

SANTANDER

BANKING

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COMPANY REPORT

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Santander

A Global bank with Spanish Origin

- Santander's position for the rest of 2018 continues to be solid and we anticipate strong growth in total income and a higher underlying attributable profit compared with the previous year with points. Retail banking continues to be the business line that drives the growth of Santander. Continental Europe and Latin America are two of the most relevant locations for the group to achieve its growth goal in 2018.

- Due to competitive market conditions, higher regulatory, risk and control costs, the revenue and underlying attributable profit year to date in Q3 2018 dropped 5% and 9% respectively in contrast to 2017. In 2019 and the subsequent years, we hold a negative opinion about the growth outlook in this country considering the geopolitical risk caused by Brexit.

- Overall, in the Q3 2018, Santander Group reported slightly decreased revenue but also reduced operating expenses which led to the similar level of underlying attributable profits compared to the Q2. The Santander Group's third quarter EBIT amounted to 11.23 b € and was 10.4% higher than the result in the same period in 2017. Net profit reached 6.04 b €, which was 8% above the result in the same period last year.

Company description

Banco Santander, S.A. is a Spanish multinational retail and commercial bank founded and based in Santander, Spain. The bank aims to be Europe's number one commercial and retail bank and is present in 10 major core markets. Currently, it is a leading bank in the Eurozone where it ranks amongst the world's top financial institutions in terms of market cap.

Recommendation: **Hold**

Vs Previous Recommendation *HOLD*

Price Target FY19: **4.64 €**

Vs Previous Price Target *0.00 €*

Price (as of 3-Dec-2018) **4.27 €**

Bloomberg: 4.27€

52-week range (€) 3.96-6.09

Market Cap (€m) 69,362.6439

Outstanding Shares (m) 16,236.574

Source: Bloomberg

Source: Bloomberg

BlackRock 5.25%

Clearstream Banking AG 3.08%

Capital Group Cos Inc 2.95%

Vanguard Group Ince 2.83%

Norges Bank 2.08%

Dimensional Fund Advisors LP 1.34%

Source: Bloomberg

(Values in € millions) 2017 2018E 2019F

Revenues 48392 47874 49661

Operating Profit 12539 22077 23236

Net Profit 7516 7796 8572

EPS 0.463 0.478 0.524

P/E 9.32 8.94 9.15

Source: Bloomberg

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY ANDRÉ AND YUXUAN, 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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Executive summary

Table-1 Top European Banks

Rank	Bank	Country	Total Assets, US\$b
1	HSBC Holdings	UK	2,521.77
2	BNP Paribas	France	2,348.11
3	Credit Agricole Group	France	2,112.04
4	Deutsche Bank	Germany	1,766.85
5	Banco Santander	Spain	1,730.08
6	Barclays PLC	UK	1,528.89
7	Société Générale	France	1,527.43
8	Groupe BPCE	France	1,509.13
9	Lloyds Banking Group	UK	1,095.64
10	ING Group	Netherlands	1,013.65
11	UniCredit S.p.A.	Italy	1,002.36
12	Royal Bank of Scotland	UK	995.729
13	Intesa Sanpaolo	Italy	954.531
14	Credit Mutuel	France	950.531
15	UBS Group	Switzerland	937.802

Source: Relbank

With the global economy projected to have a consistent growth of 3.7%, the banking sector seems promising in the future. Profit margins will increase with several economies expanding and growing. There is an upward trend after the 2009 crisis, this is a consequence of recovery of GDP growth.

Banco Santander's core markets GDP outlook seem optimistic, as the UK, Spain, Brazil and the US is perceived to face an encouraging macro-economic environment. These 4 countries amount to 70% of the group's total net interest income generated. Brazil, Mexico and the US have a growth rate of above 4%, much higher than the 3.7% average global growth rate. The UK and Spain are growing much slower; however, all the group's core markets conjointly support the fact that Banco Santander will experience prosperous years ahead.

We believe the group has proficiencies to considerably increase its profits by attracting more clients and produce more net interest income. During the past five years, Banco Santander had an outstanding performance compared with its peer group including BBVA, Banco de Sabadell, Société Générale and Lloyds Banking Group. Banco Santander was much more profitable for having higher Net interest margin, ROE, ROA and lower efficiency ratio. The bank is also more efficient in terms of using its assets to generate revenue for having higher Assets turnover ratio than its peers. In addition, the bank has been in an ongoing deleverage process, which resulted in a lower leverage ratio.

After evaluating the bank, we have concluded the following outcomes: based on the Dividend growth model and FCFE model, the price target of Santander's equity at FY 2019 will be 4.6350 € per share. Based on the multiple valuation method, we have three stock prices which is 5.09 € per share, 7.89 € per share and 4.77 € per share. In conclusion, the reasonable stock price for Santander should be between 4.64 € per share to 5.09€ per share.

The current stock price at 3rd of December 2018 was 4.27 € per share which is lower than our estimated price range. Thus, we recommend investors to hold Santander's stock for now as the current price does not reflect the intrinsic value of the stock.

Company overview

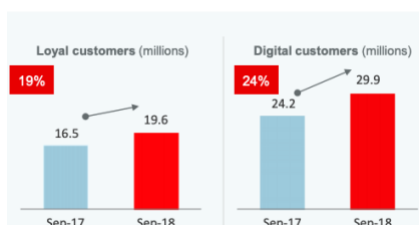
Banco Santander S.A. was founded in 1857, during the period of 1900-1919 three Spanish banks (Banco Hispanoamericano, Español de Crédito and Central) converged into Santander. The bank manages €1.383 billion in funds for more than 102 million customers. The bank is present in 10 major markets and has a network of 15,000 offices with 3.3 million shareholders and 193,000 employees. The bank is the leading retail and commercial bank in Spain and Latin America, it holds strong positions in the UK, Germany, Portugal, Poland and the US.

Furthermore, its Consumer Finance segment has its operations in Scandinavia and other European nations. On the 7th of June 2017, Santander acquired Banco Popular which will add value for the group’s customers and shareholders, it will strengthen the group’s positions in various markets.

The bank has been focusing immensely on its commercial operations and has the potential for organic growth through this new era of digital services. Loyal customers had a growth rate of 19% from September of 2017 to September of 2018. The number of digital customers had a growth rate of 24% during the same time frame

Chart-1 Digital and Loyal Customers evolution

Potential for organic growth through increased loyalty and digitalisation

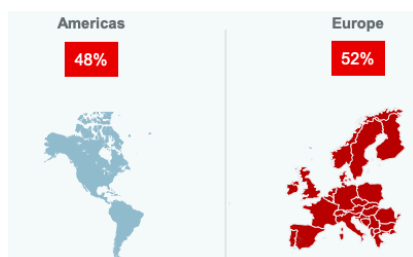


Source: Santander Financial Results Q3

IPO’s

The bank has shares listed in Spain, Lisbon, London, New York, Mexico, Sao Paulo, Buenos Aires and Milan’s stock market. On the 26th of September in 2012 Santander had two IPO’s, one in Mexico and another in the US. It sold 19% of its Mexico unit in Mexico and the other 6% in the US. This made the Group the 4th largest bank in Mexico where it was valued at around \$16.45 billion. The share price was \$12,18 and the group offered 238,232,160 shares. In 2009 the Group did an IPO in Brazil where it raised \$8.05 billion in a record IPO in Brazil. It initially offered 525 million shares but had to increase 75 million in order to meet demand. The share price was valued at \$13.30 each.

Figure 1 Geographic distribution

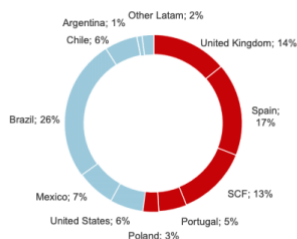


Source: Santander Financial Results Q3 Distribution

Core market

The bank’s operations in its core markets have grown tremendously, where market share in Portugal and Spain resulted to 18% and in the UK and Poland amounted to 10%. The bank diversifies its operations geographically, where 48% is distributed to the Americas in developing markets that drives growth in profits, and 52% in Europe in mature markets to provide stability and reliable returns.

Chart-2

9M'18 Underlying attributable profit¹

Source: Santander Financial Results Q3 distribution

Santander's Spanish operations contributes 17% to the group's total profit. Loyal customers increased by 54% due to innovations in payment and market share gained in all the bank's central products. One highlight includes the smart account for millennial clients, the 100 % digital no fee Zero account that attained more than 2.6 million clients. The banks focus on digital transformation has enhanced its digital capabilities in all channels, where in 2017 there was a 15% growth in digital customers and the bank positioned itself as a leader in the mobile payments market, where it has around 60% market share in the mobile payments market. The Spanish market's attributable profit reported an increase of 46% due to growth in fee income, reduced costs and reduced loan loss provisions. This increased Net Income significantly and reduced Net income expense.

Management

Santander's Group executive committee consists of 8 directors where 5 of them are external directors and the remaining 3 are executive directors.

Executive Chairman

Ms. Ana Botin-Sanz de Sautola y O'Shea

Ms. Ana Botin-Sanz de Sautola y O'Shea is the executive chairman of the group, she joined the board of directors in 1989 and has been chairman since 2014. She was responsible for the expansion of Santander into LatAm during the years of 1992 and 1998. She developed Santander UK to focus more on innovation, during her position of CEO of Santander UK throughout the years of 2010 to 2014. As Chairman in 2014, she has transformed the group to focus on customer trust and loyalty by making major adjustments to the groups commercial and technological elements.

Chief Executive Officer

Currently Mr. José Antonio Álvarez, Successor Mr. Andrea Orcel

Mr. José Antonio Álvarez joined the bank in 2002 and was appointed to Group CFO in 2004. He joined of the board of directors on 2015. Since January of 2015 he has been the CEO, where he will now move to a vice-chairmen role. On September of 2018, it was officially announced that Santander has named Mr. Andrea Orcel the groups new CEO. Mr. Orcel has advised the groups Botin family for more than 20 years and will become CEO in the early periods of 2019 after regulatory approvals. Mr. Orcel has left his position of UBS Investment banking head on September 30th.

