LISBON
SCHOOL OF
ECONOMICS &
MANAGEMENT
UNIVERSIDADE DE LISBOA

MASTER OF SCIENCE IN
FINANCE

MASTERS FINAL WORK
PROJECT

EQUITY RESEARCH:
DASSAULT AVIATION

BRUNO MIGUEL MENDES TENREIRO

NOVEMBER 2020

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SUPERVISOR:
PEDRO RINO VIEIRA

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Abstract

The present study presents include a detailed valuation of the French aerospace company Dassault Aviation SA. It was elaborated following the ISEG Master Final Project rules and the recommended format from the CFA Institute.

The price target was reached mainly through absolute valuation methods with the Discounted Cash Flow method (DCF), additionally a relative valuation and sensitivity analysis to provide support and complement the 5 year valuation. The assumptions considered during the report are the result of a wide analysis of the company annual reports, macroeconomic forecasts and industry trends from various different sources. The final recommendation is to BUY, considering the computed price target of 1422.15 EUR for 2021YE representing an upside potential of 46.07% from its closing price 767 EUR at 6 November 2020, which represents the date on which this study was finalized.

JEL Classification: G10; G32; G34; G38; C15; M14; O30; Y10

Keywords: Dassault Aviaiton; Equity Research; Valuation; Discounted Cash Flow method; Relative Valuation; Aerospace and Defense.

Resumo

O presente estudo contém uma avaliação detalhada da empresa francesa Dassault Aviation SA. Esta avaliação segue as normas de projeto final de mestrado bem como o formato recomendado pelo *CFA Institute*.

O preço-alvo foi calculado com base em métodos de avaliação absolutos como o *Discounted Cash Flow method* (DCF). Adicionalmente foram realizadas avaliações relativas e análises de sensibilidade por forma a complementar e dar suporte à avaliação. Os pressupostos considerados no decorrer da avaliação resultam de uma abrangente análise dos relatórios anuais da empresa, dados macroeconómicos e tendências da indústria aeroespacial, com recurso a várias fontes.

A recomendação final é de *BUY*, tendo em conta o *price target* calculado de 1422.15 EUR para 2021YE, representando um ganho potencial de 46.07% quando comparado com o preço de fecho 767 EUR a 6 de Novembro 2020, data que representa o fim do presente estudo.

Classificação JEL: G10; G32; G34; G38; C15; M14; O30; Y10

Palavras-chave: Dassault Aviation; Equity Research; Avaliação; Discounted Cash Flow method; Avaliação Relativa; Indústria Aeroespacial.

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This project marks the end of an important and rewarding journey. In the course of writing this thesis I received a great deal of assistance and support from my Family, Friends and Professors.

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Dassault Aviation

Dassault Aviation SA

Buy Recommendation

November 2020

Price Target 2021YE	Upside Potencial	Risk	Recommendation
1422.15 EUR	↑ 46.07%	High	BUY

1. Research Snapshot

Figure 1 – Risk Assessment

LOW	MEDIUM	HIGH

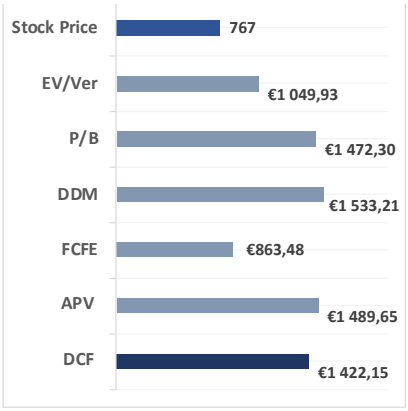
The risk assessment is the reflection of Dassault dependence on the French government along with high competition in the business aviation segment.

Source: BT analysis

Dassault Aviation SA, is. French Aerospace company specialized in production, design along with sale of military aircrafts and business jets.

BUY recommendation is issued for Dassault Aviation SA (AM FP / AVMDA.PA), with a target price of **1422.15 EUR** at **2021YE**, offering an upside potential of **+46.07%**, from its closing price at Nov 6, 2020. Despite the effects of COVID-19 together with the continuous cuts in deliveries in business jets on the civil segment.

Figure 2 – DA Price Target



Source: BT analysis

More Confidence over Defense

As deliveries are expected to grow at a CAGR of 3%, after a 25% cut in 2020 deliveries for the FALCON aircrafts on the Business Aviation segment and 13 military aircrafts (RAFALE) in line with the company COVID-19 reshaped expectations for the year, representing a 50% decrease from the previous year, which will lead to a backlog of 68 and 42 aircrafts on civil and military, respectively. Inter-government India relations with the Reliance joint-venture may propel order intakes for the RAFALE aircrafts, pushing the company earnings in the military segment forward over the next years.

New Aircraft to bounce back Business Jets

Company revenue structure shifts to a more predominant defense business until the new Falcon 6X is developed (2022) to rebound the business jets segment. The weaker jet environment, only having signs of growth in the more recent years, in combination with the uncertainty of the global pandemic may represent a future loss of market share for Dassault place them in a disadvantage in the short run.

Table 1 – DA Financial Highlights

Financial Hightlights	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Civil Deliveries	49	41	40	30	32	33	34	35	36
Military Deliveries	9	12	26	13	15	15	16	16	17
Revenues (In thousand)	€ 4 901 080	€ 5 119 219	€ 7 370 616	€ 4 218 750	€ 4 345 313	€ 4 475 672	€ 4 609 942	€ 4 748 240	€ 4 890 688
EBIT (In thousand)	€ 217 935	€ 707 529	€ 796 252	€ 233 861	€ 246 135	€ 259 162	€ 272 894	€ 287 298	€ 302 346
Net Profit Margin	12,86%	11,19%	9,67%	8,82%	8,67%	8,53%	8,42%	8,31%	8,21%
Debt/EBITDA	*3,59x*	*1,26x*	*0,59x*	*0,78x*	*0,89x*	*0,98x*	*1,05x*	*1,11x*	*1,16x*
ROE	16,92%	13,40%	16,03%	7,76%	7,43%	7,13%	6,88%	6,65%	6,44%

Source: Company Data & BT analysis

2. Business Description

Dassault Aviation SA (AM) is a multinational French company operating mainly in both military and business jets with special focus on the design, manufacture and sale.

Founded in 1929 by Marcel Bloch later known as Marcel Dassault, forging the key and fundamental values that the company still follows today. Being the only company still owned by the founding family in the industry, across the years Dassault was responsible for several iconic aircrafts and prototypes with more than 10,000 aircrafts in more than 90 countries over the years.

Today, leveraging on company's dual expertise, Falcon and Rafale, are the two names that cross one's mind for both civil and military purposes, with more than 2,100 business jets and 100 combat aircrafts in service, Dassault also counts with over 11,500 employees of which 80% in France, playing an important role in Europe's aircraft programs along with driving technological advances that can shape the future of Aerospace and Defense. To encompass its aviation business Dassault has vast number of consolidated companies (figure 61.), having an important role in each part of value chain to promote and thrive growth into the business.

In 2019, Dassault had Total Sales of 7370M, representing an YoY growth of 44%, in absolute value a EUR 2251M increase from the previous year mainly due to the increase in Exports that experienced a +62% YoY, noticeable assuming a key role on company's sales, Exports alone account for almost 88% of total sales, a considerable proportion is due to the first Rafale deliveries in Qatar and India, where both countries ordered 36 military aircrafts each, in combination with the last deliveries in Egypt, furthermore, no Rafale was delivered to French army forces despite the 28 remaining out of their 180 order. On the other hand, Civil encompassing the Falcon family, represents 30.2% of Total Sales, a slight decrease compared to last year of 2634M (2018), Civil total sales are associated with first delivery of 4 Falcon 2000MSA to Japan Coast Guards (out of 6) and delivery of 40 Falcon aircrafts from 45 schedule given the challenging market conditions.

Despite majority of revenues is from selling aircrafts, Dassault's service providing in both Civil and Military represented 28,1% of Total Sales, this comes primarily from the company's Exports with associated support and the efforts to improve its network of service providing through acquisition of 17 maintenance centers around the globe, thus increasing its market share in customer support and maintenance.

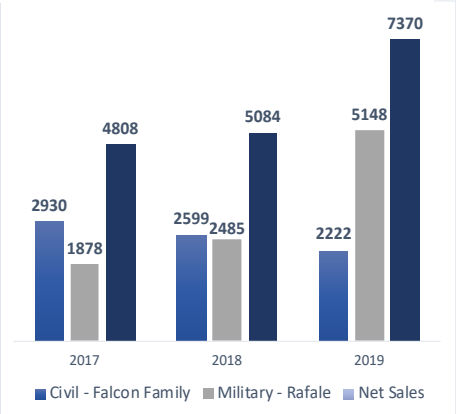
With respect to company's backlog, Dassault has EUR 17,798M in 2019, 60% of which from Defense Exports consisting of 47 Rafale aircrafts, followed by France Defense programs representing almost 27% of company's backlog with 28 Rafale aircrafts, and lastly 13% regarding Business aviation with 53 Falcon aircrafts, amongst them 2 Falcon 8X the long-range aircraft, Dassault flagship business aircrafts. Moreover, Dassault Aviation had a ratio of orders received to aircrafts shipped of 0.7724 (Book-to-Bill ratio).

Figure 3 – DA Market Profile

Industry	Aerospace & Defense
Country	France
BBG Ticker / Reuters	AM FP / AVMD.PA
CEO	Eric Trappier
Products	Military Aviation RAFALE, Business Aviation FALCON
Market cap (EURbn)	6.375
Payout Ratio	43,18%
Price (Nov 6, 2020)	EUR767.00

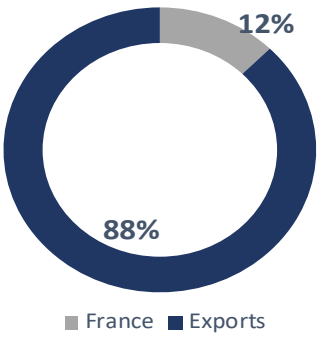
Source: Reuters

Figure 4 – Sales by segment



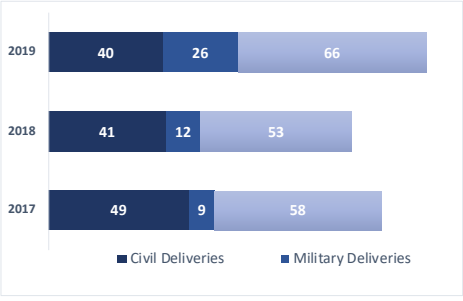
Source: Company Data

Figure 5 – Sales by Geographical area



Source: Company Data

Figure 6 – Deliveries by segment



Source: Company Data

Dassault Aviation – Strategies

Strengthening their position worldwide – Improve position and relations in foreign markets, through the creation of a joint venture for a new production facility in Nagpur, contributing on Civil and Military activities in India. Given the weight of Exports in Dassault revenues it is important that Dassault keeps strengthening their world positioning with marketing campaigns to improve awareness of their aircrafts leading to an increase in orders intake.

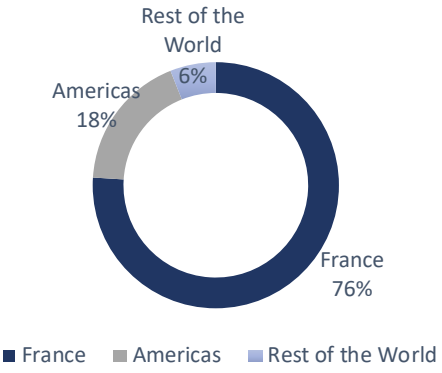
Customer Support – Dassault deploys a lot of effort in improving their customer support, providing aftermarket services for both Rafale and Falcon costumers. On the Military side, orders/deliveries are secured with integrated support contract, (RAVALE) support range from technical and logistical services to pilots/mechanics training. In the Business aviation, Dassault is recognized as the Support Leader, an important title to prospect trust among their clients.

Effectively complying with commitments – Meet their backlog deadline commitments on the FALCON and RAFALE deliveries not only in terms of time management but also in terms of assuring the top quality in their aircrafts.

Deleveraging – Dassault aims to decrease its financial debt in 2020, similar behavior to previous year where repaid its bank borrowings totaling EUR 783M in 2019 and EUR 174M in 2018. Company's Debt-to-Equity Ratio has been decreasing in the past years, in 2019 D/E was 0.13, in comparison with 0.29 in 2017.

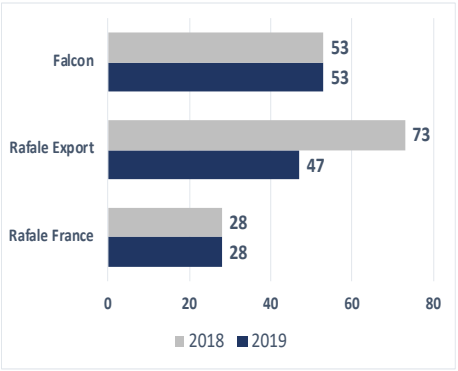
R & D – Innovation is a key step for Dassault business. Research and Development play an important role in the development of Falcon and Rafale programs, improving existing aircrafts, technological advances in aircraft parts, more efficient procedures, besides preparation of future products, specifically Falcon 6X and Rafale F4-standard and their launches, in Civil and Military, respectively.

Figure 7 – Employees by Region



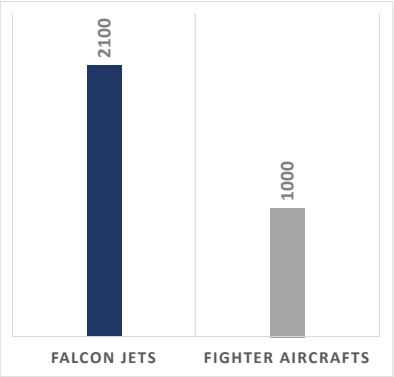
Source: Company Data

Figure 8 – Backlog by segment



Source: Company Data

Figure 9 – Aircrafts in service

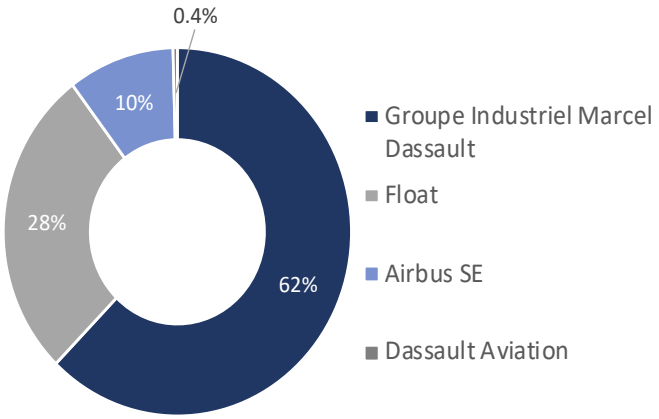


Source: Company Data

Shareholder Structure

AM's main shareholder is Groupe Industriel Marcel Dassault (GIMD) with 62.3% of the company which is still owned by the Dassault family, followed by Free-Float at 27.4%, the remaining shares are hold by Airbus SE that has been divesting in the company since the last couple of years owning now 9.9%, and also 0.4% of Treasury shares without any voting rights.

Figure 10 – Shareholder Structure

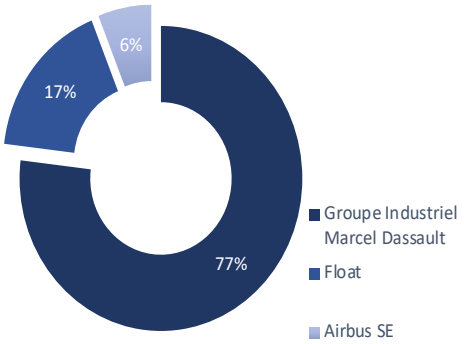


Source: Company Data

3. Management and Corporate Governance

AM is still mainly owned by the Dassault family which holds 76.9% of the voting rights, followed by 17% of the voting rights for the Free-Float and subsequently 6.1% of the voting rights for Airbus SE. Present members in the meeting , although there is no agreement between Airbus Group SE and GIMD, there is a stablished agreement between Airbus SE and the French government stating that Airbus may exercise their voting right following consultation with French government, this agreement to last 90 years grants the right of first refusal, in addition to the right of first offer in case Airbus Group SAS divest in Dassault Aviation shares.

Figure 11 – Voting Rights



Source: Company Data

The Board of Directors is composed by the Honorary Non-Executive Chairman, Charles Edelstenne, with Executive Leadership led by **Éric Trappier** as Chairman of the Board of Directors, Chief Executive Officer (CEO) and Chairman of the Committee, both appointed in 2013, the Board is still composed of 8 Non-Executive Directors, 50% of which are women compared to the 40% required legally, adding to that the average attendance rate in the Board of Directors in the three meetings held in 2019 was 93%.

Figure 12 – Board of Directors

Charles Edelstenne - Honorary Chairman
Éric Trappier - Chairman of the Board of Directors
Catherine Dassault
Olivier Dassault
Charles Edelstenne
Marie-Hélène Habert
Mathilde Lemoine
Henri Proglio
Lucia Sinapi-Thomas
Richard Bédère - Director Employee Representative

Source: Company Data

The Executive Committee covering all subjects related to the company operations and business as weekly meetings discussing relevant matters, with **Éric Trappier** as Chairman of the Committee, it is composed by 15 members, of which important mentions to **Loïk Segalen** as Chief Operating Officer (COO) since 2013, **Benoît Berger** as Senior Executive Vice President, **Denis Dassé** as Chief Financial Officer (CFO) and **Valérie Guillemet** as Director of Human Resources, appointed in 2019 being the first woman on the Executive Committee in the history of the company.

The Audit Committee responsible for monitoring the procedures for preparing the financial information, risk management and internal auditing systems, compliance with regulations and legal requirements by auditing the company and the consolidated financial statements by the statutory auditors, composed by Henri Proglio, Lucia Sinapi-Thomas and Charles Edelstenne, the attendance of the Committee meetings in 2019 was 100%.

