Key Considerations

Event date (Ed)	5/27/19
Anticipation window	4
Adjustment window	3
Estimation window	100
Shares outstanding	295.7

Auxiliary Calculations

Average return	0.07%
Alpha	-0.08%
Beta	1.18

Appendix

		Comparison Period Mean Adjusted Model	Market-adjusted model	Market Model
	Stdev	1.99%	1.82%	1.82%
	Stdev (3 days)	3.44%	3.15%	3.16%
	Stdev (4 days)	3.97%	3.64%	3.64%
	Stdev (8 days)	5.62%	5.15%	5.15%
Return (CAR)	Event	12.03%	11.88%	11.91%
	Absolut (€ m)	*1,777.6*	*1,755.3*	*1,761.0*
	Anticipation	-1.54%	-0.87%	-0.48%
	Adjustment	0.62%	2.05%	2.51%
	Total	11.11%	13.06%	13.95%
Return (BHAR)	Event	12.03%	11.88%	11.91%
	Absolut (€ m)	*1,777.6*	*1,755.3*	*1,761.0*
	Anticipation	-1.56%	-0.87%	-0.48%
	Adjustment	0.62%	2.04%	2.50%
	Total	10.96%	13.16%	14.16%
t-stat (CAR)	Event	6.05	6.52	6.54
	Anticipation	-0.39	-0.24	-0.13
	Adjustment	0.18	0.65	0.80
	Total	1.98	2.54	2.71
t-stat (BHAR)	Event	6.05	6.52	6.54
	Anticipation	-0.39	-0.24	-0.13
	Adjustment	0.18	0.65	0.79
	Total	1.95	2.56	2.75
p-value (CAR)	Event	0.00%	0.00%	0.00%
	Anticipation	69.96%	81.26%	89.62%
	Adjustment	85.66%	51.64%	42.76%
	Total	5.08%	1.27%	0.80%
p-value (BHAR)	Event	0.00%	0.00%	0.00%
	Anticipation	69.56%	81.13%	89.47%
	Adjustment	85.77%	51.87%	42.94%
	Total	5.39%	1.21%	0.71%

Source: Calculations based on Data from Bloomberg 2023b

Appendix 2: Event Study FCA - PSA Announcement | Reaction PSA

Key Considerations

Event date (Ed)	10/30/19
Anticipation window	10
Adjustment window	10
Estimation window	100
Shares outstanding	903.6

Auxiliary Calculations

Average return	0.21%
Alpha	0.11%
Beta	1.52

Appendix

		Comparison Period Mean Adjusted Model	Market-adjusted Model	Market Model
	Stdev	2.09%	1.76%	1.70%
	Stdev (10 days)	6.62%	5.57%	5.36%
	Stdev (21 days)	9.59%	8.08%	7.77%
Return (CAR)	Event	-13.07%	-12.37%	-12.23%
	Absolut (€ m)	*(3,076.6)*	*(2,911.9)*	*(2,879.2)*
	Anticipation	7.33%	8.11%	6.27%
	Adjustment	2.06%	2.24%	0.11%
	Total	-3.68%	-2.02%	-5.85%
Return (BHAR)	Event	-13.07%	-12.37%	-12.23%
	Absolut (€ m)	*(3,076.6)*	*(2,911.9)*	*(2,879.2)*
	Anticipation	7.42%	8.25%	6.30%
	Adjustment	1.94%	2.17%	0.02%
	Total	-4.81%	-3.08%	-6.68%
t-stat (CAR)	Event	-6.24	-7.02	-7.21
	Anticipation	1.11	1.45	1.17
	Adjustment	0.31	0.40	0.02
	Total	-0.38	-0.25	-0.75
t-stat (BHAR)	Event	-6.24	-7.02	-7.21
	Anticipation	1.12	1.48	1.17
	Adjustment	0.29	0.39	0.00
	Total	-0.50	-0.38	-0.86
p-value (CAR)	Event	0.00%	0.00%	0.00%
	Anticipation	27.08%	14.91%	24.50%
	Adjustment	75.58%	68.80%	98.43%
	Total	70.24%	80.30%	45.34%
p-value (BHAR)	Event	0.00%	0.00%	0.00%
	Anticipation	26.50%	14.20%	24.31%
	Adjustment	77.05%	69.82%	99.63%
	Total	61.70%	70.35%	39.23%

Source: Calculations based on Data from Bloomberg 2023b