Members of the Executive Committee

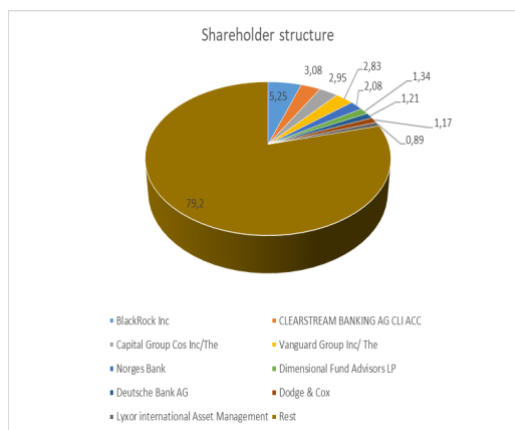
The Vice chairmen include Mr. Bruce Carnegie-Brown who joined in 2015, Mr. Rodrigo Echenique Gordillo who joined in 1988 (who will be replaced by Mr. José Antonio Álvarez) and Mr. Guillermo de la Dehesa Romero who joined the group in 2002. Other members include Mr. Ignacio Benjumae Cabeza de Vaca who joined in 2015, Mr. Ramiro Mato Garcia-Ansorena who joined in 2017 and Ms. Belén Romana Garcia who joined in 2018.

This change in management is a public statement insinuating that the group is ready to move to a more aggressive approach on acquisitions. There is a possibility that the group wants to develop its position in the US, in an attempt to increase its share price. Mr. Orcel has been Ms. Botin’s adviser for several years, he was also her father’s adviser, Mr Emilio, for several years. Mr. Orcel’s previous stints are evidence that the group will attempt major moves to become dominant in several markets. With the new appointment of Mr. Orcel, Santander’s management skills will be up to the test, while dealing with Britain’s prolonged Brexit and Brazil’s Political uncertainty.

Shareholder structure

The pie chart below shows us the top 10 shareholders of Santander and the percentage of holding share. Most of them are Asset Management firms and Investment Banks. As we can see, the sum of the shares of top 10 shareholders are around 20% which proves the diversified shareholder structure and good liquidity of Santander’s equity.

Chart-3 Shareholder Structure



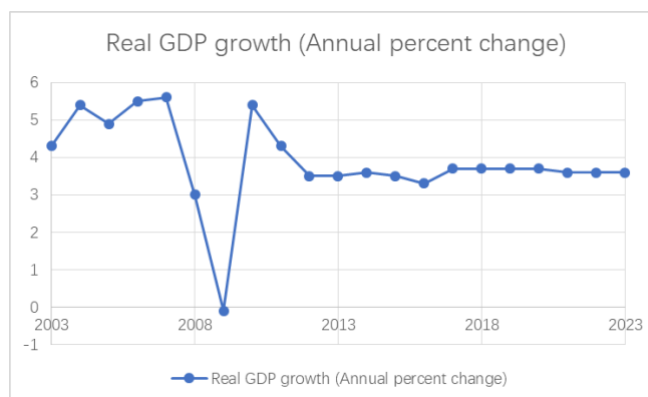
Source: Bloomberg

The Sector

Global Macroeconomic Environment

According to the forecast of the International Monetary Fund, the real GDP growth of the global economy will maintain at 3.7%, which indicates a stabilization and improvement of the global economy after the US financial crisis in 2008 and European Sovereign Debt crisis in 2013. This is a good signal for the banking sector in general as banks will be able to gain more profits by making more loans.

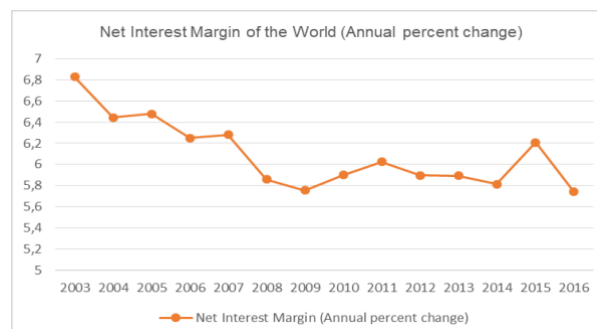
Chart-4 Real GDP growth of global economy



Source: IMF

The expanding economy may lead to the raise of the interest rate, which will contribute to the raise of the interest improvement of banks' net interest margin as well as profit margin. The graph below shows the evolution of net interest margin of the world from 2003 to 2016. We can observe that the net interest margin has been continuously decreasing since 2003. In 2009, it dropped to the bottom because of the low interest rate policy adopted by the central banks around the world. However, we observed an upward trend after 2009 which resulted from the recovery of the real GDP growth. As the global economy stabilizes, the net interest margin will very soon start to stabilize and contribute to the further improvement of banks' profit margin.

Chart-5 World Net Interest Margin evolution

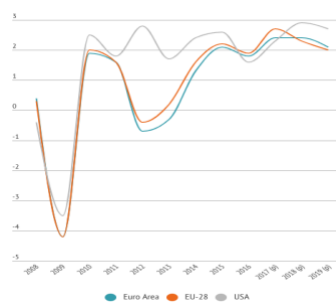


Source: IMF

European Macroeconomic Environment

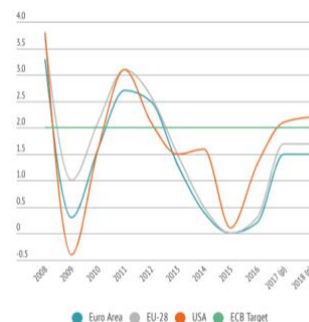
With ECB's implementation of monetary policy and a strong worldwide economy, the euro area has grown by 2.4% in 2017, despite geopolitical tensions and

Chart-6 Inflation evolution



Source: EBF

Chart-7 Euro Area Headline vs Core



Source: EBF

uncertainty.

This growth rate proves higher than Japan with 1.7%, the UK with 1.8% and the US with 2.3%. Supported financial conditions and robust growth of the global economy will continue to benefit the euro area. Growth in the euro area is predicted to increase further than 2.4% in 2018, where in 2019 it will slow down to 2.1%. This strong performance in 2018 is due to less political uncertainty and geopolitical tensions in comparison to previous years. The trade and political tensions are key risks in Europe that will affect the European macroeconomic environment. Economies around the world will be affected from spontaneous trade tensions that can increase and intensify between the US and China in the future.

The ECB will have to cautiously calibrate its monetary policy normalisation program, as the Euro-area inflation is practically touching the ECB's target of 2%. The ECB decided to conclude the asset purchase program on the 19th of December 2018. Due to the fact that the ECB anticipated lower market liquidity throughout the end of 2018. A study from Moody's expects that throughout the second half of 2019, negative interest rates will cease to exist.

An element that will aid the banking industry in Europe is the acceleration in clearance of bad loans. Aggregate NPLs resulted at 3.6% of total loans, where in 2017 it was 4.5%. Low NPL countries are expected to experience an increase in NPLs due to a rise in loan-loss provisioning charges, as is common in slower economies. Whereas in high NPL economies, the new IFRS 9 accounting regulations will certainly help in reducing NPLs.

Chart-7

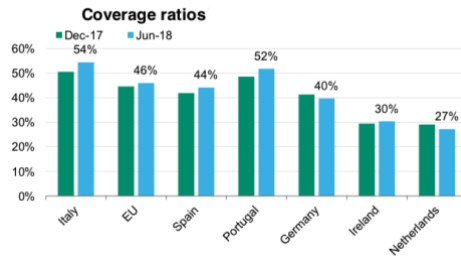
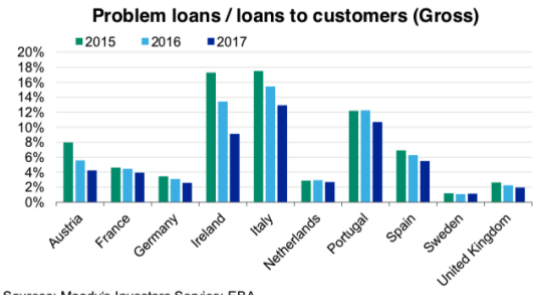


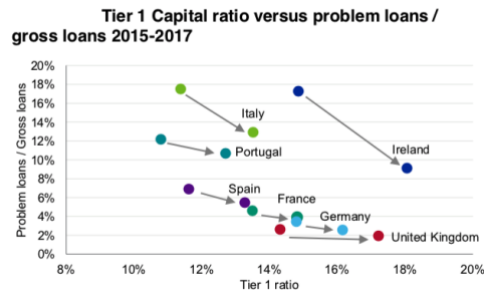
Chart-8



Sources: Moody's Investors Service; EBA

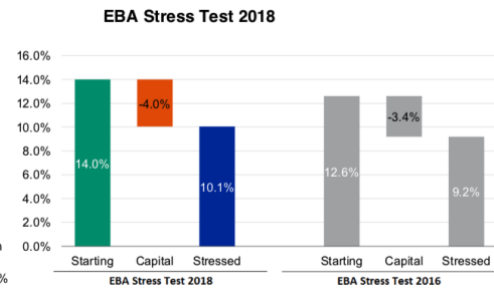
An important factor is the new capital resilience under the new Basel rules, that provide the ability to absorb shocks.

Chart-9



Source: Moody's Investors Service

Chart-10



Source: Moody's Investors Service

Out of the largest 190 EU banks, the European Banking Authority (EBA) has stated that there was an aggregate 14.3% fully loaded CET1 ratio and 18% TCR as of June 2018. Furthermore, there is an improvement in the EBA stress test results in contrast to the results recorded in 2016, which shows banks are more resilient to economic shocks.

Brexit

Brexit is an important topic when it comes to the European Banking industry, with the preliminary issue being market access. Banks with operations in the UK could lose access to the EU and vice versa. Banks in the European market need to consider many things, such as market volatility and a general weakness in the market that is present due to the extended uncertainty of Brexit. Santander's operations will be affected by their ability to retain and recruit sufficient staff in the UK. There is a lot of uncertain issues linked with the impact Brexit will have on foreign nationals that are very unclear. The group believes that there will be a significant economic disruption. The impact has resulted to an 8% fall in Santander UK quarterly profits. Profits amounted to £467m during the periods of July to September in 2018. Where in the previous year it amounted to £505m during the same period. Attributable profit experienced a fall of 9% in the first 9

months in comparison to 2017. This was a result of spreads and investments in regulatory and strategic developments. There is stiff competition in mortgage rates amongst lenders, leading to this fall in profit margins. However, the group as a whole has been performing quite well, absorbing the decrease in performance from its UK branch. Santander has transferred £22.9 billion worth of assets and £20.7 billion of liabilities from its UK subsidiary to its Madrid based subsidiary, in order to comply with new regulations that come into force next year. Santander UK has conducted a survey of businesses, where 43% of businesses believe that Brexit will have a negative impact, this is a major difference from 2017 where 66% believed there will be a negative impact on their businesses. As reported in the bank’s financial report of Q3 in 2018, Santander’s ring-fence structure is complete ahead of schedule. This ring-fencing legislation, is a law in the UK where banks must separate its retail banking activity from the rest of its operations, in order to shield clients and the banks daily operations from any risks that can arise elsewhere. UK banks must implement this legislation by the 1st of January of 2019.