Figure 13 – Key Compensation

Key Compensation			
Éric Trappier - CEO	€	1 566 605	↑ *3.07%* 2018
Loïk Segalen - COO	€	1 385 907	

Source: Company Data

Corporate and Social Responsibility

Dassault Aviation SA (AM), is devoted to an active Corporate and Social Responsibility policy, based in 5 pillars that are the ground foundation of Dassault's CSR policy, approaching the main issues in CSR that we face today in combination with industry standards and rules. These ground pillars consist of Compliance, Environmental Performance of Activities and Products, Responsible approach, Healthy and Secure Workplace, Attractive and Motivating Social Model.

Company aims for a sustainable growth, making efforts through its CSR policy to improve the well-being of the employees and workplace conditions, in combination with the innovations and eco-design made contributing to reduce the air sector impact on the Environment, also taking action in climate changes.

Figure 14 – CSR Pillars

Responsible Approach	Compliance
• Business Ethics	• Regulations
• Responsible Purchasing	• Stakeholders Expectations
Healthy/Secure Workplace	**Atractive / Motivational Model**
• Workplace Conditions	• Talent Attractivity
• Employees Health	• Skills Development
• Risk reduction	• Diversity & Equality
Environmental Performance	
• Environmental Footprint	• Innovative Solutions
• Eco-desing	• Circular Economy

Source: Company Data

4. Industry Overview and Competitive Positioning

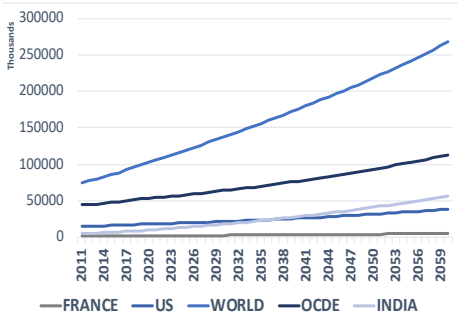
Macroeconomic outlook

The new COVID-19 pandemic has set off a global crisis in a short amount of time, as major economies entered a period of lockdown followed by a spontaneous reduction in economic activity, represent some of the combine factors causing this recession.

The Global GDP growth is expected to suffer a contraction of 4.4% in 2020, as growth forecasts for all regions have been seriously affected. For Advanced economies contraction scenario is worst as GDP growth is at -5.8% for 2020, US and EU GDP growth at -4.3% and -8.3%. However, in the East Asia, led by China's 1.9% growth in 2020, is expected to contract 1.7%, China being one of the few regions in EMDE not facing a contraction in 2020. As China experiences record low values, EMDE faces a contraction of 2.5% being the lowest since 1960.

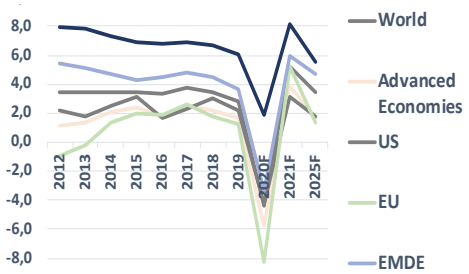
Despite this unfavorable outlook, is expected that 2021 to be a recovery year with Global GDP growth for Advanced economies at 3.9% and EMDE at 6%, both led by US and China, respectively. COVID-19 damages in economy are already evident although is still too early to access to full impact of the pandemic, as COVID-19 outbreaks resurge for a second wave worldwide, uncertainty characterizes the moment, as the outlook might change for 2021.

Figure 15 – Real GDP Long-term Forecast



Source: OECD Data

Figure 16 – Real GDP Annual %



Source: IMF Oct2020

Aerospace & Defense - Industry Overview

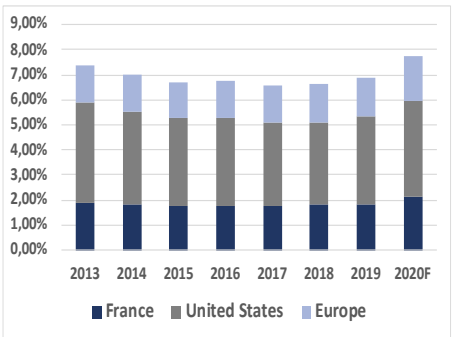
The Aerospace & Defense (A&D) industry is comprised of companies that manufacture a wide range of products, from commercial and military aircrafts to IT systems used by governments, and therefore this industry can be broken in two main sections: Commercial Aviation and Defense.

Aerospace & Defense (A&D), was expected to soar in the upcoming years yet COVID-19 may slow and delay this growth, impacting some critical areas of the industry. Supply chain is one of the major areas where companies might suffer some disruptions due to COVID-19, affecting both segments of the industry.

Defense segment is where the pandemic is less challenging, military expenses continue to go on a moderate upward trend as security threats and political tensions continue to rise, since its critical importance to governments, this segment is still pushing the industry forward. The French Defense budget increase 1.7billion in 2019, same increase is expected in 2020, for the fourth year in a row representing 1.86% of total GDP, in accordance with military programing law defense expenditure in the country is expected to increase at the same pace by 2022. It is expected to grow at 3% CAGR during the next 5-year period.

Commercial segment, Corona virus outbreaks around the world highly impacted the industry with the travel restrictions on domestic and international flights, consequently affecting new orders and deliveries for the year, as airline companies will choose to cancel or delay renewals of new fleet as a direct result from the decrease in demand.

Figure 17 – Defense Expenditures as % of GDP



Source: NATO 2020 estimates

Business Aviation, one of the sub-segments of Commercial aviation, that comprises private jets, air taxis, corporate aviation and in the more recent years flying cars, was estimated to grow pre-COVID19, at a CAGR of 7.3%, in a post-pandemic as a rough reassessment is project to grow at 3% CAGR during 2020 to 2025. Led by the long-range (5000NM>) aircrafts increase in demand, representing the jet segment with the fastest growing pace.

Figure 18 – Major Players in Business Aviation

Bombardier Inc. - Sales: 15 757
Embraer SA - Sales: 10 467,63
Dassault Aviation - Sales: 7 370
Textron Inc. - Sales: 13 630
Gulfstream - Sales: 9 801

Source: Reuters

End Customer in Business Aviation

Business Jet market is segmented in two main different scopes, Private and Business Operators that represent around 66% of the market in 2019, this is justified by the increase in on-demand services in developed countries that offer more flexibility, skip crowded check-ins and personalized schedule in flying compared to conventional airlines.

Despite the less proportion of private owners close to 34%, it is expected that future numbers will be more evenly close, given the growth in high net worth individuals generating and increase in demand for business jets. Additionally, on-demand services, also known as, charter services may experience an increase in demand in a post COVID-19 release of travel restrictions.

Figure 19 – Major Players in Defense

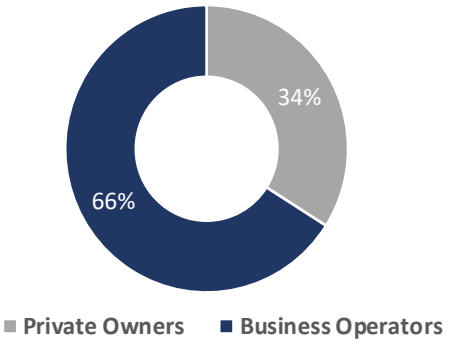
Lockheed Martin Corp. - Sales: 59 812
General Dynamics Corp - Sales: 39 350
Raytheon Technologies - Sales: 77 046
Northrop Grumman Corp. - Sales: 33 841

Source: Reuters

Aged Aircrafts define the market

In the Business jet market in 2019, the average age of jets on service was 17.6 years, usually with millions of nautical miles (NM), several maintenance and repairs, this aging may propel future growth of the jet market as next generation aircrafts are released offering more technological advances and lower fuel consumption.

Figure 20 – Business Jet Market by End user



Source: Fortune Business Insight

The Green Shift in Business Aviation

As the World shifts to more sustainability and environmental-friendly, all industries may suffer this "green shift", Business aviation is no exception as increase in demand of all-electric or hybrid aircrafts starts to happen, is expected for all-electric aircrafts segment to grow at a 4% CAGR for the next years, even so forecast point out for this growth rate to be at 24% in the next 10 years.

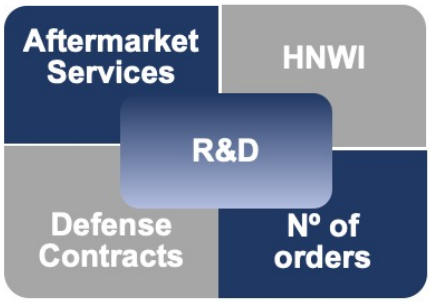
The operational costs of such aircrafts are also attractive to the end costumer as this might reflect a 50% cut in maintenance costs with 0 fuel emissions and 66% efficiency improvements in takeoff and landing.

Key Drivers of Profitability

Aftermarket services provided by Commercial Aerospace

Aftermarket plays a huge part, providing new parts, maintenance, performance improvements, also helping companies hedge against volatility in demand cycles. Additionally, the average operating profit margin from aftermarket services worldwide are substantially higher (1.5x) when compared to sale of product/equipment. Several OEM who neglected in the past the aftermarket services are now transitioning to offer such services as they provide extremely good margins and added value for the companies.

Figure 21 – Key Drivers of Profitability



Source: BT analysis

Defense Contracts / Geopolitical Tension

Geopolitical Events, Trade Wars, Diplomatic tensions, can influence Defense expenditures worldwide. Thus, increasing government contracts reflecting an increase in revenues.

HNWI / Number of Orders

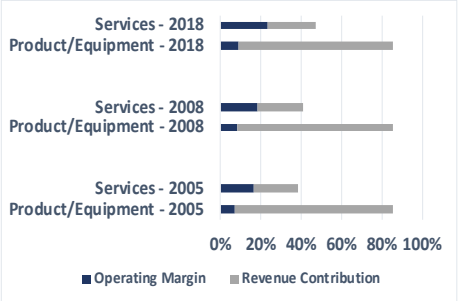
Even though Asia-Pacific has the highest number of High Net Worth Individuals (HNWI) 6.5million representing 19 trillion-Eur in total wealth, is the higher increase in North America, Europe and Middle-East in 2019 that may impact positively the Industry profitability as HNWI wealth increased 8.6% worldwide in 2019 Although correlated in some ways with other drivers, nº of orders can be one of the most important factors propelling future revenues.

Investment In R&D

Industry spends on average 4% of its revenue in R&D, these investments play a major role in the industry being extremely important to bring new innovations, technological advances and security.

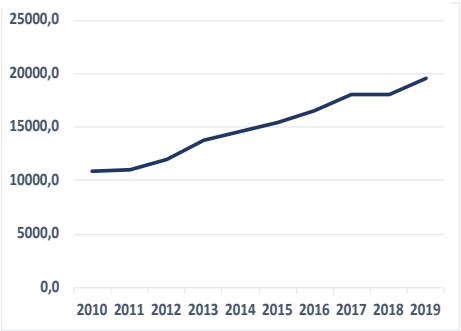
Defense perspective, although there is some share ground in both commercial and defense segments, in efficiency and safety to conduct their operations, the defense segment is often more challenging addressing the emerging need of armed forces not only the weaponry improvements, but also, versatility, flexibility and survivability, being able to perform well in different missions.

Figure 22 – Product/Equipment vs Services comparison



Source: Deloitte

Figure 23 – Global HNWI



Source: World Wealth Report

Demand and Supply drivers

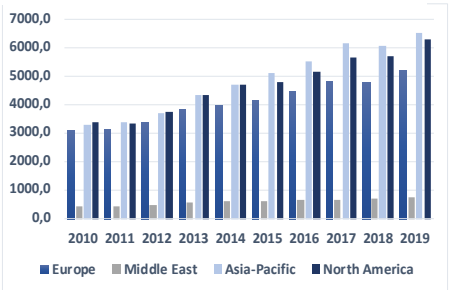
Demand - Geopolitical and Economic Events

Geopolitical events have a positive impact in the demand of this industry, especially in the **Defense segment**, as the existence of conflicts between different governments will in a way drive the military needs of those countries. An increase of the defense spending from one major economy, will lead to a response from other economies in similar ways, by increasing their defense spending reflecting an increase in demand.

An economic instability may have the opposite effect on demand. If world's economies are having difficulties, governments may have to reduce budgets and with that comes a reduction in Defense spending.

In **Commercial aviation** segment, the effect will be similar, an economic instability will reflect a reduction in the number of passengers, which delays the need for airline companies to renew their fleet given the decrease in demand. On the other hand, a strong economy is going to drive the demand up and propel investment in the **Business aviation** segment of the industry.

Figure 24 – HNWI Population by Region

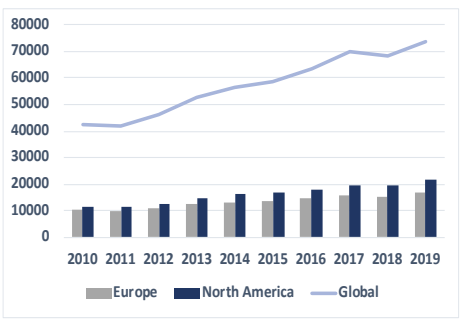


Source: World Wealth Report

Demand – Innovation

The way companies must gain some market over their competitors is through creating innovative products that meet their customer's needs. That innovation can be by creating more fuel-efficient engines or upgraded systems for the commercial aviation segment, or by creating new and safer IT systems, in order to combat the risks involved with cybersecurity, or creating new military equipment, for the defense segment. It is through this innovation that the players of this industry will gain more contracts with their customers.

Figure 25 – Global HNWI wealth



Source: World Wealth Report

Demand – Social factors

Population increases especially in developing countries trigger increase in demand for air travel representing major factors for future industry growth in commercial segment, thus Business Aviation.

In A&D industry, social issues may also affect demand. Companies in the industry have access to highly classified information, as technology improves, global security data threats accelerate and so Cybersecurity concerns increase. A security breach might directly influence a company reputation, thus affecting demand.

Additionally, according to the World Wealth Report, High Net Worth Individuals population (HNWI), increased 10.9% in North America, 9.3% in Middle East followed by 8.7% increase in Europe, this may reflect an increase in demand for Long-range business jets in the upcoming years, good news for the new Falcon 8X available for sale in 2020 and Falcon 6X in development to be available in 2022 offering the largest cabin in the market which given its luxury and unique characteristics could propel an increase in demand for DA aircrafts.

Supply - M&A activity

One of the main barriers for the growth of this industry is the supply chain. Companies need to improve their production rates, but they are faced with the problem that their suppliers are having trouble meeting the demanding needs of the industry. The rise in M&A activity in the industry, mainly in the supply chain, is allowing some vertical integration to happen, and, therefore, creating bigger suppliers with bigger capacity to meet the industry desired production rates.

A&D Industry Main Threats

Dependence on the Government

Specifically, for Dassault Aviation in the Defense segment, most revenues come from Governments, mainly French, along with India, Qatar and Egypt. This represents one of the bigger risks the companies in this industry face, since it makes them hugely dependent on the government's defense budget, which by its own is a risk as it changes every year. Any delay on the budget approval, budget reduction or release of payments is an uncertainty companies face and have a major impact in companies' financial results.

COVID-19

The impacts from COVID-19 pandemic are still emerging and it may be extremely challenging to assess the full picture for Aerospace and Defense industry.

Despite the fact that Defense segment is unquestionably more protected given that defense budgets will still be in place and money will flow to the industry, commercial segment will suffer a bigger hit, mainly because of what we are seeing today with airlines in the current state of the pandemic which directly affects commercial aviation.

Covid-19 pandemic represents a different threat on a level never experienced before, is still unknown how the virus and its effect will unfold yet is important for Dassault to adapt and find ways to recover.

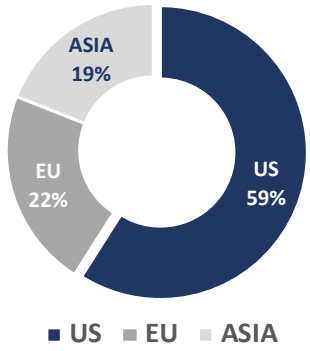
Cybersecurity events

Nowadays cyberterrorism is one of the biggest threats worldwide, and considering clients, classified and proprietary information this companies possess, it makes the industry a big target for that kind of cyber-attacks. If companies do not have IT systems in place capable of protecting valuable information, it would be catastrophic not only for clients (Governments), citizens, and the reputation of the company. Same for today's aircraft with increase in technology and connection over the years, it is extremely important that security systems are in place to address these issues.

Supply chain disruptions

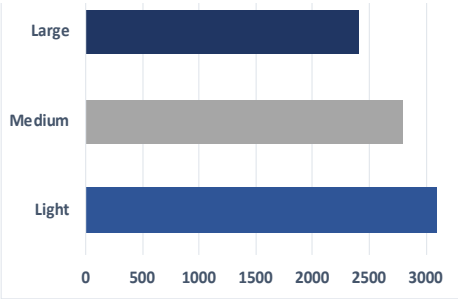
A severe pandemic like COVID-19 can delay production directly hitting revenues, causing large-scale unemployment and disruption of the supply chain. As new orders intake may suffer a solid decline for the whole industry along with upcoming delays in deliveries which will certainly strike the Industry, it is crucial for Dassault to be planning for regrowth, reevaluating supply chain to avoid future disruptions in the long-term.

Figure 26 – Industry values by region



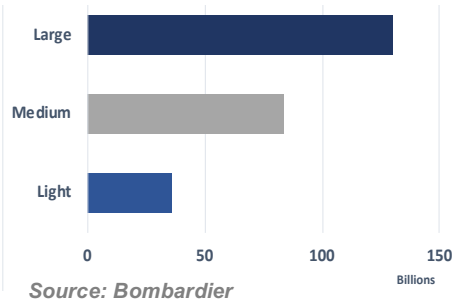
Source: Capgemini

Figure 27 – Industry Forecast 2025 Deliveries by Aircraft type



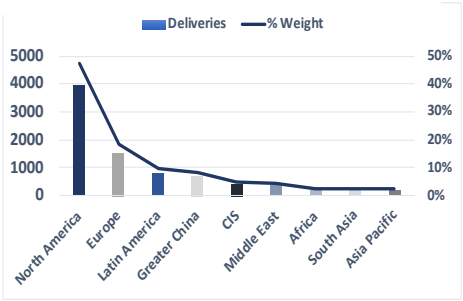
Source: Bombardier

Figure 28 – Industry Forecast 2025 Value by Aircraft type



Source: Bombardier

Figure 29 – Forecast Deliveries by region



Source: Bombardier

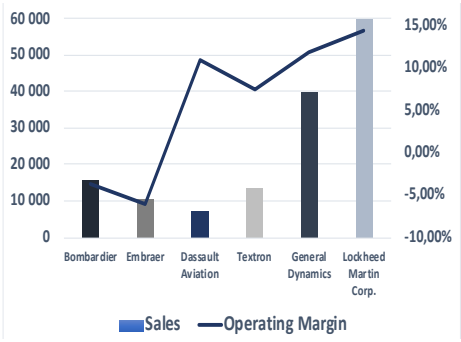
Competitors Analysis

Given Dassault Aviation, wide market exposure offering a diversity of aircrafts from fighters to business jets, the company have competitors in both segments. In Defense, competition is mainly on the bids for government contract usually around a small number of companies, that have the production capacity and know-how to land the contracts.

