

A Work Project, presented as part of the requirements for the Award of a Master's degree in Finance from the Nova
School of Business and Economics

EQUITY RESEARCH – SALESFORCE, INC.

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A Project carried out on the Master in Finance Program, under the supervision of:
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03-01-2020

Abstract

This thesis is an equity research on software-as-a-service company, Salesforce. It explores the impact of trends in the macroeconomic market, namely the rise in demand for multi-device cloud services, internet of things (IoT) and artificial intelligence (AI). An analysis of the company's microeconomic factors such as its margins, its CAPEX, NWC and cash conversion cycle enabled us to better assess the evolution of the company, given a benchmark of tier 1 comparable companies; Adobe Inc and SAP SE within the industry. These features helped determine projections for forecasts of Salesforce, in order to price the company and establish a recommendation. As such, we found that Salesforce is a market leader in terms of revenues in its respective markets; it is investing heavily in cross-selling and upgrading current features of services whilst also expanding into other areas; the company is operating under a poor cash conversion cycle with plenty of room for negotiation opportunities; and the industry is becoming very vigorous in terms of market competition. Considering our findings, we predict that Salesforce would withstand any adverse market conditions, due to its competitive advantage as a cloud only operator and outperform market expectations given its vigorous growth strategy. We believe Salesforce is a good buy, as it is currently underpriced relative to its growth opportunities. Salesforce has a track-record of outperforming analysts' revenue estimates, and operational efficiencies coupled with favourable market conditions will help bolster this appreciation to a share price of \$178.5.

Keywords: Cloud-Computing; Salesforce; Valuation; CRM;

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SALESFORCE (CRM)

SOFTWARE INDUSTRY

STUDENT: FIRDAUS LATIF & LEONOR NINA

Company Report

3 JANUARY 2020

34635 & 33930

An ever-growing industry or a bubble about to burst?

Cloud-based companies with a competitive advantage

- Client Relationship Management (CRM) software represents the largest software market globally, and we expect this to continue, with a value of more than \$80B in revenues by FY2025.
- However, we expect steeper market competition as the industry heads towards a state of consolidation by large players.
- Market forces suggest clients will migrate towards the cloud, resulting in less infrastructure software companies in the market relative to cloud computing firms.
- We expect Salesforce to utilise this advantage through an aggressive growth strategy with CAGR_{FY19-27} of 13% in revenues.

Company description

- Salesforce is a global leader in CRM (by revenues) providing its clients with the ability to further develop their relationships with consumers, through cloud computing software.
- We expect the Total Addressable Market to increase, reaching \$167B (nominal) in potential revenues by FY 2027.
- Salesforce is expected to increase its market share until FY2027, with a global market share of c. 19% in the main business units in that fiscal year.
- Whilst, we believe the UFCF will be \$5.7B in FY 2027, relative to a FCF of -\$5.4B in FY 2019.

Recommendation: BUY

Vs Previous Recommendation -

Price Target FY20: 178.5 \$

Vs Previous Price Target - \$

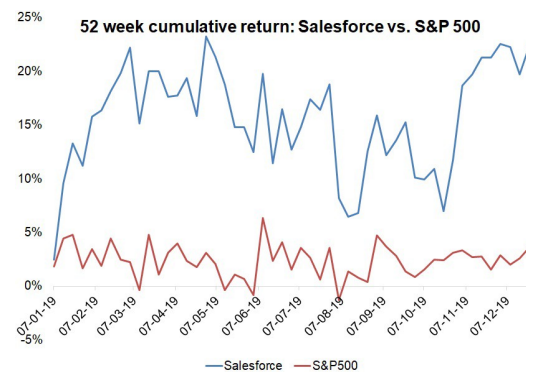
Price (as of 3-Jan-20) 166.5 \$

52-week range (\$) 130.1-167.5

Market Cap (\$M) 147.670

Outstanding Shares (M) 877

Source: Bloomberg and Yahoo Finance



Source: Yahoo Finance

(Values in \$ millions)	FY 2019 A	FY 2020 E	FY 2021 E
Revenues (\$)	13,282	17,656	20,535
EBITDA (\$)	1,497	1,773	2,615
<i>EBITDA Margin</i>	11.3%	10.0%	12.7%
Net Profit	1,110	569	829
<i>Net Profit Margin</i>	8.4%	3.2%	4.0%
EPS (\$)	1.27	0.65	0.95
P/E	106x	275x	202x
ROE	7.1%	2.9%	4.1%
ROA	3.6%	1.6%	2.0%

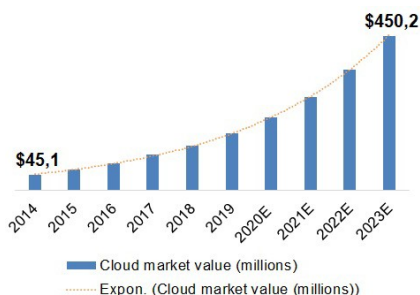
Source: Salesforce Reports and Nova Research Team

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY FIRDAUS LATIF AND LEONOR NINA, MASTER IN FINANCE STUDENTS OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS. THE REPORT WAS SUPERVISED BY A NOVA SBE FACULTY MEMBER, ACTING IN A MERE ACADEMIC CAPACITY, WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL. (PLEASE REFER TO THE DISCLOSURES AND DISCLAIMERS AT END OF THE DOCUMENT)

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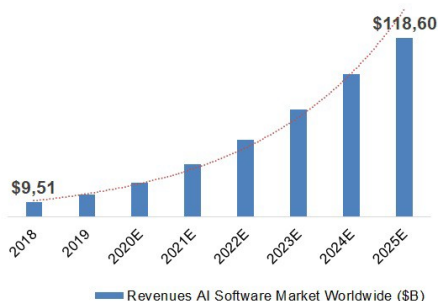
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Graph 1:
Cloud Market Value (Revenue in billions)
(2014 to 2023E)



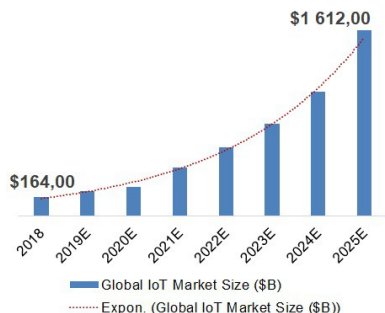
Source: Market Line²

Graph 2:
AI Market Value (Revenue in billions)
(2018 to 2025E)



Source: Tractica³

Graph 3:
IoT Market Size (Revenue in billions)
(2018 to 2025E)



Source: Statista⁴

The Sector

Since the 1960s, when the first global interconnected network idea was introduced, the software industry has witnessed rapid developments¹. In particular, Salesforce's establishment in 1999 paved a milestone in the industry with the novel concept of offering enterprise applications through a website¹. Given its technological nature, the industry is very fragmented, characterised by high competition, innovation and constantly evolving customer's needs. Whilst the adoption of the cloud has been on the rise resulting in a wave of demand for software-as-a-service (SaaS) companies, regulations on data privacy for companies handling data have tightened. As such, the market anticipates that the value for the cloud sector will reach \$450B by 2023², increasing at a CAGR₁₉₋₂₃ of 28.4%.

From a technological perspective, the industry has witnessed advances with the application of artificial intelligence (AI) and internet of things (IoT), which have resulted in dynamic growth rates in recent years. Whereby, AI is expected to reach revenues of \$118.6B in 2025³, exhibiting a CAGR₁₈₋₂₅ of 43.4%, and the IoT market size is forecasted to reach \$1612B by 2025⁴, increasing at a CAGR₁₈₋

25 of 38.6%. These innovations have allowed new business opportunities on a multi-layer scale, enabling a better handling of customer data given AI's predictive abilities. Consequently, companies in the sector will be subject to shifting consumer trends, with spending moving away from saturated areas, such as devices and on-premises data center infrastructure, to cloud services and Internet of Things (IoT) devices⁵. We believe that market players will, therefore, see a migration towards increased investments in IoT.

Salesforce: Overview

Salesforce provides their clients with the ability to further develop their connections with consumers on all mediums, using cloud-based software. In 1999 Marc Benioff, Parker Harris, Dave Moellenhoff and Frank Dominguez founded the company; presently headquartered in San Francisco, United States⁶. Salesforce offers several cloud services and is a global leading entity by revenues in client relationship management (CRM), representing approximately a

¹ Mohamed, A. (2018). *A history of cloud computing*. [online] ComputerWeekly.com. Available at: <https://www.computerweekly.com/feature/A-history-of-cloud-computing> [Accessed 19 Oct. 2019].

² Global Cloud Computing. (2016). [pdf] MarketLine, pp.2-36. Available at: <https://tesrvsd.fe.unl.pt.2126/Analysis/ViewasPDF/global-cloud-computing-42080> [Accessed 19 Oct. 2019].

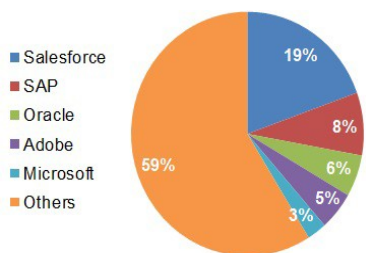
³ Tractica (2019). *Artificial Intelligence Market Forecasts*. [online] Tractica. Available at: <https://www.tractica.com/research/artificial-intelligence-market-forecasts/> [Accessed 19 Oct. 2019].

⁴ Statista (2019). *Size of the Internet of Things (IoT) market worldwide from 2017 to 2025* [online]. Available at: <https://www.statista.com/statistics/976313/global-iot-market-size/> [Accessed 19 Oct. 2019].

⁵ Gartner. (2019). *Gartner Says Global IT Spending to Reach \$3.8 Trillion in 2019*. [online] Available at: <https://www.gartner.com/en/newsroom/press-releases/2019-01-28-gartner-says-global-it-spending-to-reach-3-8-trillion> [Accessed 19 Oct. 2019].

⁶ 2019 Annual Report: Celebrating 20 Years of Salesforce. (2019). Annual Report. [online] Salesforce. Available at: https://s23.q4cdn.com/574569502/files/doc_financials/2019/Salesforce-FY-2019-Annual-Report.pdf [Accessed 3 Sep. 2019].

Graph 4:
CRM Market Share (Revenues 2018)

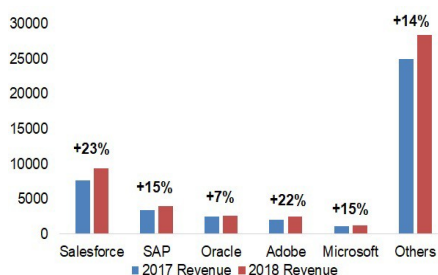


Source: Gartner

19% market share in 2018⁷. The company has experienced the highest year-on-year growth rates relative to its CRM peers, of +23% from 2017 to 2018⁷. Thus, we expect Salesforce to reach revenue figures of c. \$24 billion by FY 2022 from \$13.3B in FY 2019. This proposition is expected to be sustained by the company's offering expansion, international growth and cross-selling abilities. In addition, Salesforce has secured a partnership with Indian multinational, Mahindra & Mahindra Ltd⁸, part of the \$20.7B Mahindra Group⁹. Both businesses are looking at transforming the Indian automobile industry (expected to be worth more than \$250B by 2026¹⁰) through digitalisation, with an emphasis on digitizing the customer experience value chain.

Moreover, Salesforce has shown some resilience to withstanding political turmoil, as it secured a new contract with an Italian bank, UniCredit, amidst the disruptive political environment in Italy. However, we question Salesforce's ability to replicate this behaviour in other regions, in particular the UK, due to the severity of Brexit repercussions. Whilst we expect the impact on large corporations to be less severe due to contingency plans in place, the effect on SMB's (Small-Medium Businesses) is expected to be much greater, to the extent that owners will be likely to halt, defer or even cancel software investments. This would result in a clientele loss for Salesforce and decrease its addressable market since SMB's accounted for \$5B of the company's global revenue opportunity in FY 2016¹¹. It is also important to note that competitor SAP is focusing on this market too, with a track record of 250,000 SMB clients¹².

Graph 5:
Revenue YoY growth 17/18 CRM competitors



Source: Gartner

New clients...

Nevertheless, Q2 FY 2020 has also seen Salesforce secure new high value clients: FedEx (EV: \$70.57B) for their customer service primarily using Service Cloud Einstein; Union Pacific Railroad (EV: \$144.7B) for its CRM platform; Airbnb (funding in 2017 valued the company at \$31B) for Marketing Cloud; and an expansion of their existent relationship with Marriott (EV: \$53.37B)¹³.

New executive appointments...

In addition, local executives in the UK and Australia have been appointed by Salesforce, as it aims to transition from an international to a global company. Salesforce has given critical decision-making power to these executives in their area, in order to focus on local growth. We expect the UK local executive, Dame Jayne-Anne Gadhia, former chairman of the London Stock Exchange and ex- chief executive of Virgin Money, to help augment the number of UK clients and

⁷ Gartner (2019). *Gartner Says Worldwide Customer Experience and Relationship Management Software Market Grew 15.6% in 2018*. [online] Available at: <https://www.gartner.com/en/newsroom/press-releases/2019-06-17-gartner-says-worldwide-customer-experience-and-relati> [Accessed 19 Oct. 2019].

⁸ Online, D. (2019). *Mahindra, Salesforce partner to drive digital transformation in customer experience*. [online] DATAQUEST. Available at: <https://www.dqindia.com/mahindra-salesforce-partner-drive-digital-transformation-customer-experience/> [Accessed 19 Oct. 2019].

⁹ Techmahindra.com. (n.d.). *The Mahindra Group - A global leader in IT, Automotive, Financial Services*. [online] Available at: <https://www.techmahindra.com/company/mahindra.aspx> [Accessed 21 Oct. 2019].

¹⁰ India Brand Equity Foundation (2019). *Indian Automobile Industry Analysis*. [online] Available at: <https://www.ibef.org/industry/automobiles-presentation> [Accessed 21 Oct. 2019].

¹¹ Salesforce Investor Update. (2018). Salesforce.

¹² SAP (2019). *Small and Midsize Business Management Software*. Available at: <https://www.sap.com/products/sme-business-software.html?infi=df804780-8249-4d94-b6aa-5f4cdc36eb80> [Accessed: 19 Oct 2019]

¹³ Lauchlan, S. (2019). *Salesforce's shift from international to global supports strong second quarter*. [online] Diginomica. Available at: <https://diginomica.com/salesforces-shift-international-global-supports-strong-second-quarter> [Accessed 19 Oct. 2019].

counter some of the Brexit impacts, given Salesforce's investment of \$2.5B in the region over 5 years¹⁴.

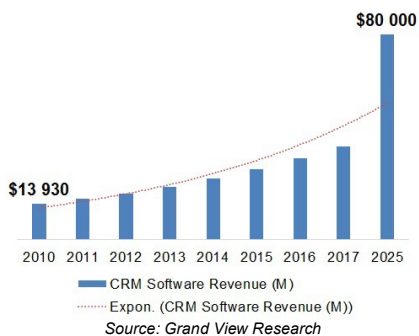
Main Trends and Risks

Within the enterprise application software industry, CRM represents the largest software market globally⁷, dealing with all the front-end information that is vital for businesses' survival. We expect the market to be worth more than \$80B in revenues by 2025¹⁵. The year 2018 saw the rise of CRM usage on mobile devices, derived from an increase in firm's usage of cloud-based CRM services, allowing for increased accessibility on all smart devices. As such, majority of CRM spending is on SaaS, which enables better accessibility through agility and flexibility, and are also key drivers of CRM growth. The potential for CRM providers is, therefore, huge: 91% of companies with more than 11 employees adopt CRM software¹⁶. On the other hand, high initial adoption rates of the cloud have resulted in slightly diminished cloud growth compared to previous years, yet it continues to remain strong at 20%. As such, we believe clients will continue to look towards service providers that offer a multi-device base, and will increasingly value access to all their combined data and details on one platform.