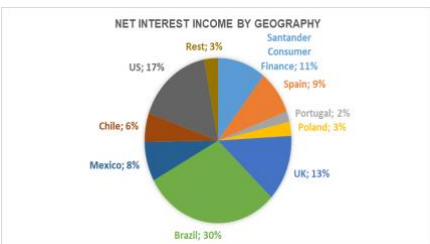
Brexit can lead to the economy deteriorating, which will certainly harm the group. The uncertainty and constant updates that keep arising will have a major impact on Santander UK until Brexit actually occurs. Certain costs will arise in order to maintain true to new legislations and business can fall due to less demand for loans. The group will remain strong and will absorb most of these costs, where Santander UK will be on top again as the UK economy stabilises in the future.

Core Markets for core business

As Santander is a bank with a strong global presence, we need to figure out which countries are more relevant for their major business such as commercial banking. In this sense, net interest income was considered as a good indicator. Thus, we list all the major countries by the weight they have in the total net interest income and made a graph as seen below.

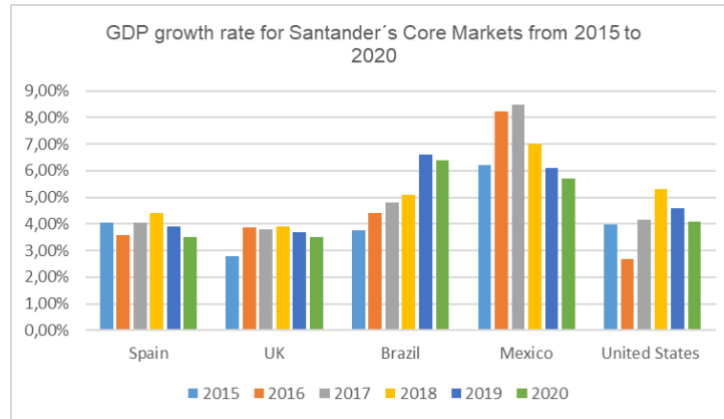
From the chart-11 on the left, we can conclude that United Kingdom, Spain, Brazil, and United States are the core markets for Banco Santander in this business as the net interest income generated from these markets together occupies almost 70% of the total. Therefore, we need to study the macroeconomic condition of Santander’s core markets to have a general overview about its growth prospect in the near future. GDP growth rate and interest rate can be considered as two good macroeconomic indicators for us to understand the general condition of the core markets where Santander is operating.

Chart-11



Source: Santander 2017 annual report

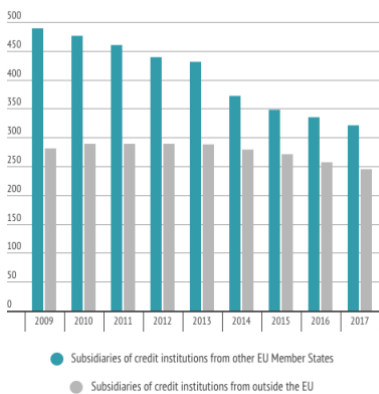
Chart-12



Source: IMF

The chart above shows us the GDP growth rate evolution of Santander's Core Markets from 2015 to 2020. All the other countries except Brazil are forecast to go through a further slowdown of the economy. Spain, UK and US have all forecast a slowdown of the economy. Even though, Brazil, Mexico, US are all growing above 4% which surpass the average of the global economy growth rate which is forecast to be 3.7% by International Monetary Fund. These three markets put together represent 55% of the Net Interest Income in 2017. In addition to that, the economy of the UK and Spain are not in a recession but just growing slower so that we should have enough reasons to be optimistic about Santander's growth prospect in its core markets.

Chart-14 Credit institutions subsidiaries

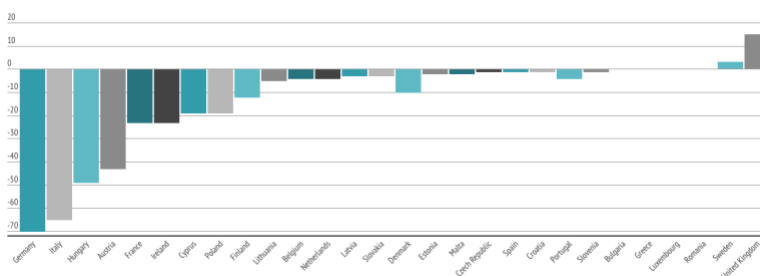


Source: EBF

Banking Sector Structure

There has been a decrease in the amount of European Union credit institutions which seem to start around 2009 and is continuing on this downward spiral. From 2016 to 2017 there was a 5% drop and since 2009 there was a total reduced amount of 2,275. This is a result of mergers and acquisitions in the banking industry from firms adopting aggressive strategies to enhance profitability.

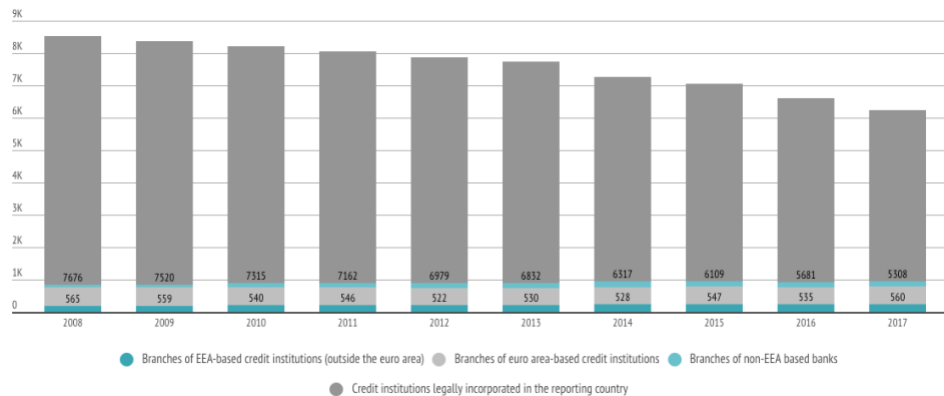
Chart-13 Change in number of Credit Institutions from 2016 to 2017



Source: EBF

In 2017, countries that went through the largest contraction includes Germany with a reduced amount of 70 units, Italy with 65, Hungary with 49, Austria with 43. There are other countries such as Sweden and the UK where credit institutions increased by 3 and 15 respectively.

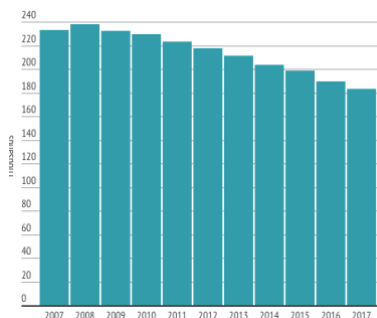
Chart-15 Credit Institutions in the EU



Source: EBF

The era of digitalisation is becoming more apparent as the years progress, and it is becoming extremely evident in the banking industry. The total amount of bank branches dropped to around 183,000 in the end of 2017. In 2016, branches in EU-28 dropped by 3.1%, around 5,900 branches, which results from is the use of digital banking. It is reported that more than 50% of clients in the EU started to use digital banking in 2017, where in 2009 around 29% of clients used internet banking. The total amount of branches has dropped by 21% since 2007 reaching a number of 50,000. The network of branches contracted by approximately 5,000 units in three countries that entails Spain with a reduction 18,020 units, Germany with 8,769 and Italy with 5,800. The total number of subsidiaries also fell by around 4.4% that amounts to 566 units for a 10th sequential year.

Chart-16 Bank Branches



Source: EBF

Comparables

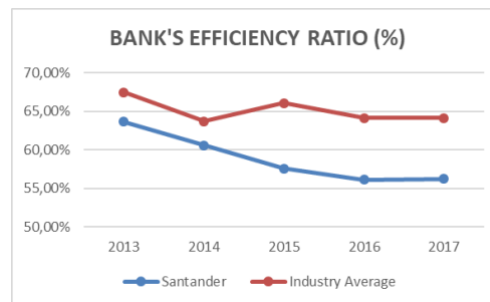
To better understand Santander’s position in the industry, we selected a group of its peers to perform a competitiveness analysis. We select the European banks which have the similar ranking worldwide by total assets in relation to Santander with core business focusing on commercial banking. Following our requirement, the four banks that we selected are Banco de Sabadell, Société Générale, Lloyds Banking Group and BBVA. Then we analyzed the performance of these banks during the past five years by comparing Profitability Ratios, Turnover Ratios and Leverage Ratios.

- Profitability Ratios

Efficiency ratio one of the most common indicator for bank's profitability which divides banks' operating expenses by net revenue as shown in the formula below

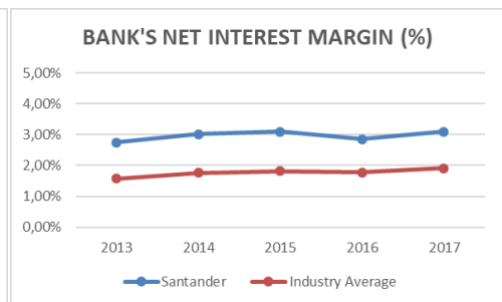
$$\text{Efficiency ratio} = \text{Noninterest expenses} / \text{Revenue}$$

Chart-17



Source: Bloomberg

Chart-18



Source: Bloomberg

Lower efficiency ratio implies higher profitability of the bank. The chart on the left shows that Santander's efficiency ratio has been decreasing each year since FY 2013 and always below the industry average. This ratio declined from the 63.67% in FY 2013 to 56.26% in FY 2017. This ongoing reduction of efficiency ratio implied a higher profitability of Santander compared to five years ago. On the other hand, the industry average of efficiency ratio has been managed at a quite stable level. The ratio dropped sharply in FY 2014 to the minimum in the past five years but then remained unchanged after that and fluctuated around 65%.