On the other hand, in the Aerospace segment, specifically in Business Aviation, competition is higher, even though there is a big gap between renewals of business jets, companies in the industry have to fight for brand awareness of its customers, as brand loyalty plays an important role in the time of purchase, thus the importance of aftermarket services as well as, Exhibitions and Conventions to show the latest technological improvements and secure some potential clients.

At the moment, despite the fact the company may lack some new offers when it comes to flagship aircraft, as competitors are launching into service new top of the line aircrafts such as, Embraer Praetor 600, Gulfstream G600 and Bombardier Global 7500, Dassault is still developing its new ultrawide Falcon 6X business jet a first in the market, expected to boost orders in take by 2022, this may reflect some disadvantages until the launch for the company over the next years in Business Aviation (Figure 58, Appendix 14).

Figure 30 – Competitors Analysis

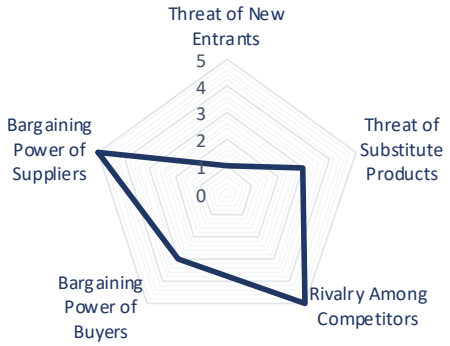


Source: Reuters; BT analysis

Competitive Positioning

Porter's 5 Forces

Figure 31 – Business Aviation Porter's 5 Forces



Source: BT analysis

Threat of New Entrants

Defense (Low) / Business Aviation (Low)

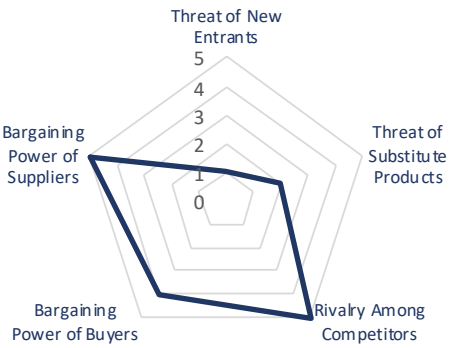
High initial capital requirements, difficulty in managing the supply chain, establishing a track record, inflow of orders and getting the certifications needed are just some of the barriers that companies entering the market will have to face. All things considered, threat of new entrants in the industry is minimal.

Bargaining Power of Suppliers

Defense (High) / Business Aviation (High)

The supply chain and its management are one of the challenges that OEM's face nowadays, mainly because a ramp up in production can only happen if the suppliers meet the needs of the companies. Several M&As over the past years also enhanced the vertical integration in the supply chain, therefore there are fewer and larger suppliers, giving those suppliers more bargaining power.

Figure 32 – Defense Porter's 5 Forces



Source: BT analysis

Bargaining Power of Buyers

Defense (Medium-High) / Business Aviation (Low)

Defense segment, majority of the revenues come from the governments this gives buyers negotiation power over the manufacturers. By contrast, in Commercial segment 2 main companies share 90% of the market, the buyers end up not having a great deal of leverage over those 2 companies. In Business aviation, where Dassault stands, bargaining power is similar to Commercial aviation, even though for jets are higher correlated with the economic cycle.

Threat of Substitute Products

Defense (Low) / Business Aviation (Medium-Low)

Given the high barriers to entry the industry, there is a reduced number of competitors, companies take long periods of time to develop, test, produce and complete, there are no feasible substitute products. Although, Unmanned Aerial Vehicle (UAV's), could be a feasible substitute for certain kinds of military missions in the defense segment.

New Technological advances and all-electric aircrafts are starting to enter into the market which may be suitable substitutes for short-range flights that are now done via smaller jets for this reason it was consider the substitute threat to be slightly bigger in Business Aviation compared to Defense.

Rivalry Among Competitors

Defense (High) / Business Aviation (High)

Companies are always trying to deliver the most technologically advanced and most efficient aircraft to their clients for both segments in the industry, competition comes in his majority from innovation and capacity to meet their commitments and deliveries.

In the defense segment, rivalry depend on their ability to land contracts with the government, which increase the competition between the major players.

Figure 33 – Current Short-Range Business Jets Substitutes/Competitors

Current Short-Range All-electric / Hybrid Competitors	Aircrafts	Date
Ampaire	Electric EEL	2020
	Eco Otter SX	Post-2022*
	Tailwind	Post-2025*
Eviation	Alice	2022
Zunum Aero	ZA10	2023
	ZA50**	2030***
XTI Aircraft	Trifan 600	2020

*Not announced
** Long-range aircraft
***Rumors

Source: Companies Data

SWOT Analysis

Figure 34 – DA SWOT Analysis

SWOT Analysis - Dassault Aviation SA			
Strenghts	**Weaknesses**	**Opportunities**	**Threats**
•Business aviation & Military expertise	•Large proportion of revenues from Governements.	•Increase of Military expenditures;	•Geopolitical Environment;
•Aftermarket Services		•Major Contracts in Developing Economies such China, Middle-East and African Markets;	•COVID-19, production delays / supply chain disruptions
•Pilot training (Military)	•Strong Competition in Business Aviation	•Latin America & Africa fast growing regions for Business Jets.	
•New defense contracts; India; Qatar; Egypt	•COVID-19, Travel restrictions	•Green Aviation Technology / Hybrids	•Business jets demand
•Civil Falcons with lowest C02 emissions		•New Falcon 6X to boost Jet Market (2022);	•New Startups in Business Jets market

Source: BT analysis

5. Investment Summary

Given the computed target price for Dassault Aviation SA of 1422.15 EUR 2021YE resulting on a potential upside of 46.07%, from its closing price 767EUR (Nov 6, 2020), in a post-COVID shock as companies in the industry and Dassault suffered a huge downturn (-93%) in March 2020 to 664€EUR, compared with stock price the year before where AM FP was trading at 1280, giving reasons to assume stock price is extremely undervalued.

Defense and Business Aviation driving the upside.

Dassault Aviation SA has a strong position in Business Aviation worldwide and in the defense segment through the relations and expertise from all the years working together with the armed forces in various countries. As both segments are expected to grow at a CAGR of 3% from 2020 to 2025, combined with the recent increases of defense expenditure in France and around globe, AM FP is in a good position for the future, offering combat proven aircrafts in defense with RAFALE and top of the line aircrafts with FALCON 8X & 6X for the Long-range (5000>NM) market displaying to be the fastest growing category in business jets.

Dassault Aviation Analysis

As the COVID-19 pandemic leads the world to a contraction year (-5.2% GDP growth), 2021 is expected to be a recovery year for almost every country. However, as March outbreak levels are breached again and tend to increase, coronavirus might be a risk that one has to considered that might affect the price. Despite this fact, as 60% of Dassault's total sales comes from the Defense segment that is expected to keep running even in periods of recession, Dassault Aviation stands in a good position with cashflows from multiple sources.

Price Target Risks

Several factors may represent a risk for Dassault Aviation SA target price, as it can be very sensitive to WACC and terminal growth changes as 90bps increase in WACC may represent a 16.72% decrease in upside potential (Table 12.) , similarly for a 52 bps increase in terminal growth rate represent a 226 EUR increase in Target price (Table 15.).

AM FP - Investment Risks

The main risks concerning an investment in Dassault Aviation, from more riskier to less riskier that an investor should take in consideration, is COVID-19 as it might not only affect worldwide economy but also disrupt the industry supply chain affecting the industry thus Dassault Aviation in multiple ways, causing unfavorable market conditions, delaying production and delivery deadlines, as well as, causing large scale unemployment or temporary dismisses.

Additionally, Dassault Aviation ability to land future Defense contracts might be represented as a risk, as a big proportion of sales comes from this segment and the French government alone will not propel revenue forward as expected. Investors should have in mind a drop-in revenue regarding Business Aviation if the company do not advertise their new aircrafts correctly or choose to cut their marketing campaigns and shows attendance such as EBACE, (European Business Aviation Convention & Exhibition), as Brand Loyalty represents a major factor in Business Jets sales. Last but not least, cyber-attacks can damage a company reputation, thus affecting the stock price. (More in Investment Risks section).

Table 2 – Target Price by method

DCF Valuation	
Price Target	€ 1 422,15
Upside	46,07%

APV Valuation	
Price Target	€ 1 489,65
Upside	48,51%

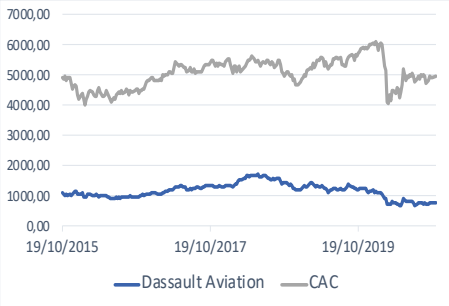
DDM Valuation	
Price Target	€ 1 533,21
Upside	49,97%

P/B - Multiples	
Price Target	€ 1 472,30
Upside	47,90%

EV/Rev - Multiples	
Price Target	€ 1 049,93
Upside	26,95%
(At close: 2020 Nov 6)	
Stock price	767

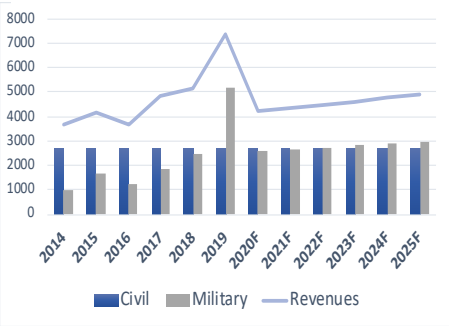
Source: BT analysis

Figure 35 – CAC40 vs DA price movement



Source: Yahoo Finance & BT analysis

Figure 36 – DA revenues forecast



Source: BT analysis

6. Valuation

Dassault Aviation SA price target was assessed using the discounted cashflow model (DCF), reaching a price target of 1422.15 EUR 2021YE, for a potential upside of 46.07%, compared to its closing price 767 EUR (Nov 6, 2020). Using the free cashflow to the firm process to compute the Enterprise value of the firm with WACC as discount rate.

An absolute valuation pre-COVID, assuming the initial forecasted deliveries for 2020 before the impact of the global pandemic and a pre-COVID YoY revenue growth of 3% and 7.3% for Defense and Business Aviation, respectively. Gives a price target of 1843.05 EUR 2021YE, reaching an upside of 58.38%, from its closing price 767 EUR (Nov 6, 2020). From here it is observable the impact of COVID-19 in the upside potential of AM FP.

On the relative valuation, a Multiples approach was used, to consolidate and provide additional information to the computation from the DCF model. It was computed the (EV/REV) and (P/B), achieving a price target of 1049.93EUR and 1472.30EUR, respectively. Confirming the AM FP market price is currently undervalued.
The peer group was carefully selected through companies in the Defense segment, Commercial and Business Aviation, given Dassault Aviation wide market exposure.

Valuation Drivers

Taking into account the computed forecasts for a time horizon of 6 years, the WACC and Terminal Growth estimations, the valuation model might be impacted with changes on valuation drivers.

Net Sales / Revenues

Given the complexity to forecast sales for the several aircrafts plus different price ranges Dassault Aviation offers on both segments Defense and Business Aviation. Net sales were forecasted assuming a 25% decrement in the civil aviation given Dassault forecast of delivering 30 instead of 40 aircrafts for 2020F, and a 50% decrease in defense sales compared to 2019, for the remaining forecasted years a 3% YoY growth was assumed, in line with the growth expectation for both segments. A 3.3% decrement on the compound annual growth rate when compared with the pre-COVID values for Business Aviation. The US market is expected to lead the growth in Business Aviation segment, even though as US market starts to saturate increase in demand in Middle East and Africa might shift some focus of OEM's to those regions as HNWI increased 9.3% in 2019.

Cost of Goods Sold (COGS)

For the accounts regarding COGS i.e. cost of the materials and personal expenses, it was assumed the historical average percentage of sales for all of the 6 years forecasted period, this represents close to 88% of total net sales, a big proportion of the operating expenses (50%), is due to purchases consumed item. These assumptions were made as COGS are directly correlated with the company sales.

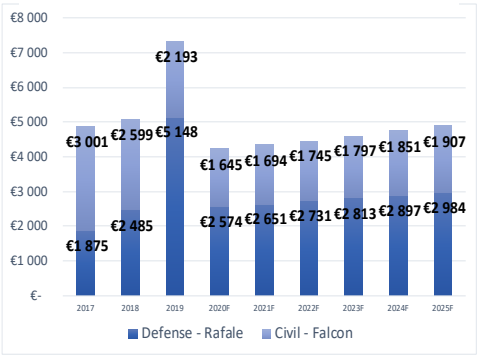
Capital Expenditures (CAPEX)

Considering Dassault Aviation do not mention their future intentions regarding capital expenditures after the 100 million EUR investment in the joint-venture (Dassault Reliance Aerospace) for the India facilities with Reliance Group, it was assumed for the forecasted period to be the historical average percentage of net sales, 4,44%, in

Figure 37 – Stock Price vs PT Pre-COVID vs PT Post-COVID

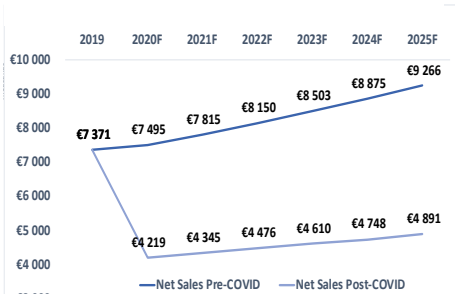
Source: BT analysis

Figure 38 – Revenues 2025 Forecast by segment



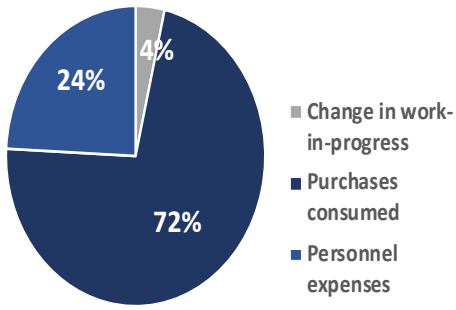
Source: BT analysis

Figure 39 – Post-COVID Revenue scenario



Source: BT analysis

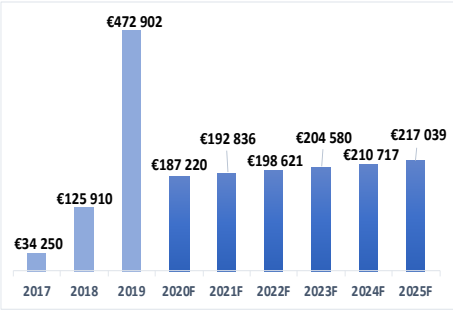
Figure 40 – COGS Structure



Source: BT analysis

other words it is expected that CAPEX increases 3% annually i.e. 6 million increase in absolute value (Figure 41).

Figure 41 – CAPEX 2025 Forecast



Source: BT analysis

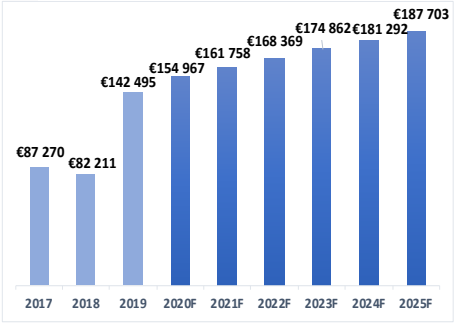
Depreciation & Amortization

With respect to D&A, it was implied a constant percentage of 17,93% in proportion of Property Plant and Equipment, this percentage represents historical average percentage of PPE from 2017 to 2019, going in line with historical trend for D&A (Figure 42).

Net Working Capital (NWC)

Net Working Capital was computed not taking into account the effect of Cash and Debt (Figure 43). Similar to 2019, NWC is negative in all the forecasted years, as trade Payables and Contract Liabilities exceeds Inventories and Receivables, this difference is increasing yearly, thus the negative ΔNWC.

Figure 42 – D&A 2025 Forecast



Source: BT analysis

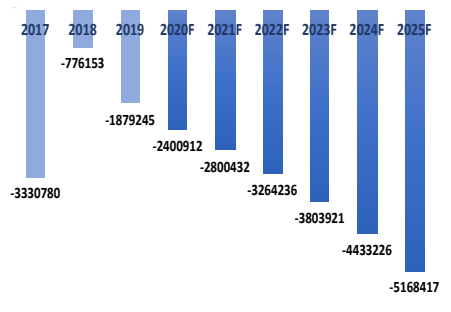
Discounted Cashflow Valuation

The price target reached after performing the DCF model is 1422.15EUR 2021YE, for a potential upside on AM FP of 46.07%, leading to a BUY recommendation, with High risk, as Dassault Aviation market price is currently undervalued.