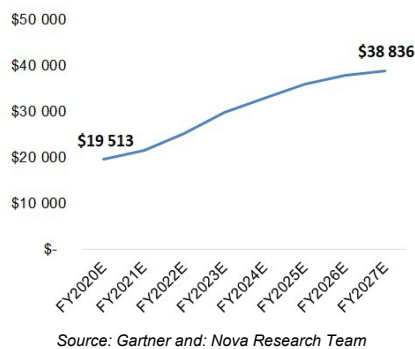
However, the CRM market alone does not represent the total revenue opportunity for Salesforce. The company has been expanding and diversifying its core business operations to include areas like Analytics, Integration and Artificial Intelligence (AI), so as to utilize big data in order to improve and help develop its other cloud services. This particular segment of the market has been growing rapidly in the past few years, a tendency that we expect to continue in the future. In this sense, Salesforce has been taking advantage of M&A opportunities to grow in this area; examples include the acquisition of Mulesoft (purchase price of \$6.5B) in FY 2018 and a more recent acquisition of Tableau (purchase price of \$15.7B) in FY 2020. Furthermore, whilst CRM represents Salesforce's largest system offering, it also operates in back-office solutions, such as enterprise resource planning (ERP) and supply chain management (SCM) systems⁶.

Moreover, low interest rates coupled with recent strong US economic growth and low unemployment has helped justify predicted total technology spending for companies to be approximately \$3.74T globally in 2019¹⁷. Nevertheless, trade wars, falling housing market, a looming recession, weak foreign economies and uncertain government policies, including Brexit, may dampen company spending as the software industry enters a phase of ambiguity. The pending recession and

Graph 6:
CRM Market Value Evolution (Revenue in millions)



Graph 7:
Analytics and Integration market evolution - FY2020E to FY2027E (millions)



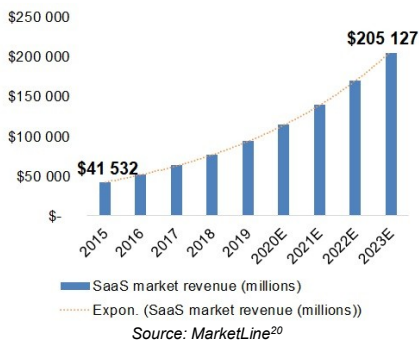
¹⁴ Salesforce (2019). DAME JAYNE-ANNE GADHIA TO JOIN SALESFORCE AS UK AND IRELAND CEO. [online] Available at: <https://www.salesforce.com/uk/company/news-press/press-releases/2019/08/190806/> [Accessed 23 Oct. 2019].

¹⁵ Customer Relationship Management Market Worth \$81.9 Billion By 2025. (2017). [online] Grand View Research. Available at: <https://www.grandviewresearch.com/press-release/global-customer-relationship-management-crm-market> [Accessed 25 Oct. 2019].

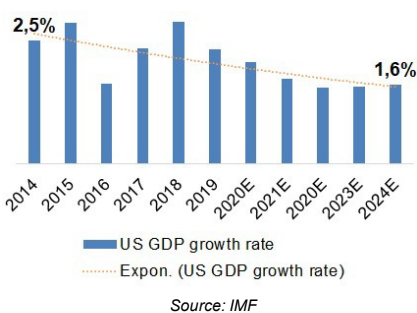
¹⁶ The State of B2B Lead Generation (2013). [online] BuyerZone. Available at: <https://www.buyerzone.com/global-images/resource-center/state-of-b2b-2013.pdf>

¹⁷ Gartner Says Global IT Spending to Reach \$3.8 Trillion in 2019. (2019). [online] Available at: <https://www.gartner.com/en/newsroom/press-releases/2019-01-28-gartner-says-global-it-spending-to-reach-3-8-trillion> [Accessed 25 Oct. 2019].

Graph 8:
SaaS global market revenues evolution – 2015 to 2022E (billions)



Graph 9:
US GDP real growth rate – 2014 to 2024E (billions)



subsequent cutbacks in technology expenditures have meant that market players such as VMware, a data centre software company, and Splunk, a data analytics company, are witnessing falling share prices, amid fears of an IT downturn¹⁸. In fact, worldwide tech budgets are predicted to slow down to growth rates of 5% and 4% in 2019 and 2020, respectively¹⁹. Note that these growth rates are still relatively strong, primarily driven by software adoption, as US companies shift to cloud-based software, namely, multitenant SaaS providers, such as Salesforce. In fact, the SaaS market revenues are increasing on a global scale and are expected to reach c.\$205B by 2023²⁰. Therefore, we maintain a fairly positive outlook for cloud-based companies, as infrastructure on-premise software companies are starting to subside. In addition, we remain of the opinion that despite talks of a potential recession hitting US companies' IT spending, the sector will continue to experience positive growth rates, given that bearish concerns regarding US GDP have eased, as growth revisions were up to 2.1%²¹. This bullish view has been supported by the Federal Reserve and European Central Bank's ongoing injections of liquidity, increased optimistic outlooks on an ordinary Brexit, and easing of trade war tensions. We, therefore, have taken a more upbeat stance.

Additionally, Salesforce has an overall beta of 1.2 (considering a regression of 5 years of monthly returns), which indicates that the stock price is more volatile than the market. Therefore, if the US market is growing (even if it is at a slower rate), Salesforce's share price will be increasing by 1.2x that amount.

Climate change and the increased pressure on companies to conform to increased CSR, has led to global sustainability investments witnessing growth to more than \$30T in 2018²², as CEOs rank climate change as their primary risk to company growth. On the other hand, legacy industries are now tending towards cloud-based solutions in the manufacturing and consumer goods industry. Approximately \$200B is spent by U.S. consumer goods companies annually on merchandising, marketing and sales efforts, however, almost \$100B is not used in the manner in which it was intended²³. In general, market conditions are migrating towards more companies investing in digital transformation which translates to customer engagement, as companies compete to provide greater personalisation and customer retention. We consider these new market opportunities as a boost to Salesforce's TAM, subsequently bolstering its revenue in forthcoming years.

New opportunities...

¹⁸ Waters, R. (2019). Software sector braces for a split among leading companies | *Financial Times*. [online]. Available at: <https://www.ft.com/content/ac6a7fa6-c558-11e9-a8e9-296ca66511c9> [Accessed 25 Oct. 2019].
¹⁹ Forbes.com. (2019). US Tech Spending Slowdown Amid Rising Cloud Adoption Will Squeeze Tech Budgets. [online]. Available at: <https://www.forbes.com/sites/forrester/2019/08/29/us-tech-spending-slowdown-amid-rising-cloud-adoption-will-squeeze-tech-budgets/#b788889302ad> [Accessed 26 Nov. 2019].
²⁰ MarketLine (2016). Cloud Computing Global Industry Data.
²¹ CNBC (2019). GDP slows to 2.1% in second quarter but beats expectations thanks to strong consumer expenditure. Available at: <https://www.cnbc.com/2019/07/26/us-gdp-second-quarter-2019.html>. [Accessed 28 Oct 2019].
²² Salesforce Introduces Salesforce Sustainability Cloud, Empowering Every Business to Drive Impactful Climate Action. (2019). [online]. Available at: <https://www.salesforce.com/company/news-press/press-releases/2019/09/191809-gf/> [Accessed 27 Oct. 2019].
²³ Zero-based trade for CPG leaders: Five steps for raising the impact of your trade promotions. (2017). [online]. PwC. Available at: <https://www.strategyand.pwc.com/gx/en/insights/2017/zbt-for-cpg-leaders.html> [Accessed 11 Nov. 2019].

Table 1:
Scenario analysis summary for the risk of a
cyber attack

Scenario 1 - No Cyber Attack Occurs		FY2020E
Probability of Occurrence of a Cyber Attack	0%	
Value of Operations FY2020	\$	155 755
Book Value (Non Operational Business)	\$	2 342
Book Value (Financial)	\$	(1 522)
Equity Value	\$	156 574
# Shares outstanding	\$	877
Price per share	\$	178,5
Scenario 2 - 25% Chance of a Cyber Attack		FY2020E
Probability of Occurrence of a Cyber Attack	25%	
Value of Operations FY2020	\$	152 821
Book Value (Non Operational Business)	\$	2 342
Book Value (Financial)	\$	(1 522)
Equity Value	\$	153 640
# Shares outstanding	\$	877
Price per share	\$	175,2
Reduction in Share Price		-1,87%

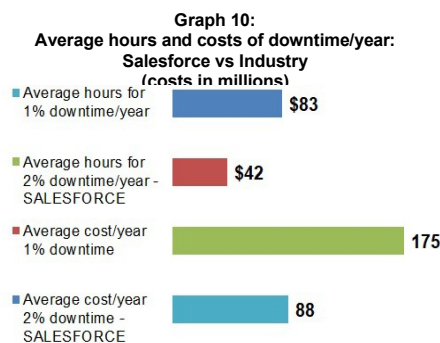
Source: Nova Research Team

We believe that the most significant risks posing to Salesforce's operations are those that implicate the firm's reputation in the long run, resulting in a loss of client trust, and reduced subscription renewals. Specifically, security breaches resulting from cyber-attacks can cause irrecoverable damage to the reputation of the firm, leading to operational issues, disruptions and defects of the services. We believe that clients' inability to access their data will halt their business operations and, consequently, lead to a lack of customer trust. This may translate into clients refraining from renewing their subscriptions or delaying and withholding payments, and potentially even pose litigation issues⁷. In fact, after conducting a scenario analysis of the potential cyber-attack risk, we were able to conclude that if a security breach were to occur with a 25% probability in FY 2021, Salesforce's share price could suffer a reduction as big as -1.87% in the aftermath of the attack.

In addition, Salesforce is particularly dependent on its third parties which it relies on for the functioning of the infrastructure of the Internet and for serving clients through data center hosting facilities, and cloud computing platform providers. In the event that these external parties' system crashes or Salesforce's internal system crashing, Salesforce is vulnerable to increased customer attrition rates, inability to attract new customers and penalties⁷. As witnessed in May 2019, Salesforce had downtime resulting in an outage for clients of more than 15 hours²⁴. In fact, the repercussions of a downtime for clients can be severe, almost \$7,900²⁵ per minute of downtime. In the industry, it is common for service providers to have 1% of downtime, but it has been revealed that Salesforce actually has 2% of downtime²⁶, which translates to roughly 175.2 hours of downtime and \$83M in costs per average client (an additional \$41.5M). Salesforce shares fell by approximately 3% as a result of this outage²⁷. For reimbursement purposes, Salesforce includes a clause in its contracts (although these are negotiable), that ensures they have limited liability for any of these costs. The only type of compensation Salesforce covers is through the provision of credits to customers for three days of subscription revenue. We, therefore are of the opinion that the major cost in an outage for Salesforce are the indirect costs.

As a data controller and processor, Salesforce is further subject to the consistently evolving legislation on the handling: collecting, processing, storing, transfer and use of data. These laws demand further changes to services in order to comply with the requirements, which may limit the company's ability to freely

Outage risk...



Source: Ponemon's Institute Cost of Data Centre Outages

Regulation risk ...

²⁴ TechHQ. (2019). Salesforce hit by 15-hour downtime - TechHQ. [online] Available at: <https://techhq.com/2019/05/salesforce-hit-by-15-hour-downtime/> [Accessed 13 Nov. 2019].

²⁵ Cost of Data Center Outages. (2016). [online] Ponemon Institute. Available at: https://planetaklimata.com.ua/instr/Liebert_Hiross/Cost_of_Data_Center_Outages_2016_Eng.pdf [Accessed 10 Nov. 2019].

²⁶ Bona, Liversidge, A. (2016). Key Terms to Negotiate in Your Salesforce Master Subscription Agreement. [online] Gartner. Available at: <https://www.gartner.com/en/documents/3283917/key-terms-to-negotiate-in-your-salesforce-master-subscri> [Accessed 19 Nov. 2019].

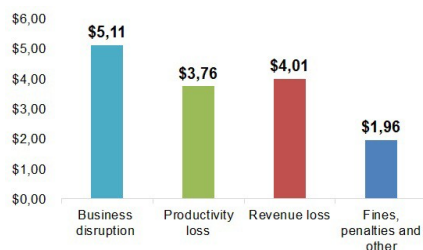
²⁷ Novet, J. (2019). Salesforce says a 'major issue' with its cloud service results in outage for some customers. [online] CNBC. Available at: <https://www.cnbc.com/2019/05/17/salesforce-says-a-major-issue-with-cloud-service-results-in-downtime.html> [Accessed 17 Nov. 2019].

Graph 11:
Average compliance costs per type
(millions)



Source: Dynamic Globalscape Study, *The True Cost of Compliance with Data Protection Regulations*

Graph 12:
Average non-compliance costs per type
(millions)



Source: Dynamic Globalscape Study, *The True Cost of Compliance with Data Protection Regulations*

operate, reduce customer demand, and even subject the firm to liabilities through fines, penalties and negative press⁷. With the global big data and business analytics industry currently valued at \$169 billion (2018) and growing at an expected CAGR¹⁸⁻²² of 10.15% to reach a value of \$274 billion in 2022²⁸, regulators have increasingly focused on the legislation of the industry. Following the introduction of Europe's General Data Protection Regulation (GDPR) in May 2018, several multinationals have already been penalized with hefty fines for failing to comply. Consequently, various US states responded by proposing replications of the GDPR on a state scale. An example is the California Consumer Privacy Act (CCPA), which is scheduled to become the most comprehensive data privacy regulation in the US. These regulations can restrict a company's ability to conduct business, since the costs of compliance with regulatory changes are calculated to be c. \$5.47M, while the costs of non-compliance are much greater at an average of \$14.82 million²⁹. Moreover, in the specific case of GDPR, the non-compliance costs can be much higher, with two tiers of fines in place. As Salesforce is currently updating its systems to comply with new data legislation, we believe that Salesforce will never fully breach GDPR, which means that, in the worst case scenario, the company would be liable to pay tier 1 fines, which are the greater of \$10M or 2% of the worldwide annual turnover of the previous financial year. Given that 1/3 of all FTSE 30 companies are currently at risk of violating GDPR³⁰, and assuming a similar risk for Salesforce, we can conclude that, if a violation was to occur in FY2021, with a 33% probability, Salesforce would be liable to pay a fine of \$346M that fiscal year. Currently, these values are not material enough to influence Salesforce's share price significantly, yet these costs might be aggravated in the future as data legislation evolves.

Given that Salesforce conducts its business on a global scale in EMEA, the firm is exposed to exchange risk⁷. Specifically, due to receiving revenues and paying expenses in the local currency. Primarily, the currencies that pose the main risks include GBP Sterling, Euro, Japanese Yen, Canadian and Australian Dollar against the US Dollar and the Euro against the GBP Sterling⁷. In particular, geopolitical outcomes such as Brexit play a further role in generating uncertainty for interest rates, which can magnify the volatility of currency fluctuations. To evaluate the potential expected loss resulting from FX risk, we conducted a Value at Risk (VaR) analysis for the USD/EUR and the USD/GDP exchange rates. As such, over the last 12 months (January to December 2019), we obtained a monthly VaR of -0,937% and -2,95% for the FX components mentioned above,

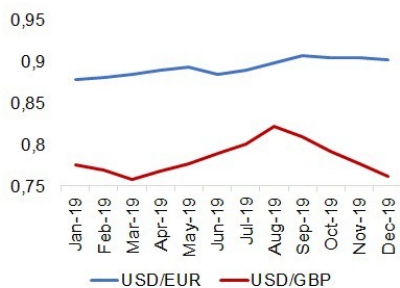
Exchange rate risk...

²⁸IDC (2019). Worldwide Semiannual Big Data and Analytics Spending Guide. Available at: www.idc.com [Accessed 22 October 2019]

²⁹ Cost of Compliance with Data Protection Regulation. (2020). [online] Ponemon Institute. Available at: <https://dynamic.globalscape.com/files/Whitepaper-The-True-Cost-of-Compliance-with-Data-Protection-Regulations.pdf> [Accessed 18 Nov. 2019].

³⁰ FTSE 30 Companies Risk Violating Key GDPR Principle. According to New RiskIQ Research. (2017). [online] Available at: <https://www.riskiq.com/press-release/ftse-30-companies-risk-violating-key-gdpr-principle-according-new-riskiq-research/> [Accessed 30 Nov. 2019].

Graph 13:
Currency exchange rates USD/EUR and
GBP/EUR
(1 year monthly evolution)



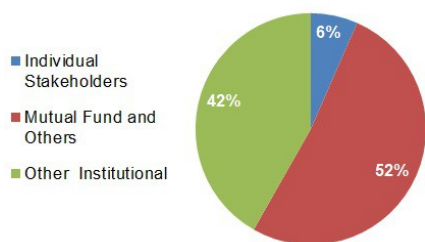
Source: X-rates

respectively, with a 95% confidence level. Therefore, assuming a \$1M notional value, the potential expected loss for Salesforce over a monthly period is \$9.375 and \$24.497, respectively. Considering salesforce's revenues amount to billions of dollars, these currency fluctuations can lead to a decrease in overall revenue, therefore impacting the company's results. However, Salesforce currently offsets this risk by utilizing foreign currency forward contracts, thereby reducing the probability of fluctuations in currency that can materially affect the company's results, to close to 0%.