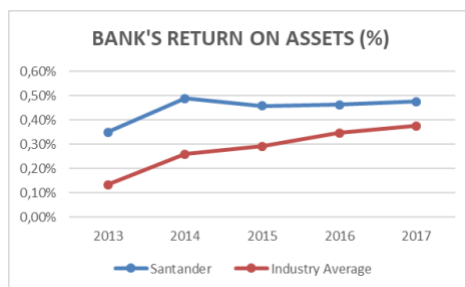
Net Interest Margin is another ratio common in the banking industry that we use to measure bank's profitability. It is calculated by the following formula:

$$\text{Net Interest Margin} = (\text{Interest Received} - \text{Interest Paid}) / \text{Average Invested Asset}$$

In 2017, 71% of Santander's total income comes from the net interest income which tells us the relevance of this ratio in measuring Santander's profitability. As we can see on chart 18, Santander had a net interest margin well above the industry average. This ratio had increased from 2013 to 2015 but then had a drop, however, it has always been kept around 3% while the industry average has never surpassed 2% during the past five years.

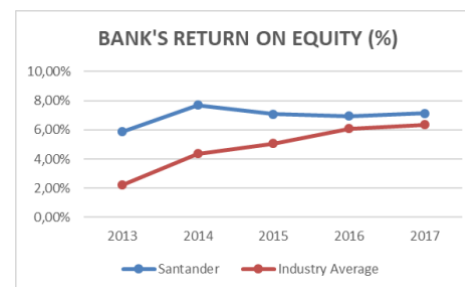
In addition, there are other two ratios (ROA and ROE) which are also relevant to measure bank's profitability.

Chart-19



Source: Bloomberg

Chart-20



Source: Bloomberg

The two charts above compare Santander's profitability with the industry average measured by ROA and ROE. In terms of ROA, Santander reached the peak level of 0.49% in 2014 and then dropped slightly a year after, but later the ROA of Santander picked up growth and was kept at a level close to 0.50%. At the same time, the ROA of the industry has been continuously improving over the past five years. It grew from 0.13% in FY 2013 to the peak level of 0.37% in FY 2017. As Santander always has a ROA above its peers which indicates that the bank is more efficient in terms of using assets to generate its net income. In terms of ROE, Santander reached the peak of 7.70% in 2014 and then started to decline each year. Even though, Santander still manage to maintain a ROE closed to 7%. The industry average of ROE has been continuously improving and converging to the level of Santander over the past five years. The industry average of ROE grew from 2.21% in FY 2013 to 6.34% FY 2017 which indicate an overall improvement of profitability in the European Banking Sector. Either measured by ROA or ROE, Santander was well above the industry average over the past five years.

After we compared Santander with its counterpart by 4 indicators of profitability (Efficiency ratio, Net Interest Margin, ROA and ROE), we can conclude that Santander is the second most profitable bank among all the 5 banks. Furthermore, the bank's profitability has been continuously improving over the past five years.

- Turnover Ratio

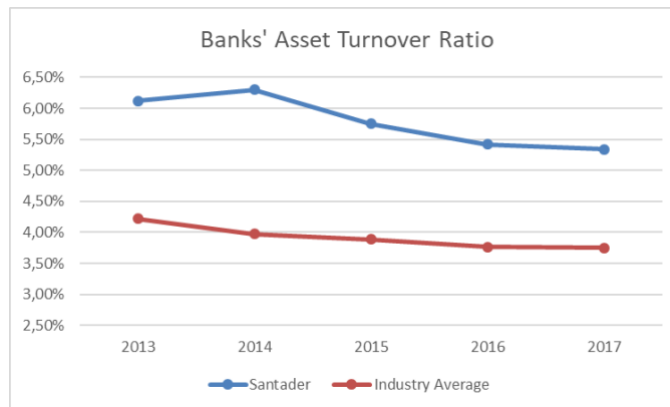
Asset turnover ratio is a financial ratio that measures the efficiency of a company's use of its assets in generating sales revenue or sales income to the company. The ratio is calculated as below:

$$\text{Asset Turnover Ratio} = \text{Net Sales Revenues} / \text{Average Total Assets}$$

As we can see on the chart below, Santander has the highest asset turnover ratio compared to its peer group during the past five years which indicated that

the bank is one of the most efficient in terms of using its assets in generating sales revenue.

Chart-21

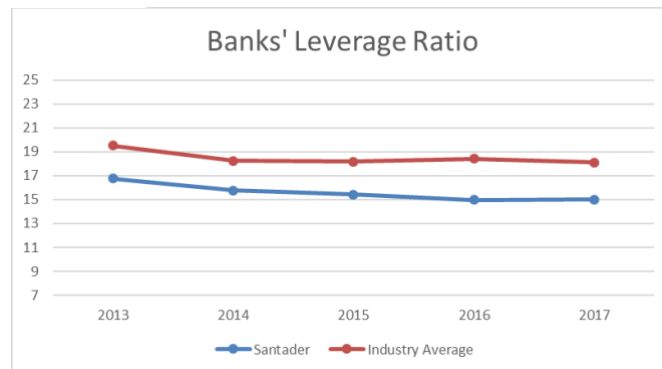


Source: Bloomberg

However, this ratio has been continuously declining since 2014 which indicated a deterioration of efficiency in using assets in generating revenue. The decrease in the Asset turnover ratio will also drag the overall ROE down which later we will discuss in detail in the DuPont analysis.

- Leverage Ratio

Chart-21



Source: Bloomberg

Leverage Ratio is a ratio that assess the ability of firms to meet their financial obligations. The ratio is calculated as below:

Leverage Ratio= Total Assets/ Total Equity

As we can see on the graph, Santander's leverage ratio has been continuously declining since 2013 and in 2017 and it maintained at a level well below the industry average. This means that Santander has been improving its ability to meet its financial obligations during the past five years.

- DuPont Analysis

According to the approach of DuPont Analysis, we calculate the ROE as followings:

$$ROE = \text{Net Profit Margin} \times \text{Asset Turnover Ratio} \times \text{Leverage Ratio}$$

Based on the conclusion we made by analyzing the Net Profit Margin, Asset Turnover Ratio and Leverage Ratio. During the past five years, the Net Profit Margin was increasing while Asset Turnover Ratio and Leverage Ratio was declining. Therefore, the recent decrease in terms of ROE for Santander could be related with its deleveraging efforts the fact Santander became less efficient in using assets in generating net sales.

▪ Valuation

Table-2 Multiples of Santander and its peers

Multiples	P/TB	P/E	P/B
Banco Santander SA	1,34	9,62	0,73
Industry Average	0,86	11,16	0,63
BBVA	0,91	9,31	0,75
Lloyds Bank	1,28	10,66	0,84
Banco de Sabadell	0,59	16,01	0,48
Societe Generale SA	0,66	8,65	0,44

Source: Bloomberg

Multiples can serve an easy alternative for the valuation of Santander's equity.

To do this, we decided to use three types of multiples (P/Tangible Book, P/E and P/B) which make more sense for the industry. The tables in the appendix compares Santander, its peers and the industry average in terms of these three metrics.

Table-3 Santander Data

Subjects	FY 2019
EBITDA	16802
Tangible Book	95404
Earnings	11404
Book value	122608

Source: Bloomberg

Then with the Book value, Tangible book value, Earnings of Santander in FY 2019 we can derive the price of stock. The Book Value in FY 2019 will equal to the difference of total assets and total liabilities in FY 2019. Based on the forecasted balance sheet, we have Book Value in FY 2019 = 1540743 M€ - 1419135 M € = 122608 M €. Knowing the Book Value of Santander in FY 2019, Tangible book value of Santander in FY 2019 can be easily calculated as the difference of book value and value of intangible assets in FY 2019 according to the definition. Therefore, we have the tangible book value in FY 2019 = 122609 M € - 27204 M € = 95404 M €. The Earnings in FY 2019 equal to the Profit for the period of FY 2019 which equals 11404 million € from the estimated consolidate income statement. The table on the left shows the book value, total tangible book value and earnings of Santander in FY 2019.

Table-4 Stock Price Forecast by Multiples

Multiples Type	Equity Value	Stock Price
P/Tangible Book	82133	5,09
P/E	127243	7,89
P/Book	76903	4,77

Source: Bloomberg

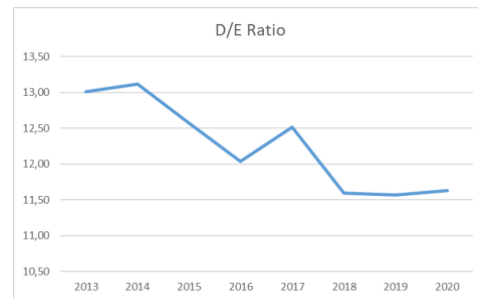
After the book value, total tangible value and earnings of Santander and their respective multiples, we can then calculate the equity value by simply multiplying them respectively. Dividing the estimated equity value by the total number of outstanding shares will give us the stock price target for FY 2019 which ranges from 4.77 € to 7.89 €. The results are shown in the table on the left.

Valuation

Considering the special nature of banking industry, we decided to use the Flow to Equity method and Dividend growth model to value Santander's stock price.

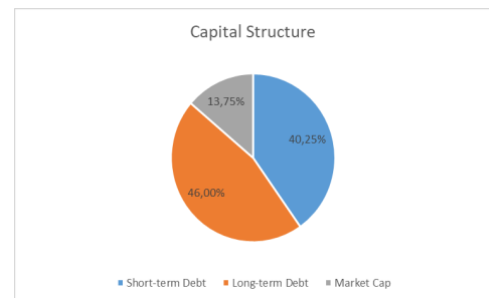
Capital Structure

Chart-22 D/E Ratio Evolution from 2013 to 2020



Source: Bloomberg

Chart-23 Capital Structure



Source: Bloomberg

Unlike another industry, the banking industry tends to have relatively higher debt to equity ratio. As we already have forecast the balance sheet in the next three years, the debt to equity ratio can be calculated as the quotient between the total liabilities and total equity on the balance sheet. The Chart-22 above on the left shows us the evolution of this ratio for Santander from 2013 to 2020, a declining trend could be observed by us which could be interpreted by Santander's effort of deleverage during recent years. Even though as we see, the D/E ratio stayed at a quite constant level between 11 to 13.5 and was predicted to stay constant in the next two years. The pie Chart-23 above on the right shows us the detailed capital structure of Santander. Banco Santander's total market cap reached 69958.30 M € which represents 13.80% of the total. The rest 86.25% was all debt where long-term debt reached 234031 M € (40.20%) and short-term debt reached 204769 M € (46.00%).