An analysis of the Dassault's future cash flows was computed by calculating the annual Free Cash Flow to the Firm (FCFF), using the weighted average cost of capital as discount rate. In line with forecasted Revenues and the almost constant percentage of COGS, it is expected that FCFF increases in the forecasted years for a level of 904 million EUR in 2025F.

$$FCFF = EBIT * (1 - t) + D\&A - \Delta NWC - CAPEX$$

Figure 43 – NWC 2025F Outlook



Source: BT analysis

Weighted Average Cost of Capital (WACC)

The future company Cash Flows were discounted using weighted average cost of capital (WACC) as discount rate, for the computation the following formula was considered:

$$WACC = Re * \left(\frac{E}{E+D}\right) + Rd * \left(\frac{D}{E+D}\right) * (1 - t)$$

The **cost of equity** (6.82%), was calculated assuming a **risk-free rate** of -50 bps from the 10 Year German Bund for the forecasted years, in perpetuity a risk-free rate of 0.99% was assumed in line with Germany 10-Year Bond Yield 10-Year historical average, **Unlevered Beta** value of 0.975 was computed over a regression model on AM FP and CAC40 weekly 5-Year Returns, therefore computing the levered beta of 0.998 as per below:

$$\beta L = \beta u * \left(1 + \frac{D}{E}(1 - t)\right)$$

Table 3 – DCF Valuation

Price Target		
Enterprise Value	€	17 180 388
Net Debt	€	5 305 459
Equity Value	€	11 874 929
Number of Shares Outstanding	€	8 350
Price Target	**€**	**1 422,15**
(At close: 2020 Nov 6) Stock price		767
Upside		46,07%

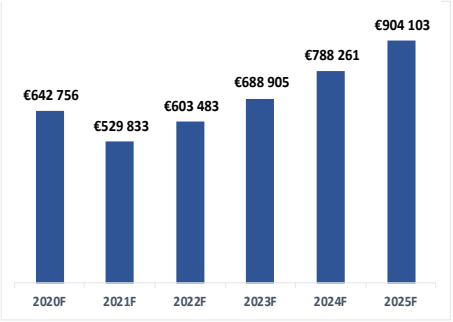
Source: BT analysis

The **Equity Risk Premium** (ERP) 5.96% was considered according to Damodaran, using the Capital Asset Pricing Model (CAPM) with all the information above, the cost of equity was calculated 6.82% (Re):

$$Re = Rf + \beta L * ERP$$

Whereas the **Cost of Debt** (Rd) was determined as the proportion of the cost of financial debt in total borrowings, reaching an Rd of 8.78%, after-tax 5.76%, taking into account a Tax rate of 34.43%, Dassault Aviation 2018 and 2019 Tax rate, assuming this constant rate for the remaining forecasted years.

Figure 44 – FCFF 2025 Forecast



Source: BT analysis

Terminal Growth Rate

The Terminal Growth Rate (g) 2.48% was computed considering France and World Real GDP Long-term Growth Forecast (2015-2060) as a percentage of Net Sales for France and Exports, France was considered given its importance for Dassault's defense segment, on the other hand, Exports given the increase in demand in Middle East and Africa despite USA are still to this day the leading market in business aviation.

With respect to **Terminal Value**, that captures future cashflow of the business beyond the projections made, it was computed a TV of 20 million EUR.

$$TV = \frac{FCFF2025F * (1 + g)}{(WACC - g)}$$

Table 4 – Terminal WACC

WACC	7,10%
Rf	0,99%
Beta levered	1,034
ERP	5,96%
Re	7,15%
Tax rate	34,43%
Rd	8,78%
After-tax Rd	5,76%

Source: BT analysis

Complementary Valuations

DDM and Dividend Policy COVID-19

Dassault Aviation canceled their dividend proposal of 26% Payout Ratio, totaling 96 million EUR for 2019 in May 12, 2020. Considering the current COVID-19 environment and difficulties to predict how the coronavirus will impact the company and world economy, the Board of Directors decided to withdraw the dividend proposal and to allocate fully to retained earnings. To compute this additional valuation method (DDM) was assumed that dividends will resume in 2021F with a payout ratio of 26% for the remaining forecasted years and assuming a dividend growth rate of 6.47% as the average increase from 2014 to 2025F, reaching a Price Target of 1533.21 EUR, representing an upside potential of 49.97%. Due to the fact that company has only paid dividends since 2012 and dividend withdraw are still not clear in the upcoming years, the Three Stage Dividend Discount Model (DDM) should be considered as an additional supporting valuation method rather than a stand-alone absolute valuation given the future uncertainty of paid dividends with the current Covid-19 situation worldwide.

Table 5 – Terminal Growth Rate estimations

	% Net Sales	Real GDP Growth
France	12,42%	1,97%
Exports	87,58%	2,55%
Terminal Growth Rate	**2,48%**	

Source: OCDE Data & BT analysis

Table 6 – DDM Valuation

PV Dividends	€ 453 433
PV TV	€ 12 348 877
Equity Value	€ 12 802 310
Shares Outstanding	8350
Price Target	**€ 1 533,21**
(At close: 2020 Nov 6) Stock price	767
Upside	49,97%

Source: BT analysis

APV and FCFE Valuation

The adjusted present value method (APV) was computed, to reinforce the DCF valuations and reassure the conclusions reached, using APV a target price of 1489.65 EUR was reached (+48.51%), when compared to current price (767 EUR 6Nov2020), complementing the beliefs that the company is undervalued.

However, using the FCFE we reach a lower target price when compared to all the previous valuations 863.48 EUR, even though its representing an upside potential of 11.17% supporting the initial BUY recommendations, this disparity of values may be explained by the deleveraging approach the company is heading directly impacting the Net Borrowings, since the company is not maintaining the same capital structure during the forecasted period, furthermore this valuation similar to DDM must be considered as a supporting factor to our absolute valuation, validating the premise that DA stock price is currently undervalued.

Multiple Valuation (Relative Valuation)

Peers Group

Owing to the fact Dassault Aviation has a wide market exposure position which is not common in the Industry as most companies tend to focus primary on defense or commercial aviation, and is not where near the size of top companies in the Defense segment based in the US, to that extent choosing peer companies correctly for both segments was a hard task. Since Industry reference values Sales, Assets or D/E ratio (0.13 in 2019 compared to 0.38 industry) were very divergent from Dassault. Profitability ratios such as ROA, ROE and Net Profit margin were taking into account as they represented the best fit for the final choice of peers as per below:

Final Peer Group	Net Profit Margin	ROA	ROE
Boeing Co	-0,75%	-0,51%	-
Bombardier Inc	-10,20%	-6,44%	-
Lockheed Martin Corp	10,42%	13,48%	275%
Airbus SE	-1,88%	-1,15%	-17,35%
Northrop Grumman Corp	6,64%	5,71%	26,44%
Honeywell International Inc	16,21%	10,22%	30,91%
Thales SA	6,23%	4,04%	20,13%
Safran SA	10,01%	6,02%	20,12%
General Dynamics Corp	8,85%	7,39%	27,53%
Textron Inc	5,98%	5,57%	15,22%
Dassault Aviation	9,67%	4,64%	16,03%

Multiple Valuation (EV/REV), (P/B)

The relative valuation consolidates the valuation performed using the discount cashflow model (DCF). The (P/B) multiple reach a target price of 1 472.30 EUR present the highest potential upside of the 2 computed multiples, resulting in 47.90% upside. Confirming the initial thought that company is currently undervalued. Furthermore, the (EV/Rev) multiple focusing more in the operational side, obtained a target price of 1 049.93 EUR, compared to its closing price 767 EUR (Nov 6, 2020) represents an upside of 26.95%. To conclude, the (EV/EBITDA) and (P/E) were not considered, given the impact of coronavirus pandemic in the company operational profit margin dropping 5% in 2020F, skewing the values, thus misrepresenting the target stock price.

The multiple valuation supports the initial absolute valuation, leading to the belief that Dassault Aviation might be currently undervalued as their financials are not reflecting appropriately in the stock price. This valuation method should always be taking into consideration together with an absolute valuation such us DCF, as assumptions made may lead into different conclusions, additionally, peer's headquarters and countries of operations reflect different financials and economic environment, that were not taken into account.

Table 7 – APV Valuation

Enterprise Value	€	18 201 627
Net Debt		5305459
Equity Value	€	12 896 168
PV Interest Tax Shield	-€	457 596
EV + ITS	€	12 438 572
Shares Outstanding		8350
Price Target	€	1 489,65
(At close: 2020 Nov 6) Stock price		767
Upside		48,51%

Source: BT analysis

Table 8 – FCFE Valuation

Equity Value	€	7 210 069
Number of Shares Outstanding		8350
Price Target	€	863,48
(At close: 2020 Nov 6) Stock price		767
Upside		11,17%

Source: BT analysis

Table 9 – EV/Rev Multiples Valuation

Equity Value	€	8 766 934
No. Shares		8350
TP	€	1 049,93
(At close: 2020 Nov 6) Stock price		767
Upside		26,95%

Source: BT analysis

Table 10 – P/B Multiples Valuation

Equity Value	€	12 293 739
No. Shares		8350
TP	€	1 472,30
(At close: 2020 Nov 6) Stock price		767
Upside		47,90%

Source: BT analysis

Table 11 – Multiples Valuation

EV/Rev	P/B
€ 1 049,93	€ 1 472,30
EV/EBIDTA	**P/E**
€ 752,79	€ 667,64
Average Target Price	€ 985,67
(At close: 2020 Nov 6) Stock price	767
Average Upside	22,18%

Source: BT analysis

7. Financial Analysis

Dassault Aviation 2019 financials reflect a noticeable upward trend in revenue and income over the past 5 years. This results mirror, the inter-government agreements done between France and India, Qatar & Egypt, over the recent years, being vital for the growth of Dassault Aviation with almost 5.2billion EUR in Net sales in 2019 in the military segment, exhibiting a 107% increase compared to 2018 2.5billion EUR, totaling 7.3billion EUR in Net sales for 2019.

As in the Business Aviation segment, company underperforms some of its peers in the US market, for 2019 revenues dropped 16% to 2.2billion EUR in this segment, representing only 30% of the business compared to 2018, 2.6billion EUR weighting almost 50% of company total activity.

Overall Dassault has a promising financial position, giving the fact that Defense segment always gives the company the airbag and protection needed in times of recession or sluggish demand in Business Aviation.

COVID-19 pandemic Analysis

The coronavirus pandemic hit the global economy very rapidly, today in the forecasts the COVID-19 impacts are already visible on Dassault Aviation financials, supply chain disruptions are part of the problem as internal and external changes had to be made, adapting the loads with company subcontractors for the RAFALE and Falcon projects, the main area of impact is revenues for 2020 company expects to delivery only 13 RAFALE aircrafts which represents a 50% reduction in total sales, 2.5billion compared with 2019 5 billion in 26 aircraft deliveries. For the Civil segment it is expected a 25% decrease in 2020, with 30 deliveries instead of the 40 initially planned.

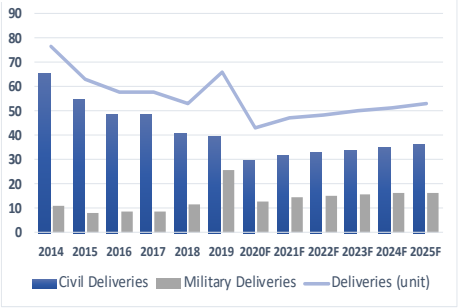
In total terms, the pandemic highly impacted the company with an overall expected 75% decrement in sales compared to 2019, in a year that was expected for the company to maintain or slightly increase their sales.

This major crisis is still unpredictable and the effects of it might influence company operations and financials for a longer period than 2020 alone, possibly affecting developments for Falcon 6x and 8x with timelines for 2022, as they represent a great importance in Dassault's revamp on the Business Aviation segment.

DuPont Approach

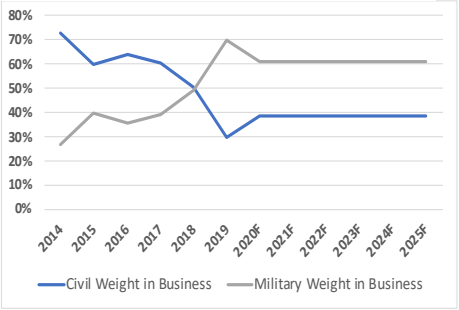
The effects of COVID-19 can also be seen in the profitability and efficiency ratios, as ROA and ROE suffer a downturn in the forecasted horizon, as the increase in total assets is not followed in the same track by net income, additionally in Assets turnover the behavior is similar mainly due with the increase in cash and cash equivalents over the forecasted period negatively impacting this ratio. Analyzing ROE performing a DuPont analysis, as production increased in 2019 a decrease of 1.52% in operating efficiency is observable from 11.19% in 2018 to 9.67%, besides that, equity multiplier shows the company deleveraging also supported by the solvency ratios continuing also on 2020F.

Figure 46 – Deliveries 2025 Forecast in units



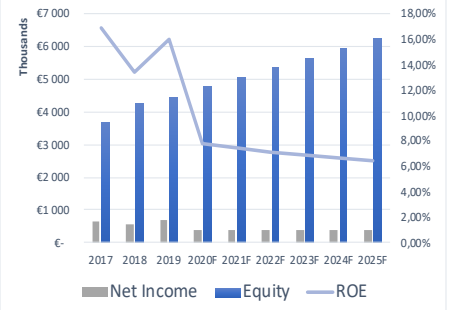
Source: BT analysis

Figure 47 – Segment Weight in Business 2025 Forecast



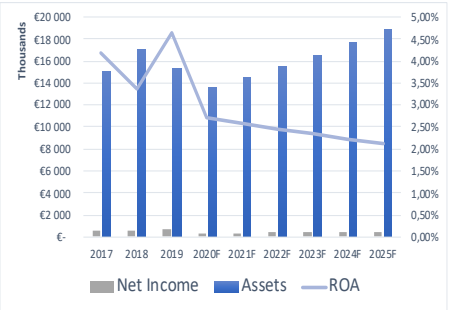
Source: BT analysis

Figure 48 – ROE Analysis



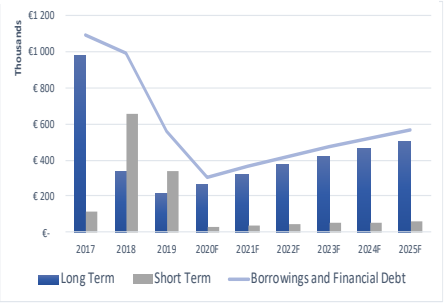
Source: BT analysis

Figure 49 – ROA Analysis



Source: BT analysis

Figure 50 – Debt Breakdown Forecast 2025 Analysis



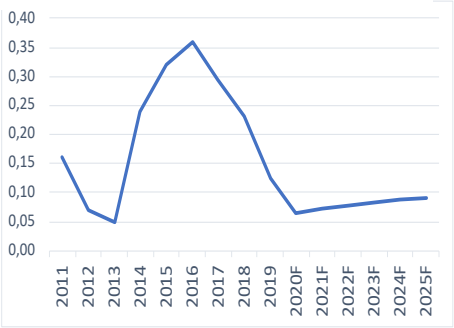
Source: BT analysis

Debt-to-Equity

Presently, Dassault Aviation has been on a path of deleveraging as D/E was 0.29 in 2017 decreasing 26% to 0.23 in 2018, in 2019 D/E was 0.13 representing a decrease of 84%, mainly due to Dassault's decrease in Borrowings and Financial debt of EUR 783M in 2019 and EUR 174M in 2018. For 2020 it is Dassault's intention to repay EUR 250M that was accounted in the forecasts, this represents a 83% decrease similar to the previous year, which is directly reflected in the D/E of 0.6 for 2020F, with total borrowing and financial debt at EUR 300M in the first year of forecast. The remaining forecasted years, it was decided to reduce the pace of deleveraging with industry levels of D/E close to 0.38 it was decided to gradually converge to historical average DA D/E of 0.9 before its debt increase in 2015-2017, reaching a 0.9 D/E in 2024F remaining around those D/E levels thereafter, it was also assumed a repayment YoY rate of 10.49% for total borrowings, according to 2017 levels.

DA tries to hedge some risk by entering an interest rate swap, swapping the variable subscribed rate in their borrowings to a fixed rate making them more protected in adverse market fluctuations.

Figure 51 – D/E 2025 Forecast Analysis



Source: BT analysis

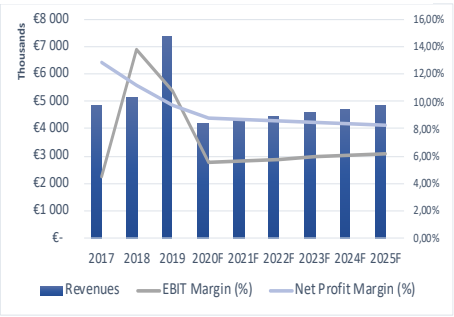
Dassault Margins

Additionally, Gross profit margin increase to 15.16% in 2019, mainly due to the increase in sales. Even though Net profit margin has been decreasing more than 1% YoY in the last couple of years reaching 9.67% in 2019 due to increase of financial expenses and losses in foreign exchange.

However, in 2017 Net Financial Income played in the company favor propelling the EBIT margin of 4.57% to a Net profit margin of 12.86%.

To conclude, in 2019 is still important to analyze that from 712 million in net income, 36% represents Dassault Aviation 25% share in Thales earnings, i.e. performing a net profit margin without Thales gives a 6.16% NPM which better reflect reality.

Figure 52 – EBIT/Net Profit Margin



Source: BT analysis

Liquidity Ratios

As cash is anticipated to increase in forecast horizon, is expected that Liquidity ratios follow and increase on an annual basis from 1.12 in 2019 to 1.32 in 2026F for Current Ratio and 0.58 in 2019 to 0.93 in 2026F for Quick Ratio, similar behavior to Cash Ratio in the past years.

Dividends

Dassault Aviation Board of directors canceled their dividend proposal of 26% Payout Ratio similar to previous years, totaling 185 million EUR for 2019 in May 12, 2020 in response to current COVID-19 environment and difficulties to assess the impact for the company. Company has been paying dividend on a YoY basis since 2012, owing to that for the forecasted years it was assumed company will resume paying dividends in 2021F, maintaining the same level of payout ratio of 26%, i.e. 99.5million in 2021F representing EUR 11.97 per share 80% decrease when compared to 2019 pre-COVID of EUR 25.4/share.

