LISBON
SCHOOL OF
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UNIVERSIDADE DE LISBOA

MASTER OF SCIENCE IN
FINANCE

MASTERS FINAL WORK
PROJECT

EQUITY RESEARCH:
ROYAL DUTCH SHELL, PLC

SÉRGIO SOUSA

NOVEMBER 2020

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SUPERVISOR:
VICTOR MAURÍLIO SILVA BARROS

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Abstract

Royal Dutch Shell, plc (Shell, or RDS) is the largest integrated company in the Oil and Gas sector, in terms of assets. It operates globally, with regard to the geography in which it has interests, and integrates the entire value chain into its business model. With **more than a century of history**, it tries to diversify its businesses with an increasingly important presence in the production of energy from renewable sources and in electricity retail.

Shell (NYSE, Class A:US) has a **REDUCE** recommendation with a target price (TP) for 20YE of $ 33.58, a potential annualized return of 9.9%, with high risk.

The divergence of the current price with our recommendation is due to: i) **too optimistic prospects about the capacity to contain a second wave of COVID-19 globally**; ii) the **drop in consumption** due to the confinement resulting from the COVID-19 pandemic; iii) **supply glut of oil on the market**; iv) the global economic recession environment; v) some **financial leverage** compared to the main direct competitors; vi) the need for high levels of costs in optimizing the asset portfolio through expensive acquisitions and the sale of assets that, until recently, were seen as strategic; vii) **low prospects of a sustainable rise in oil price**.

Management intends **to increase its presence in the current context of energy transition** to more environmentally sustainable sources. Proof of this is that already in 2016 made a major investment to increase its exposure to natural liquid gas (the least polluting fossil fuel) and since then until now it has increased its presence in obtaining energy from various renewable sources, to know the various business models and be able to become a relevant player in this market in a very vigorous way. The **remuneration of the management bodies is also linked to the company's environmental performance**.

JEL classification: G10; G11; G12; G17; G32; G34; G35; L71; Q31; Q35; Q41; Q42.

Keywords: Royal Dutch Shell, plc; Oil & Gas; Natural Gas; Renewables; Power; Equity Research; Valuation.

Resumo

A Royal Dutch Shell, plc (Shell) é a maior empresa integrada no setor de Oil & Gas, em termos de ativos. Opera globalmente, no que se refere à geografia onde tem interesses, e integra no seu modelo de negócio toda a cadeia de valor. Com mais de um século de história tenta **diversificar o seu negócio** com uma, cada vez mais importante, presença na **produção de energia a partir de fontes renováveis** e no retalho de energia elétrica.

A Shell tem uma recomendação de **REDUZIR** com um **preço alvo para o final do ano de 2021 de $33.58**. Um potencial de subida de 13.2% ou uma **rentabilidade anualizada de 9.9%, com elevado risco.**

A divergência do preço atual com a nossa recomendação deve-se i) a **perspetivas demasiado otimistas quanto à capacidade de conter uma segunda vaga de COVID-19 a nível global**; ii) à **quebra no consumo** por via do confinamento derivado da pandemia da COVID-19; iii) a um **excesso de petróleo no mercado**; iv) ao ambiente de recessão económica a nível mundial; v) alguma **alavancagem financeira** comparativamente aos principais competidores diretos; vi) necessidade de manter elevados custos na otimização do portfólio de ativos por via de aquisições dispendiosas e de alienação de ativos até há pouco tempo vistos como estratégicos; vii) **baixas perspetivas de aumento sustentável do preço do petróleo**.

A gestão pretende **aumentar a sua presença no atual contexto de transição energética** para fontes ambientalmente mais sustentáveis. Prova disso é que já em 2016 fez um avultado investimento para aumentar a sua exposição ao gás líquido natural (o combustível fóssil menos poluente) e daí até à atualidade tem aumentado de forma recorrente a sua presença no setor de energias de fontes renováveis, pretendendo conhecer os vários modelos de negócio e de forma bastante vigorosa poder tornar-se um *player* relevante nesse mercado. Também a **remuneração dos órgãos de gestão está *linkada* ao desempenho ambiental** da empresa.