Cost of Equity

As we adopted the Flow to Equity method to value Santander, the discount rate that we need is levered cost of equity (R_e). According to the CAPM model ($R_e = R_f + \beta_e \times MRP$), the levered beta (β_e), risk free rate (R_f) and market risk premium (MRP) should be known before we compute the unlevered cost of equity.

For risk free rate, we use the Spain 10-year Government bond Yield as Santander is a European Bank headquartered in Spain. Therefore, risk free rate (R_f) = 1.54%. Regarding equity risk premium, we use the equity risk premium

calculated for Spain by Professor Damodaran market risk premium. He used the equity risk premium in US as the benchmark and then added the country risk premium consistent with their rating class. In 2018, Spain was rated Baa2 which corresponds to a country risk premium 2.19%. Adding this country risk premium to the equity risk premium in US which is 5.08% according to the calculation of Professor Damodaran, we have the equity risk premium of 7.27% for Spain.

For levered beta, we can use the raw beta derived in relation to IBEX Index weekly during the past three years. The section above already discussed about a quite stable capital structure for Banco Santander as the D/E ratio varied between 11% and 13% from 2013 to 2020. In this sense, we can use the value of this raw beta directly instead of further steps of un-levering and re-levering beta again. To make our estimate more precise, we used the value of raw beta and standard Error of Beta of Banco Santander as well as its comparable group to compute the 95% Confidence Interval of Beta which is showed in the table below.

Table-5 Raw Beta and 95% CI of Santander and its peers

Banks	Banco Santander S.A <i>Spain</i>	Banco de Sabadell <i>Spain</i>	BBVA <i>Spain</i>	Société Générale <i>France</i>	Lloyds Bank <i>UK</i>
Raw Beta	1,477	1,384	1,363	1,511	0,745
Standard Error of Beta	0,065	0,112	0,069	0,115	0,142
Beta Upper Range (95% CI)	1,607	1,608	1,501	1,741	1,029
Beta Lower Range (95% CI)	1,347	1,16	1,225	1,281	0,461

Source: Bloomberg

The 95% Confidence Interval of Banco Santander's Raw Beta was between 1.347 and 1.607. The average and median of comparable group were 1.251 and 1.374 respectively. Based on all this information, we decided to adopt a beta of 1.374 which was within the 95% Confidence Interval of Banco Santander and closed to the average of comparable group.

In the end, we can compute the cost of equity after all the three inputs required by the CAPM model (levered beta (β_e), risk free rate (R_f) and market risk premium (MRP)) are known to us. Consequently, Banco Santander's **Cost of Equity** was $R_e = R_f + \beta_e \times MRP = 1.54\% + 1.374 \times 7.27\% = 11.53\%$.

Sustainable growth rate

The sustainable growth rate in FY 2019 should be estimated by the following formula:

$$g = \text{Retention ratio in FY 2019} \times \text{ROE in FY 2019} = (1 - \text{payout ratio in FY 2019}) \times \text{ROE in FY 2019}$$

We estimate payout ratio in the next three years to be 54.70% which is the average of the past three years payout ratio if we tried to be as conservative as possible. However, our earnings data are quite optimistic for the next three years so that there is no reason for Santander to reduce its payout ratio. ROE can already be calculated based on the forecasted balance sheet and income statement. According to the definition, Return on Equity in FY 2019 = Net Income in FY 2019 / ((Equity in FY 2018+ Equity in FY 2019)/2) =9.56%. Therefore, $g=9.56\% \times (1-54.70\%) =4.33\%$.

Free Cash Flow to Equity

Valuing Financial services companies such as Santander, Free Cash Flow to Equity should be considered as a good alternative to Dividend growth model for equity valuation. For banks, FCFE can be calculated as followings:

$FCFE = \text{Net Income} - \text{Change in total assets} + \text{Change in total liabilities}$

Based on the income statement and balance sheet that we forecast for FY 2018- FY 2020, we can derive the FCFE in FY 2018-2020. The total equity value at Year-End 2019 of Santander should be calculated by the following formula:

Equity value in FY 2019= $FCFE \text{ in FY 2020} / (r-g)$ where r is the cost of equity and g is the long-term growth rate.

According to the previous calculation, we know that $FCFE \text{ in FY 2020} = 7052$ million €, $r=Re=11.53\%$ and $g=4.33\%$. Therefore, we have Equity Value in FY 2019 = $5387 \text{ million €} / (11.53\%-4.33\%) = 74791 \text{ million €}$. As the total number of shares outstanding is already known to us as 16136 million, the stock price target at Year-End 2019 for Santander = $\text{Equity Value in FY 2019} / \text{total number of shares outstanding} = 74791 \text{ million €} / 16136 \text{ million} = 4.6350\text{€ per share}$.

Dividend growth model

To guarantee the credibility of our valuation, we use the dividend growth model to double check if we calculate our stock price target correctly. The formula of dividend growth model is known as $P = D1 / (r-g)$ where $D1$ is the dividends per of next period, r is the required rate of return and g is the expected growth rate in dividends.

As we are estimating the price target at Year-End 2019, the $D1$ should be dividends distributed in FY 2020. To calculate dividend per share in FY 2020, we need to know the earnings per share in FY 2020 as well as the payout ratio in FY 2020. The earnings per share in FY 2020 was already known to us as the result of earnings in FY 2020 divided by the total number of shares outstanding which

equals 0.610. The payout ratio is already known to us as 54.70% based on the previous conclusion. In the end, the Dividends per share in FY 2020= Earnings per share in FY 2020 * payout Ratio in FY 2020 =0.610 € per share * 54.70% =0.334€ per share.

The sustainable growth rate in FY 2019 $g = 4.33\%$. The last input that we need is the required rate of return (r) which should be the same as the cost of equity that we have estimated before. Thus $r = R_e = 11.53\%$.

After all the values of input variables are obtained, we are ready to calculate the stock price target at Year-End 2019 for Santander by simply plugging values of input variables in the formula. $P = 0.334\text{€ per share} / (11.53\% - 4.33\%) = 4.6350\text{ € per share}$ which is exactly the same as the result of Flow to Equity approach.

Financials

The Following Table gives a comprehensive overview about key financial ratios that were forecasted for Banco Santander.

Table-6 Ratio Analysis of Banco Santander from 2016 to 2020

Ratio Analysis (%)	2016	2017	2018	2019	2020
Return on equity (ROE)	7,4%	7,8%	9,3%	9,6%	9,6%
Return on assets (ROA)	0,6%	0,6%	0,7%	0,8%	0,8%
Operating ROA	0,8%	0,9%	1,2%	1,2%	1,3%
Tax Rate	30,5%	32,1%	32,1%	32,1%	32,1%
Dividend yield	2,7%	3,3%	4,7%	5,0%	5,3%
Dividend payout	49,4%	56,9%	54,7%	54,7%	54,7%
Customer loans y/y growth	-0,5%	-2,3%	4,3%	4,6%	3,9%
Assets y/y growth	-0,1%	7,9%	1,2%	5,4%	6,0%
RWA y/y growth	0,4%	2,9%	1,1%	0,0%	0,0%
Deposits y/y growth	1,6%	5,0%	1,7%	2,8%	1,6%
Net Interest Income y/y growth	-5,3%	10,3%	4,5%	6,7%	5,8%
Revenue y/y growth	-3,6%	9,3%	5,8%	5,4%	4,8%
RWA	588088	605064	611866	611866	611866
NPLs	33644	37589	35140	33227	31746
NPLs y/y growth	-9,3%	11,7%	-6,5%	-5,4%	-4,5%
NPLs/ Loans	4,0%	4,1%	3,8%	3,5%	3,2%
Tier 1 Ratio	12,5%	12,3%	12,3%	12,3%	12,3%
Net Interest Margin	2,3%	2,5%	2,5%	2,5%	2,6%
Non Interest Income/ Net revenue	29,7%	29,1%	29,9%	29,0%	28,3%
Non Interest Income/ Avg Assets	1,0%	1,0%	1,1%	1,0%	1,0%
Efficiency ratio	44,9%	45,0%	39,0%	37,5%	35,9%
Leverage ratio	13,04	13,52	12,59	12,57	12,63
Revenue/ Assets	3,3%	3,3%	3,5%	3,5%	3,5%

Source: Bloomberg

As we can see on the table above, NPLs of Banco Santander surged 11.7% in 2017 majorly because of the acquisition completed of Banco Popular. This

acquisition added 9492 M € to the total amount of NPLs which reversed the trend of previous years. For this year and next two years, we predicted that the overall NPLs/ Loans will go down as the group will integrate portfolios of Banco Popular portfolio into its usual management in Iberian market and increasing lending in the Latin American market due to the robust growth of the economy.

Recommendation & Sensitivity Analysis

Based on the FCFE and Dividend growth model, the stock price of Banco Santander at FY 2019 will be 4.6350 € per share. Based on the multiple valuation method, we have three stock price which is 4.77 € per share, 7.89 € per share and 5.09 € per share. In the end, we conclude that the reasonable stock price for Banco Santander should situate in an interval between 4.64 € per share to 5.09€ per share.

The current stock price at 3rd of December 2018 was 4.27 € per share. This means that the upside potential of Banco Santander's stock is from 8.67% to 19.20%. Thus, we recommend investors to hold the stock of Banco Santander now the expected total return of Banco Santander's equity may fluctuate around 10% over a 12-month period.