Figure 53 – DPS 2025 Forecast

Source: BT analysis

8. Investment Risks

Market/Economic Risk – World Economy / GDP growth (MER1)
The Business Aviation segment is highly dependent on the prospects of the World economy showing strong correlation in times of economic growth, service provider companies will renew their fleet and increases in the number of high net worth individuals will propel order intakes.

In the Defense segment even though more safeguarded in case of worldwide recession as military segment is a vital part of every country, there stronger evidence that when Real GDP expected growth in considerably higher, the segment thrives, as countries increase their percentage of GDP in military expenses.

Market/Economic Risk – COVID-19 (MER2)
COVID-19 represents a risk to global economy directly affecting Dassault Aviation, on top of the economic downturn that may affect Business Aviation demand, company has to face several issues regarding sales, deliveries, production and developments of upcoming aircrafts. COVID pandemic reflects a harsh crisis for the company and their subcontractors, with future uncertainty the possibility of a second wave may represent an even higher risk than anticipated.

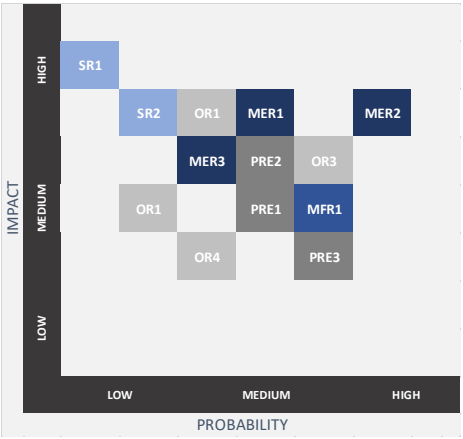
Market/Economic Risk – Demand Shift (MER3)
Competition in Business Aviation is aggressive in technological terms, demand increase in all-electric aircrafts, may represent a future risk for Dassault Aviation in the Business Aviation segment, as the expected growth forecasts looking promising over the next 10 years, with a growth rate of 24%, 50% reduction in maintenance costs allied with higher efficiency may be the turning point for a shift in demand.

Market/Financial Risk – Foreign exchange (MFR1)
Dassault Aviation France location do not play in their favor in the Business Aviation Market, US is the largest market for business jets which gives the company competitors economic advantages as they are not exposed to market fluctuations in the exchange rates which may affect company revenues.

Operational Risk – Dependence on Governments (OR1)
Defense segment business highly depends on Dassault Aviation ability to land government contracts, notwithstanding company efforts to land inter-government contracts in South Asia and Middle East, Dassault is still very dependent on the French government as 40% of the RAFALE backlog in 2019 is from France alone. Despite this, Business aviation is a way to ease risk a to be less dependent.

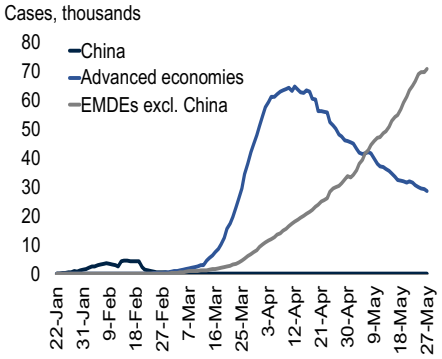
Operational Risk – Research and Innovation (OR2)
Research and Development (R&D), plays a major role in the industry being extremely important in terms of new innovations, technological advances and security.
On Business Aviation competitive environment, R&D investments made by companies tend to increase leading to new innovative technologies, process upgrades, safety improvements and new fuel-efficiency engines/mechanisms.
Despite some share ground in both commercial and defense segments, in efficiency and safety to conduct their operations, the defense segment is often more challenging addressing the emerging need of armed forces not only the weaponry improvements, but also, versatility, flexibility and survivability, being able to perform well as a multirole weapon system.

Figure 54 – DA Risk Matrix



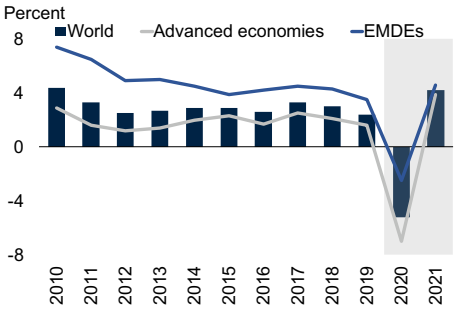
Source: BT analysis

Figure 55 – Daily New COVID-19 Cases



Source: Johns Hopkins University; World Bank

Figure 56 – Global Growth Forecast



Source: World Bank

Operational Risk – Supply Chain (OR3)
Dassault Aviation production is dependent on their subcontractors and suppliers, a disruption in the chain may lead to delays in production and delivery of aircrafts which could influence revenues, this risk might be mitigated through acquisition of smaller contractors and joint ventures in foreign countries.

Operational Risk – Qualified Labor (OR4)
Extremely qualified and skilled employees lay the foundations for Aerospace and Defense, Dassault Aviation is no exception in which individual and collective performance bring the company forward. However, this can be a weak point for the company as they become dependent on individual's talent and skill. Dassault needs to maintain motivation within their workers, a part of this is by investing almost 3% of the annual payroll in training and offering attractive compensation, as the average annual compensation for 2019 was EUR 57 100.

Security Risk – Faulty Aircraft Design (SR1)
Regardless of Dassault Aviation several years of expertise in the aviation industry, the risk in a system or component malfunction failure exists, even if its minimal, such incidents may result in damages for the company affecting brand reputation which is crucial on consolidating new clients.

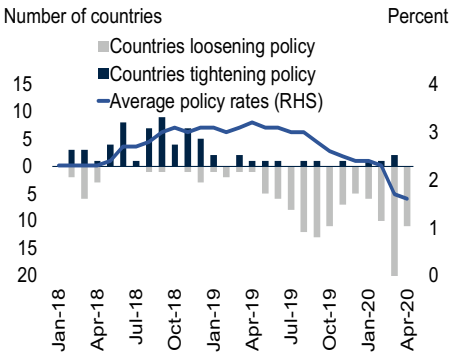
Security Risk – Cybersecurity (SR2)
Despite low probability cybersecurity issues could have a big impact for Dassault Aviation considering the classified and proprietary information the company holds, makes them susceptible to cyber-attacks. Dassault needs IT software capable of protecting valuable information and aircrafts, as it can be harmful for the company and stakeholders.

Political & Regulatory Risk - Environmental Protection (PRE1)
Energy is a key input into production, today, environmental protection and sustainable performance represent the bigger challenges as environmental policies become narrow. Aerospace and Defense is still one of the industries that create more environmental externalities, Greenhouse Gases, Soil and Water pollution that have ecological impacts. As a consequence, this risks around hazardous waste and C02 production, need to be handle strictly according to regulations, resulting in sanctions and penalties when breached.

Political & Regulatory Risk – Regulation (PRE2)
Aerospace and Defense is subject to Regulation and Policies around the world. The European Aviation Safety Agency (EASA) and Federal Aviation Administration (FAA) in the US have authority in several aspects, including quality of aircrafts and parts, safety and security measures, inspections and maintenance procedures, and also other operational and environmental concerns.

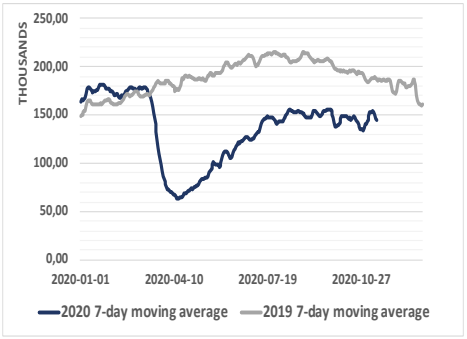
Political & Regulatory Risk – Legal (PRE3)
Legal Patents for Intellectual Property, can along with other factors, be a key to succeed in the market, protecting their new innovative aircraft parts, software, new devices, manufacturing or assemble procedures that will ultimately make companies more competitive in the long run.

Figure 57 – World Policy Rates



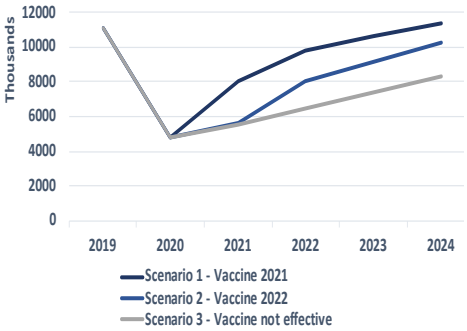
Source: Bank of International Settlements; ECB; World Bank

Figure 58 – Nº of Flights 2019 vs 2020



Source: Flightradar24

Figure 59 – Europe Nº of Flights Forecast Scenarios



Source: Eurocontrol

Price Target Risks

A sensitivity analysis was performed to evaluate the impact of some variables in the Dassault Aviation target price.
Sensitivity tests were run to various factors that may affect Dassault Aviation SA target price, namely Weighted Average Cost of Capital (WACC), Beta Levered (BL), Equity Risk Premium (ERP), Terminal Growth Rate (g) and Tax Rate (t).

Regarding, the sensitivity analysis on Dassault Aviation Target price, we can conclude that, the target price is extremely sensitive to changes in WACC, BL and ERP. A 1% decrease in Weighted Average Cost of Capital (WACC) (Table 12.), represents an increase of 16.93% in the upside potential for AM FP, similarly for a Unlevered Beta (Bu) of 0.85 which reflect an BL of 0.9 (Table 13.), represents a price target of 1836.47EUR meaning an upside of 58.24% compared to 46.07% with BL at 1.03. Additionally, on the same subject a 96bps decrease in Equity Risk Premium (ERP) (Table 14.), constitutes an upside of 60.98% with a Price target at 1965.52EUR corresponding to an increase of 14.91% on the upside. Concerning this we can observe that price target is overly sensitive to these 3 variables.

Table 12 – WACC Sensitivity Analysis

Sensitivity Analysis	Weighted Average Cost of Capital (WACC)							
	7,10%	4%	5%	6%	7%	8%	9%	10%
Enterprise Value	€ 17 180 388	€ 53 012 126	€ 31 754 181	€ 22 615 498	€ 17 561 397	€ 14 369 863	€ 12 182 213	€ 10 596 612
Price Target	€ 1 422,15	€ 5 713,37	€ 3 167,51	€ 2 073,06	€ 1 467,78	€ 1 085,56	€ 823,56	€ 633,67
Potencial Upside/Downside	46,07%	86,58%	75,79%	63,00%	47,74%	29,35%	6,87%	-21,04%

Source: BT analysis

Table 13- Beta Levered (BL) Sensitivity Analysis

Sensitivity Analysis	Beta Levered						
	1,03	0,80	0,90	1,00	1,10	1,30	1,40
Enterprise Value	€ 17 180 388	€ 24 309 843	€ 20 640 004	€ 17 935 723	€ 15 863 954	€ 12 907 830	€ 11 820 066
Price Target	€ 1 422,15	€ 2 275,97	€ 1 836,47	€ 1 512,61	€ 1 264,49	€ 910,46	€ 780,19
Potencial Upside/Downside	46,07%	66,30%	58,24%	49,29%	39,34%	15,76%	1,69%

Source: BT analysis

Table 14 – Equity Risk Premium (ERP) Sensitivity Analysis

Sensitivity Analysis	Equity Risk Premium (ERP)						
	5,96%	3,00%	4,00%	5,00%	7,00%	8,00%	9,00%
Enterprise Value	€ 17 180 388	€ 48 163 254	€ 29 968 297	€ 21 717 544	€ 14 027 482	€ 11 946 289	€ 10 426 705
Price Target	€ 1 422,15	€ 5 132,67	€ 2 953,63	€ 1 965,52	€ 1 044,55	€ 795,31	€ 613,32
Potencial Upside/Downside	46,07%	85,06%	74,03%	60,98%	26,57%	3,56%	-25,06%

Source: BT analysis

Moreover, looking over the sensitivity analysis on Terminal Growth Rate (g) (Table 15.) for a 48bps decrease in Terminal Growth Rate (g) portrays a price target of 1254.46EUR with 38.86%, a decrease of 167.69EUR in PT. On the other hand, for Tax Rate (t) (Table 16.), is possible to observe that (t) have a much smaller impact over Price Target, a 5% increase or decrease in the Tax Rate (t), represents a Price target ranging from 1453.54EUR (+47.23%) to 1382.68EUR (+44.53%) from which we can conclude that price target is less responsive to changes in t.

Table 15 – Terminal Growth Rate (g) Sensitivity Analysis

Sensitivity Analysis	Terminal Growth Rate (g)						
	2,48%	1,0%	1,5%	2,0%	3,0%	3,5%	4,0%
Enterprise Value	€ 17 180 388	€ 13 570 898	€ 14 576 900	€ 15 780 178	€ 19 067 293	€ 21 395 766	€ 24 475 486
Price Target	€ 1 422,15	€ 989,87	€ 1 110,35	€ 1 254,46	€ 1 648,12	€ 1 926,98	€ 2 295,81
Potencial Upside/Downside	46,07%	22,52%	30,92%	38,86%	53,46%	60,20%	66,59%

Source: BT analysis

Table 16 – Tax Rate (t) Sensitivity Analysis

Sensitivity Analysis	Tax Rate						
	34,43%	20%	25%	30%	40%	45%	50%
Enterprise Value	€ 17 180 388	€ 18 034 236	€ 17 738 378	€ 17 442 519	€ 16 850 802	€ 16 554 943	€ 16 259 085
Price Target	€ 1 422,15	€ 1 524,40	€ 1 488,97	€ 1 453,54	€ 1 382,68	€ 1 347,24	€ 1 311,81
Potencial Upside/Downside	46,07%	49,69%	48,49%	47,23%	44,53%	43,07%	41,53%

Source: BT analysis

Monte Carlo Simulation

To complete the sensitivity analysis, using Crystal Ball software, a Monte Carlo simulation was computed with 100 000 simulation to test the price target 2021 YE sensitivity to two variables previous analyzed, WACC and Terminal Growth Rate (g), to perform this sensitivity analysis it was assumed a standard deviation of 50bps for WACC and 25 bps for terminal growth rate (g).

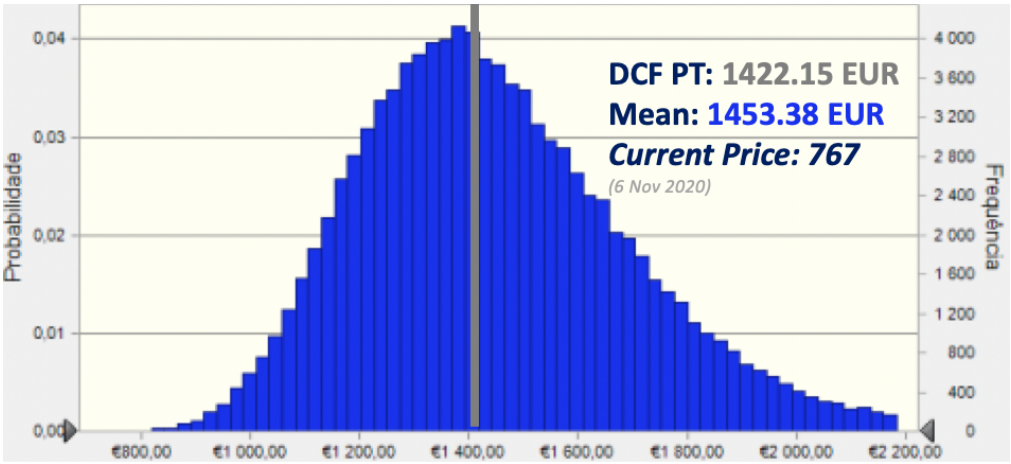
Given the 95% confidence level, a mean price of 1453.38 EUR was reached representing an upside of 47.23% with a standard deviation of 260.51 EUR and a median of 1421.21 EUR, the min price value observed was 691.75 EUR and 3 680 EUR for the max value observed representing an upside of 79.16% as per Table 17.