Classificação JEL: G10; G11; G12; G17; G32; G34; G35; L71; Q31; Q35; Q41; Q42.

Palavras-Chave: Royal Dutch Shell, plc; Equity Research; Petróleo; Gás Natural; Renováveis; Preço de um ativo.

Acknowledgements

I wish to thank to my family for all the support. To my wife Sofia for being always present and supportive, to our daughters, Mariana and Rita, for being so comprehensive with their missing father. To my mother, father, brother and remaining family for being true “cheerleaders”.

To the family that we choose, the friends, for the constant incentive. A special word to Emanuel who is always nearby when I need.

And, to the family that I gained in academia, colleagues and professors, the latters for being a reference, the first ones for being real companions, some like a real brotherhood. Pedro and António will be always among my dearest friends.

To Professor Victor Barros, for all the motivation and availability.

“Only the dead have seen the end of war”

Plato

This quote was often mentioned at the end of each master's cycle as a reminder of the challenges that were approaching with the arrival of a new cycle. With the completion of the MFW new challenges will arise ...

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Terms and abbreviations

Currencies	
$	US dollar
€	euro
£	sterling

Units of measurement	
acre	approximately 0.004 square kilometres
b(/d)	barrels (per day)
boe(/d)	barrels of oil equivalent (per day); natural gas volumes are converted into oil equivalent using a factor of 5,800 scf per barrel
kboe(/d)	thousand barrels of oil equivalent (per day); natural gas volumes are converted into oil equivalent using a factor of 5,800 scf per barrel
MMBtu	million British thermal units
megajoule	a unit of energy equal to one million joules
mtpa	million tonnes per annum
per day	volumes are converted into a daily basis using a calendar year
scf(/d)	standard cubic feet (per day)

Products	
GTL	gas to liquids
LNG	liquefied natural gas
LPG	liquefied petroleum gas
NGL	natural gas liquids

Miscellaneous	
ADS	American Depositary Share
AGM	Annual General Meeting
API	American Petroleum Institute
CCS	carbon capture and storage
CCS earnings	earnings on a current cost of supplies basis
CO_2	carbon dioxide
EMTN	Euro medium-term note
EPS	earnings per share
FCF	free cash flow
FID	final investment decision
GAAP	generally accepted accounting principles
GHG	greenhouse gas
HSSE	health, safety, security and environment
IAS	International Accounting Standard
IEA	International Energy Agency
IFRS	International Financial Reporting Standard(s)
IOGP	International Association of Oil & Gas Producers
IPIECA	International Petroleum Industry Environmental Conservation Association (global oil and gas industry association for environmental and social issues)
LTIP	Long-term Incentive Plan
OECD	Organisation for Economic Co-operation and Development
OML	oil mining lease
OPEC	Organization of the Petroleum Exporting Countries
OPL	oil prospecting licence
PSC	production-sharing contract
PSP	Performance Share Plan
REMCO	Remuneration Committee
SEC	US Securities and Exchange Commission
TRCF	total recordable case frequency
TSR	total shareholder return
WTI	West Texas Intermediate

1. Research Snapshot

Royal Dutch Shell: looking to thrive in the energy transition

We issue a **REDUCE recommendation** for Royal Dutch Shell, plc ADS (RDS or Shell) with a **2021YE TP of $33.58**, based on a WACC method, representing an upside potential of 13.2% from August 31st, 2020 closing price of $29.68, or an **annualized return of 9.9%**, although with **high risk** (Figure 1). **Business variables are very volatile. This effect has a high impact on the company`s valuation**.

In an unstable commodities price landscape Shell profits from its resilient portfolio. Strong cash generation of upstream business will provide enough liquidity to the strategic ambitions of Shell, which are focused on the energy transition to cleaner sources. Until 2020 Shell will invest $2 billion yearly in the New Energies division and, after that, surely that amount will multiply.