Shareholder Structure and Corporate Governance

During Q2 FY 2020 institutional investors gained majority interest in the ownership of Salesforce, through the purchase of a net \$14.2M shares, resulting in a combined ownership of 84.69%³¹. Individual stakeholders now account for 5.54%, whilst the overall largest shareholder, Fidelity Management & Research Co, pertain a stake of 10.48%³¹. Given the fragmentation of ownership, there is no single entity that holds a majority interest in the company. However, with shareholder activism on the rise, institutional investors hold greater influence to exert better corporate governance through increased quality of strategic decision making³². Coupled with the board of directors primarily composing of independent directors (all but 3), we believe that this shift of increased institutional investors is beneficial to the performance of the company, as a larger number of independent board members increases objectivity. Moreover, it is worth noting that Salesforce operates under a co-CEO structure, which ensures that major strategic decisions are undertaken by two people but can also cause delays in the decision-making process. However, there is low gender-diversity (only 3 female board members out of 13) which might pose as a challenge to the company because, in general, good governance arises from a diverse board³². In fact, the least gender-diverse firms usually underperform their regional benchmarks by an average of 1.4 percentage points³³.

Graph 14:
Shareholder Structure (%)



Source: Bloomberg

Furthermore, we believe that the company's decision to hire Gavin Patterson, the former BT (British Telecommunications) chief executive³⁴, to lead in Europe can adversely impact Salesforce's revenue opportunities in the region due to the uncertainty that is expected to follow Brexit. Given his employment past of dismissal from his previous position due to a lack of faith in his leadership abilities³⁴, we are of the belief that someone with greater leadership potential was needed.

³¹ Money.cnn.com. (2019). CRM - Salesforce.Com Inc Shareholders - CNNMoney.com. [online] Available at: <https://money.cnn.com/quote/shareholders/shareholders.html?symbol=CRM&subView=institutional> [Accessed 3 Oct. 2019].

³² Good Governance driving Corporate Performance? A meta-analysis of academic research & invitation to engage in the dialogue. (2016). [online] Deloitte. Available at: <https://www2.deloitte.com/content/dam/Deloitte/nl/Documents/risk/deloitte-nl-risk-good-governance-driving-corporate-performance.pdf> [Accessed 14 Oct. 2019].

³³ Ft.com. (2019). The data show it: diverse companies do better | Financial Times. [online] Available at: <https://www.ft.com/content/7c3dbf1e-e047-11e9-b112-9624ec9edc59> [Accessed 12 Oct. 2019].

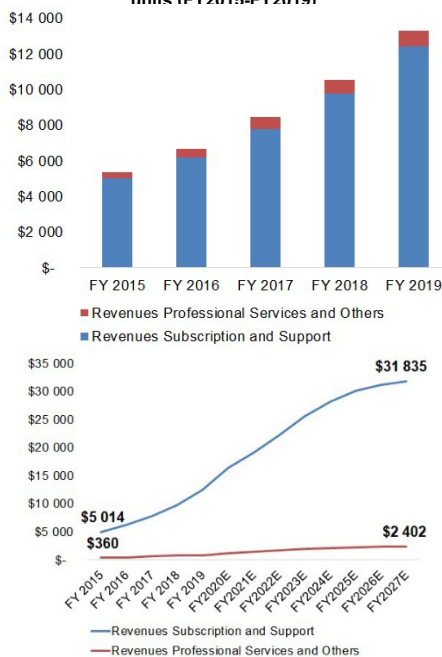
³⁴ Ft.com. (2019). Salesforce hires ex-BT boss Patterson to lead European business | Financial Times. [online] Available at: <https://www.ft.com/content/8204f27a-cfbf-11e9-b018-ca4456540ea6> [Accessed 14 Nov. 2019].

Business Model

Salesforce operates according to two business units, Subscription and Support, accounting for 93% of total revenues in FY 2019³⁵, and Professional Services and Others amounting to the remaining 7%. The Subscription and Support business unit (consisting of subscription fees, software licenses and support fees) has regularly been the greatest value driver for total revenue, with a steep increase in revenue between FY 2015 (\$5B) and FY 2019 (\$12.4B). This is namely due to the company's operations being based on a subscription business model. We consider this to be favorable for Salesforce, due to the stability in the stream of cash flows, as we find that subscription-based models have higher customer retention. In fact, Salesforce has a low attrition rate of less than 10%⁷, and this has been fairly stable over the past years. As such, it can be expected that existent clients will be more likely to renew their subscription with the company. On the other hand, Salesforce has a fairly high cash conversion cycle of approximately 118 days in FY 2019. This is primarily due to the recognition of revenue: ratably over the contract term for Subscription and Support revenues whilst Professional Services revenues can be recognised as the services are rendered, according to performance basis, or ratably over the contract term⁷. Consequently, this results in advanced invoiced amounts being recorded as accounts receivable or in unearned revenue, conditional on the criteria. As such, days sales outstanding (DSO) is 135 in FY 2019, where over 90% is for Subscription and Support services. Whereas, days payable outstanding (DPO) is below the average of peers (17 days vs. 44 days in FY 2019). Over the past few years, the company's cash conversion cycle deteriorated from 102 days in FY 2015 to 126 days in FY 2018, as DPO troughed in FY 2018 at 10 days, whilst DSO remained fairly constant at 136 days. Therefore, we believe that there is a negotiating opportunity for Salesforce to be operating on better terms with its third parties, in order to improve its cash management.

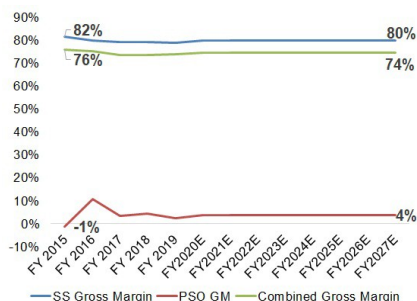
Salesforce's gross margin has remained fairly consistent over the years in both Subscription and Support and the overall company. On the other hand, Professional Services and Others' gross margin has fluctuated between FY 2015 and FY 2017 and then maintained fairly stable. FY 2019 witnessed gross margins of c.79% and c.3% for Subscription and Support, and Professional Services and Others, respectively, consequently leading to a combined gross margin of c. 74%. We expect this to continue into the future, as we believe there will be no significant deviations in the costs of delivering the service and providing support.

Graph 15:
Salesforce's revenues according to business units (FY2015-FY2019)



Source: Nova Research Team

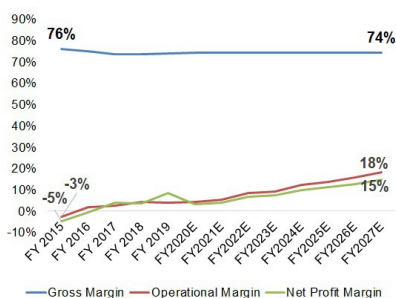
Graph 16:
Salesforce's gross margin breakdown into business units (FY2015-FY2019)



Source: Nova Research Team

³⁵ Fiscal year ended in 31 January 2019

Graph 17:
Salesforce's gross Margin, operational Margin and net margin (FY2015-FY2019E)

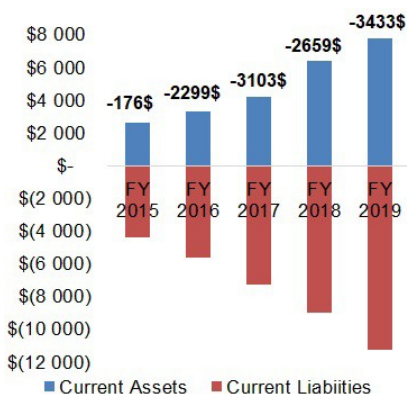


Source: Nova Research Team

On the other hand, the company's operational margin falls to significantly lower values at c.4% in FY 2019, with the net profit margin actually being exceptionally higher than that year (8.4% in FY 2019 vs 3.4% in FY 2018). This was mainly due to an increase in net profit that was motivated by an atypically high non-operating result, following extraordinary gains on strategic investments that Salesforce made in other public and privately held companies. Additionally, in FY 2019 the company actually benefited from its fiscal policy, as it had a tax benefit⁷. In fact, Salesforce often operates with tax credits due to valuation allowances of deferred tax assets and losses carried forward, whereby the latter will eventually exhaust⁷.

In addition, the company has much higher operating expenses in comparison to its competitors, in particular for marketing and sales as a percentage of revenues (Salesforce: 46% vs. main peers - Adobe and SAP - average: 31%). Adobe Inc³⁶, for example, has improved its gross, operational and net margins in 2018³⁷, with values above those of Salesforce at 87%, 31% and 29%, respectively. SAP SE³⁸ has had constant gross margins at 70% throughout 2018³⁹, 2017, 2016 and 2015, whilst operating margins were 23%, 21%, 23% and 20% respectively, with net profit margins stabilised at 17% from 16% in 2016 and 15% in 2015. Whilst SAP and Salesforce's gross margins are fairly aligned (70% and 74% respectively), there is a substantial loss in value for Salesforce due to recurring operating expenses. We, therefore, believe that Salesforce's performance is currently being hindered and will tend towards more reasonable values that are more aligned with the industry, especially once the company exhausts its acquisition opportunities.

Graph 18:
Salesforce's NWC (FY2015-FY2019) (millions)



Source: Nova Research Team

Assessing the company's net working capital, it has primarily remained negative; recent years have become increasingly negative (except for FY 2018, which was primarily driven by an increase in c. 230% of costs capitalised to obtain revenue contracts, due to the adoption of ASU 2014-09⁷). The negative net working capital is mainly due to the company's revenue recognition criteria. As mentioned above, subscription fees are received in advance and are recorded as deferred revenue⁷. These account for c. 76% of current liabilities over FY2016-FY2019, aside from FY 2018 where deferred assets accounted for c.78%. If we assess total NWC in absolute values as a % of revenue, it can be seen that it accounted for a larger percentage of revenue over FY 2015 to FY 2017 where it peaked at 37% from 33%, as NWC grew at a faster pace than revenues (35% vs 27% in FY 2017). NWC as a % of revenues got to 25% in FY 2018, derived from a decline in absolute values of NWC whilst total revenues increased. Thereafter, the KPI increased by 1pp in FY 2019 (26%). These values are fairly aligned with those of

³⁶ Annual Report 2018. (2018). Annual Report. [online] Adobe, Inc. Available at: <https://www.adobe.com/content/dam/acom/en/investor-relations/pdfs/ADBE-10K-FY18-FINAL-CERTIFIED.pdf> [Accessed 13 Nov. 2019].

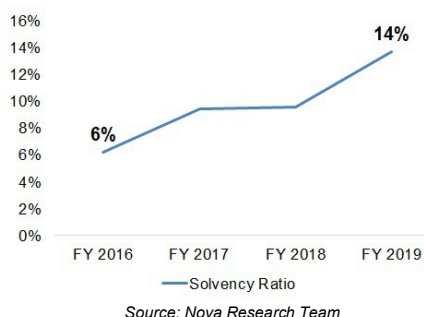
³⁷ Fiscal year ended in 30 November 2018

³⁸ Annual Report 2018. (2018). Annual Report. [online] SAP SE. Available at: <https://www.sap.com/docs/download/investors/2018/sap-2018-annual-report-form-20f.pdf> [Accessed 12 Nov. 2019].

³⁹ Fiscal year ended in 31 December 2018

Adobe, that have ranged from 31% to 40% over the past years³⁶, whilst the NWC absolute values of SAP SE have been much lower resulting in a lower % of revenue, ranging from 2% to 4%³⁸. As such, the company's current ratio has maintained between 0.57 (FY 2016) and 0.71 (FY 2018) over the years, with the most recent financial year (FY 2019) falling to 0.69. This value has consistently remained below 1, which suggests Salesforce is incapable of paying its short-term obligations, and this raises doubts regarding Salesforce's ability of funding its growth opportunities. When comparing this to the industry ratio of 1.26, one can conclude that Salesforce is lagging. However, when assessing the company's solvency ratio, there has been a positive trend, with an increase from 6% (FY 2016) to 14% (FY 2019). We believe that this shows improvements in the company's ability to cover its obligations with cash flows. On comparing it to other players like Adobe and SAP, we believe that the company's solvency ratio will continue to increase, as Adobe has demonstrated a solvency ratio of 29% and 30% in 2018 and 2017, respectively (c.14 percentage point increase from 2015-2018), whilst SAP SE has had a solvency ratio of 24% in 2018 and 31% in 2017, which is a c.7 percentage point increase from 2015-2018. This suggests that, currently, Salesforce is below its industry peers, but is continuously improving its cash flow.

Graph 19:
Salesforce's solvency Ratio (FY2016-FY2019)



Value Drivers

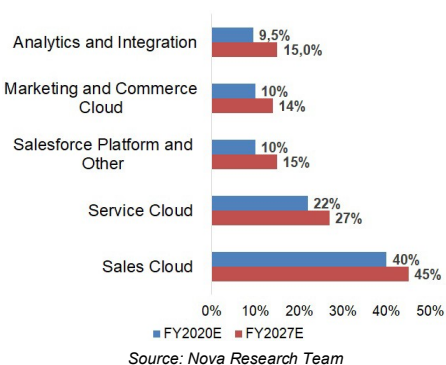
From our perspective, the main value drivers for Salesforce's Subscription and Support segment are composed of the market share and the total revenue opportunity available for all firms in this sector (Total Addressable Market -TAM). In fact, this business unit can be further decomposed into several types of services such as Sales Cloud, Service Cloud, Marketing Cloud, Commerce Cloud, Platform and Other and Analytics and Integration. We conclude that, in spite of this being a sector on the rise (as shown by the main trends identified before), high levels of growth are not sustainable in the long-term for any of the services provided, as the industry will be entering a consolidation phase, therefore growing at slower rates. Consequently, we expect the available revenue opportunity to stabilize in all services that Salesforce provides, with a CAGR_{FY19-27} of c.7% for Sales and Service 8% for Marketing, 10% for Commerce and 3% for Platform and Other. Nonetheless, steeper market growth is expected for the Analytics and Integration sector, with an expected CAGR_{FY19-27} of c.10%. We believe this to be a recently popular area in the IT industry, with high demand, which in turn has a great impact on the rest of Salesforce's business operations. This is further supported by the strong M&A effort that Salesforce has undertaken to expand in this area.

Graph 20 :
TAM by segment – Expected Evolution
(millions)
(FY2020 to FY2027)



Moreover, the implicit market share was determined for each financial year and forecasted according to the company's future investments and proposition, competition in the industry, and the aforementioned trends in the sector. In

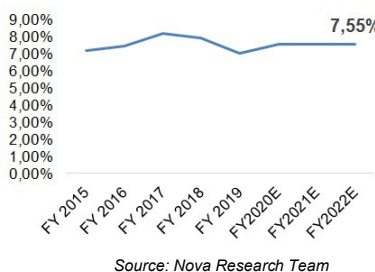
Graph 21:
Salesforce's market share by segment
(FY2020 and FY2027E)



particular, Salesforce's market share in each segment is expected to increase between FY 2020 and FY 2027 given the growth in their services, and then it will stabilize, as the industry consolidates and competition within the sector increases. Whilst we expect competition to augment, we are of the view that the opportunity cost for clients to switch to alternative smaller players is large. Such that, they would prefer to have a company like Salesforce handle all their customer data on one platform, which can be easily accessed. Thus, we expect minimal impact on current clients.

The secondary business unit's revenues, Professional Services and Others, are directly correlated with the revenues from Subscription and Support, given that these services (process mapping, project management, implementation services and training fees⁷) are complementary to the main cloud offerings of the company. Therefore, and given that the revenues from this business unit are not materially significant, we forecasted them as a percentage of Subscription and Support revenues, which has been fairly constant (between 7% and 8%) over the past years. In fact, this business unit is not as much intended to generate revenue as it is to support and complement the company's main revenue stream that comes from Subscription and Support, improving Salesforce's client relationship.