Table 16 – Crystal Ball Percentiles

Percentiles	Value	Upside Potencial
0%	€691,75	-10,88%
10%	€1 151,27	33,38%
20%	€1 235,35	37,91%
30%	€1 301,58	41,07%
40%	€1 362,40	43,70%
50%	€1 421,21	46,03%
60%	€1 485,86	48,38%
70%	€1 560,54	50,85%
80%	€1 652,94	53,60%
90%	€1 792,45	57,21%
100%	€3 680,09	79,16%

Source: BT analysis

Table 17 – Monte Carlo Price Target Distribution



Source: BT analysis

Appendices

Appendix 1: Statement of Financial Position

Table 18 – Dassault Aviation Balance Sheet

Dassault Aviation Balance Sheet									
(in EUR thousands)	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Goodwill	€ 14 366	€ 14 366	€ 77 452	€ 77 452	€ 77 452	€ 77 452	€ 77 452	€ 77 452	€ 77 452
Intangible assets	€ 30 687	€ 28 881	€ 40 931	€ 24 892	€ 25 639	€ 26 408	€ 27 200	€ 28 016	€ 28 856
Property, plant and equipment	€ 445 310	€ 489 009	€ 819 416	€ 864 141	€ 902 010	€ 938 874	€ 975 085	€ 1 010 940	€ 1 046 686
Equity associates	€ 1 770 557	€ 1 924 093	€ 1 841 218	€ 1 970 751	€ 2 340 957	€ 2 704 364	€ 3 061 798	€ 3 414 007	€ 3 761 670
Available-for-sale securities	€ 3 305 850	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
Other non-current financial assets	€ 38 197	€ 204 618	€ 207 730	€ 207 730	€ 207 730	€ 207 730	€ 207 730	€ 207 730	€ 207 730
Deferred tax assets	€ 323 291	€ 378 728	€ 438 261	€ 438 261	€ 438 261	€ 438 261	€ 438 261	€ 438 261	€ 438 261
TOTAL NON-CURRENT ASSETS	**€ 5 928 258**	**€ 3 039 695**	**€ 3 425 008**	**€ 3 583 226**	**€ 3 992 049**	**€ 4 393 088**	**€ 4 787 526**	**€ 5 176 406**	**€ 5 560 656**
Inventories and work-in-progress	€ 3 471 434	€ 3 403 278	€ 3 368 351	€ 1 997 189	€ 2 054 583	€ 2 113 698	€ 2 174 587	€ 2 237 302	€ 2 301 899
Contract assets	€ -	€ 16 967	€ 14 788	€ 11 223	€ 11 560	€ 11 907	€ 12 264	€ 12 632	€ 13 011
Trade and other receivables	€ 870 161	€ 1 068 312	€ 1 224 369	€ 700 797	€ 721 821	€ 743 476	€ 765 780	€ 788 753	€ 812 416
Advances and progress payments to suppliers	€ 2 525 871	€ 3 282 220	€ 2 363 786	€ 2 028 924	€ 2 089 792	€ 2 152 486	€ 2 217 060	€ 2 283 572	€ 2 352 079
Derivative financial instruments	€ 172 818	€ 40 407	€ 6 815	€ 73 347	€ 73 347	€ 73 347	€ 73 347	€ 73 347	€ 73 347
Other current financial assets	€ -	€ 3 211 968	€ 1 433 071	€ 1 433 071	€ 1 433 071	€ 1 433 071	€ 1 433 071	€ 1 433 071	€ 1 433 071
Cash and cash equivalents	€ 2 061 419	€ 2 990 141	€ 3 532 883	€ 3 881 798	€ 4 211 310	€ 4 613 344	€ 5 099 236	€ 5 682 517	€ 6 379 298
TOTAL CURRENT ASSETS	**€ 9 101 703**	**€ 14 013 293**	**€ 11 944 063**	**€ 10 126 350**	**€ 10 595 483**	**€ 11 141 328**	**€ 11 775 345**	**€ 12 511 194**	**€ 13 365 121**
TOTAL ASSETS	**€ 15 029 961**	**€ 17 052 988**	**€ 15 369 071**	**€ 13 709 576**	**€ 14 587 532**	**€ 15 534 416**	**€ 16 562 871**	**€ 17 687 600**	**€ 18 925 777**
Capital	€ 66 495	€ 66 790	€ 66 790	€ 66 790	€ 66 790	€ 66 790	€ 66 790	€ 66 790	€ 66 790
Consolidated reserves and retained earnings	€ 3 720 201	€ 4 237 360	€ 4 379 424	€ 4 751 391	€ 5 030 089	€ 5 312 742	€ 5 599 822	€ 5 891 764	€ 6 188 979
Currency translation adjustments	-€ 24 888	€ 8 317	€ 34 608	€ 6 012	€ 6 012	€ 6 012	€ 6 012	€ 6 012	€ 6 012
Treasury shares	-€ 37 828	-€ 36 432	-€ 34 888	-€ 33 687	-€ 32 527	-€ 31 407	-€ 30 325	-€ 29 281	-€ 28 273
TOTAL ATTRIBUTABLE TO THE OWNERS OF THE PARENT COMPANY	€ 3 723 980	€ 4 276 035	€ 4 445 934	€ 4 790 506	€ 5 070 364	€ 5 354 138	€ 5 642 299	€ 5 935 286	€ 6 233 509
Non-controlling interests	€ 493	€ 554	€ 151	€ 399	€ 399	€ 399	€ 399	€ 399	€ 399
TOTAL EQUITY	**€ 3 724 473**	**€ 4 276 589**	**€ 4 446 085**	**€ 4 790 906**	**€ 5 070 764**	**€ 5 354 537**	**€ 5 642 698**	**€ 5 935 685**	**€ 6 233 908**
Long-term borrowings and financial debt	€ 980 265	€ 335 306	€ 216 176	€ 272 484	€ 325 254	€ 374 928	€ 421 904	€ 466 540	€ 509 161
Deferred tax liabilities	€ -	€ -	€ 3 517	3517	3517	3517	3517	3517	3517
TOTAL NON-CURRENT LIABILITIES	**€ 980 265**	**€ 335 306**	**€ 219 693**	**€ 276 001**	**€ 328 771**	**€ 378 445**	**€ 425 421**	**€ 470 057**	**€ 512 678**
Contract liabilities	€ 8 126 973	€ 9 198 007	€ 7 375 703	€ 5 900 871	€ 6 077 897	€ 6 260 234	€ 6 448 041	€ 6 641 482	€ 6 840 727
Trade and other payables	€ 735 754	€ 914 298	€ 1 075 599	€ 637 753	€ 656 080	€ 674 957	€ 694 400	€ 714 427	€ 735 054
Tax and social security liabilities	€ 237 616	€ 309 191	€ 291 985	€ 208 310	€ 214 559	€ 220 996	€ 227 626	€ 234 455	€ 241 489
Short-term borrowings and financial debt	€ 114 910	€ 656 070	€ 342 042	€ 31 942	€ 38 127	€ 43 950	€ 49 457	€ 54 689	€ 59 686
Provisions for contingencies and charges	€ 1 097 903	€ 1 337 402	€ 1 540 323	€ 1 825 183	€ 2 162 723	€ 2 562 686	€ 3 036 616	€ 3 598 193	€ 4 263 624
Derivative financial instruments	€ 12 067	€ 26 125	€ 77 641	€ 38 611	€ 38 611	€ 38 611	€ 38 611	€ 38 611	€ 38 611
TOTAL CURRENT LIABILITIES	**€ 10 325 223**	**€ 12 441 093**	**€ 10 703 293**	**€ 8 642 669**	**€ 9 187 998**	**€ 9 801 434**	**€ 10 494 752**	**€ 11 281 857**	**€ 12 179 191**
TOTAL EQUITY AND LIABILITIES	**€ 15 029 961**	**€ 17 052 988**	**€ 15 369 071**	**€ 13 709 576**	**€ 14 587 532**	**€ 15 534 416**	**€ 16 562 871**	**€ 17 687 600**	**€ 18 925 777**

Source: BT analysis

Appendix 2: Income Statement

Table 19 – Dassault Aviation – Income statement

Dassault Aviation - Income statement									
(in EUR thousands)	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
NET SALES	€ 4 901 080	€ 5 119 219	€ 7 370 616	€ 4 218 750	€ 4 345 313	€ 4 475 672	€ 4 609 942	€ 4 748 240	€4 890 688
Other revenue	€ 44 038	€ 110 494	€ 60 164	€ 54 467	€ 56 101	€ 57 784	€ 59 518	€ 61 303	€ 63 142
Change in work-in-progress	-€ 108 296	-€ 52 505	-€ 311 902	-€ 157 568	-€ 157 568	-€ 157 568	-€ 157 568	-€ 157 568	-€ 157 568
Purchases consumed	-€ 3 062 529	-€ 3 287 081	-€ 4 698 415	-€ 2 678 099	-€ 2 758 442	-€ 2 841 196	-€ 2 926 432	-€ 3 014 225	-€3 104 651
Personnel expenses	-€ 1 143 040	-€ 1 204 926	-€ 1 302 723	-€ 907 510	-€ 934 735	-€ 962 778	-€ 991 661	-€ 1 021 411	-€1 052 053
Taxes	-€ 68 381	-€ 68 935	-€ 71 887	-€ 52 096	-€ 53 659	-€ 55 269	-€ 56 927	-€ 58 635	-€ 60 394
Depreciation and amortization	-€ 87 270	-€ 82 211	-€ 142 495	-€ 154 967	-€ 161 758	-€ 168 369	-€ 174 862	-€ 181 292	-€ 187 703
Allocations to provisions	-€ 948 321	-€ 1 047 885	-€ 811 240	-€ 935 815	-€ 935 815	-€ 935 815	-€ 935 815	-€ 935 815	-€ 935 815
Reversals of provisions	€ 856 874	€ 983 211	€ 703 819	€ 847 968	€ 847 968	€ 847 968	€ 847 968	€ 847 968	€ 847 968
Other operating income and expenses	-€ 32 719	-€ 2 852	€ 315	-€ 1 269	-€ 1 269	-€ 1 269	-€ 1 269	-€ 1 269	-€ 1 269
CURRENT OPERATING INCOME	€ 351 436	€ 466 529	€ 796 252	€ 233 861	€ 246 135	€ 259 162	€ 272 894	€ 287 298	€ 302 346
Other non-current income and expenses	-€ 133 501	€ 241 000	€ -	€ -	€ -	€ -	€ -	€ -	€ -
OPERATING INCOME	€ 217 935	€ 707 529	€ 796 252	€ 233 861	€ 246 135	€ 259 162	€ 272 894	€ 287 298	€ 302 346
Cost of net financial debt	-€ 72 802	-€ 86 507	-€ 61 288	-€ 26 741	-€ 31 920	-€ 36 795	-€ 41 405	-€ 45 786	-€ 49 969
Other financial income and expenses	€ 592 361	-€ 59 376	-€ 34 337	-€ 34 337	-€ 34 337	-€ 34 337	-€ 34 337	-€ 34 337	-€ 34 337
NET FINANCIAL INCOME	€ 519 559	-€ 145 883	-€ 95 625	-€ 61 078	-€ 66 257	-€ 71 132	-€ 75 742	-€ 80 123	-€ 84 306
Share in net income of equity associates	€ 143 951	€ 205 849	€ 258 673	€ 258 673	€ 258 673	€ 258 673	€ 258 673	€ 258 673	€ 258 673
Income tax	-€ 251 363	-€ 194 693	-€ 246 578	-€ 59 489	-€ 61 932	-€ 64 739	-€ 67 879	-€ 71 330	-€ 75 071
NET INCOME	€ 630 082	€ 572 802	€ 712 722	€ 371 967	€ 376 619	€ 381 964	€ 387 946	€ 394 517	€ 401 642
Attributable to the owners of the Parent Company	€ 630 040	€ 572 741	€ 712 704	€ 371 949	€ 376 601	€ 381 946	€ 387 928	€ 394 499	€ 401 624
Attributable to non-controlling interests	€ 42	€ 62	€ 18	€ 18	€ 18	€ 18	€ 18	€ 18	€ 18
Earnings per share (in EUR)	76,4	69,1	85,7	€ 45	€ 45	€ 46	€ 46	€ 47	€ 48
Diluted earnings per share (in EUR)	76,4	69,1	85,7	€ 45	€ 45	€ 46	€ 46	€ 47	€ 48

Source: BT analysis

Appendix 3: Cash Flow Statement

Table 20 – Dassault Aviation – Cash Flow Statement

Dassault Aviation - Cash Flow Statement	2021F	2022F	2023F	2024F	2025F
Operating Activities	€ 745 482	€ 826 595	€ 919 563	€ 1 026 564	€ 1 150 169
+EBIT	€ 246 135	€ 259 162	€ 272 894	€ 287 298	€ 302 346
+D&A	€ 161 758	€ 168 369	€ 174 862	€ 181 292	€ 187 703
-Income Tax	€ 61 932	€ 64 739	€ 67 879	€ 71 330	€ 75 071
-DNWC	-€ 399 521	-€ 463 803	-€ 539 686	-€ 629 305	-€ 735 192
Investment Activities	-€ 192 836	-€ 198 621	-€ 204 580	-€ 210 717	-€ 217 039
-CAPEX	€ 192 836	€ 198 621	€ 204 580	€ 210 717	€ 217 039
+-Other Inv.					
Financing Activities	-€ 223 134	-€ 225 940	-€ 229 091	-€ 232 567	-€ 236 349
-Interest paid	€ 66 257	€ 71 132	€ 75 742	€ 80 123	€ 84 306
-Dividends	€ 97 921	€ 99 311	€ 100 866	€ 102 575	€ 104 427
-DDebt	€ 58 956	€ 55 497	€ 52 483	€ 49 869	€ 47 616
Change in Cash	€ 329 512	€ 402 034	€ 485 892	€ 583 281	€ 696 781
Opening net cash and cash equivalents	€ 3 881 798	€ 4 211 310	€ 4 613 344	€ 5 099 236	€ 5 682 517
Closing net cash and cash equivalents	€ 4 211 310	€ 4 613 344	€ 5 099 236	€ 5 682 517	€ 6 379 298

Source: BT analysis

Appendix 4: Key Financial Ratios

Table 21 – Key Financial Ratios

	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Efficiency Ratios									
Total Assets Turnover (x)	0,33	0,30	0,48	0,31	0,30	0,29	0,28	0,27	0,26
Accounts Receivables Turnover (x)	5,63	4,79	6,02	6,02	6,02	6,02	6,02	6,02	6,02
Collection Period (days) (DSO)	64,80	76,17	60,63	60,63	60,63	60,63	60,63	60,63	60,63
Inventory Turnover (x)	1,24	1,34	1,87	1,87	1,87	1,87	1,87	1,87	1,87
Days in Inventory (days) (DIO)	293,72	273,34	194,75	194,75	194,75	194,75	194,75	194,75	194,75
Payables Turnover (x)	5,86	4,97	5,87	5,87	5,87	5,87	5,87	5,87	5,87
Payables Period (days) (DPO)	62,25	73,43	62,19	62,19	62,19	62,19	62,19	62,19	62,19
Operating Cycle (days)	358,52	349,51	255,38	255,38	255,38	255,38	255,38	255,38	255,38
Cash Cycle (days)	296,27	276,08	193,19	193,19	193,19	193,19	193,19	193,19	193,19
Solvency Ratios									
Long- and short-term Debt Ratio (%)	7,29%	5,81%	3,63%	2,22%	2,49%	2,70%	2,85%	2,95%	3,01%
Long-term Debt Ratio (%)	6,52%	1,97%	1,41%	1,99%	2,23%	2,41%	2,55%	2,64%	2,69%
Debt to Equity Ratio (x)	0,29	0,23	0,13	0,06	0,07	0,08	0,08	0,09	0,09
Debt to EBITDA (x)	3,59	1,26	0,59	0,78	0,89	0,98	1,05	1,11	1,16
Liquidity Ratios									
Current Ratio (x)	0,88	1,13	1,12	1,17	1,15	1,14	1,12	1,11	1,10
Quick Ratio (x)	0,28	0,58	0,58	0,70	0,69	0,69	0,70	0,70	0,71
Cash Ratio (x)	0,20	0,24	0,33	0,45	0,46	0,47	0,49	0,50	0,52
Profitability Ratios									
Gross Profit Margin (%)	12,88%	13,38%	15,16%	12,56%	12,67%	12,78%	12,88%	12,98%	13,08%
EBIT Margin (%)	4,45%	13,82%	10,80%	5,54%	5,66%	5,79%	5,92%	6,05%	6,18%
Net Profit Margin (%)	12,86%	11,19%	9,67%	8,82%	8,67%	8,53%	8,42%	8,31%	8,21%
ROA (%)	4,19%	3,36%	4,64%	2,71%	2,58%	2,46%	2,34%	2,23%	2,12%
ROE (%)	16,92%	13,40%	16,03%	7,76%	7,43%	7,13%	6,88%	6,65%	6,44%
ROE (%) - DuPont Approach	16,92%	13,40%	16,03%	7,76%	7,43%	7,13%	6,88%	6,65%	6,44%
(*) NI / S	12,86%	11,19%	9,67%	8,82%	8,67%	8,53%	8,42%	8,31%	8,21%
(*) S / A	32,61%	30,02%	47,96%	30,77%	29,79%	28,81%	27,83%	26,85%	25,84%
(*) A / E	4,04	3,99	3,46	2,86	2,88	2,90	2,94	2,98	3,04

Source: BT analysis

Appendix 5: Common-Size Statement of Financial Position

Table 22– Dassault Aviation Common-Size Balance Sheet

Dassault Aviation Common-Size Balance Sheet	Aviation	Common-Size	Balance	Sheet	2021F	2022F	2023F	2024F	2025F
Goodwill	0,10%	0,08%	0,50%	0,56%	0,53%	0,50%	0,47%	0,44%	0,41%
Intangible assets	0,20%	0,17%	0,27%	0,18%	0,18%	0,17%	0,16%	0,16%	0,15%
Property, plant and equipment	2,96%	2,87%	5,33%	6,30%	6,18%	6,04%	5,89%	5,72%	5,53%
Equity associates	11,78%	11,28%	11,98%	14,37%	16,05%	17,41%	18,49%	19,30%	19,88%
Available-for-sale securities	22,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Other non-current financial assets	0,25%	1,20%	1,35%	1,52%	1,42%	1,34%	1,25%	1,17%	1,10%
Deferred tax assets	2,15%	2,22%	2,85%	3,20%	3,00%	2,82%	2,65%	2,48%	2,32%
TOTAL NON-CURRENT ASSETS	**39,44%**	**17,82%**	**22,29%**	**26,14%**	**27,37%**	**28,28%**	**28,91%**	**29,27%**	**29,38%**
Inventories and work-in-progress	23,10%	19,96%	21,92%	14,57%	14,08%	13,61%	13,13%	12,65%	12,16%
Contract assets	0,00%	0,10%	0,10%	0,08%	0,08%	0,08%	0,07%	0,07%	0,07%
Trade and other receivables	5,79%	6,26%	7,97%	5,11%	4,95%	4,79%	4,62%	4,46%	4,29%
Advances and progress payments to suppliers	16,81%	19,25%	15,38%	14,80%	14,33%	13,86%	13,39%	12,91%	12,43%
Derivative financial instruments	1,15%	0,24%	0,04%	0,54%	0,50%	0,47%	0,44%	0,41%	0,39%
Other current financial assets	0,00%	18,84%	9,32%	10,45%	9,82%	9,23%	8,65%	8,10%	7,57%
Cash and cash equivalents	13,72%	17,53%	22,99%	28,31%	28,87%	29,70%	30,79%	32,13%	33,71%
TOTAL CURRENT ASSETS	**60,56%**	**82,18%**	**77,71%**	**73,86%**	**72,63%**	**71,72%**	**71,09%**	**70,73%**	**70,62%**
TOTAL ASSETS	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**
Capital	0,44%	0,39%	0,43%	0,49%	0,46%	0,43%	0,40%	0,38%	0,35%
Consolidated reserves and retained earnings	24,75%	24,85%	28,50%	34,66%	34,48%	34,20%	33,81%	33,31%	32,70%
Currency translation adjustments	-0,17%	0,05%	0,23%	0,04%	0,04%	0,04%	0,04%	0,03%	0,03%
Treasury shares	-0,25%	-0,21%	-0,23%	-0,25%	-0,22%	-0,20%	-0,18%	-0,17%	-0,15%
TOTAL ATTRIBUTABLE TO THE OWNERS OF THE PARENT COMPANY	**24,78%**	**25,07%**	**28,93%**	**34,94%**	**34,76%**	**34,47%**	**34,07%**	**33,56%**	**32,94%**
Non-controlling interests	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TOTAL EQUITY	**24,78%**	**25,08%**	**28,93%**	**34,95%**	**34,76%**	**34,47%**	**34,07%**	**33,56%**	**32,94%**
Long-term borrowings and financial debt	6,52%	1,97%	1,41%	1,99%	2,23%	2,41%	2,55%	2,64%	2,69%
Deferred tax liabilities	0,00%	0,00%	0,02%	0,03%	0,02%	0,02%	0,02%	0,02%	0,02%
TOTAL NON-CURRENT LIABILITIES	**6,52%**	**1,97%**	**1,43%**	**2,01%**	**2,25%**	**2,44%**	**2,57%**	**2,66%**	**2,71%**
Contract liabilities	54,07%	53,94%	47,99%	43,04%	41,67%	40,30%	38,93%	37,55%	36,15%
Trade and other payables	4,90%	5,36%	7,00%	4,65%	4,50%	4,34%	4,19%	4,04%	3,88%
Tax and social security liabilities	1,58%	1,81%	1,90%	1,52%	1,47%	1,42%	1,37%	1,33%	1,28%
Short-term borrowings and financial debt	0,76%	3,85%	2,23%	0,23%	0,26%	0,28%	0,30%	0,31%	0,32%
Provisions for contingencies and charges	7,30%	7,84%	10,02%	13,31%	14,83%	16,50%	18,33%	20,34%	22,53%
Derivative financial instruments	0,08%	0,15%	0,51%	0,28%	0,26%	0,25%	0,23%	0,22%	0,20%
TOTAL CURRENT LIABILITIES	**68,70%**	**72,96%**	**69,64%**	**63,04%**	**62,99%**	**63,09%**	**63,36%**	**63,78%**	**64,35%**
TOTAL EQUITY AND LIABILITIES	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**