A financial stronghold

Shell management has the tradition to provide a generous remuneration to its shareholders but **the one thing** that it does not abdicates is the **healthy financial position of the company**. As the oil price collapsed, the management did not hesitate to cut dividends and to suspend the share repurchases. A **gearing[1] of 15-25% is the management target** (Figure 2), and, as revenues are expected to reduce, Shell management slashed shareholder remuneration instead of jeopardizing the strategy deployment. Capex (Figure 3) and debt reduction will assure the company`s future, not shareholder return.

From big oil to big energy

While investing for the future, Shell still meets today`s energy demands. Its core upstream oil and gas business continues to deliver significant projects in Deep Water, Shales and Conventional Oil and Gas. Fossil fuels are expected to remain the most important component in the global energy mix for the first half of the century (Figure 4). To reduce greenhouse gases (GHG) emissions, Shell invests in developing carbon capture and storage (CCS), develops hybrid solutions like iShale® (the field of the future with multiple upgrades like solar-powered facilities), provides natural gas to replace coal for power generation and develops nature-based solutions like advanced biofuels. Also invests in Hydrogen, charging for battery-electric vehicles and in power generation from low-carbon sources such as wind, solar and natural gas.

However, for now, oil price sets the pace

Shell`s portfolio is highly resilient and with lowering breakeven levels. The management is consistently delivering objectives proposed in its strategic goals. But, in the near-term, and until a more diversified stream of cashflows may be developed (like the objective of becoming an integrated power player) **oil price is king**. It is, by far, the most relevant key driver of profitability (Figure 5).

Figure 5- TP sensitiveness to commodity price ($/ share)

Annual avg. Brent price ($/b) for 2020F										
31.2	33.2	35.2	37.2	39.2	41.2	43.2	45.2	47.2	49.2	51.2
3.4	9.5	15.5	21.5	27.6	33.6	39.6	45.6	51.7	57.7	63.7

Source: Author analysis

[1] In this report we will consider "Gearing" as RDS management does= net debt/(net debt+total equity)

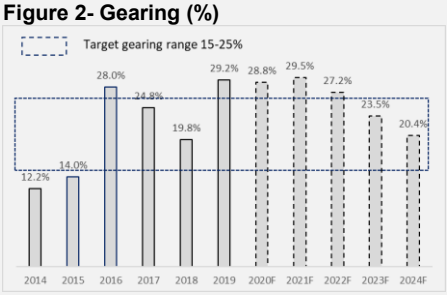
Target Price 2021YE **$33.58**
Current Price (Aug.31st) $29.68
Upside potential ⬆ 13.2%
Annualized return ⬆ **9.9%**
High risk

Bloomberg/ Reuters code
RDS/A:US/ RDSa

Figure 1 – 52-week stock price

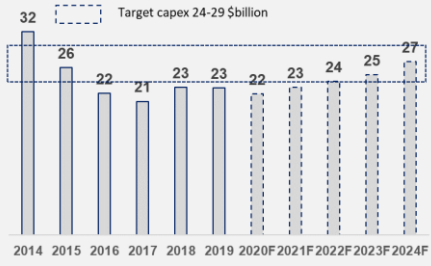
Source: Author analysis

Figure 2- Gearing (%)



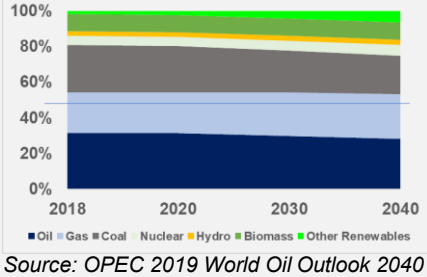
Source: Author analysis

Figure 3- Capex ($ billion)



Source: Author analysis

Figure 4- Oil and Natural gas primary energy source global demand (%)



Source: OPEC 2019 World Oil Outlook 2040

2. Business Description

The Company

Royal Dutch Shell, plc (Shell or RDS) is an international energy company focused on the exploration, development, production, refining and marketing of oil and natural gas, as well as in the manufacturing and marketing of chemicals. With a **growing presence in power generation, including from low-carbon sources** such as wind and solar, and new fuels for transport, such as advanced biofuels and hydrogen.