Graph 22:
Professional Services and Others revenue as % Subscription and Support revenue
(FY2015-FY2022E)



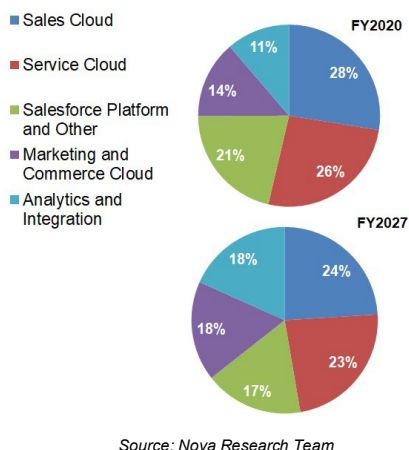
Growth Strategy

Salesforce's growth strategy comprises mainly of:

- Expanding the current service offering to provide new features, security and functionality and reduce customer attrition⁷:

Salesforce has attempted to improve its core business offerings, in order to increase cross-selling. In this sense, several editions of the Salesforce's cloud services exist at various price points, ranging from \$25 per user/month to \$1250 per user/month for small businesses, and \$25 per user/month to \$300 per user/month in Sales and Service Clouds⁴⁰. As such, we believe that this pricing strategy enables Salesforce to meet the needs of clients of differing sizes. In addition, the company disclosed Customer 360 at Dreamforce 2018⁴¹, a cross-cloud technological innovation that combines customer data across several offerings to provide a unified customer experience. Consequently, Sales Cloud and Service Cloud continue to account for the greatest percentage of Sales and Subscription revenue respectively, despite falling weightage. We believe this will persist in the future, as subscription fees for the offerings remain the company's core business.

Graph 23:
% Revenues of each segment in total
Subscription & Support Revenues
(FY2020- FY2027E)



⁴⁰ Salesforce (2019). Available at: www.Salesforce.com [Accessed 12 Oct 2019]
⁴¹ Introducing Salesforce Customer 360 — Unify the Customer Experience on the World's #1 CRM Platform. (2018). [online] Available at: <https://www.salesforce.com/company/news-press/press-releases/2018/09/180925-k/> [Accessed 3 Dec. 2019].

Salesforce has launched Lightning Order Management, Sustainability Cloud, Salesforce Blockchain, Consumer Goods Cloud and Manufacturing Cloud, whilst expanding their Financial Services Cloud in a bid to reduce customer attrition, currently at less than 10%⁷, and gain further clients, presently over 150,000⁷. Today, Fortune 500 companies spend in excess of \$15B on CSR⁴² and Salesforce's Sustainability Cloud aims to address this market opportunity by assisting clients through the provision of a 360-degree perspective of their environmental impact and data-driven insights. This service is expected to be available in December 2019²², and as such we can expect revenue streams to increase from this new offering.

We believe that these new offerings complement their current services and believe that Salesforce can provide package deals to clients and cross-sell which can prove to be advantageous in the long-run.

- Expand on an international scale

Salesforce's revenues have historically been concentrated in the Americas, with c.70% over the past years owing to the Americas, whilst Europe is the fastest-growing region for Salesforce revenues, growing at a CAGR of c.27% since FY2015⁷. The over reliance on the Americas is offset by the lack of dependence on any one client (none account for more than 5% of revenues)⁷. Nevertheless, Salesforce's ability to diversify its revenues is conditional on its ability to internationalize.

The Middle East and rest of the world is expected to witness the highest CAGR₁₈₋₂₃ of 36% for cloud service market value, whilst North America and Asia-Pacific both are expected to have the lowest CAGR₁₈₋₂₃ at 28%. South America and Europe are expected to have CAGR₁₈₋₂₃ of 34% and 29%, respectively²⁰.

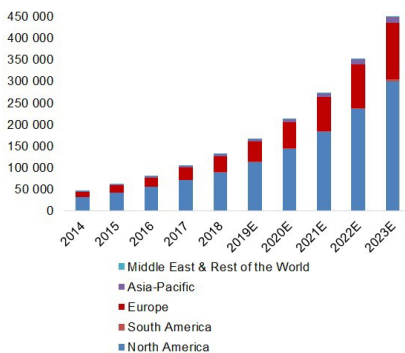
To facilitate this internationalization process, partnerships with cloud computing platform companies have been enabling Salesforce to have greater flexibility to serve customers in new and emerging regions, increase clients with in-country data privacy needs, and aid acquired companies. For example, the company has a joint venture with Sunbridge, a Japanese tech company since 2001, which helped Salesforce penetrate the market, and a strategic partnership with KDDI in 2005 to offer on-demand CRM solutions for the Japanese industry, strengthening their positioning in the Asia-Pacific market⁴³. And more recently, as mentioned previously, Salesforce has now partnered with an Indian MNC.

Graph 24:
Salesforce revenues per geographic region



Source: Nova Research Team

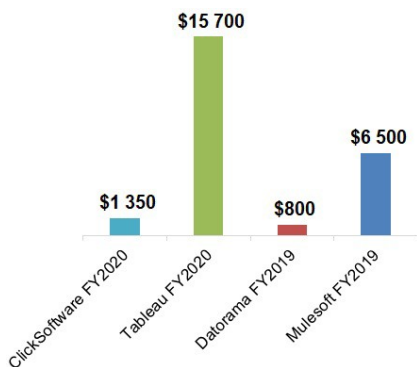
Graph 25:
Market value of cloud per region (2014A-2023F)



Source: Marketline

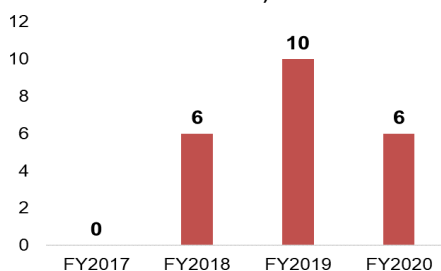
⁴² Ft.com. (2014). Fortune 500 companies spend more than \$15bn on corporate responsibility | Financial Times. [online] Available at: <https://www.ft.com/content/95239a6e-4fe0-11e4-a0a4-00144feab7de> [Accessed 3 Nov. 2019].
⁴³ salesforce.com, inc. The world's most innovative company?. (2013). [pdf] MarketLine. Available at: <https://fesrvsd.fe.unl.pt:2126/Analysis/details/salesforce-com-inc-the-worlds-most-innovative-company-27029> [Accessed 19 Oct. 2019]

Graph 26:
Salesforce's biggest acquisitions by deal value in FY2019 and FY2020 (millions)



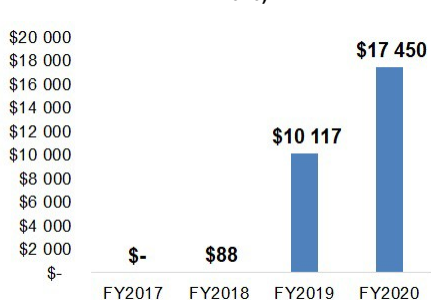
Source: MarketLine⁴⁵

Graph 27:
Number of Salesforce's M&A deals (FY2017 to FY2020)



Source: MarketLine⁴⁵

Graph 28:
Salesforce's annual deal value (FY2017 to FY2020)



Source: MarketLine⁴⁵

- Extend their reach in new horizontal markets through acquisitions and partnerships and expand on their partner ecosystem in order to tap into new markets and industries:

Inorganically, Salesforce is a major player in the M&A market and has continued to make additions to its diversified acquisition portfolio. Salesforce's largest deal by value, Tableau, an analytics company was acquired in FY2020 for \$15.7B, (a multiple of 13.59x the target's 2018 revenue and the largest acquisition Salesforce has ever made). We believe that these acquisitions broaden Salesforce's total addressable market from \$88B to c.\$108B in FY2020, given the increase in combined market size, consequently resulting in increased revenue opportunity from a new service offering within Business Integration and Analytics. However, we assume that these acquisitions will not bring any synergies, as approximately 60%-80%⁴⁴ of M&A transactions fail to achieve their desired outcomes due to overestimation of synergies to justify premiums (50% over market value: \$5.23B). In the event that there are synergies arising from this deal, we believe that this would result in a positive NPV of \$136M. Such that, if Salesforce benefitted from synergies and underwent integration costs there would be an increase in Salesforce's value, with a share price increase of 3.25% with a 12% probability.

Moreover, the company values their inorganic growth strategy, with partnerships and acquisitions of 24 companies since July 2014⁴⁵, with the bulk (22) occurring within the past three years. Salesforce continues its strategy, through its Field Service Management vendor ClickSoftware Technology acquisition for \$1.35B. This company has a substantial amount of clientele, with estimates of their midsize and large organisation user base to be greater than 650,000⁴⁶. Salesforce has a solid product in this sector, Field Service Lightning, which witnessed a year-on-year growth of 100% and can be combined with ClickSoftware.

In fact, Salesforce's deal value has exponentially increased over the past few years (in FY2020, the total deal value amounted to over \$17.4B, relative to \$0.88B in FY2018). Nevertheless, we are extremely wary of these high value deals, as we believe that Salesforce may be overspending, and justifying large premiums with overestimations of synergies. Furthermore, we consider this focus on inorganic growth as proof that organic growth opportunities are losing momentum due to profit margins taking the hit.

⁴⁴ Marks, Mitchell & Mirvis, Philip. (2001). Making mergers and acquisitions work: Strategic and psychological preparation. *Academy of Management Executive*.15. 80-92.

⁴⁵ MarketLine.com. (2019). Salesforce.Com Inc. [online] Available at: https://fesrvsd.fe.unl.pt:2126/Company/CompanyDeals/salesforcecom_inc [Accessed 20 Nov. 2019].

⁴⁶ Computer Business Review. (2019). Salesforce Buys ClickSoftware for \$1.35B, Rival IFS Welcomes Deal. [online] Available at: <https://www.cbronline.com/news/salesforce-buys-clicksoftware> [Accessed 18 Nov. 2019].

Comparables

The software industry is very fragmented, ranging from large companies to smaller niche-oriented ones. Nonetheless, it is still possible to make a comparison between Salesforce and other similar players in the sector. Within the industry, there are companies that offer either on-premise, software-as-a- service (SaaS), or both. There are several proposed peers that focus on CRM, ERP and SCM. Therefore, we established detailed criteria to divide the possible comparables into three different tiers, with tier 1 companies being the most similar to Salesforce.

Table 2:
Comparable Companies (millions)

Salesforce, Inc. Comparables - CoCo's		Criteria						
Tier	Comparable Companies	Market Cap (\$M)	Cash LF	Total Debt	Net Debt	Net D/E	Industry Application	D/E
1	SALESFORCE.COM INC	\$ 131 980	\$ 3 510	\$ 6 432	\$ 2 922	2%	Application Software	37%
1	ADOBE INC	\$ 131 176	\$ 2 209	\$ 4 137	\$ 1 928	1%	Application Software	40%
1	SAP SE	\$ 161 675	\$ 6 024	\$ 17 925	\$ 11 901	7%	Application Software	54%
2	INTUIT INC	\$ 67 013	\$ 2 116	\$ 436	\$ (1 680)	-3%	Application Software	12%
2	DASSAULT SYSTEMES SA	\$ 39 175	\$ 6 384	\$ 3 969	\$ (2 416)	-6%	Application Software	69%
3	WORKDAY INC-CLASS A	\$ 36 651	\$ 620	\$ 1 543	\$ 923	3%	Application Software	70%
3	CADENCE DESIGN SYS INC	\$ 18 267	\$ 655	\$ 464	\$ (191)	-1%	Application Software	31%
3	GUIDEWIRE SOFTWARE INC	\$ 9 144	\$ 254	\$ 317	\$ 63	1%	Application Software	20%
3	SAGE GROUP PLC/THE	\$ 9 875	\$ 456	\$ 1 004	\$ 548	6%	Application Software	56%
3	CONSTELLATION SOFTWARE INC	\$ 21 156	\$ 214	\$ 563	\$ 349	2%	Application Software	100%
3	OPEN TEXT CORP	\$ 10 794	\$ 941	\$ 2 615	\$ 1 674	16%	Application Software	67%

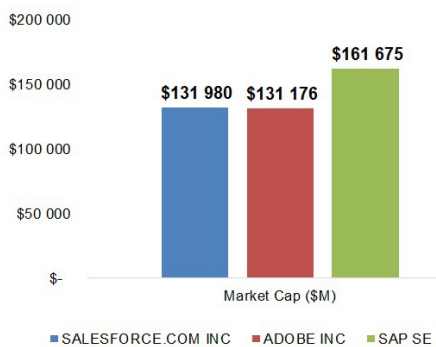
Source: Bloomberg (26/10/2019)

We acknowledge that out of the above peers, none are genuinely accurate representations of the inherent risks that Salesforce presents. Nevertheless, we derived the closest comparables as Adobe, Inc. and SAP SE., mainly because both operate within the application software sub-sector of the industry, have CRM operations, are similar in size (evaluated through the market capitalization), the companies all operate internationally and their target market covers all size firms, ranging from SMBs to MNEs^{36 38}.

However, Adobe Inc and SAP SE both offer on-premise and SaaS, so we believe this will distort the comparison of any CAPEX figures, as Salesforce is purely SaaS with no on-premise operations^{36 38}. Furthermore, the business mix slightly defers, with Adobe having a key focus on creativity cloud features, whilst SAP SE has a focus on ERP. Yet, all three firms offer CRM, ERP and SCM, and derive cloud revenue according to a subscription-based model. As such, we believe that this presents an acceptable proxy to Salesforce, post adjusting to account for solely cloud subscriptions and support revenue, given its subscription-based business model and operational structure.

Adobe was founded in 1982 and is mostly known for its creativity and multimedia software products like Photoshop, Acrobat Reader and Adobe Creative Cloud. The company is currently the third largest cloud software provider, after Microsoft and Salesforce, with a 9.3% market share. In the CRM sector alone, Adobe

Graph 29:
Tier 1 comparables market cap
(millions)



Source: Bloomberg (26/10/2019)

accounted for a 5.1% worldwide market share in 2018⁴⁷. According to the latest press release, the total addressable market for Adobe is expected to reach \$128B by 2022⁴⁷.

Founded in 1972, SAP is commonly recognized for its leadership in ERP software, with a market share of around 8.3% in the CRM market in 2018. Nowadays, around 77% of the world's revenue transactions are done through a SAP system⁴⁸. With over 400,000 customers in more than 180 countries, the company intends to improve its costumers' businesses through machine learning, Internet of Things (IoT) and advanced analytics technologies. Nonetheless, SAP has also been evolving to become a major player in end-to-end enterprise application software, database, analytics and experience management, with a total revenue of over \$24B in FY2018³⁸.

Forecasting and Valuation

In order to obtain a share price for Salesforce as of FY2020, an income statement and a balance sheet have been forecasted until FY2027, as we anticipate that by FY2027, Salesforce's operations and cashflows will have stabilized.

Income Statement

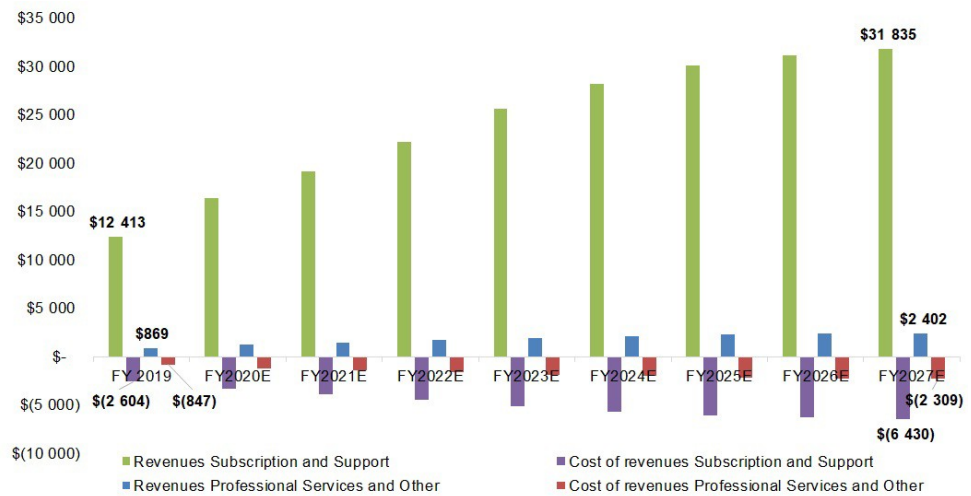
- Revenues and Cost of Revenues

The value drivers for Salesforce's Subscription and Support business segment are composed of market share and the TAM, as previously explained. Thus, the growth in revenue is mainly attributed to Salesforce's increased service offerings within each area, including through acquisitions (increasing market share), whilst client companies experience technology budget growth and a migration away from infrastructure to the cloud, thereby increasing both the number of paying subscribers and service types (increase in TAM). In fact, the global market share of salesforce is expected to increase from c. 13% in FY 2019 to c. 19% in FY 2027, while the TAM will increase from c. \$98B in FY 2019 to c. \$167B in FY 2027 (nominal values). Consequently, we believe that Salesforce's main revenue stream is going to increase in the future, achieving a total value of more than \$31.8B in FY 2027. The cost of revenues for the Subscription and Support business unit was estimated as a percentage of revenue, as is consistent with previous years, and we expect this to continue into the future at an average of 20%. In FY 2027, the cost of revenues is then estimated to be over \$6.4B.