Source: BT analysis

Appendix 6: Common-Size Income Statement

Table 23 – Common-Size Income statement

Dassault Aviation - Common-Size Income statement									
(in EUR thousands)	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
NET SALES	100%	100%	100%	100%	100%	100%	100%	100%	100%
Other revenue	0,90%	2,16%	0,82%	1,29%	1,29%	1,29%	1,29%	1,29%	1,29%
Change in work-in-progress	-2,21%	-1,03%	-4,23%	-3,73%	-3,63%	-3,52%	-3,42%	-3,32%	-3,22%
Purchases consumed	-62,49%	-64,21%	-63,75%	-63,48%	-63,48%	-63,48%	-63,48%	-63,48%	-63,48%
Personnel expenses	-23,32%	-23,54%	-17,67%	-21,51%	-21,51%	-21,51%	-21,51%	-21,51%	-21,51%
Taxes	-1,40%	-1,35%	-0,98%	-1,23%	-1,23%	-1,23%	-1,23%	-1,23%	-1,23%
Depreciation and amortization	-1,78%	-1,61%	-1,93%	-3,67%	-3,72%	-3,76%	-3,79%	-3,82%	-3,84%
Allocations to provisions	-19,35%	-20,47%	-11,01%	-22,18%	-21,54%	-20,91%	-20,30%	-19,71%	-19,13%
Reversals of provisions	17,48%	19,21%	9,55%	20,10%	19,51%	18,95%	18,39%	17,86%	17,34%
Other operating income and expenses	-0,67%	-0,06%	0,00%	-0,03%	-0,03%	-0,03%	-0,03%	-0,03%	-0,03%
CURRENT OPERATING INCOME	7,17%	9,11%	10,80%	5,54%	5,66%	5,79%	5,92%	6,05%	6,18%
Other non-current income and expenses	-2,72%	4,71%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
OPERATING INCOME	4,45%	13,82%	10,80%	5,54%	5,66%	5,79%	5,92%	6,05%	6,18%
Cost of net financial debt	-1,49%	-1,69%	-0,83%	-0,63%	-0,73%	-0,82%	-0,90%	-0,96%	-1,02%
Other financial income and expenses	12,09%	-1,16%	-0,47%	-0,81%	-0,79%	-0,77%	-0,74%	-0,72%	-0,70%
NET FINANCIAL INCOME	10,60%	-2,85%	-1,30%	-1,45%	-1,52%	-1,59%	-1,64%	-1,69%	-1,72%
Share in net income of equity associates	2,94%	4,02%	3,51%	6,13%	5,95%	5,78%	5,61%	5,45%	5,29%
Income tax	-5,13%	-3,80%	-3,35%	-1,41%	-1,43%	-1,45%	-1,47%	-1,50%	-1,53%
NET INCOME	12,86%	11,19%	9,67%	8,82%	8,67%	8,53%	8,42%	8,31%	8,21%

Source: BT analysis

Appendix 7: Forecasting Assumptions Income Statement

Table 24 – Income Statement Assumptions

	2020F	2021F	2022F	2023F	2024F	2025F	Assumption
Income Statement							
Net Sales (1)*	€ 4 218 750	€ 4 345 313	€ 4 475 672	€ 4 609 942	€ 4 748 240	€ 4 890 688	For 2020, 13 Rafales Planned by Dassault which is half of the deliveries in 2019 for the Defense Segment. On Civil, plan to deliver 30 instead of the originally planned 40, which was the same Falcon sales in 2019, reflecting the 25% decrease on the Civil Segment. For the remaining years was considered a 3% Business aviation CAGR / Defense CAGR.
Other revenue	2017	2018	2019	3 year average			Historical Average % of Net Sales assuming a YoY constant rate.
	0,90%	2,16%	0,82%	1,29%			
Change in work-in-progress	-157568						3 Year Historical Average Value, remaining constant for the forecasted years.
Purchases consumed	2017	2018	2019	3 year average			Historical Average % of Net Sales assuming a YoY constant rate.
	62,49%	64,21%	63,75%	63,48%			
Personnel expenses	23,32%	23,54%	17,67%	21,51%			Historical Average % of Net Sales assuming a YoY constant rate.
Taxes	5,98%	5,72%	5,52%	5,74%			Historical Average % of Personal Expenses assuming a YoY constant rate.
Depreciation and amortization	19,60%	16,81%	17,39%	17,93%			Average Percentage of PPE between 2017 & 2019, assuming a YoY constant growth rate. CAPEX & PPE sheet.
Allocations to provisions	-948321	-1047885	-811240	-935815			As Provisions are already a future forecast, was assumed 3y average historical value, constant throught the forecast horizon.
Reversals of provisions	856874	983211	703819	847968			
Other operating income and expenses		-2852	315	-1269			Mainly, gains/losses from disposal of non-current assets and foreign exchange gains/losses from business transactions, since highly unprecditable, very correlated with exchange rates and disparity from 2017 to 2019, average between 2018-2019 was considered.
Other non-current income and expenses	0						In 2018, Dassault Aviation signed an agreement with Safran that settled their dispute over the Silvercrest engine that was expected to equip the Falcon 5X. Under the terms of this agreement, Dassault Aviation received an indemnity of USD 280 million from Safran, which was recorded as other non-current operating income. Assumed the 2019YE Carrying amount of 0, for the forecasted years.
Cost of net financial debt	26741	31920	36795	41405	45786	49969	Borrowings F.Debt & Tax SS sheet.
Other financial income and expenses	-34337						Equal to 2019YE Carrying Amount.
Share in net income of equity associates	258673						In 2019 Dassault Aviation held 24.69% of the interest rights of the Thales Group, for simplicity it was assumed that NI for Thales Group will remain 1 121 900mio for the forecasted years, given the 24.69% Dassault interest right, 258 673 will be considered as the carrying amount for the remaining years.
Income tax	34,43%						According to Dassault 2019 Annual Report, Income tax was 34.43% in 2019, as in 2018.

Source: BT analysis

Appendix 8: Forecasting Assumptions Balance Sheet

Table 25 – Balance Sheet Assumptions

	2020F	2021F	2022F	2023F	2024F	2025F	Assumption
Balance							
Goodwill	77452						Equal to 2019YE Carrying Amount.
Intangible assets	24892	25639	26408	27200	28016	28856	Intangible Assets Sheet
Property, plant and equipment	864141	902010	938874	975085	1010940	1046686	Capex & PPE Sheet calculations
Equity associates	47%	54%	60%	66%	72%	77%	As equity associates is mainly related with Dassault Aviation % in Thales, given the new French Government Contract (30 Dec 2019), awarded to both Dassault and Thales, to equip the french army with aircraft and strategic intelengece warfare capabilities. Given their parternship also on the on board system for Falcon 8X, the assumption was made to consider it as a % of Total Net Sales. Increasing 7%, 6%, 5%, respectively as Falcon 6X and 8X is realesed and as developments are made in the Airborne intellegent program.
	1970751	2340957	2704364	3061798	3414007	3761670	
Other non-current financial assets	207730						Equal to 2019YE Carrying Amount. (Mainly non-listed securities and Embraer shares
Deferred tax assets	438261						Carrying Amount 2019.
Inventories and work-in-progress	1997189	2054583	2113698	2174587	2237302	2301899	Forecasted assuming Days outstanding remain constant throughout the forecasted years. NWC & CCC & ACC REC PAY & INV Sheet Calculations.
Trade and other receivables	700797	721821	743476	765780	788753	812416	
Trade and other payables	637753	656080	674957	694400	714427	735054	
Contract Assets	2018	2019	2 year average				Average % of Net Sales 2018 & 2019, assuming YoY constant rate.
	0,33%	0,20%	0,27%				
Contract Liabilities	179,68%	100,07%	139,87%				
Advances and progress payments to suppliers	64,12%	32,07%	48,09%				
Derivative financial instruments - Assets	2017	2018	2019	3 year average			Dassault covers risk from exchange rates and interest rates using derivative financial instruments mainly in US dollars given the Falcon sales on the Civil segment. Dassault hedges their risk using foward contracts and foreing exchange options. 3 year historical average will be considered as carrying amount for the forecasted years.
	172818	40407	6815	73347			
Derivative financial instruments - Liabilities	12067	26125	77641	38611			
Other current financial assets	1433071						Equal to 2019YE Carrying Amount.
Cash and cash equivalents	3881798	4211310	4613344	5099236	5682517	6379298	CashFlow Statement Sheet. (CF)
Capital	66790						Equal to 2019YE Carrying Amount.
Consolidated reserves and retained earnings	4751391	5030089	5312742	5599822	5891764	6188979	Retained Earnings sheet.
Currency translation adjustments	2017	2018	2019	3 year average			3 Year Historical Average Value, remaining constant for the forecasted years.
	-24888	8317	34608	6012			
Treasury shares	34374	33190	32048	30944	29878	28850	Assuming the average share-based payment as % weight of total treasury shares for the forecasted years.
Non-controlling interests	2017	2018	2019	3 year average			3 Year Historical Average Value, remaining constant for the forecasted years.
	493	554	151	399			
Long-term borrowings and financial debt	272484	325254	374928	421904	466540	509161	Borrowings F.Debt & Tax SS sheet
Short-term borrowings and financial debt	114910	656070	342042	31942	38127	43950	
Deferred tax liabilities	3517						Equal to 2019YE Carrying Amount.
Tax and social security liabilities	208310	214559	220996	227626	234455	241489	Borrowings F.Debt & Tax SS sheet
Provisions for contingencies and charges	1825183	2162723	2562686	3036616	3598193	4263624	Borrowings F.Debt & Tax SS sheet
Attributable to non-controlling interests	18						Equal to 2019YE Carrying Amount.

Source: BT analysis

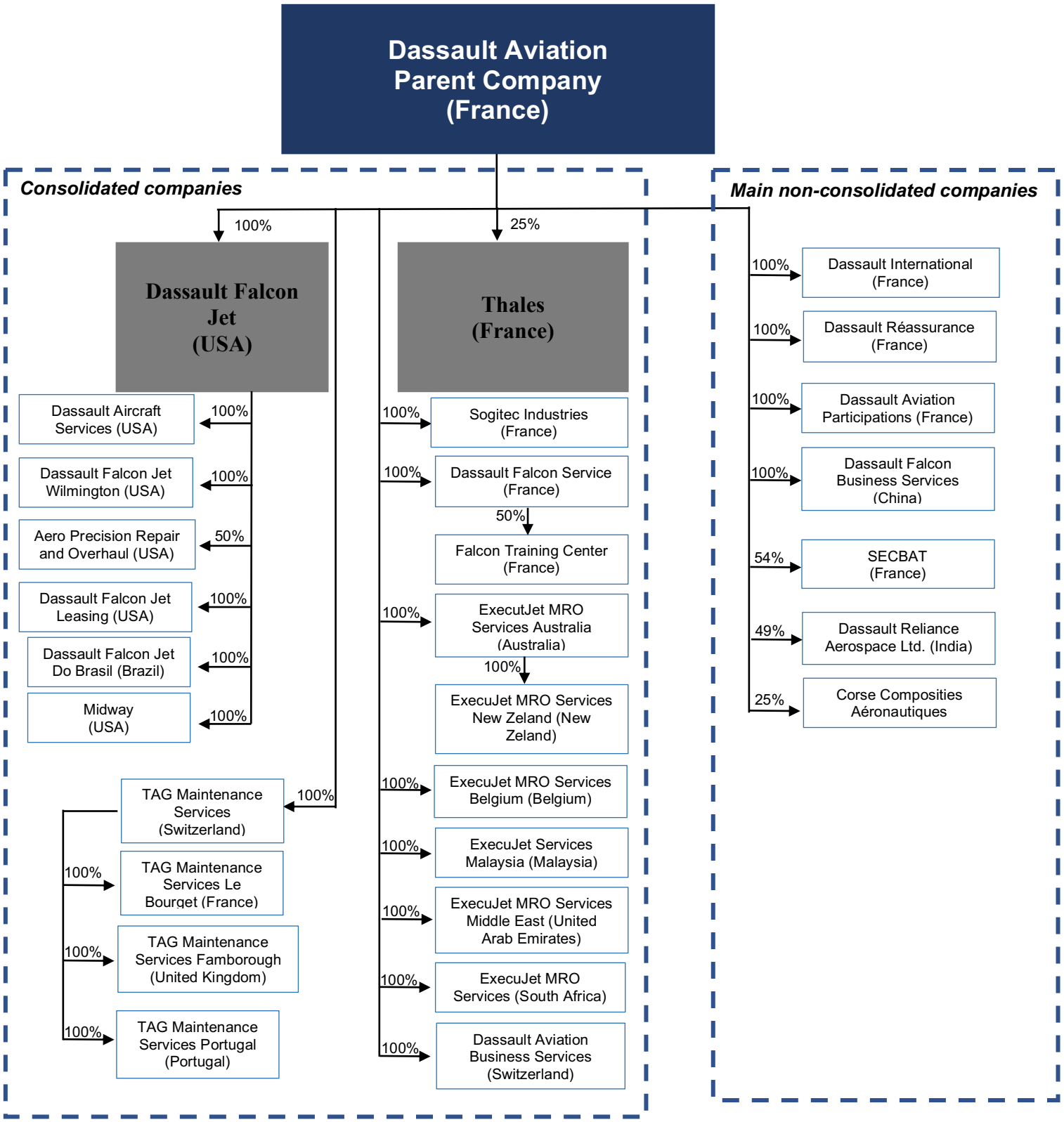
Appendix 9: Dassault Aviation Group Structure

Figure 60 – Dassault Aviation Group Administration Board

Boards of Directors as of December 31, 2019	
Honorary Chariman	Charles Edelstenne
Chairman of the Board of Directors	Éric Trappier
Directors	Catherine Dassault Olivier Dassault Charles Edelstenne Marie-Hélène Habert Mathilde Lemoine Henri Proglio Lucia Sinapi-Tomas Richard Bédère (director representing employees)
Executive Management	
Chief Executive Officer	Éric Trappier
Chief Operating Officer	Loïc Segalen
Executive Committee as of December 31, 2019	
Chairman and Chief Executive Officer	*Chairman of the Committee* Éric Trappier
Chief Operating Officer	Loïk Segalen
Senior Executive Vice-President, Procurement and Purchasing,	Benoît Berger
Senior Executive Vice-President, Civil Aircraft.	Carlos Brana
Senior Executive Vice-President, Military Customer Support,	Bruno Chevalier
Chief Financial Officer,	Denis Dassé
Senior Executive Vice-President, International,	Benoît Dussaugey
Executive Vice-President, Military and Space Programs,	Jean-Marc Gasparini
Executive Committee Secretary and Executive Vice-President, Public Affairs and Security,	Bruno Giorgianni
Director of Human Resources,	Valérie Guillemet
Senior Executive Vice-President, Industrial Operations,	Frédéric Lherm
Senior Executive Vice-President, Total Quality,	Géral Maria
Senior Vice-President, Sales,	Philippe Massot
Senior Executive Vice-President, Engineering,	Nicolas Mojaïsky
Senior Executive Vice-President, Falcon Programs,	Frédéric Petit
Chief Information Officer and *Chief Digital Officer,*	Jean Sass

Source: Company Data

Figure 61 – Dassault Aviation Group Structure



Source: Company Data

Appendix 10: Weighted Average Cost of Capital (WACC)