Considering the uncertainty of global interest rate change as well as global GDP growth rate, we performed a sensitivity analysis for these two factors to measure the impact of the change in these two factors on the price target. The results of this analysis were shown on the Table-7. We found out that when the central bank raises the interest rate for 5 bp to 25 bp more in the next two years, we will recommend our investors to buy the stock as the stock price will go above the normal level for 22% to 80%. When the central bank decides to reduce the interest rate for 5 bp, we will still give a hold recommendation on Banco Santander's stock as the downside potential is within 10%. Only in case that the Global Interest rate was down 10 bp to 25 bp or even more, we will suggest investors to sell stock as downside potential was more than 10% in these

Table-7 Sensitivity analysis of Global Interest Rate Change

Scenario	Price Target	Recommendation
Global Interest Rate + 25.0 bp	7,6754	Buy
<i>Change %</i>	80%	
Global Interest Rate + 10.0 bp	5,7962	Buy
<i>Change %</i>	36%	
Global Interest Rate + 5.0 bp	5,207	Buy
<i>Change %</i>	22%	
Global Interest Rate - 5.0 bp	4,0795	Hold
<i>Change %</i>	-4%	
Global Interest Rate - 10.0 bp	3,5398	Sell
<i>Change %</i>	-17%	
Global Interest Rate - 25.0 bp	2,0089	Sell
<i>Change %</i>	-53%	

We also performed a sensitivity analysis of Banco Santander's stock price target in FY 2019 in relation to the different change in the Global GDP growth rate. The results of this analysis were shown on the Table-8. If the Global GDP growth rate in the next two years changes from 1.0% to 2.0%, we all strongly recommend our investors to buy the stock as the upside potential is more than 10%. If the Global GDP growth rate in the next two years changes .1.0%, we still recommend our investors to hold the stock as the downside potential is below -10%. Only in case that the Global GDP growth rate in the next two years changes from -1.5% to -2.0%, we would give a sell recommendation as the downside potential is more than 10%.

Table-8 Sensitivity analysis of Global GDP Growth rate Change

Scenario	Price Target	Recommendation
Global GDP Growth rate + 2.0%	5,2259	Buy
<i>Change %</i>	22%	
Global GDP Growth rate + 1.5%	5,534	Buy
<i>Change %</i>	30%	
Global GDP Growth rate + 1.0%	5,852	Buy
<i>Change %</i>	37%	
Global GDP Growth rate - 1.0%	4,0759	Hold
<i>Change %</i>	-5%	
Global GDP Growth rate - 1.5%	3,8076	Sell
<i>Change %</i>	-11%	
Global GDP Growth rate - 2.0%	3,5465	Sell
<i>Change %</i>	-17%	

In conclusion, we performed a sensitivity analysis of Banco Santander's stock price target in FY 2019 in relation to the variation of global headcount which is a key factor that influences the staff cost. The results of this analysis were shown on the Table-9. If Global Headcount Growth Rate increases from 1.0% to 5.0% or decrease within 1.0%, we will give a hold recommendation on Banco Santander's stock as the upside potential was between -10% to 10%. If Global Headcount Growth Rate decreases from 3.0% to 5.0% or even more, well will strongly recommend our investors to buy the stock as the upside potential of the stock is over 10%.

Table-9 Sensitivity analysis of Global Headcount Growth Rate Change

Scenario	Price Target	Recommendation
Global Headcount Growth Rate + 5.0%	4,4698	Hold
<i>Change %</i>	6%	
Global Headcount Growth Rate + 3.0%	4,5354	Hold
<i>Change %</i>	6%	
Global Headcount Growth Rate + 1.0%	4,6017	Hold
<i>Change %</i>	8%	
Global Headcount Growth Rate - 1.0%	4,6685	Hold
<i>Change %</i>	9%	
Global Headcount Growth Rate - 3.0%	4,7359	Buy
<i>Change %</i>	11%	
Global Headcount Growth Rate - 5.0%	4,8039	Buy
<i>Change %</i>	13%	

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Individual Part

Interest rate and its impact on Net Interest

Margin

Estimating Net Interest Income was one of the most essential part of Santander's equity valuation. In our financial model, we break net interest income into Interest Income and Interest expense. Interest Income comes from the interest the bank charged on the loans lent to corporate or individuals while Interest expense is the interest that banks are supposed to pay for retaining clients' deposits. From Santander's annual report from 2013 to 2017, we can find the completed financial statements of following 8 countries which are Spain, Portugal, Poland, UK, Brazil, Mexico, Chile and US 8 countries. This allows us to break the Interest income and Interest expense for each geography further down into multiple value drivers.

For Interest Income, our model can be expressed like followings:

$$\text{Interest Income} = \text{Country's GDP} \times \text{Loan Size \% GDP} \times \text{Bank's Market Share} \times \text{Average Interest Rate Earned}$$

For Interest Expense, we have

$$\text{Interest Expense} = \text{Country's GDP} \times \text{Deposits Size \% GDP} \times \text{Bank's Market Share} \times \text{Average Interest Rate Paid}$$

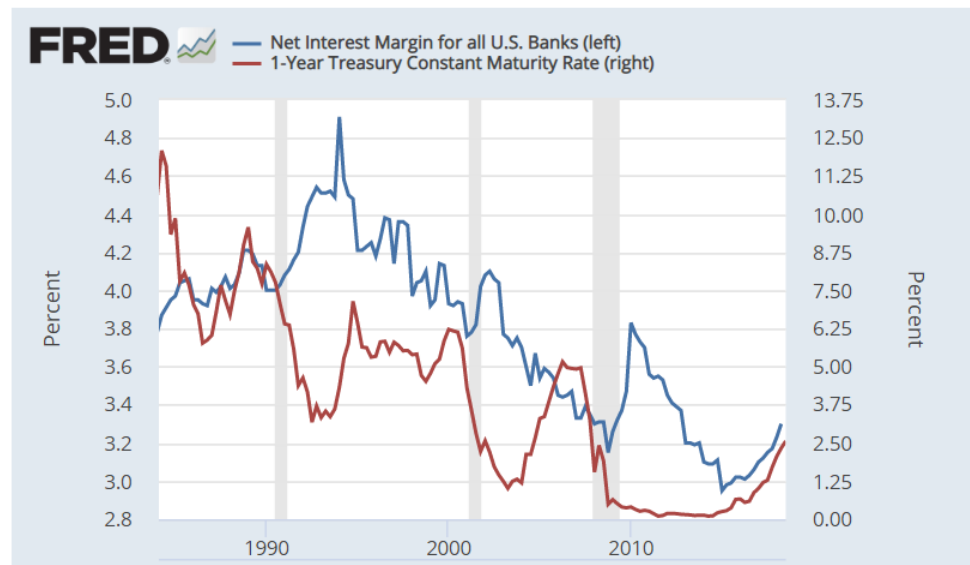
After we calculate both Interest Income and Interest Expense for each country, we can then derive the Net Interest Income by the following formula:

$$\text{Net Interest Income} = \text{Interest Income} - \text{Interest Expense}$$

To estimate Interest Income and Interest Expense separately for each geography, we need to estimate each value driver in the model. Country's GDP is easy to forecast as we can find the GDP growth forecast from IMF or country's central bank. Loan Size in percentage of GDP and Bank's Market Share can be forecasted by assuming a certain growth rate for each of these value drivers. The most difficult part is about the variation of either Average Interest Rate Earned or Average Interest Rate Paid. Because most banks finance their loans and other investments by issuing debt, primarily in the form of deposits or various securities sold in the open market. When the central bank of a country raises its benchmark interest rate, it will lead to an increase in the banks interest income but also to an increase in bank's funding cost. This make it difficult to measure the final impact on the net interest margin. In our model, we simply assume that the Average Interest Rate Paid will stay the same while the increase of net interest margin will be all reflected on the Average Interest Rate Earned. (1)

However, the mechanism of how short-term interest rate change influence the bank's Net Interest Margin is far more complicated than what we have assumed in our model. Take United States as an example, we plot the average net interest margin for all U.S. banks since 1984 alongside the one-year constant maturity yield on U.S. Treasury securities where the yield represents the general level of short-term market interest rates.

Chart-24 Net Interest Margin and 1-Year Treasury Constant Maturity Rate evolution



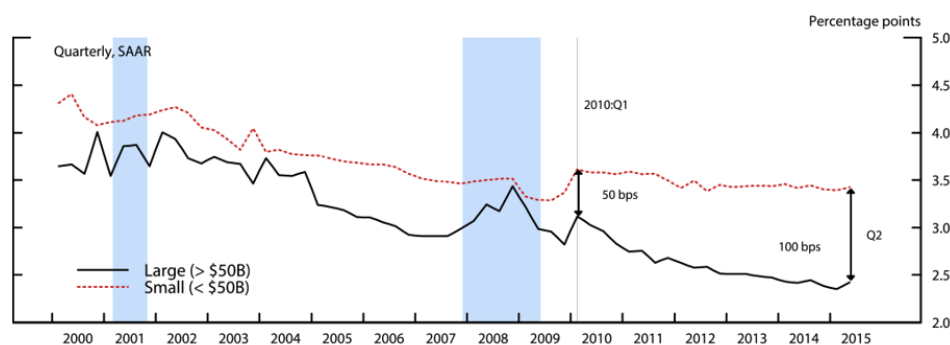
Source: Federal Reserve

As we can see on the graph, the variation trend of Net interest margin does not always go along with each other. During the recessions of 1990-1991, 2001 and 2007-2009, the yield on treasury securities fell significantly while the net interest margin moved the opposite and increased substantially. As the short-term interest rates continued to decrease further, the net interest margin finally started to decrease as well. In a thesis wrote by Mr. Huberto M.Ennis, Helen Fessenden and John R.Walter, this phenomenon was attributed to “Maturity Mismatch” (1). “Maturity Mismatch” refers to the fact that the average maturity of the loans in a bank's portfolio tends to exceed the average maturity of its deposits and other debt. For example, Bank liabilities such as consumer and business deposits tend to have relatively short-term maturities while banks assets such as business loans, consumer loans often have longer maturities. Short term rates track more closely the fed funds rate so that when there is a hike in the fed funds rate, banks interest expense will increase more compared with interest income which then narrow the margin. On the other hand, when market interest rates fall, banks' funding cost will tend to fall quickly than their interest income which in the end increase the net interest margin.

In the most recent recession happened in 2008, the Federal Reserve adopted quantitative easing policy which kept interest rate at a super low level for a period of time to boost economy. This corresponds to the period after 2010 on the chart when we observe a continuous fall of net interest margin while the interest rate remained quite stable. Because banks were replacing the loans made in the past at relatively high interest rate by new loans with lower interest rate during this period which in the end resulted in a decreased net interest margin.