⁴⁷ Adobe Inc. (2019). Available at: www.adobe.com [Accessed 26 Oct 2019]
⁴⁸SAP SE (2019). Available at: www.sap.com [Accessed 26 Oct 2019]

In what concerns Professional Services and Others, the revenue growth will accompany that of the Subscription and Support Revenues, given that they are directly related. Consequently, these revenues are expected to achieve a value of over \$2.4B in FY 2027. However, for Professional Services and Others, the cost of revenues as a percentage of revenues is much higher, averaging at 96%. This happens because this segment is a very labour-intensive area, as it involves consulting and implementation services including training and training classes, which justifies the cost of goods sold being so high relative to the fairly low revenue stream. In FY 2027, the cost of revenues is then estimated to be over \$2.3B.

Graph 30:
Revenues and cost of revenues for Subscription and Support and Professional Services and Other (FY2019-FY2027E)
(millions)



Source: Nova Research Team

Operating expenses

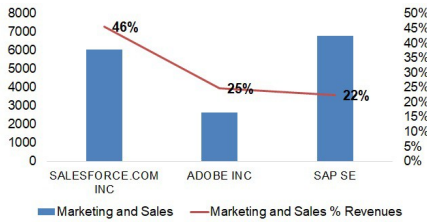
Graph 31:
Operating expenses (FY2019-FY2027E)
(millions)



Source: Nova Research Team

Operating expenses are categorised into research and development, marketing and sales, and general and administrative. Currently, the greatest cost is attributable to marketing and sales, which is expected to continue to account for the largest portion of operating expenses. However, when compared to the average of the tier 1 comparables, the current cost as a percentage of revenue is inflated (46% vs. 31%). Such that, we assume Salesforce will increase their efficiency in the future and, once the company tends towards the steady state, the marketing costs as a percentage of revenue will decline, as they have in the past, to get closer to the average of Salesforce's closest peers. In fact, as of the last fiscal year, marketing expenses accounted for 25% and 22% of Adobe's and SAP's revenues, respectively. As such, by FY 2027, it is expected that marketing and sales expenses will account for 31% of the total revenue value, totalizing \$10.6B, which contributes to a slight decline in the overall operating expenses between FY 2026 (c. \$19.6B) and FY 2027 (c. \$19.2B). This view is mainly

Graph 32:
Marketing and sales expenses tier 1
comparables expenses – absolute values and
as % revenues (2018)
(\$millions)

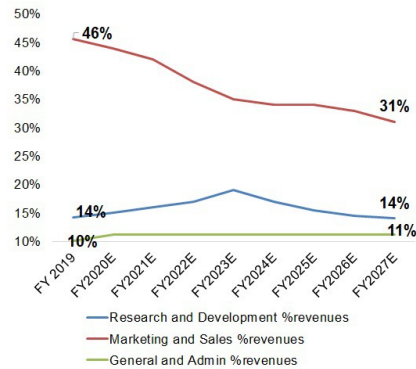


Source: Nova Research Team

justified by our prediction that Salesforce will consolidate its brand strength within the industry while increasing its market share, thereby solidifying its position as a well-established and renowned CRM company, which we believe is currently where Salesforce is headed. Consequently, the company will not need to make such big marketing investments to achieve its target revenues.

In a software intensive company such as Salesforce, research and development (R&D) is the second biggest expense, primarily comprising of salaries and related expenses, the costs of adding new services and functionalities and integrating acquired technologies. As such, we expect these expenses to increase both in absolute dollars and as a percentage of total revenues until the FY 2023 (\$5.2B and 19%), as the company invests in system infrastructure and additional employees to be able to take advantage of the growing market opportunities and to keep up with the rapid development of the industry. However, as the industry starts to consolidate, we believe that R&D expenses will decline as a percentage of revenues and in absolute values, given that most of the expenses in this area will be done to improve and update already existing services and functionalities. Therefore, we expect that by FY 2027, R&D expenses will amount to 14% of the total revenue value, totalizing c. \$4.7B. Finally, general and administrative expenses also consist of salaries and related expenses for finance, accounting, legal, internal audit and professional fees. We expect an increase in absolute dollars due to increased investments in infrastructure and further employee related costs, professional fees and insurance costs associated with the growth in Salesforce’s business. Nevertheless, general and administrative costs are expected to remain flat as a percentage of revenues in the future (11%), achieving an absolute value of \$3.8B in FY 2027.

Graph 33:
Operating expenses as % revenues
(FY2019-FY2027E)

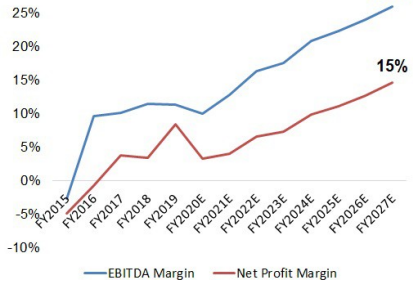


Source: Nova Research Team

▪ EBITDA and Net Profit Margins

Salesforce’s EBITDA and net profit margins have had a similar evolution in the past with the exception of FY 2019, where the net profit margin suffered an abnormally steep increase (3.4% in FY 2018 vs. 8.4% in FY 2019) due to the company’s strategic investments, as previously explained. In fact, Salesforce plans to keep investing in both mature and early-stage companies for strategic purposes. However, due to the high risk of investing in start-ups, these extraordinary results cannot be expected to occur on a regular basis in the future. Therefore, we expect the evolution of both EBITDA and net profit margin indicators to be positively aligned going forward, given that the main driver for the company’s bottom line profit is the operational income. In this sense it is expected that the EBITDA margin will grow from c.10% in FY 2020 to c. 26% in FY 2027, which is mainly derived by the falling weightage that operational

Graph 34:
EBITDA and net profit margins
(FY2015-FY2027E)



Source: Nova Research Team

expenses have on revenues, as previously stated. Similarly, the net profit margin is also expected to increase from c. 3% in FY 2020 to c. 15% in FY 2027, given our belief that the company will increase its efficiency through improved operations, with greater bargaining power.

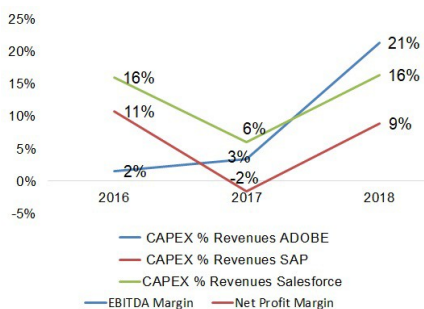
Balance Sheet

▪ CAPEX

Capital expenditures can be obtained for the company's fixed assets and intangibles, comprising of property, plant and equipment, intangible assets and capitalised software. We forecasted CAPEX according to the KPI used by the company, which is as a percentage of revenues. Whilst Salesforce predicts that CAPEX will remain constant in the near future, as a percentage of total revenues, we believe the current percentage is too high to be sustainable for future years, considering the positive evolution of revenues. Therefore, it was deemed that this ratio would become lower over time, as the company's revenues start to stabilise, (6% in FY 2027 relative to 16% in FY 2020). Comparing this KPI to tier 1 comparable companies, Adobe and SAP, it can be deduced that Adobe, over 2016, 2017 and 2018, has increasingly invested in its CAPEX, with values as a % of revenues increasing from 2% and 3% to 21%, respectively. On the other hand, SAP has had fluctuating CAPEX levels of 11%,

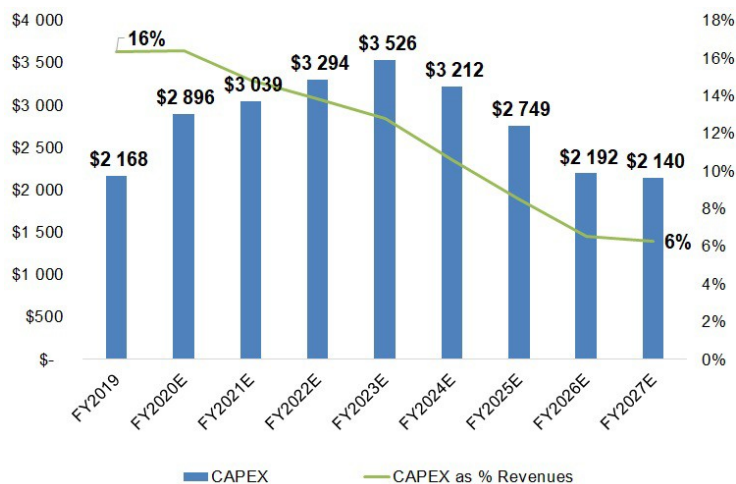
-2% and 9%, over 2016, 2017, and 2018. The higher CAPEX levels for Adobe can be justified by their larger acquisition strategy, whilst SAP only acquired 1-2 companies of smaller values over 2017 and 2018. Therefore, it can be concluded that, in general, Salesforce has presented higher CAPEX, as a percentage of revenues, than its closest comparables, with the exception of 2018, when Adobe's CAPEX values were higher than usual. Moreover, 2017 (FY 2018) was an anomaly for Salesforce, given that only two acquisitions were undertaken, Sequence and Attic Labs⁴⁵, resulting in a decline in the intangible assets acquired through business combinations of -26%. However, note that, as mentioned before, tier 1 comparables' CAPEX figures may be distorted due to the diversification of their operations, which makes them not 100% equivalent for this purpose. Nonetheless, given Salesforce's acquisitive nature, we predict that CAPEX will continue to increase in value until FY 2023 (when it reaches its maximum value of c. \$3.5B). Thereafter, acquisitions and investment opportunities will exhaust as market growth starts to slow down, whereby it is expected for CAPEX to decline (c. \$2.1B in FY 2027).

Graph 35:
CAPEX as % revenues for tier 1 comparables
(2016-2018)



Source: Nova Research Team

Graph 36:
CAPEX (millions) and as % revenues
(FY2019 to FY2027E)

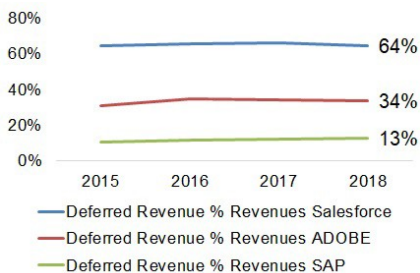


Source: Nova Research Team

▪ Net Working Capital

Working capital has been negative over the past few years, a tendency that will be aggravated in the future, mainly due to the way the company recognises revenues in the financial statements. As mentioned above, deferred revenue values are fairly high, accounting for a percentage of about 64% of total revenue in 2018. In fact, it is expected that deferred revenue will continue to be the main component of working capital, as it will increase in the same proportion as revenues. Therefore, a 5 year average KPI of 65% of revenues was used to forecast the deferred revenues in the future. When comparing this percentage to Adobe and SAP, it can be verified that it is much higher, as Adobe and SAP's revenue comprises of additional material revenue streams other than subscription-based fees. Adobe's KPI for deferred revenues has maintained c.34% over the past years, mainly due to much lower absolute values, with a similar case in SAP, with an even lower deferred revenue KPI at c.13% of revenues in 2018.

Graph 37:
Deferred revenue as % revenues for tier 1
comparables (2015-2018)



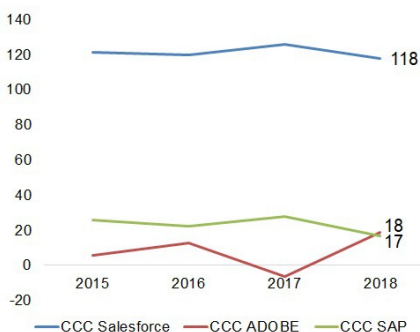
Source: Nova Research Team

In the instances where the remainder of the captions in working capital are dependent on the value of sales, they were forecasted based on an average percentual weight of total revenues. Moreover, operational cash was determined as a constant 2%⁴⁹ of total cash and equivalents, which we expect to be sustainable to cover Salesforce's operations.

In what concerns accounts receivable, the DSO has remained fairly constant in past years, ranging from 129 to 138 days. Comparable SAP had their DSO fluctuate from 94 days, in 2015, to 100 days, in 2016, and, most recently, reach 96 days, in 2018. Whilst, Adobe had their DSO return from 61 days, in 2017,

⁴⁹Koller, T. and Goedhart, M. (2010). *Valuation*. 5th ed. Hoboken: John Wiley & Sons.

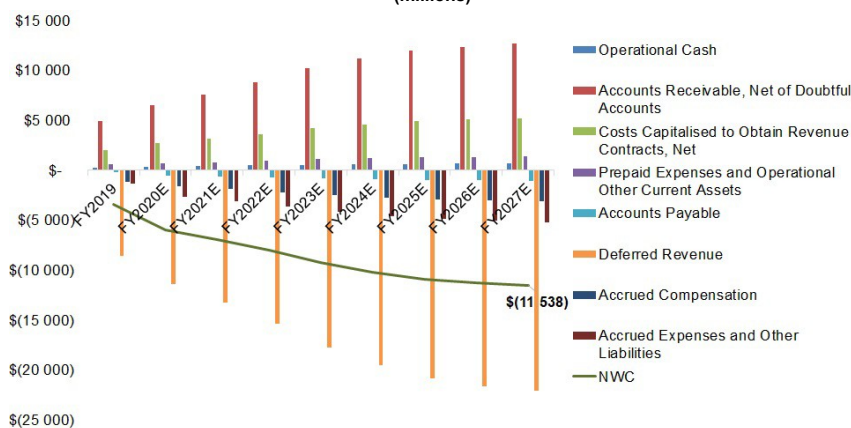
Graph 38:
CCC for tier 1 comparables (2015-2018)



Source: Nova Research Team

(which is considered an anomaly over the past 4 years) to 53 days, which is more within their usual values. Whilst Salesforce has the highest DSO, we believe that this is mainly attributed to their revenue recognition criteria, recording amounts invoiced to clients as accounts receivable or unearned revenue. We, therefore, believe this principle will be maintained and an average number of the past years of 135 days was used as a KPI for future years. On the other hand, the payable period fluctuated significantly, from 10 days to 27 days, over the past 5 years. On comparison to their tier 1 comparables, SAP had a higher overall DPO with values of 68, 78, 66 and 79 days in 2015, 2016, 2017 and 2018, respectively. Whereas, Adobe's DPO has fluctuated substantially over the years, peaking in 2017, at 67 days, yet troughing in 2018 by c.50% to reach 35 days. Therefore, we used the tier 1 comparables' average DPO of 44 days as a benchmark to forecast accounts payable. This results in a predicted CCC of 91 days for Salesforce, which is way above that of Adobe and SAP, at 18 and 17 days, respectively, in 2018, indicating that the comparables operate much more efficiently. As previously mentioned, we believe that Salesforce has the potential to negotiate better payment terms with its third parties, so we consider 97 days to be too high for a subscription-based model. Overall, we expect NWC to become more negative in future years, achieving a value of -\$11.5B in FY 2027, as it can be seen in the graph below.