Table 26 – Weighted Average Cost of Capital

WACC	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	Terminal Value
Cost of Equity										
Rf	-0,5%	-0,50%	-0,50%	-0,50%	-0,50%	-0,50%	-0,50%	-0,50%	-0,50%	0,99%
Unlevered Beta	0,975	0,975	0,975	0,975	0,975	0,975	0,975	0,975	0,975	0,975
D/E	29,40%	23,18%	12,56%	6,35%	7,17%	7,82%	8,35%	8,78%	9,13%	9,13%
Tax rate	44,43%	34,43%	34,43%	34,43%	34,43%	34,43%	34,43%	34,43%	34,43%	34,43%
Beta levered	1,13	1,12	1,06	1,02	1,02	1,025	1,029	1,031	1,034	1,034
ERP	5,96%	5,96%	5,96%	5,96%	5,96%	5,96%	5,96%	5,96%	5,96%	5,96%
Re	6,26%	6,20%	5,79%	5,55%	5,59%	5,61%	5,63%	5,65%	5,66%	7,15%
Cost of Debt										
Rd	6,65%	8,73%	10,98%	8,78%	8,78%	8,78%	8,78%	8,78%	8,78%	8,78%
After-tax Rd	3,69%	5,72%	7,20%	5,76%	5,76%	5,76%	5,76%	5,76%	5,76%	5,76%
Weight of Equity	92,71%	94,19%	96,37%	97,78%	97,51%	97,30%	97,15%	97,05%	96,99%	96,34%
Weight of Debt	7,29%	5,81%	3,63%	2,22%	2,49%	2,70%	2,85%	2,95%	3,01%	3,66%
WACC	6,08%	6,17%	5,84%	5,56%	5,59%	5,61%	5,63%	5,65%	5,66%	7,10%

Source: BT analysis

Table 27 – Beta Regression Dassault / CAC 40 Output

Beta - Regression

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,68070413
R Square	0,46335811
Adjusted R Square	0,46128613
Standard Error	0,0293919
Observations	261

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0,19319118	0,19319118	223,630979	7,14756E-37
Residual	259	0,2237459	0,00086388		
Total	260	0,41693708			

	Coefficients	*tandard Erro*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95,0%*	*Upper 95,0%*
Intercept	-0,0010119	0,00181951	-0,5561539	0,57858582	-0,004594846	0,00257099	-0,0045948	0,00257099
X Variable 1	0,97526579	0,06521643	14,9542963	7,1476E-37	0,846843844	1,10368773	0,84684384	1,10368773

Source: BT analysis

Appendix 11: Valuations

Table 28 – Discounted Cash Flow Method (DCF)

DCF	2020F	2021F	2022F	2023F	2024F	2025F	Terminal Value
EBIT*(1-Tc)	153343	161391	169932	178937	188381	198248	
D&A	154967	161758	168369	174862	181292	187703	
ΔNWC	-521 667	-399 521	-463 803	-539 686	-629 305	-735 192	
CAPEX	187220	192836	198621	204580	210717	217039	
FCFF	€ 642 756	€ 529 833	€ 603 483	€ 688 905	€ 788 261	€ 904 103	€ 926 525

Terminal Growth Rate	2,48%						
WACC	5,56%	5,59%	5,61%	5,63%	5,65%	5,66%	7,10%

Discounted Terminal Value	€ 20 056 942
PV Discounted TV	€ 14 234 034

NPV FCFF	€ 541 023	€ 584 441	€ 632 677	€ 686 430

Enterprise Value	€ 17 180 388

Source: BT analysis

Table 29 – DCF Price Target

Price Target	
Enterprise Value	€ 17 180 388
Net Debt	€ 5 305 459
Equity Value	€ 11 874 929
Number of Shares Outstanding	8350
Price Target	**€ 1 422,15**

(At close: 2020 Nov 6) Stock price	767
Upside	46,07%

Source: BT analysis

Table 30– Adjusted Present Value Valuation (APV)

APV	2020F	2021F	2022F	2023F	2024F	2025F	Terminal Value
FCFF	€ 642 756	€ 529 833	€ 603 483	€ 688 905	€ 788 261	€ 904 103	€ 926 525
C. PV	€ 3 591 671	€ 3 113 633	€ 2 728 769	€ 2 244 961	€ 1 643 930	€ 904 103	
Discounted TV	€ 14 293 996	€ 15 087 994	€ 15 930 766	€ 16 824 599	€ 17 771 986	€ 18 775 617	€ 19 838 386
Interest Paid	-€ 26 741	-€ 31 920	-€ 36 795	-€ 41 405	-€ 45 786	-€ 49 969	-€ 1 096 445
Interest Tax Shield	-€ 9 207	-€ 10 990	-€ 12 669	-€ 14 256	-€ 15 764	-€ 17 204	-€ 377 506

TV	€ 19 838 386
PV FCFF	€ 3 113 633
PV TV	€ 15 087 994
PV Int. Tax Shield	-€ 457 596

Terminal Growth Rate	2,48%
Re	7,15%

APV Valuation	
Enterprise Value	€ 18 201 627
Net Debt	5305459
Equity Value	€ 12 896 168
PV Interest Tax Shield	-€ 457 596
EV + ITS	€ 12 438 572
Shares Outstanding	8350
Price Target	**€ 1 489,65**

(At close: 2020 Nov 6) Stock price	767
Upside	48,51%

Source: BT analysis

Table 31 – Dividend Discount Model (DDM)

DDD Valuation	2020F	2021F	2022F	2023F	2024F	2025F	Terminal Value
Dividends	€ -	€ 97 921	€ 99 311	€ 100 866	€ 102 575	€ 104 427	€ 104 427
PV Dividends		€ 453 433	€ 375 370	€ 291 548	€ 201 419	€ 104 427	
Discounted TV		€ 12 348 877	€ 13 038 649	€ 13 770 214	€ 14 545 609	€ 15 367 039	€ 16 236 869

Terminal Growth Rate	6,47%
Re	7,15%

DDM Valuation	
PV Dividends	€ 453 433
PV TV	€ 12 348 877
Equity Value	€ 12 802 310
Shares Outstanding	8350
Price Target	**€ 1 533,21**

(At close: 2020 Nov 6) Stock price	767
Upside	49,97%

Source: BT analysis

Table 32 – FCFE Valuation

FCFE	2020F	2021F	2022F	2023F	2024F	2025F	Terminal Value
Net Income	€ 371 967	€ 376 619	€ 381 964	€ 387 946	€ 394 517	€ 401 642	
D&A	€ 154 967	€ 161 758	€ 168 369	€ 174 862	€ 181 292	€ 187 703	
CAPEX	€ 187 220	€ 192 836	€ 198 621	€ 204 580	€ 210 717	€ 217 039	
DNWC	-€ 521 667	-€ 399 521	-€ 463 803	-€ 539 686	-€ 629 305	-€ 735 192	
Net borrowing	€ 253 792	€ 58 956	€ 55 497	€ 52 483	€ 49 869	€ 47 616	
FCFE	€ 446 279	€ 390 648	€ 340 648	€ 280 185	€ 207 092	€ 118 808	€ 212 227
Re	5,55%	5,59%	5,61%	5,63%	5,65%	5,66%	7,15%
							€ 6 700 652,04
Discounted TV	€ 8 484 311	€ 8 038 032	€ 7 647 384	€ 7 306 737	€ 7 026 552	€ 6 819 460	
PV	€ 8 037 829	€ 7 210 069	€ 6 492 152	€ 5 868 925	€ 5 338 889	€ 5 178 326	
NPV FCFE	422794	350409	289189	225050	157352	90216	4744044

FCFE Valuation	
Equity Value	€ 7 210 069
Number of Shares Outstanding	8350
Price Target	**€ 863,48**

(At close: 2020 Nov 6) Stock price	767
Upside	11,17%

Source: BT analysis

Appendix 12: Multiples Valuation

Table 33 – Multiples Peers Selection

Final Peer Group	Net Profit Margin	ROA	ROE	
Boeing Co	-0,75%	-0,51%	-	Reuters
Bombardier Inc	-10,20%	-6,44%	-	Reuters
Lockheed Martin Corp	10,42%	13,48%	275%	Reuters
Airbus SE	-1,88%	-1,15%	-17,35%	Reuters
Northrop Grumman Corp	6,64%	5,71%	26,44%	Reuters
Honeywell International Inc	16,21%	10,22%	30,91%	Reuters
Thales SA	6,23%	4,04%	20,13%	Reuters
Safran SA	10,01%	6,02%	20,12%	Reuters
General Dynamics Corp	8,85%	7,39%	27,53%	Reuters
Textron Inc	5,98%	5,57%	15,22%	Reuters
Dassault Aviation	9,67%	4,64%	16,03%	Ratio calculation

Source: BT analysis

Table 34 – Peers Multiples Computation

	EV/Rev	EV/EBITDA	P/E	P/B
Boeing Co				
Bombardier Inc				
Lockheed Martin Corp				
Airbus SE				
Northrop Grumman Corp	1,84	12,39	13,60	5,36
Honeywell International Inc	3,64	14,58	15,73	6,52
Thales SA	0,93	9,83	11,39	2,54
Safran SA	1,64	7,78	15,24	2,91
General Dynamics Corp	1,38	10,30	14,01	2,98
Textron Inc	0,85	10,04	9,57	1,50
Average	1,71	10,82	13,26	3,64
Median	1,51	10,17	13,80	2,95
Dassault Aviation	2,33	18,30	8,43	

Source: BT analysis

Table 35 – EV/Rev Price Target

EV/Rev	
Equity Value	€ 8 766 934
No. Shares	8350
TP	**€ 1 049,93**
(At close: 2020 Nov 6) Stock price	767
Upside	26,95%

Source: BT analysis

Table 36 – Multiples Average Price Target

EV/Rev	P/B
€ 1 049,93	**€ 1 472,30**
EV/EBIDTA	P/E
€ 752,79	**€ 667,64**
Average Target Price	€ 985,67
(At close: 2020 Nov 6) Stock price	767
Average Upside	22,18%

Source: BT analysis

Table 37 – P/B Price Target

P/B	
Equity Value	€ 12 293 739
No. Shares	8350
TP	**€ 1 472,30**
(At close: 2020 Nov 6) Stock price	767
Upside	47,90%

Source: BT analysis

Appendix 13: Price Target Risks

Table 38 – Terminal Growth Rate and Perpetual WACC Sensitivity Analysis

Sensitivity Analysis	Price Target	Terminal Growth Rate					
	1422,15	1,5%	2,0%	2,48%	3,00%	3,5%	4,0%
Prepetual WACC	3%	6037,52	9244,24	18124,46	#DIV/0!	-19616,27	-9996,10
	4%	3329,05	4253,72	5713,37	8874,35	18101,76	9254738,53
	5,00%	2177,74	2601,93	3167,51	4086,58	5571,22	8540,52
	6%	1542,44	1780,68	2073,06	2495,38	3067,15	3924,79
	7,10%	1110,35	1254,46	€ 1 422,15	1648,12	1926,98	2295,81
	8%	868,18	970,21	1085,56	1235,50	1412,36	1633,43
	9%	669,84	742,89	823,56	925,52	1041,74	1181,21
	10%	520,29	574,67	633,67	706,73	787,99	882,81
	11%	404,00	445,71	490,36	544,77	604,21	672,14

Source: BT analysis

Table 39 – Perpetual WACC and Tax Rate Sensitivity Analysis

Sensitivity Analysis	Enterprise Value	Prepetual WACC					
	17180388	3%	4%	5%	6%	7,10%	8,0%
Tax Rate	15%	166856322	56490064	33850845	24118361	18330095	15336951
	20%	164228518	55595072	33311302	23731623	18034236	15088086
	25%	161600714	54700080	32771759	23344885	17738378	14839222
	30%	158972910	53805089	32232216	22958148	17442519	14590357
	34,43%	156644675	53012126	31754181	22615498	€ 17 180 388	14369863
	38%	154768423	52373102	31368947	22339368	16969145	14192174
	45%	151089497	51120114	30613586	21797935	16554943	13843764

Source: BT analysis

Table 40– Beta Levered and Equity Risk Premium Sensitivity Analysis

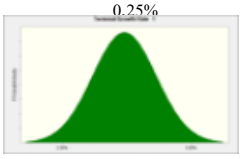
Sensitivity Analysis	Enterprise Value	Beta Levered					
	17180388	0,70	0,80	0,90	1,03	1,10	1,20
Equity Risk Premium (ERP)	3%	114854601	81301236	62846828	48163254	43137166	37263535
	4%	58413433	45524081	37263535	29968297	27306132	24079979
	5%	39037048	31523165	26421526	21717544	19952967	17779600
	6%	29561220	24309843	20640004	€ 17 180 388	15863954	14228877
	7,00%	23388818	19476429	16691076	14027482	13004703	11727712
	8%	19476429	16357717	14112145	11946289	11110259	10063441
	9%	16691076	14112145	12241178	10426705	9724095	8842973

Source: BT analysis

Figure 62 – Standard Deviation (g) Assumption

Pressuposto: Terminal Growth Rate · 1

Normal distribuição com parâmetros:
Média 2,48% (=C13)
Desvio Padrão 0,25%

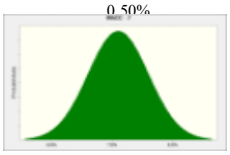


Source: BT analysis

Figure 63 – Stand Deviation WACC Assumption

Pressuposto: WACC · 7

Normal distribuição com parâmetros:
Média 7,10% (=I14)
Desvio Padrão 0,50%



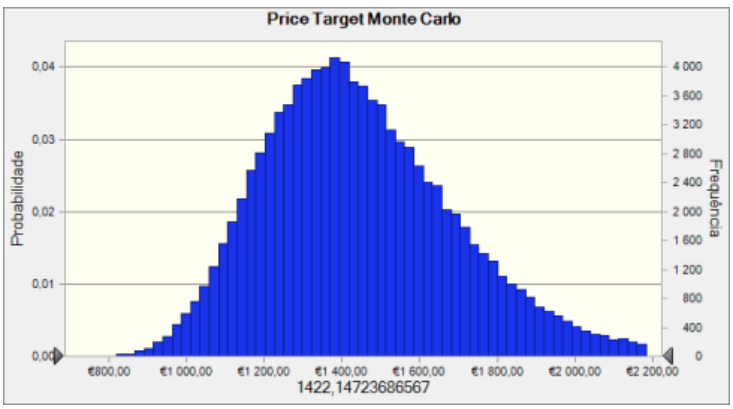
Source: BT analysis

Table 41 – Percentiles Monte Carlo

Percentiles	Value	Upside Potencial
0%	€691,75	-10,88%
10%	€1 151,27	33,38%
20%	€1 235,35	37,91%
30%	€1 301,58	41,07%
40%	€1 362,40	43,70%
50%	€1 421,21	46,03%
60%	€1 485,86	48,38%
70%	€1 560,54	50,85%
80%	€1 652,94	53,60%
90%	€1 792,45	57,21%
100%	€3 680,09	79,16%

Source: BT analysis

Figure 64 – Monte Carlo Price Target Distribution



Source: BT analysis

Appendix 14: Business Aviation Peers New Aircraft Placement

Figure 65 – Peers New Aircraft Placement Overview

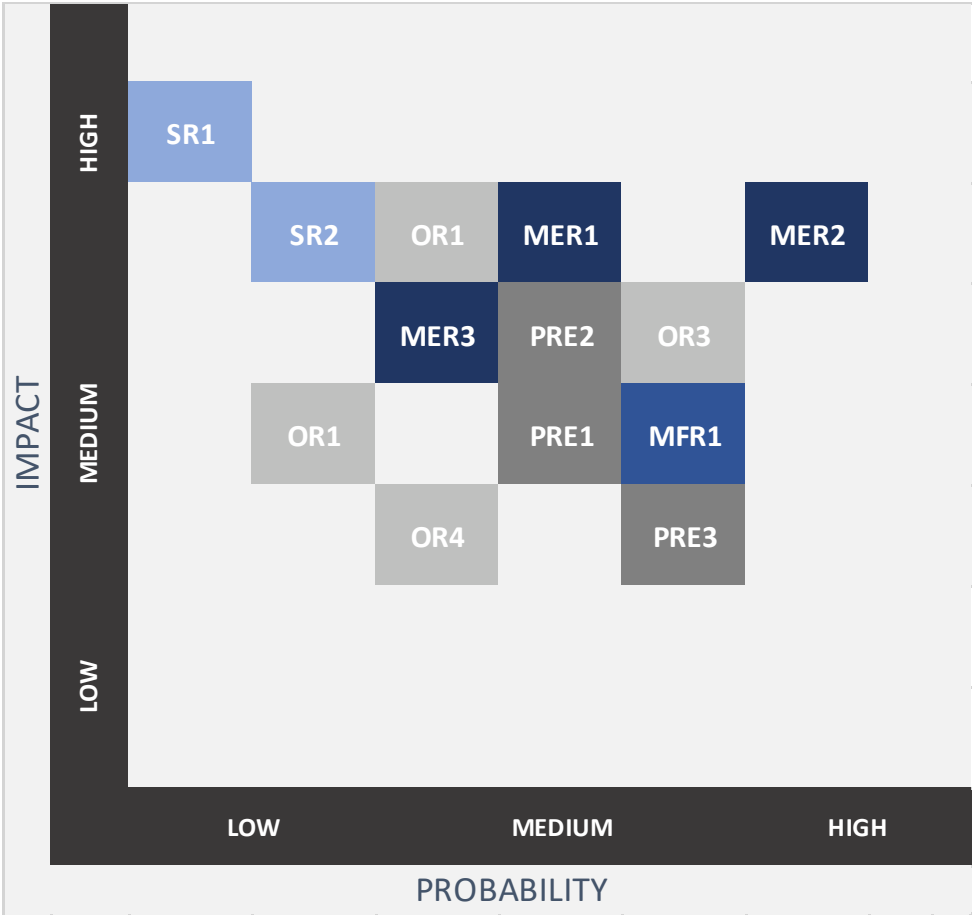
Peers New Aircraft Placement	2015	2016	2017	2018	2019	2020	After 2020
Gulfstream				G500	G600		G750
Textron (Cessna)	Latitude				Longitude		Hemisphere
Bombardier	CL 650			GLOBAL 7500	GLOBAL 5500/6500		GLOBAL 8500
Embraer	LEGACY 450				PREDATOR 500/600		
Dassault Aviation		8X					6X

Low-Mid Range Aircraft | Mid-Long Range Aircraft | Long-Range Aircraft

Source: Companies Data & BT analysis

Appendix 15: Investment Risks

Figure 66 – Investment Risks



Source: BT analysis

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Recommendation System

Level of Risk	SELL	REDUCE	HOLD	BUY
High Risk	<-10%	>-10% & <30%	>15% & <30%	>30%
Medium Risk	<-10%	>-10% & <10%	>10% & <20%	>20%
Low Risk	<-10%	>-10% & <5%	>5% & <15%	>15%