Another research of Mr, Francisco B.Covas, Mr. Marcelo Rezende and Mrs. Cindy M Vojtech indicated that the impact may also vary according to the size of the banks.(3) As shown in the Chart-25 below, net interest margin of large banks has dropped 70 basis points while the one of small banks only decreased 20 basis points approximately during the past five years.

Chart-25 Net Interest Margin, By BHC type



Source: FR Y-9C

The difference in terms of impact on net interest margin could be explained from two points related with the the recent low interest rate environment. First point has to do with the liability side of banks' balance sheet. Small bank has relatively smaller balance sheet and less liabilities which implies less reduction in funding cost in this environment. The second point is about the asset side of the balance sheet. Specifically, in recent years large banks have experienced a somewhat bigger decline in the interest income that they earn on "other" assets, which includes assets held for trading purposes.

We can conclude from these empirical findings that large banks could try to boost their profitability in the short term by delaying an increase in their deposit rates relative to previous tightening cycles. That may explain Banco Santander's profitability surpassed the average of its peers measured by Net Interest Margin.

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Technology in the Banking industry

Santander understands that technology and innovation is the future and it is absolutely critical towards its success in the long term. As the number of customers in most services around the world want to go digital, the bank has focused a lot on innovation to increase customer loyalty and at the same time create banking products that are more convenient and simpler to use. The bank was very creative in 2017 with their digital transformation, such as their new 'Openbank'.

Openbank is Spain's first fully digital bank launched by the Group. The bank focused a lot on innovating its product and services by creating a website and mobile app, where its customers will have full access to a range of products and services. The bank is one of the first in the world to launch a digital bank with this type of software, where its technology is run by machine learning.

Santander's branch in Brazil launched 'Superdigital', which is a digital mobile-first payment solution platform. Customers can open a new payment account instantly, and its benefits includes the fact that clients can deposit, withdraw money or pay without the need of a traditional bank account.

Other products include Santander Cash Nexus which is a cash management position, the bank allows clients to manage their funds, combining the Groups global services with a variety of local services. Most of Santander's new launches are with the aid of machine learning, which allows the Group to understand their customers better and create personalised products and services. The results have been extremely positive, resulting to 60% less customer attrition and an increase of 30% in loyalty. The main focus for the bank and for entities who are in the financial technology Industry are Blockchain technology, data, payments and application programming interfaces (API).

Firms such as BBVA are also focusing on innovation and its future in banking, where BBVA has increased its stake in the UK company Atom bank, which is a digital financial company and provides banking services through their mobile app. BBVA has also created a mobile banking app where they reached a total of 22.6 million digital customers, 17.7 million mobile customers which results to a 25% and 44% increases respectively. BBVA has decided to focus extremely on their data and has created a division to just focus on this strategy. Lloyds Bank has also shifted to focusing on technology more, where they are building their services to increase customer satisfaction through multi-brand and multi-channel approach. Their digital platforms have 13.4 million users and 9.3 of them come from mobile apps. Citigroup has focused a lot on their digital banking products,

as customers around the world are shifting towards digital channels and banks have to change the way they target and retain clients.

The ECB has noticed that banks in eurozone have become more resilient, however there are many challenges that banks such as Santander have to face such as “raising profits in a challenging environment” with an environment that has low rates, with that cybercrime and other technology changes also brings difficulties to banks. Regulation is something that is extremely important towards the banking operating environment, the ECB will have to look closely to future regulation to make this environment more stable.

When talking about technology and the future, in the financial world many arguments arise, one important topic is who will prosper, financial technology firms (fintech’s) or tradition banks such as Banco Santander. Many fintech’s have risen due to new innovations in banking, intensifying competition and forcing banks to wake up and create products that are more demanding or innovate and modify products that are “outdated”. It has been recorded that more than 2,000 startups have shifted their business to be fintech’s in Europe. Around the world, approximately 7,500 startups focus their operations on providing innovative solutions to the financial technology industry. Investments in fintech’s have amounted to €27 billion in 2017 globally, where in Europe it was €4.6 billion which is more than double in 2016. (4)

A study has proven that around 20% of a bank’s costs are associated to technology changes/implementation or anything related to the topic of ‘technology’. With this shift of technology in the industry, approximately 62% of banks around the world believe that they will be ‘digitally mature’ by 2020, in addition 19% believe that they have achieved it already this year, which is evident through Santander’s new product offering. Another study has shown that the use of the world “digital” has increased to around 55 times in the annual reports of the top 20 banks. To provide digital solutions, professionals of the field are required. Where recruitment for IT specialists have increased 11.4 times higher in 2018 than in 2015. (1) (2) (3)

PSD2 Environment

The PSD2 is a regulation that provides legal foundation in order to further develop the internal market for electronic payments within the European Union. It is a law that was implemented in January 2018. This law has affected the banking industry immensely due to its element of attracting competition in the industry. The chairman of Santander believes this regulation to be severely unfair due to the fact that it gives fintech’s the upper hand. Fintech’s can create innovative products based on data provided from banks such as Santander, while

traditional banks cannot access other data the same way Fintech's can.

However, this smoothes the collaboration between fintech's and banks, causing a more innovative environment to create better banking products, which will only help stimulate the economy.

Additionally, the EU Commission believes that the PSD2 "will promote the development of innovative online and mobile payments, which will benefit the economy and growth". Competition will arise extensively that brings more product innovation, which can be seen with Santander's new product offering to cater its ever-growing digital customers.

With the liberty Fintech's have to create products, there are other elements that allow banks such as Santander to overcome this wave of competition. Data is a sensitive topic, firms such as Facebook have recently caused a huge uproar with customer data. Banks have spent a lot of capital on developing the security to keep their customers data safe, which makes banks much more appealing in my opinion from a security standpoint. However, with the uncertainty of Brexit, there will be issues ahead with the respective legal and regulatory environments that Santander's subsidiaries operate due to the fact that the UK will no longer be a member of the EU.

Santander

Santander have shifted a lot of their business to focus on digital products that will retain their customers and attract new ones in order to keep revenues increasing and keep away competition. Banks such as Santander have hired data scientists and integrating tools to create artificial intelligence (AI) based solutions, robo-advice and cloud computing. Many firms believe that budgets for cloud projects will increase by 10% in the following 2 years. AI and distributed ledgers will have a major impact in the future, but it is clearly evident in the industry already. In 2017, €1.5 billion was invested on blockchain in the financial services industry, where 91% of banks are investing in blockchain. Financial firms that invest in AI could improve their revenues by 32% and the need for human expertise will certainly increase. This can cause employment to increase by 10% during 2018 to 2022. (5) (6) (7) (8)

This year, Santander has adopted the use of the nCino platform in order to enhance the business's lending operations. nCino is a worldwide leader in cloud banking. This will cut the loan decision time by 40%, improving Santander's lending platform significantly. Santander caught onto the wave of disruptive innovation a few years ago, since the bank did not want to miss the opportunity to be one of the leading banks in Europe. In 2014, the bank launched its \$100 million fund to get close to the Fintech industry, called Santander InnoVentures.

They wanted to ensure that its customers worldwide would benefit from the most recent innovations that disrupt the industry. Based on the 2018 Q3 results, the number of digital clients has increased by 24%, from 24.2 million to 29.9 million as in September of 2018. The huge amount of focus being directed to their multichannel strategy has benefited the group immensely. Part of this strategy involves closing down branches, as a shift to the digital world means banks can reduce costs by reducing the number of branches they have. Which is why, Santander has stated it will close down 46 branches in the UK. In nearly every branch, they have stated that their customers are using their local branches much less than the previous years, and that most of their methods of using the bank is online or by phone. With customers on the rise for Santander the future seems promising. InnoVentures also has the possibility to find the most disruptive technology that could put Santander in a dominant position around the world. (9) (10)

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Appendix

Financial Statements

Consolidated Income Statement					
	2016	2017	2018	2019	2020
Net interest income	31089,00	34296,00	35854,02	38252,15	40489,65
Dividend income	413,00	384,00	507,72	541,56	577,66
Share of results of entities accounted for using the equity method	444	704	508	552	588
Commission income	12943,00	14579,00	15621,56	15923,69	16240,28
Commission expense	-2763,00	-2982,00	-2913,79	-3042,19	-3191,27
Gains or Losses on Financial Assets and Liabilities	3751,00	1571,00	1769,42	1887,35	2013,14
Gains or losses from hedge accounting, net	-23,00	-11,00	-53,20	-53,20	-53,20
Exchange differences, net	-1627,00	105,00	134,00	134,00	134,00
Other operating income	1919,00	1618,00	1469,76	1335,11	1212,79
Other operating expenses	-1977	-1966	-1847	-1735	-1630
Income from assets under insurance and reinsurance	1900,00	2546,00	2759,60	2759,60	2759,60
Expenses from liabilities under insurance and reinsurance	-1837,00	-2489,00	-2665,20	-2665,20	-2665,20
TOTAL INCOME	44232,00	48355,00	51144,50	53889,45	56474,98
Administrative expenses	-18737	-20400	-18737	-18839	-18623
Staff costs	-11004	-12047	-10234	-10173	-10123
Other general administrative expense	-7733	-8353	-8503	-8666	-8844
Depreciation and amortisation cost	-2364,00	-2593,00	-2328,46	-2104,16	-1834,61
Provisions or reversal of provisions	-2508	-3058	-3113	-3699	-4666
Impairment or reversal of impairment on financial assets not measured at fair value through profit or loss, net	-9626,00	-9259,00	-10208,34	-10716,70	-11165,17
Impairments of Financial Assets	-69,00	-18,00	-197,86	-211,05	-225,12
Impairments of Loans and Receivables	-9557,00	-9241,00	-10010,48	-10505,65	-10940,06
PROFIT FROM OPERATION	10997	13045	16758	18530	20187
Impairment of investments in subsidiaries, joint ventures and associates, net	-17,00	-13,00	-13,00	-13,00	-13,00
Impairment on non-financial assets, net	-123,00	-1260,00	-1426,47	-1703,31	-2459,51
Gains or losses on non financial assets and investments,	30,00	522,00	223,92	242,13	319,47
Negative goodwill recognised in results	22,00	0,00	93,06	88,40	83,33
Gains or losses on non-current assets held for sale not classified as discontinued operations	-141	-203	-343	-343	-343
PROFIT OR LOSS BEFORE TAX FROM CONTINUING OPERATIONS	10768,00	12091,00	15292,45	16801,65	17774,63
Tax expense or income from continuing operations	-3282,00	-3884,00	-4912,40	-5397,20	-5709,76
PROFIT FOR THE PERIOD FROM CONTINUING OPERATIONS	7486,00	8207,00	10380,05	11404,44	12064,88
Profit or loss after tax from discontinued operations	0	0	0	0	0
PROFIT FOR THE PERIOD	7486,00	8207,00	10380,05	11404,44	12064,88
Profit attributable to non-controlling interests	1282,00	1588,00	1907,42	2095,66	2217,02
Profit attributable to the parent	6204	6619	8473	9309	9848
CONSOLIDATED PROFIT FOR THE YEAR	7486,00	8207,00	10380,05	11404,44	12064,88
OTHER RECOGNISED INCOME AND EXPENSE	-303,00	-7320,00	-2686,40	-2686,40	-2686,40
Items that will not be reclassified to profit or loss	-806	-88	-192,8	-192,8	-192,8
Items that may be reclassified to profit or loss	503	-7232	-2494	-2494	-2494
TOTAL RECOGNISED INCOME AND EXPENSES	7183,00	887,00	7693,65	8718,04	9378,48