It is one of the world`s largest independent energy companies in terms of market capitalization, cash flow from operations (Figure 7) and production levels. Its fully integrated business is one significant competitive advantage as it facilitates the global portfolio optimization and to capture synergies along the value chain.

Operates in over seventy countries, has around 83,000 employees, sold over seventy-four million tonnes of liquified natural gas (LNG) during 2019, operates twenty-one refineries and produces 3.7 million barrels of oil equivalent (mboe) per day.

The History

Shell first appeared as a corporation in 1897, when Marcus Samuel formed the Shell Transport and Trading Company.

In **1907 the Royal Dutch Petroleum Company and Shell Transport and Trading merged**, the latter's brand name and symbol (Shell and the pecten) (Figure 8) became the short-form name and emblem of the new Royal Dutch Shell Group. Thus, it has remained ever since.

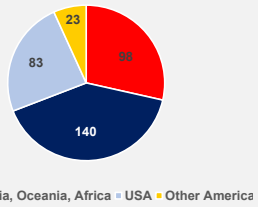
In the early 20th century Shell began to expand rapidly, opening operations in Europe, Asia and the Americas. The inter-war years were a time of rapid expansion for oil companies as the use of motor cars and demand for petrol increased and so, in 1929, Shell Chemicals was founded to advance the refinement of chemicals.

The immediate post-war years were some of the toughest Shell had faced. Reconstruction was very expensive and the market for oil was changing rapidly. Shell launched new exploration programmes in Africa and South America and built new refineries in the UK. The company also invested in larger and higher-powered ships – supertankers – in order to carry more oil in bulk. Alongside it **Shell has always been a brand related to technological and scientific achievements** such as the first commercially viable offshore well or the first sea transportation of LNG in 1964.

In 2005, the Royal Dutch Shell Group underwent a major structural reorganization as the partnership between Royal Dutch Petroleum and Shell Transport and Trading was dissolved and **Shell unified its corporate structure under a single new holding company, Royal Dutch Shell plc.**

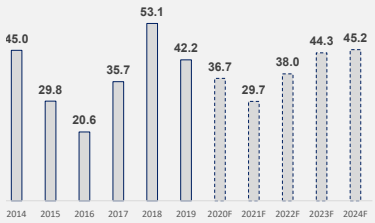
Shell's innovation has continued at pace into the 21st Century. In 2012, the company completed Pearl GTL, in Qatar, the world's largest source of gas to liquids (GTL) products. In 2016, production started at Shell's Stones field, **the world's deepest oil and gas project**. And in 2017, Prelude, **the world's biggest floating liquefied natural gas facility**, sailed 5,800 kilometers from a shipyard in South Korea to its new home in Western Australia. Currently, as an example that technology is a priority and a strength of the group, Shell is contributing to the development of a ship that is expected to be the **world`s first vessel to transport liquefied hydrogen across oceans**, at temperatures of minus-253 Celsius. (Figure 9)

Figure 6-Revenue by geographical area ($ billion)



Source: Shell annual report 2019

Figure 7-Cash flow from operations ($billion)



Source: Shell annual report 2019

Figure 8– The Pecten

Source: Shell annual report 2019

Figure 9– Suiso Frontier- the first vessel to transport liquefied hydrogen

Source: Shell annual report 2019

The company has also **continued to expand by mergers and acquisitions**. In 2015, Shell announced that it would be buying BG Group (a UK oil and gas production company) for $53 billion. The acquisition was completed in February 2016, expanding and enhancing the company's LNG and deepwater portfolio.