Graph 39 :
NWC evolution
(FY2019-FY2027E)
(millions)



Source: Nova Research Team

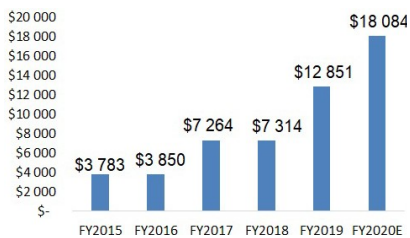
Table 3: NWC KPIs
(FY2019-2027E)

NWC KPI'S	FY 2019	FY2020E	FY2021E	FY2022E	FY2023E	FY2027E
DPO	17	44	44	44	44	44
DSO	135	135	135	135	135	135
CCC	118	91	91	91	91	91
%Revenues						
Operational Cash	2%	2%	2%	2%	2%	2%
Prepaid Expenses and Operational Other Current Assets	4%	4%	4%	4%	4%	4%
Deferred Revenue	64%	65%	65%	65%	65%	65%
Accrued Compensation	9%	9%	9%	9%	9%	9%
Accrued Expenses and Other Liabilities	10%	15%	15%	15%	15%	15%
Costs Capitalised to Obtain Revenue Contracts per 1\$ revenue	\$ 0,15	\$ 0,15	\$ 0,15	\$ 0,15	\$ 0,15	\$ 0,15

Source: Nova Research Team

▪ Goodwill

Graph 40 :
Goodwill evolution
(FY2015-FY2020E)
(millions)

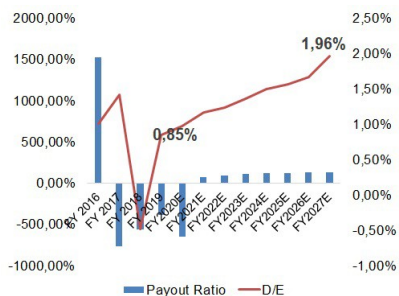


Source: Nova Research Team

Goodwill suffered a sharp increase between FY 2018 (\$7.3M) and FY 2019 (\$12.8B), mainly due to market premiums paid for the acquisitions of MuleSoft, Datorama and CloudCraze, in that fiscal year. Additionally, the Tableau acquisition in FY 2020, whose deal value of \$15.7B included a 50% market premium, resulted in a forecast of goodwill increasing in that year to \$18B. Hereinafter, goodwill was presumed to remain constant at \$18B, as we believe that any additional acquisitions the company will undertake, will not generate any synergies, and therefore no market premiums will be considered.

▪ Pay-out Ratio

Graph 41 :
Pay-out ratio and D/E evolution
(FY2016-FY2020E)
(millions)



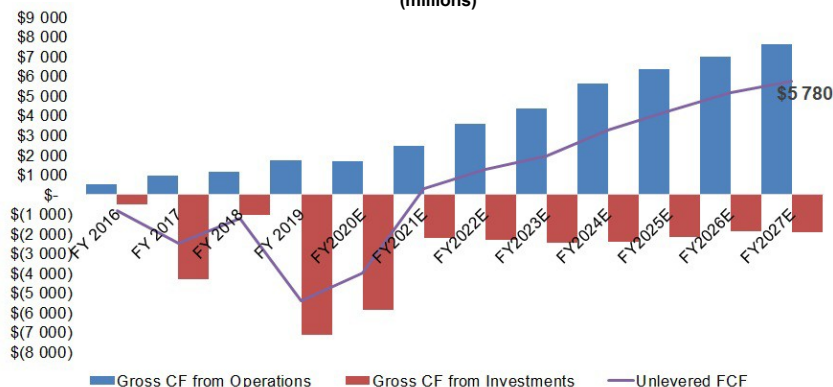
Source: Nova Research Team

The company's pay-out ratio has varied significantly throughout previous years. Consequently, we opted for estimating it in such a way that allows the company to achieve its debt-to-equity target ratio of 1.96%⁵⁰ in FY 2027, since the D/E ratio as of the FY 2019 was 0,85%. Therefore, it was necessary to gradually increase the pay-out ratio, to achieve the target D/E as we believe that it is not sustainable in the long-term for the company to not rewards shareholders. In fact, this situation is in line with the stabilization of the company's operations to achieve a steady state, as Salesforce is expected to invest less of its cash flow in the future, and will therefore distribute cash to shareholders, after paying off any pending financial obligations. Note that the pay-out ratio in question includes not only dividends (which are 0% at the moment) but also any other forms of transactions with shareholders such as stock repurchases.

Unlevered Free Cash Flow (UFCF)

Salesforce's UFCF is mainly determined by the gross cash flow (CF) from operations and the gross CF from investments, as demonstrated in the graph below.

Graph 42 :
UFCF evolution
(FY2016 to FY2027E)
(millions)



Source: Nova Research Team

⁵⁰ See Discount Rate section

In line with our forecasts, the CF from operations steadily increases after FY 2020 (c. \$1.6B), until it starts to stabilize around FY 2027 (c. \$7.6M). This increase is mainly due to the increase in EBIT over the years.

On the other hand, the CF from investments has been fairly stable throughout past years, with the exceptions of the FY 2017 (c. \$4.3M) and FY 2019 (c. \$7.1B). In those two years, it can be seen that the investments have increased significantly relative to previous periods, which was primarily driven by Salesforce's M&A activity that increases the variation in goodwill, whenever Salesforce buys a target company above its current market value. This happens because it is perceived by Salesforce that enough synergies will be created in the future to compensate for the difference. In fact, in FY 2019 the acquisitions of MuleSoft, Datorama and CloudCraze resulted in a significant increase in goodwill. Similarly, in FY 2020, the increase in goodwill that results from the Tableau acquisition, caused the investment CF to reach higher values again (c. \$5.8B). As expected, in these years the UFCF is very negative (c. -\$2.4B, c. -\$5.4B and c. -\$3.9B, respectively), given that the CF from operations is not large enough to accommodate the investments that have been made. Given that we have perceived goodwill to be constant after FY 2020 (therefore assuming that no new synergies will result from further M&A activities), the CF from investments becomes rather stable in the following years, allowing the UFCF to increase at the same pace as the CF from operations and to reach a value of c. \$5.7B in FY 2027.

Discount Rate

According to our analysis, the industry peers that we have compiled do not operate under the exact same risk as Salesforce, i.e. different business mixes. Post obtaining the values for the levered betas of industry firms, we concluded that the peers that are most similar to Salesforce are the tier 1 comparables (Adobe and SAP), given their size, geographical presence, target consumer, and CRM business area. However, given their different risk profiles relative to Salesforce (as not all material revenues are from a subscription-based models and they operate with both on-premise and SaaS), we opted for using all the comparable companies to get a median of the unlevered beta, so as not to bias the beta calculation towards the values of the aforementioned two companies.

Table 4 :
Comparables' levered beta, standard error, R-square, confidence and unlevered beta

Salesforce, Inc.		Levered Beta	Standard Error	R-square	Lower 95% Beta	Upper 95% Beta	Unlevered Beta
Comparable Companies							
Tier	Comparable Companies	Levered Beta	Standard Error	R-square	Lower 95% Beta	Upper 95% Beta	Unlevered Beta
1	SALESFORCE.COM INC	1,36	0,12	0,47	1,14	1,59	1,33
1	ADOBE INC	1,17	0,11	0,43	0,95	1,38	1,15
1	SAP SE	0,94	0,10	0,36	0,74	1,14	0,87
2	INTUIT INC	1,19	0,10	0,46	0,98	1,40	1,22
2	DASSAULT SYSTEMES SA	0,83	0,12	0,24	0,59	1,07	0,88
3	WORKDAY INC-CLASS A	1,10	0,20	0,17	0,71	1,49	1,07
3	CADENCE DESIGN SYS INC	1,04	0,13	0,30	0,79	1,29	1,05
3	GUIDEWIRE SOFTWARE INC	1,17	0,15	0,29	0,88	1,46	1,16
3	SAGE GROUP PLC/THE	0,74	0,13	0,18	0,49	1,00	0,70
3	CONSTELLATION SOFTWARE INC	0,80	0,13	0,20	0,54	1,06	0,78
3	OPEN TEXT CORP	0,72	0,11	0,21	0,50	0,94	0,62
<i>Median</i>							1,05

Source: Yahoo finance and Nova Research Team

As per table 4 above, we conducted an analysis of 156 observations comprising of 3 years of weekly returns per stock. This time period was selected as Salesforce is consistently acquiring businesses and, therefore, altering their business mix. The choice for S&P500 as our benchmark, is due to its advantages over other benchmarks for being market-weighted and comprising of the 500 largest firms⁵¹. Consequently, our regression yielded in an R-square for Salesforce, Adobe and SAP of c.0.48, 0.43 and 0.36, respectively. Whilst these are fairly low R-square values less than 0.5, we can conclude that out of our initial sample of 11 equities, these tier 1 comparables had the highest R-squared figures, along with Intuit (R-square of 0.46). Additionally, the sensitivity to the moves in the market is 36% more volatile for Salesforce, 17% more volatile for Adobe and 6% less volatile for SAP SE. In particular, none of the confidence intervals include 0, thereby suggesting that the SP500 and the stocks are in fact related, and this regression model is beneficial for prediction purposes. As such, we can conclude with 95% confidence that Salesforce's beta lies within the range of 1.14 and 1.59, Adobe's beta lies within 0.95 and 1.38 and SAP has the lowest beta range and confidence interval width of 0.74 and 1.14. However, in the long run, we actually believe that Salesforce's unlevered beta will tend towards values closer to 1, as we assume that Salesforce will withstand market conditions, that, to an extent, will work in its favour, helping augment Salesforce's size as time progresses⁵¹. Thus, the company will become more diversified with increased assets that result in cash flows, as per our analysis. Therefore, we deemed that the comparables' median of 1.05 was a fair value to use for the unlevered beta.

Similarly, we assumed that the capital structure of Salesforce would tend to the median value of its comparables, such that, in the long run, the net debt-to-equity ratio of Salesforce would be 1.96%. We believe that this value is aligned with our predictions for the company, as Salesforce will have to fund its acquisitions partly with new debt. Nonetheless, we expect this ratio to be below 2%, as Salesforce is not a very asset-heavy industry and therefore should aim for a debt load that allows for the company to conduct its operations and expand, without falling into

Graph 43 :
Cost of equity, cost of debt and WACC

Cost of Equity	
Rf	1,71%
MRP	5,50%
Beta Unlevered	1,05
Ru	7,48%
Re	7,61%
Cost of Debt	
Rf	1,71%
YTM	2,27%
Credit Rating	A3
Probability of Default	2,19%
Loss Given Default	53,90%
Credit Default Spread	1,56%
Rd	1,09%
WACC	
Net Debt/Equity	1,96%
Rd	1,09%
Re	7,61%
D/EV	1,92%
t	21,00%
WACC	7,48%

Source: Bloomberg, Moody's,
Damodaran and Nova Research Team

the risk of default. By re-levering the cost of equity to account for the company's target capital structure, we obtained a cost of equity of 7.61%

Concerning the cost of debt, it was obtained based on a yield to maturity of 2.27% for a fixed Salesforce callable bond with maturity in 2028⁵². A 10-year bond results in a loss given default of 53.9% and probability of default of 2.19%⁵³. These values are the ones that correspond to the company's credit rating of A3⁵² provided by Moody's, which given the low debt levels, we believe is sustainable into the future. Therefore, we were able to obtain a cost of debt of 1.09%.

As a result, with a 21% statutory tax rate, the WACC calculated for Salesforce is 7.48%.

Perpetual Growth

In a service providing company such as Salesforce, the value of the terminal growth rate obtained through the ROIC and RR is artificially high. This is due to the reinvestment rate leading to an inflated value, as invested capital in a company operating on the cloud is lower relative to other industries. Specifically, for Salesforce, only capital expenditure on acquisitions drives investments. As such, we decided to adopt an alternative approach. Given that Salesforce operates in three main regions (Americas, Europe and Asia-Pacific)⁷ we considered the nominal GDP evolution in those three territories to derive the weight of the sector (measured by the TAM in each year) relative to the overall economy. In this sense, we obtained a combined GDP nominal CAGR₂₀₋₂₇ of 4.64%. Thus, using these two figures in formula 1, we computed a perpetual growth rate of 4.9%, which is within reasonable values for GDP growth plus inflation. Consequently, it can be deduced that, in perpetuity, the company will grow consistently aligned with the economy.

Table 5 :
Perpetual growth rate calculation

	FY 2020E	FY 2027 E
Weighted Average GDP (Nominal)	\$ 21 632 808	\$ 29 708 191
GDP Nominal CAGR	4,64%	
Sector's Weight	0,15%	0,15%
	100,25%	
Growth Rate	4,90%	

Source: Nova Research Team

Formula 1:
Growth rate calculation

$$g = (1 + \text{GDP Nominal cagr}) \times \left(\frac{\text{sector's weight}_t}{\text{sector's weight}_0} \right)^{\frac{1}{t}} - 1$$

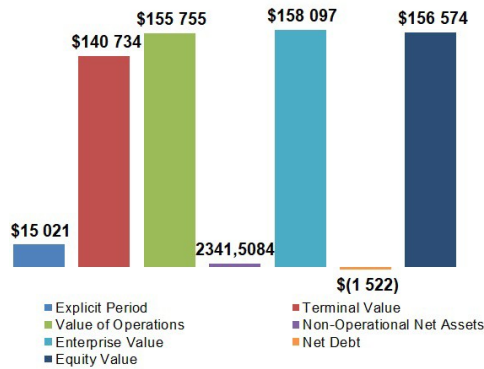
Enterprise Value and Equity Value

In order to determine Salesforce's enterprise value, we used the operational free cash flow of the company as the starting point and, for the explicit forecasting period, the CFs from the years starting in FY 2021 were discounted at the WACC (7,48%). Finally, for the perpetuity calculation, the same WACC was used together with a perpetual growth rate of 4,86%. The sum of the values obtained for all the correspondent years and in perpetuity is c. \$155.7B, which corresponds to Salesforce's value of operations in FY 2020. Furthermore, we calculated the company's enterprise value, which is c. \$158B and obtained an equity value of \$156.5B. Consequently, considering the 877M⁵² outstanding shares, this results in a share price of 178.5\$ in FY 2020.

⁵² Bloomberg (2019). Available at: www.bloomberg.com [Accessed 28 Oct 2019]

⁵³ Moody's Investors' Service "Annual Default Study: Corporate Default and Recovery Rates". (2018). Moody's.

Graph 43:
Enterprise value breakdown FY2020



Source: Nova Research Team

Sensitivity Analysis

- WACC and Perpetual Growth

With many factors influencing a company’s WACC and perpetual growth, and the material impact it can have on the share price, we performed a sensitivity analysis of 5% and 10% from the base in either direction. A 10% increase in Salesforce’s perpetual growth rate, resulting in a value of 5.40% which is above that of the market growth rate, and a lower WACC of 6.75% results in the highest share price of \$341.9. We believe this to be a very unlikely scenario, given that Salesforce cannot outpace the market in growth perpetually. On the contrary, the lowest share price of \$120 results from a lower perpetual growth rate of 4.42%, and a higher WACC of 8.24%. We believe that fluctuations in Salesforce’s WACC are probable, depending on alterations in the company’s capital structure mix. Therefore, we can conclude that a higher perpetual growth rate leads to a higher market value for the firm, whilst a lower WACC also results in the same effect.

Table 7 :
Sensitivity analysis for WACC and perpetual g

Perpetual Growth Rate	WACC					
	17%	6,75%	7,10%	7,48%	7,85%	8,24%
4,42%	\$ 179	\$ 204,3	\$ 175,7	\$ 152,9	\$ 135,0	\$ 120,0
4,65%	\$ 225,3	\$ 191,1	\$ 164,3	\$ 143,8	\$ 126,9	
4,90%	\$ 253,2	\$ 210,7	\$ 178,5	\$ 154,6	\$ 135,2	
5,14%	\$ 289,6	\$ 235,1	\$ 195,8	\$ 167,3	\$ 144,8	
5,40%	\$ 341,9	\$ 268,4	\$ 218,2	\$ 183,3	\$ 156,6	

Source: Nova Research Team

- Total Addressable Market and Market Share

We believe that the market share would not change by more than 5 pp (up or down) in each year, and when analyzing a 5% decrease in market share from FY 2020 to FY2027 we obtained a share price of \$169.7, resulting in a reduction of -4,93% in share price. Similarly, for an increase of 5% in market share, the share price obtained is \$187.3, an increase of 4.93% relative to the base share price. In what concerns TAM, we believe that the values we have predicted would not change more than 2pp from FY 2020 to FY 2027. Consequently, for a decrease in TAM of 2% we obtained a share price of \$175 (-1.97% decrease) and for an increase in TAM of 2% we obtained a share price of \$182.1 (1.97% increase). Note that the percentual changes in share price are very closely correlated to the percentual changes in the value drivers, which

Table 8 :
Sensitivity analysis for market share and TAM

Δ Market Share	Share Price	% Δ
Low MS (-5pp)	\$ 169,7	-4,93%
Base MS	\$ 178,5	0%
High MS (+5pp)	\$ 187,3	4,93%

Δ TAM	Share Price	% Δ
Low TAM (-2pp)	\$ 175,0	-1,97%
Base TAM	\$ 178,5	0%
High TAM (+2pp)	\$ 182,1	1,97%

Source: Nova Research Team

reinforces our opinion of the importance of these two variables in influencing Salesforce's market value.