Consolidated Balance Sheet					
	2016	2017	2018	2019	2020
Assets					
CASH, CASH BALANCES AT CENTRAL BANK AND OTHER DEPOSITS ON DEMAND	76454	110995	98573	105143	112150
FINANCIAL ASSETS HELD FOR TRADING	148187	125458	157505	168003	179200
FINANCIAL ASSETS DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS	31609	34782	41746	44529	47497
FINANCIAL ASSETS AVAILABLE-FOR-SALE	116774	133271	138923	148182	158058
LOANS AND RECEIVABLES	840004	903013	963562	1027783	1096284
INVESTMENTS HELD-FOR-MATURITY	14468	13491	12013	12814	13668
HEDGING DERIVATIVES	10377	8537	9975	10640	11349
CHANGES IN THE FAIR VALUE OF HEDGED ITEM IN PORTFOLIO HEDGE OF INTEREST RATE RISK	1481	1287	1554	1657	1768
INVESTMENTS	4836	6184	5299	5652	6029
Insurance contracts linked to pension	269	239	303	323	344
REINSURANCE ASSETS	331	341	375	400	427
TANGIBLE ASSETS	23286	22974	26799	28586	30491
PPE	20770	20650	22819	25177	26855
Investment Property	2515	2324	3980	3408	3635
INTANGIBLE ASSETS	29421	28683	32757	34940	37269
Goodwill	26724	25769	29730	31712	33825
Other intangible assets	2697	2914	2999	3199	3412
TAX ASSETS	27678	30243	32024	34158	36435
Current Tax Assets	6414	7033	7170	7648	8158
Deferred Tax Assets	21264	23210	24854	26510	28277
OTHER ASSETS	8178	9527	9350	9973	10637
inventory	1116	1964	1496	1595	1702
Other	7062	7563	7854	8377	8936
NON-CURRENT ASSETS HELD FOR SALE	5772	15280	9809	10463	11161
TOTAL ASSETS	1339125	1444305	1540567	1643245	1752767

Liabilities and Equity	2016	2017	2018	2019	2020
FINANCIAL LIABILITIES HELD FOR TRADING	108765	107624	120315	125751	134038
FINANCIAL LIABILITIES DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS	40263	59616	57620	60223	64192
FINANCIAL LIABILITIES AT AMORTISED COSTS	1044240	1126069	1199261	1253438	1336046
HEDGING DERIVATIVES	8156	8044	9413	9839	10487
CHANGES IN THE FAIR VALUE OF HEDGED ITEM IN PORTFOLIO HEDGE OF INTEREST RATE RISK	448	330	356	372	397
LIABILITIES ASSOCIATED WITH NON-CURRENT ASSETS HELD FOR SALE	0	0	0	0	0
LIABILITIES UNDER INSURANCE CONTRACT	652	1117	887	928	989
PROVISIONS	14459	14489	16253	16987	18107
Provisions for Taxes and Other Legal Contingencies	2994	3181	3274	3422	3648
Provisions for Commitment and Guaranties Given	459	617	634	662	706
Other Provisions	2718	2660	3144	3287	3503
Provisions for Pensions and Similar Obligations	8288	8031	9200	9616	10250
TAX LIABILITIES	8373	7592	8872	9273	9884
Current Tax Liabilities	2679	2755	2846	2975	3171
Deferred Tax Liabilities	5694	4837	6026	6298	6713
OTHER LIABILITIES	11070	12591	12640	13212	14082
Transactions in Transit	994	811	956	1000	1066
Accrued Expenses and Deferred Income	6507	6790	7454	7791	8304
Other Liabilities	3569	4990	4230	4421	4712
TOTAL LIABILITIES	1236426	1337472	1425618	1490022	1588222
SHAREHOLDER'S EQUITY	105977	116265	132848	148358	167893
CAPITAL	7291	8068	8068	8068	8068
SHARE PREMIUM	44912	51053	51053	51053	51053
EQUITY INSTRUMENTS ISSUED OTHER THAN CAPITAL	0	525	0	0	0
OTHER EQUITY	240	216	223	223	223
ACCUMULATED RETAINED EARNINGS	49953	53437	68205	83322	100354
OTHER RESERVE	-949	-1602	-554	-554	-554
(-)OWN SHARES	-7	-22	-15	-15	-15
PROFIT ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT	6204	6619	8191	9005	11956
(-)DIVIDENDS	-1667	-2029	-2324	-2745	-3192
OTHER COMPREHENSIVE INCOME	-15039	-21776	-30482	-11907	-21359
NON CONTROLLING INTEREST	11761	12344	12583	16772	18012
EQUITY	102699	106833	114949	153223	164545
TOTAL LIABILITIES AND EQUITY	1339125	1444305	1540567	1643245	1752767

Consolidated Profit & Loss	2016	2017	2018	2019	2020
<i>\$ millions</i>					
Revenues	44 232	48 355	51 144	53 889	56 475
Cost of Sales	-18 737	-20 400	-18 737	-18 839	-18 623
Provisions and Impairments	-12 134	-12 317	-13 321	-14 416	-15 831
Depreciation	-2 364	-2 593	-2 328	-2 104	-1 835
EBT	10 997	13 045	16 758	18 530	20 187
Gains or Losses from Non-Financial Assets	-229	-954	-1 465	-1 728	-2 412
Income Taxes	-3 282	-3 884	-4 912	-5 397	-5 710
Gain or Losses from Discontinued Operations	0	0	0	0	0
Consolidated Net Profit	7 486	8 207	10 380	11 404	12 065
<i>Other Comprehensive Income:</i>					
Other comprehensive income (loss), net of taxes	-303	-7 320	-2 686	-2 686	-2 686
Total Comprehensive Income	7 183	887	7 694	8 718	9 378

Company Group	2016	2017	2018	2019	2020
Consolidated Free Cash Flows					
<i>\$ millions</i>					
Net Income	7 486	8 207	10 380	11 404	12 065
Change in total assets	-1 136	105 181	17 598	78 840	92 735
Change in Cash, Cash Balances at Central Bank and Other Deposits on Demand	-1 297	34 541	-12 422	6 570	7 008
Change in Financial Assets Held for Trading	1 841	-22 729	32 047	10 498	11 197
Change in Financial Assets Designated at Fair Value Through Profit or Loss	-13 434	3 173	6 964	2 782	2 968
Change in Financial Assets Available-For-Sale	-5 262	16 497	5 652	9 259	9 876
Change in Loans and Receivables	3 848	63 009	-14 571	43 947	38 555
Change in Investments Held-For-Maturity	10 113	-977	-1 367	-1 637	-1 770
Change in Hedging Derivatives	2 650	-1 840	-1 691	-1 498	-1 281
Changes in the Fair Value of Hedged Item in Portfolio Hedge of Interest Rate Risk	102	-194	-107	-42	13
Change in Investments	1 585	1 348	-885	353	377
Change in Insurance contracts linked to pension	-30	-30	-24	-19	-15
Change in Reinsurance Assets	-	10	19	29	41
Change in Tangible Assets	-2 035	-311	-1 869	-3 163	-3 902
Change in Intangible Assets	-9	-738	-759	-720	-598
Change in Tax Assets	-136	2 565	3 366	4 370	5 657
Change in Other Assets	802	1 349	3 489	8 929	25 928
Change in Non-Current Assets Held For Sale	126	9 508	-244	-816	-1 317
Change in total liabilities	-5 081	101 046	8 358	72 306	86 057
Change in Financial Liabilities Held For Trading	3 547	-1 141	7 851	21 766	35 844
Change in Financial Liabilities Designated at Fair Value Through Profit or Loss	-14 505	19 353	-4 436	10 401	17 128
Change in Financial Liabilities at Amortised Costs	4 897	81 829	2 633	31 379	18 659
Change in Hedging Derivatives	-781	-112	981	1 701	2 801
Change in Changes in the Fair Value of Hedged Item in Portfolio Hedge of Interest Rate Risk	274	-118	14	65	107
Change in Liabilities Associated with Non-Current Assets Held For Sale	-	-	-	-	-
Change in Liabilities Under Insurance Contract	25	465	-265	161	265
Change in Provisions	-35	30	1 106	2 939	4 841
Change in Tax Liabilities	648	-781	926	1 606	2 644
Change in Other Liabilities	849	1 521	-452	2 288	3 768
FCFE	3 541	4 072	1 140	4 870	5 387
Change in Equity (cash)	-3 540	-4 073	-1 140	-4 870	-5 387

	2016	2017	2018	2019	2020
FCFE	3 541	4 072	1 140	4 870	5 387
Present Value of equity cash flows				74 791	
Equity Value				74 791	
Number of shares outstanding				16 136	
Payout ratio	49,36%	56,88%	54,70%	54,70%	54,70%
Retention ratio				45%	
ROE	7,43%	7,83%	9,31%	9,56%	9,58%
Long term Growth rate				4,33%	
Price Target at Year-End 2019 (€)				4,6350	
Dividend Growth Model					
EPS	0,384	0,410	0,525	0,577	0,610
DPS	0,190	0,233	0,287	0,316	0,334
Price Target at Year-End 2019 (€)				4,6350	

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Report Recommendations

Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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