Also, **in 2016, Shell created its New Energies business** to focus on exploring and developing commercial opportunities in renewable energy, such as wind and solar.

Financial highlights

Shell managed to reach sales of $344.9 billion (Bn) (Figure 10), **$42.2 Bn of cash flow from operating activities** (Figure 11) which translated into $16.5 Bn of earnings in 2019 fiscal year.

Shell`s reporting business segments

As previously detailed, Shell business evolved to a fully integrated business, capable of capture synergies along the full value chain (Appendix 6). With this business model this major energy company tries to manage the commodity price volatility properly.

Thus, the company reports its results in four segments.

Integrated Gas

In this segment Shell manages liquified natural gas (LNG) activities and the conversion of natural gas into gas-to-liquids (GTL) fuels (Figure 12) as well as the New Energies portfolio. It includes natural gas and liquids exploration and extraction, and the operation of upstream and midstream that delivers it to market. It also markets and trades natural gas, LNG, electricity and carbonemission rights.

It is interesting to detail the new energies business in which Shell explores emerging opportunities linked to the energy transition. Focused on **power, from generation to electric-vehicle charging to integration into trading**, as well as on new fuels for transport, including advanced biofuels and hydrogen. **Shell puts big efforts in this subsegment** as it bets on building on its strengths while embracing change.

In 2019 revenue provided by this segment were 12% of total sales but corresponded to **54.5% of total earnings** at the bottom line.

Upstream

While investing for the future Shell continues to meet the energy demand of today with its Upstream business.

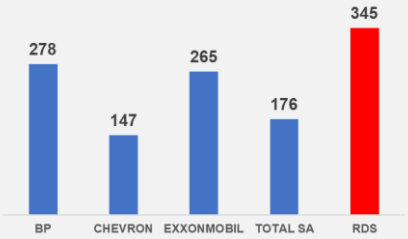
In the upstream business segment Shell **explores and extracts crude oil, natural gas and natural gas liquids**. Shell is also involved in the extraction of bitumen from mined oil sands and its conversion into synthetic crude oil. It also operates the infrastructure necessary to deliver them to the market.

In 2019 production was 1,001 million boe compared with 989 million boe in 2018. (Figure 13) Increases were from new field start-ups and the continuing ramp-up of existing fields, in particular in the Permian Basin in the United States of America (USA), in the Gulf of Mexico and in Brazil.

In 2019 segment earnings represented 26.5% of total earnings.

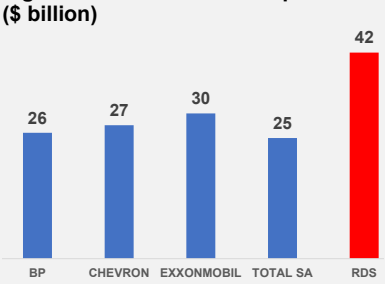
Shell`s proved developed reserves in 2019 YE were 8,809 million boe and total proved developed and undeveloped reserves summed 11,096 million boe, or, around eleven years of production.

Figure 10– Revenues ($ billion)



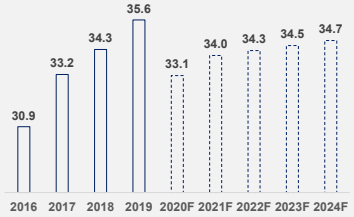
Source: Companies annual reports 2019

Figure 11– Cashflow from operations ($ billion)



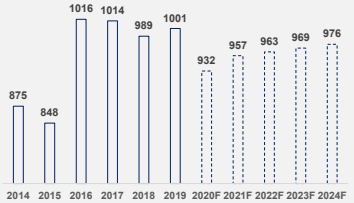
Source: Companies` annual reports 2019

Figure 12– LNG Liquefaction volumes (million tonnes)



Source: Shell annual report 2019 and author analysis

Figure 13– Upstream production (mboe)



Source: Shell annual report 2019 and author analysis

Downstream

The downstream business **consists of oil products and chemicals activities**. They form part of an integrated value chain that trades and refines crude oil and other feedstocks into products for domestic, industrial and transport use. Those products include gasoline, diesel, heating oil, aviation fuel, marine fuel, biofuel, lubricants, bitumen and Sulphur. Shell also produces and sells petrochemicals for industrial use.