Multiples Analysis

As mentioned previously, Salesforce's comparable companies were ranked according to tiers. Tier 1 represented the closest peers, comprising of Salesforce, Adobe Inc and SAP SE. Salesforce currently has 877 million shares outstanding, whilst Adobe Inc has approximately half this amount at 484 million shares outstanding and SAP SE has the most, at 1.2 billion shares outstanding⁵², given that the company is larger in terms of market capitalization, sales, and cash and cash equivalents. Concerning the Tier 1 comparable's computed multiples: EV/EBITDA, EV/EBIT, EV/Sales and P/E, the multiple that is most aligned with Salesforce's is the median EV/Sales, which is the cost an investor would undergo to purchase the company's sales. As such, Salesforce has a multiple of 9x, which is in between its comparables: Adobe Inc has a higher multiple of 12x and SAP SE has a lower multiple of 6x. This can be deciphered as SAP SE being considered as attractive in the market due to potentially being undervalued, whilst Adobe Inc is considered as overvalued. In part, this is due to SAP SE having a greater net sales value, in comparison to its enterprise value, thus resulting in a lower multiple. Nevertheless, the multiple does not consider the impact of a company's expenses or taxes, which may help explain the differences between the comparables' EV/Sales multiple relative to its EV/EBITDA and strikingly different EV/EBIT, once expenses are accounted for. Salesforce has a higher EV/EBITDA and even higher EV/EBIT in comparison to its peers, suggesting that Salesforce has room for operational efficiencies, whilst its peers are already operating more efficiently with higher EBITDA and EBIT margins. In terms of growth prospects, SAP SE and Adobe Inc are also considered lower relative to Salesforce, as the companies' P/E ratio, which is indicative of future growth, is lower at 38 and 48, respectively in comparison to Salesforce at 128. This multiple results in the market perceiving Salesforce as a company that pertains solid growth opportunities. On the other hand, a high P/E ratio can also be suggestive of an overvalued stock. We are of the opinion that Salesforce is actually undervalued relative to the inherent growth opportunities that the company holds. As trailing 12 months values were utilized⁵², this suggests that \$128 of investment were required to receive \$1 of the company's earnings, given its past performance. However, we must stress that past performance is not indicative of future performance. The multiple derives from EPS, which can help justify Salesforce's relatively larger value in comparison to its peers, as its EPS is 1.2, whilst Adobe Inc is at 5.6 and SAP SE is at 3.2. The lower EPS relative to SAP SE most likely derives from less shares outstanding. When comparing to our DCF valuation, it can be verified that EV/Sales is the multiple whose median is the closest to Salesforce's and therefore the consequent share price obtained (\$172) is also the closest to the DCF share price of \$178.5 Therefore, one

can conclude that this might be the most appropriate multiple to consider when valuing Salesforce in relation to its peers. However, we are of the opinion that this multiple still does not represent the full value of Salesforce, which can derive from the fact that even the closest Salesforce's comparables' businesses are diversified in different ways, as previously explained.

Table 9 :
Multiple's valuation FY 2020

Tier 1 Comparables	EV/EBITDA	EV/EBIT	EV/Sales	P/E
SALESFORCE.COM INC	53	269	9	128
ADOBE INC	37	44	12	48
SAP SE	19	33	6	38
Median	37	44	9	48
Share Price	\$ 79	\$ 43	\$ 172	\$ 57

Source: Bloomberg and Nova Research Team

Financials

Table 10 :
Salesforce's financials (FY2019-FY2017E)

Salesforce, Inc.		Forecast								
All values in \$ millions, except per share data		FY2019	FY2020E	FY2021E	FY2022E	FY2023E	FY2024E	FY2025E	FY2026E	FY2027E
Income Statement										
Total Operating Revenues	\$	13 282	\$ 17 656	\$ 20 535	\$ 23 870	\$ 27 544	\$ 30 303	\$ 32 342	\$ 33 468	\$ 34 238
Cost of Revenues	\$	(2 489)	\$ (3 496)	\$ (3 718)	\$ (4 168)	\$ (4 750)	\$ (5 138)	\$ (5 513)	\$ (5 800)	\$ (6 122)
Operating Expenses	\$	(9 296)	\$ (12 387)	\$ (14 202)	\$ (15 792)	\$ (17 947)	\$ (18 835)	\$ (19 618)	\$ (19 632)	\$ (19 227)
EBITDA	\$	1 497	\$ 1 773	\$ 2 615	\$ 3 911	\$ 4 847	\$ 6 329	\$ 7 211	\$ 8 037	\$ 8 889
Amortization and Depreciation	\$	(962)	\$ (1 011)	\$ (1 523)	\$ (1 925)	\$ (2 281)	\$ (2 597)	\$ (2 742)	\$ (2 743)	\$ (2 617)
EBIT	\$	535	\$ 762	\$ 1 092	\$ 1 985	\$ 2 567	\$ 3 733	\$ 4 469	\$ 5 294	\$ 6 272
Interest Expenses	\$	(154)	\$ (213)	\$ (213)	\$ (178)	\$ (178)	\$ (103)	\$ (103)	\$ (103)	\$ (103)
Non Operating Result	\$	602	\$ 67	\$ 67	\$ 68	\$ 68	\$ 68	\$ 68	\$ 68	\$ 68
EBT	\$	983	\$ 616	\$ 946	\$ 1 875	\$ 2 456	\$ 3 697	\$ 4 433	\$ 5 258	\$ 6 236
Taxes	\$	127	\$ (48)	\$ (117)	\$ (312)	\$ (434)	\$ (695)	\$ (849)	\$ (1 023)	\$ (1 228)
Net Profit	\$	1 110	\$ 569	\$ 829	\$ 1 563	\$ 2 022	\$ 3 003	\$ 3 584	\$ 4 236	\$ 5 008
Balance Sheet										
Working Capital	\$	(3 433)	\$ (5 950)	\$ (6 921)	\$ (8 045)	\$ (9 283)	\$ (10 212)	\$ (10 899)	\$ (11 279)	\$ (11 538)
Fixed Assets and Intangibles	\$	4 126	\$ 6 011	\$ 7 527	\$ 8 896	\$ 10 141	\$ 10 756	\$ 10 764	\$ 10 213	\$ 9 736
Goodwill and Others	\$	13 394	\$ 18 898	\$ 19 030	\$ 19 184	\$ 19 353	\$ 19 480	\$ 19 574	\$ 19 626	\$ 19 661
Foreign Currency Derivative Co	\$	42	\$ 18	\$ 19	\$ 22	\$ 24	\$ 25	\$ 22	\$ 22	\$ 23
Net Other non-Operating Assets	\$	2 464	\$ 2 342	\$ 2 342	\$ 2 342	\$ 2 342	\$ 2 342	\$ 2 342	\$ 2 342	\$ 2 342
Net Debt	\$	(988)	\$ (1 522)	\$ (1 956)	\$ (2 203)	\$ (2 582)	\$ (2 994)	\$ (3 298)	\$ (3 689)	\$ (4 538)
Shareholders Equity	\$	15 605	\$ 19 795	\$ 20 041	\$ 20 196	\$ 19 995	\$ 19 396	\$ 18 503	\$ 17 235	\$ 15 685
Cash Flow Statement										
EBIT	\$	535	\$ 762	\$ 1 092	\$ 1 985	\$ 2 567	\$ 3 733	\$ 4 469	\$ 5 294	\$ 6 272
+ Notional Taxes	\$	(112)	\$ (160)	\$ (229)	\$ (417)	\$ (539)	\$ (784)	\$ (938)	\$ (1 112)	\$ (1 317)
+ Tax Adjustment	\$	333	\$ 82	\$ 82	\$ 82	\$ 82	\$ 82	\$ 82	\$ 82	\$ 82
NOPLAT	\$	756	\$ 684	\$ 944	\$ 1 650	\$ 2 109	\$ 3 031	\$ 3 612	\$ 4 264	\$ 5 036
+ Depreciation and Amortisation	\$	962	\$ 1 011	\$ 1 523	\$ 1 925	\$ 2 281	\$ 2 597	\$ 2 742	\$ 2 743	\$ 2 617
Gross Cash Flow From Operati	\$	1 718	\$ 1 695	\$ 2 468	\$ 3 575	\$ 4 390	\$ 5 627	\$ 6 354	\$ 7 007	\$ 7 653
- Δ Working Capital	\$	(774)	\$ (2 517)	\$ (970)	\$ (1 124)	\$ (1 238)	\$ (930)	\$ (687)	\$ (380)	\$ (259)
- Δ Goodwill and Other Assets	\$	5 744	\$ 5 479	\$ 134	\$ 157	\$ 171	\$ 128	\$ 91	\$ 53	\$ 36
- CAPEX	\$	2 168	\$ 2 896	\$ 3 039	\$ 3 294	\$ 3 526	\$ 3 212	\$ 2 749	\$ 2 192	\$ 2 140
Gross Cash Flow From Investm	\$	7 137	\$ 5 858	\$ 2 203	\$ 2 327	\$ 2 458	\$ 2 411	\$ 2 152	\$ 1 865	\$ 1 917
Operating FCF	\$	(5 419)	\$ (4 163)	\$ 264	\$ 1 249	\$ 1 931	\$ 3 216	\$ 4 202	\$ 5 142	\$ 5 737
+ NOPLAT (Non-Operating)	\$	437	\$ 43	\$ 43	\$ 43	\$ 43	\$ 44	\$ 43	\$ 43	\$ 43
- Δ Non Operating Items	\$	435	\$ (122)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Unlevered FCF	\$	(5 418)	\$ (3 997)	\$ 308	\$ 1 292	\$ 1 975	\$ 3 260	\$ 4 245	\$ 5 185	\$ 5 780
- Interest	\$	154,0	\$ 213,3	\$ 213,3	\$ 178,4	\$ 178,4	\$ 103,2	\$ 103,2	\$ 103,2	\$ 103,2
+ Tax Shield	\$	32,3	\$ 44,8	\$ 44,8	\$ 37,5	\$ 37,5	\$ 21,7	\$ 21,7	\$ 21,7	\$ 21,7
- Δ Debt	\$	(1 452,8)	\$ 22,9	\$ -	\$ 507,0	\$ -	\$ 1 178,0	\$ -	\$ -	\$ -
+ Equity Cash Flow	\$	4 158,0	\$ 3 631,2	\$ (573,4)	\$ (1 397,4)	\$ (2 213,0)	\$ (3 591,1)	\$ (4 467,6)	\$ (5 493,6)	\$ (6 547,7)
- Δ Cash	\$	71,2	\$ (557,4)	\$ (434,2)	\$ (753,3)	\$ (379,2)	\$ (1 590,6)	\$ (304,0)	\$ (390,1)	\$ (849,0)
Financing CF	\$	5 418	\$ 3 997	\$ (308)	\$ (1 292)	\$ (1 975)	\$ (3 260)	\$ (4 245)	\$ (5 185)	\$ (5 780)

Source: Nova Research Team

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THE IMPACT OF A CYBER ATTACK ON SALESFORCE'S VALUATION

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A Project carried out on the Master in Finance Program, under the supervision of:

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Abstract

The purpose of this report is to assess how the possible risk of Salesforce suffering from a cyber- attack could affect its valuation. First, a brief literature review is done, to highlight the major impacts that cyber-crime can have on firms nowadays and how these consequences can negatively influence stock returns. Afterwards, the specific case of Salesforce is analyzed, so as to conclude whether the possibility of a cyber-attack can effectively cause a reduction in share price, therefore affecting the company's valuation. The main findings were that the possibility of a cyber-attack can indeed negatively affect Salesforce's valuation, given that it was estimated that a -1.87% reduction in share price occurs with a 25% chance.

Keywords: Cyber-attack; Salesforce; Stock returns

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The Impact of Cyber Attacks on Firms and Stock Returns

Information security is nowadays recognized as a matter of vital importance for organizations worldwide due to the growing integration of computing systems into all aspects of modern life. However, estimating potential costs that result of a cyber-crime is not an easy task. Firstly, companies usually have incentives not to reveal that they have suffered a cyber-attack, since this sort of news can have a negative impact on share price and alert possible hackers that the organization's cyber defenses are weak. Additionally, firms also have concerns about possible litigations from affected stakeholders and about incurring in additional expenses and liabilities, like sanctions and fines. Finally, there are no standard methods to measure the expenses related to cyber-attacks, since these can produce many kinds of costs, some of which can't be easily quantified. In fact, the costs arising from security breaches can be divided into two main types: direct and indirect costs. Direct costs are the ones that are intrinsically tied to the attack, like the expenses incurred in restoring and recovering the computer system, attorney fees and litigation expenses and the costs of improving cyber security and proceeding to investigate how the attack occurred. On the other hand, there are indirect costs, which may continue to accrue for a longer period of time, after the attack. These include lost revenue due to the reputational harm that has been done to the company, costs associated with operational disruption and loss of intellectual property, among others. Evidence shows that these intangible costs are actually more significant than direct costs, despite being harder to estimate.¹ It seems obvious that some firms might be more exposed to cyber-attacks than others. Empirical research shows that size can affect the vulnerability of a firm to be hacked, but what influences this probability the most is the extent to which the firm is dependent on computer networks to conduct its business. Consequently, it is perceived

¹ Cashell, B., Jackson, W. and Webel, B. (2014). *The Economic Impact of Cyber Attacks*. [online] CRS Report for Congress. Available at: <https://fas.org/sgp/crs/misc/RL32331.pdf> [Accessed 22 Nov. 2019].

that companies that operate mostly through the internet face an increased vulnerability to suffer from a cyber-attack. Over the years, several studies that assess the impact of a cyber-attack on stock returns have been conducted and the majority of them have found a decline in stock prices in the immediate aftermath of an attack. To this effect, *Arcuri M. et. al.* used an event study methodology including a wide sample of companies of different sectors who have suffered cyber-attacks, from 1995 to 2015. The main results obtained for the sub-sample of non-financial entities show that the Cumulative Abnormal Returns (CARs) are negative for all event windows (meaning the number of days before and after the attack occurs). With a 95% level of confidence, the study shows that for the time frames of (-5;5) days, (-3;3) days and (0; 20) days, the mean CAR would be -1,18%, -1,22% and -0,79%, respectively. This means that most of the negative impact that cyber-crime has on stock returns generally happens within a short time period and that this is an important risk to be considered by all firms, especially those that depend on the internet to conduct their business.²

Salesforce's Case

As Salesforce operates within an industry that is strongly dependent on IT to conduct its operations, it is safe to say that the company could endure severe consequences from a cyber-attack. For the purpose of this report, those same consequences will be measured in relation to the extent with which they affect the company's valuation and stock returns. Furthermore, it was assumed that the possible attack would happen in FY2021, so as to facilitate the estimation of the associated costs during the explicitly forecasted period.

Potential Costs

² Arcuri, M., Borgi, M. and Gandolfi, G. (2017). *How does cyber crime affect firms? The effect of information security breaches on stock returns*. [online] Venice, Italy. Available at: <http://ceur-ws.org/Vol-1816/paper-18.pdf> [Accessed 16 Nov. 2019].