Sales of downstream segment were 85% of total revenues from sales.

Refinery availability was 91% in 2019, unchanged from 2018.

Corporate

It **covers the non-operating activities** supporting Shell. Comprises Shell`s holdings and treasury organization, its self-insurance activities and its headquarters and central functions. All finance expense and income, as well as related taxes, are included in the Corporate segment earnings rather than in the earnings of the business segments.

Key drivers of profitability

Price of commodities is the most relevant driver of Oil & Gas companies` profitability (Figure 14). Yet, is also the most difficult to manage as it is provided by the market. It is **driven by supply and demand balance, linked to economic cycles and to World GDP growth**. (Appendix 7)

In **2020, price volatility has reached extreme values**, leading some more catastrophist analysts to predict the end of the entire industry. This level of uncertainty is the main cause preventing the company from growing its value. To manage this, Shell is continually **optimizing its portfolio** in search of the lowest breakeven and **reducing operating costs** (Figure 15), (Figure 16). Maintaining a diversified portfolio is another way how Shell mitigates the impact of price volatility.

Strategy

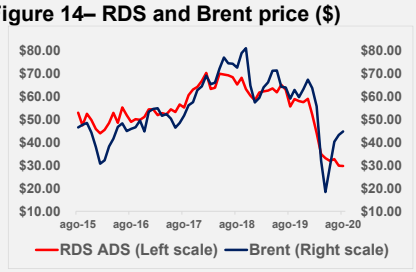
Shell`s strategy is to provide oil, gas and low-carbon energy products and services as the world`s energy system transforms.

That strategy is founded on the outlook that the rising standard of living of a growing population (mostly at emerging economies) is likely to continue to drive upwards demand for energy for years to come but also the need to find a lower-carbon energy system to deal with climate change. So, even if is expected that liquid and gaseous fuels will continue to be an important part of the energy mix, over time electricity needs to play a bigger part in the world in order to meet the Paris Agreement goals. That said, it means there is a transition under way to a lower-carbon energy system although its pace and path forward are uncertain which requires the company to be agile decision-making. Confirming that view, **Shell spends $2 billion per year until 2020 in the New Energies division** and is expected to expand that amount in the coming years.

Shell`s management identifies three strategic ambitions:

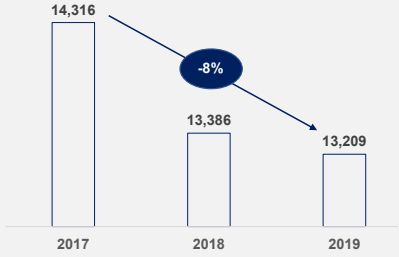
- To **thrive in the energy transition** producing and distributing more and cleaner energy (eg. acquisition of ERM power, one of Australia`s leading commercial and industrial electricity retailers; joint venture with EDP Renewables to build wind farms off Massachusetts)

Figure 14– RDS and Brent price ($)



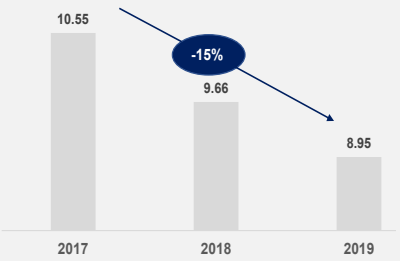
Source: NYSE, EIA and author analysis

Figure 15– Employee costs ($ million)



Source: Shell annual report 2019

Figure 16– Average production cost oil, natural gas liquids and natural gas ($/boe)



Source: Shell annual report 2019

- To **provide a world-class investment case** by growing organic free cash flow and increasing returns maintaining a strong financial framework (eg. Gearing under 30%) and resilient portfolio, and
- To **sustain a strong societal license to operate and make a positive contribution to society** through its operations (eg. Partnership with Forestry and Land Scotland to preserve and extend the ancient forest of Glengarry, in the Scottish Highlands).