As previously stated, since the exercise of assessing the potential costs incurred in a possible future cyber-attack involves some guesswork, several assumptions were made and adjusted to the specific case of Salesforce. As a starting point, the method that was used is based on a benchmark of a past cyber-attack to a company more or less similar to Salesforce: a US technology manufacturer that has an annual revenue of \$40B, 60.000 employees and holds contracts with clients of multiple industries.³ Since this benchmark company does not have the same size and is not exactly in the same industry as Salesforce, some adjustments have been made to these sample results. First, it was assumed that the types of costs incurred by Salesforce in the case of a cyber-attack would be the same as in the benchmark case. Direct costs are straightforward in the sense that they are incurred by most companies that suffer from security breaches. Therefore, these were only adjusted to the size of Salesforce and calculated as the same percentage of revenues as in the benchmark case, during the same time frame. In what concerns indirect costs, first, it is expected that Salesforce will experience a loss in expected revenues because of the nature of the company's business, which makes it vulnerable to the amount of trust its clients have in the services provided. Due to the dependence of Salesforce business model on being able to keep client's information safe and private, it is estimated that the percentage of lost revenues in total annual revenue will be higher (15%>4%) and will be felt during a longer term (7>5 years), relative to the benchmark case. In fact, if a serious cyber-attack was to occur, Salesforce could expect a decrease in the number of renewed subscriptions and the loss of significant future client contracts. Second, operational disruption costs can be incurred if the cyber-attack damages Salesforce's network, which could lead to additional R&D costs to resolve this issue. In this case, it was considered that the revenue percentage and the term of the cost would be the same as in the

³ Mossburg, E., Gelinne, J. and Calzada, H. (2016). *Beneath the surface of a cyberattack: A deeper look at business impacts*. [pdf] Deloitte. Available at: <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/risk/us-risk-beneath-the-surface-of-a-cyber-attack.pdf> [Accessed 17 Nov. 2019].

benchmark case (3% over 2 years). Third, the devaluation of trade name is also expected to represent a big percentage of the total costs incurred, since it is related to the trust Salesforce’s clients have in the name of the brand and the ability of the company to keep client’s information secure. Similarly, to what happens with the loss in revenue, it was assumed that the percentage of lost revenue due to the devaluation of the company’s name will be higher (5%>0.7%) and will be felt during a longer period (7>5 years), in comparison to the benchmark case. Fourth, it is likely that the security breach would lead to the irreversible loss of sensitive information, which results in an increased loss of intellectual property. Since this is particularly relevant for Salesforce, it was considered that this cost would be incurred during a period of 5 years, resulting in a loss of 5% of total annual revenue. Finally, there is also a possibility that the insurance premium of the company would increase, which would result in a one-off cost for the company. Overall, the potential costs of a cyber-attack to Salesforce can amount to over \$4.9B over the course of 7 years. Note that all these costs were calculated in relation to the total annual revenue of the year previous to the attack (FY 2020), which amounts to \$17.6B, and then split across the forecasted years, according to the respective timeframes. Additionally, for the cases in which the costs are incurred in more than one year, it was assumed that that the impact will be bigger during the first 2 years after the attack.

Table 1:
Cyber-attack costs: benchmark vs. Salesforce
Source: Deloitte and Nova Research Team

Impact Factor	Benchmark Case		Salesforce Case	
	Term (Years)	Cost (Million\$)	Term (Years)	Cost (Million\$)
DIRECT COSTS				
Cybersecurity Improvements	1	\$ 13,00		\$ 5,74
% Revenues		0,03%		0,03%
Attorney Fees and Litigation	5	\$ 11,00		\$ 4,86
% Revenues		0,03%		0,03%
Public Relations	1	\$ 1,00		\$ 0,44
% Revenues		0,003%		0,003%
Technical Investigation	0,17	\$ 1,00		\$ 0,44
% Revenues		0,003%		0,003%
INDIRECT COSTS				
Lost Revenue	5	\$ 1 600,00	7	\$ 2 648,47
% Revenues		4,00%		15,00%
Operational Disruption	2	\$ 1 200,00	2	\$ 529,69
% Revenues		3,00%		3,00%
Devaluation of Trade Name	5	\$ 280,00	7	\$ 882,82
% Revenues		0,70%		5,00%
Loss of Intellectual Property	5	\$ 151,00	5	\$ 882,82
% Revenues		0,38%		5,00%
Insurance Premium Increases	1	\$ 1,00	1	\$ 0,44
% Revenues		0,003%		0,003%
Total		\$ 3 258		\$ 4 956
Annual Revenue (millions)		\$ 40 000		\$ 17 656

Possible Scenarios and Valuation

The valuation of Salesforce considering that no major cyber-attack was considered as the base-case scenario for this analysis. Afterwards, alterations were made to the Income Statement and Balance Sheet of Salesforce to determine how the additional costs previously estimated would affect the firm's Free Cash Flow and, therefore, its valuation, in the case that a cyber-attack occurs.

Note that neither the WACC nor the perpetual growth rate change in the case of a cyber-attack. The cost of capital remains the same because it was considered that the main effects of the potential incident would be felt at the level of FCFs, therefore not altering the cost of equity or the cost of debt significantly. The perpetual growth rate is assumed to be equivalent in both cases, since it is implicitly assumed that the main consequences of a potential cyber-attack will cease after the explicitly forecasted period. Finally, it is important to estimate the probability of occurrence of the possible security breach. The cyber-attack scenario, assumes a probability of a cyber-attack occurring of 25%, which means that all the additional costs related to the incident would be incurred with a 25% chance. This probability was estimated based on a study by *Ponemon Institute*, which concludes that the chances of a company experiencing a data breach are approximately $\frac{1}{4}$. The result obtained in this setup shows a reduction in share price of around -1,87%, relative to the base scenario, which implies a loss of over \$2.9B in equity value for the FY 2020. Consequently, it can be verified that the empirical evidence obtained from this specific case falls above the mean negative CAR's estimated in previous studies.

Table 2:
Scenario Summary
Source: Nova Research Team

<i>Scenario 1_ No Cyber Attack Occurs</i>	<i>FY2020E</i>	<i>Scenario 2_ 25% Chance of a Cyber Attack</i>	<i>FY2020E</i>
Probability of Occurrence of a Cyber Attack	0%	Probability of Occurrence of a Cyber Attack	25%
Value of Operations FY2020	\$ 155 755	Value of Operations FY2020	\$ 152 821
Book Value (Non Operational Business)	\$ 2 342	Book Value (Non Operational Business)	\$ 2 342
Book Value (Financial)	\$ (1 522)	Book Value (Financial)	\$ (1 522)
Equity Value	\$ 156 574	Equity Value	\$ 153 640
# Shares outstanding	\$ 877	# Shares outstanding	\$ 877
Price per share	\$ 178,5	Price per share	\$ 175,2
		<i>Reduction in Share Price</i>	<i>-1,87%</i>

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THE TABLEAU ACQUISITION: THE IMPACT OF SYNERGIES AND INTEGRATION COSTS ON
SALESFORCE'S VALUATION

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Abstract

Merger and acquisition activity is widely disputed amongst academics, especially given its considerably high failure rates. Nevertheless, corporations continue to invest in inorganic growth strategies, with 2018 seeing a global deal value of \$3.5 trillion, placing 2018 as the third largest year according to values. Being a highly acquisitive company, Salesforce exposes itself to the risks and opportunities that M&A presents. Upon announcement of the acquisition of the target, Tableau, the acquiring firm's share price dropped by a staggering 8%. As such, this paper aims to draw on existent literature to assess the impact of synergies and integration costs from the acquisition of Tableau undertaken by Salesforce in August 2019 (FY2020). The base valuation model assumes that there are no synergies from any acquisitions due to the high probability of failed mergers. In the case that synergies are considered, especially for such a large deal with a high premium, Salesforce is expected to witness a share price appreciation by 3.25% to \$184.34 with a 12% probability.

Keywords: Tableau; Synergies; Integration; Stock returns; Premium

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Literature Review

Whilst M&A is seen as an attractive growth strategy, especially when organic growth opportunities have expired in mature industries, the reality is that only an underwhelming 20% of all mergers succeed, whilst most destroy shareholder wealth¹. In fact, approximately 70% of companies announce higher synergies than can be justified². This overestimation of synergies in order to rationalize a deal price² is one of the most frequent reasons for discouraging deal outcomes.

Concerning returns, 41 studies on the buyer side have concluded conflicting results: 13 studies report value destruction, 14 report value conservation and 17 report value creation³. In the long run, 8 out of 11 studies reported negative and significant returns³. Nonetheless, some academics are of the view that acquisitions allow a reallocation of assets to more capable management and gain from other synergistic benefits from the transfer of control⁴. In this case, an implicit assumption is made that the acquiring shareholders are better off or neutral to the acquisition.

Synergies in Deal Making^{5 6}

When considering an acquisition, buyers identify the potential additional benefits from a deal. In this sense, it can be said that potential synergies might give the acquirer an edge during the bidding process, since these can be incorporated in the bid price as a premium over the target's market value. Consequently, it can be said that the success of the transaction might be measured by the magnitude of targeted synergies that have been realized. However, it can be argued that synergies alone cannot be responsible for failures. In fact, it is not uncommon for synergies' targets to be overestimated or miscalculated and for the related costs to be underestimated. Specifically, revenue synergies are not everlasting, because competitors will eventually erode

¹ Grubb, T. and Lamb, R. (2000) *Capitalise on Merger Chaos*. New York: Free Press.

² Miles, L., Borchert, A. and Ramanathan, A. (2019). *Why Some Merging Companies Become Synergy Overachievers*. [online] Bain&Company. Available at: <https://www.bain.com/insights/why-some-merging-companies-become-synergy-overachievers/> [Accessed 24 Nov. 2019].

³ Bruner, F. (2002). Does M&A Pay? A Survey of Evidence for the Decision-Maker. *Journal of Applied Finance Theory, Practice and Education*, 12(1).

⁴ Dodd, P. and Ruback, R. 1977. Tender offers and Stockholders Returns: An Empirical Test. *Journal of Financial Economics*, 4.

⁵ Lohman, A. (2013). *EY – Capturing Synergies in Dealmaking*; 2013. EY

⁶ Eliason, S. 2011. 'Synergies in Mergers and Acquisitions'. Master's Thesis. JÖNKÖPING University, JÖNKÖPING.

this competitive advantage in the long run.

Data and Methodology

The target, Tableau was selected as it is the most significant deal in terms of value, worth \$15.7bn (13.59x Tableau's 2018 revenue; 86000 clients; and c.\$1.2B revenue in 2018). To fully account for the combined entity value, forecasts for Tableau were deemed necessary. As such, the forecasts for revenue were underpinned by a growth rate in the number of clients, and the average fee rising according to the US inflation rate. Costs of revenue for Tableau were taken as a percentage of revenue, and it was assumed that the company is operating with better negotiating terms, such that last year's percentage was straight-lined into the future. The growth rate in clients was assumed to maintain constant and gradually decrease in the last two years by 8%, as the company has shown a slow-down in client growth by 8%.

In terms of synergies and integration costs, these vary depending on the business, its industry and deal specifics. In 2017, globally consolidated sectors such as high-tech, have announced median synergies of 2.3%⁷. This data was utilized as a benchmark in the estimation of synergies, coupled with the information that a company is expected to realize its full run-rate synergies 2.8 years² after closing a deal. On the other hand, one-off integration costs are typically one-full run rate of synergies required². Furthermore, the range of publicly reported integration costs had a wide dispersion from 1% to 7% of total deal value.

To estimate approximate synergies, calculations through the combined entity's revenue are computed. Value created can be defined as the market value of the target plus synergies minus the market value of the target plus premium, simplifying to synergies minus premium for benefits and integration costs. Research suggests that "Leaders" are firms that are successful in attaining at least 80% of their revenue synergy targets, whilst "Laggards" tend to achieve

⁷ Bamford, I., Chickermane, N. and Nandy, R. (2017). Revenue synergies in acquisitions In search of the Holy Grail. [ebook] Deloitte. Available at: <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/mergers-acquisitions/us-mergers-and-acquisitions-revenue-synergies.pdf> [Accessed 3 Dec. 2019].

less than 40% of their targets⁸. Leaders are often larger in size, with c.33% of top achievers having greater than \$5bn in sales. Nevertheless, a base, low and high scenario for the revenue synergies were considered. Note that the synergy value and revenue in FY2020 were considered to be 4 out of 12 months, due to the acquisition occurring in August 2019.

The number of years were assumed to be 7, which is the same period as the Salesforce forecasts, with an annuity whereby an assumption is made that the synergies will maintain for 30 years due to Salesforce's competitive advantage, enabling them to benefit from cross-selling due to combining different strengths of analytics (Tableau) and the data (Salesforce) but also extending Salesforce's reach into new markets, whilst no terminal value was considered as these synergies would erode with competition in perpetuity⁵. For the discount rate, a cost of capital for the target was required to help determine whether this would add value to Salesforce shareholders. Tableau operates with no debt; hence its cost of capital is equivalent to its cost of equity; this was determined through its beta obtained from a regression analysis of 3 years of monthly data.

Thereafter, a Monte Carlo simulation can be set up given the range of benefits and integration costs. Subsequently, the high case was classified as the total discounted synergies, implying that 100% of benefits could be obtained. The low case was calculated as 40% of the high case, whilst the base was the most probable, where Salesforce is a "leader", due to the size of the firm, whereby 80% of synergies would be attained. For the costs in this setup, the base was assumed to be the premium, with the most likely costs, representing 2.65% of total deal value (one full-run rate of synergies). The high case comprises of 7% of total deal value plus the premium, whereas the low case is 1% plus the premium. Random values were generated for the costs and benefit between the maximum and minimum ranges, and a simulation of 1000 cases was considered. A static NPV was used to calculate a statistics summary with the average,

standard deviation, minimum and maximum values.

For valuation purposes, a scenario excluding any synergies or integration costs was utilized as the base (this state just assumes goodwill comprises of the premium of the acquisition). A second scenario considers Salesforce benefitting from the acquisition of the target in the form of revenue synergies, but also undergoes integration costs and the cost of acquisition. The probability of this scenario occurring was inputted from the simulation. Post-acquisition, it was assumed that Salesforce's credit rating would persist, as no new debt was issued, and no debt was acquired such that the cost of capital for Salesforce would maintain at its prior value.

Results and Discussion

Salesforce closed the all-stock deal at a premium of 50%, implying that the company paid a multiple of 13.68x 2018 revenue for Tableau. Subtracting the one-off integration costs, results in an application of a multiple of 12.68x. For both parties to prevent value destruction, given the large premium, synergies of approximately \$416m are required (the premium covered by the multiple without the integration costs). This translates to a value of 2.47% of the combined entity's revenues (FY2020), which is fairly aligned with the reported industry median of 2.3%. The synergy values tend towards this breakeven value 2.8 years from closing the deal, and then increase significantly to a maximum of 9.58%, as the client base increases generating additional sales from cross-selling and new growth opportunities. Synergies are then assumed to sustain for the following 30 years in an annuity, with no terminal value. For the one-off integration costs an approximation of the one-full run rate synergy value of \$416m was considered. Note that the value of synergies are highly correlated with integration costs and are, therefore, a good approximation⁴.

The CAPM resulted in a cost of equity of 8.88% for Tableau. In terms of the acquisition project, it generates a negative NPV using the base values, at -\$474M, which is expected given that the acquisition's premium is substantially large. However, if all synergies can be obtained, the

project becomes positive with an NPV of \$136M. Nonetheless, a simulation of 1000 scenarios suggests that the average NPV is, in fact, negative at c. -\$1423M, with a high dispersion in

Table 1: Summary Statistics (Monte Carlo Simulation)

results. The probability of occurrence of a positive NPV is low at 12%. This is fairly aligned with the probability of less than a quarter of ‘leaders’ attaining at least 80% of synergies⁷.

Summary Statistics	
Average	-1423
St Dev	1119
Min	-3642
Max	1028
Prob NPV > 0	12%

Source: Nova Research Team

Adjustments to the base model were made to include the value of synergies which were discounted at Salesforce’s cost of capital, as the implicit assumption is that the target has now been acquired under the umbrella of Salesforce. Note that in a scenario with synergies and integration costs, neither the cost of capital nor the perpetual growth rate alters, as the acquisition does not have a material impact on the company’s WACC, due to the all-stock payment method.

Consequently, one-off integration costs, financial and non-operational invested capital in book values are accounted for, resulting in an equity value of approximately \$161.66bn, an increase of \$4.41bn translating to a share price of \$184.34, and share appreciation of 3.25%. Therefore, this paper concludes that companies tend to overestimate synergies to justify premiums, without considering the low probability of success. Albeit Salesforce witnessing a decline in share price in the short-run, in the long-run if synergies are attained, Salesforce can expect positive returns. However, the probability of occurrence is reasonably low given the large premium paid relative to the value of the target.

Table 2: Results

<i>Scenario 1 _ No Cyber Attack Occurs</i>	<i>FY2020E</i>	<i>Scenario 2 _ 17% Prob Synergies</i>	<i>FY2020E</i>
Probability of Synergies and Integration Costs	88%	Probability of Synergies and Integration Costs	12%
Value of Operations FY2020	\$ 155,755	Value of Operations FY2020	\$ 155,755
PV of Synergies	\$ -	PV of Synergies	\$ 5,503
Integration Costs	\$ -	Integration Costs	\$ (416)
Book Value (Non Operational Business)	\$ 2,342	Book Value (Non Operational Business)	\$ 2,342
Book Value (Financial)	\$ (1,522)	Book Value (Financial)	\$ (1,522)
Equity Value	\$156,574	Equity Value	\$ 161,662
# Shares outstanding	\$ 877	# Shares outstanding	\$ 877
Price per share	\$ 178.53	Price per share	\$ 184.34
		<i>Increase in Share Price</i>	<i>3.25%</i>

Source: Nova Research Team