Shareholder structure

Royal Dutch Shell is traded under **two classes of shares. Both class A and class B** ordinary shares have identical rights, differing to the dividend access mechanism, which applies only to the class B ordinary shares.

Dividends paid on Class A-shares have a Dutch source for tax purposes withhold. Class B shareholders receive dividends with no withholding tax. Each shareholder will pay taxes according to his/ her personal tax situation.

Royal Dutch Shell plc has an American Depositary Share (ADS) facility managed by JP Morgan Chase Bank, traded in NYSE. Each ADS is equivalent to two Royal Dutch Shell ordinary shares.

Shell shares (both class A and B) are traded in Amsterdam Stock Exchange (Euronext) in Euros, in London Stock Exchange in GBP and in **New York Stock Exchange in USD**.

With 99,6% of free-float Shell shares are mainly in the hands of **mutual funds and institutional investors**. (Table 1)

Table 1- Interests of investors with 3% or more of A and B shares combined at February 14, 2020

	Total A and B	%
BlackRock Inc	563,079,223	7.14%
The Capital Group	391,643,477	4.99%
The Vanguard Group	338,195,671	4.29%
Sum	1,292,918,371	16.42%

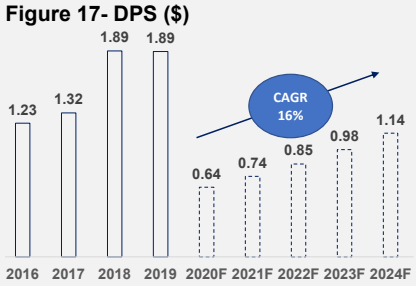
Source: Shell annual report 2019

Dividend policy

Shell dividend policy is to grow dividend according to management view of earnings and cash flow.

In March 2020, as the COVID 19 pandemic spread and oil price imploded, the Board of directors announced an historic decision to **cut the dividend by two thirds** for the first time since the end of World War II. That decision has shaken some shareholders beliefs and stock the price has suffered accordingly. (Figure 17)

Figure 17- DPS ($)



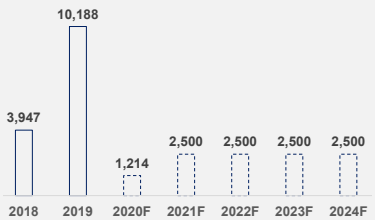
Source: Shell annual report 2019 and author analysis

In the base of that decision Mr van Beurden referred the necessity to maintain financial resilience, a strong balance sheet and provide further flexibility to manage the uncertainty for the remaining 2020 and maybe more. He also mentioned that next quarters` dividends would be linked to oil price evolution and cash flow generation. Again, management showed no fear in protecting the company`s strong financial health.

Based on our view of the economic landscape and estimates for recovery after COVID-19 we believe that in the second half of 2021 world will start to recover to a pre-pandemic level and by that fact we think that a small but steady dividend growth could occur. We estimate that dividend growth to be around 16% yearly. That number is aligned with the expected Brent price in the forecasted period.

Another way to remunerate the shareholders is to buyback shares. (Figure 18) Shell has a buyback programme with mandate to buyback $25 billion shares started July 2018 but, after the completion of the tranche started on January 30th 2020 of $1 billion, **next tranche of that programme was also put on hold** to protect company`s liquidity. The company's intention remains to buy back at least $25 billion of its shares, but the pace remains subject to macro conditions and further debt

Figure 18– Repurchase of shares ($ million)



Source: Shell annual report 2019 and author analysis

reduction. The number of shares repurchased until now is about $15.75 billion, or about two thirds of the programme completed.

Again, we estimate that in 2021 the current programme of share repurchases may be resumed, and completed in four more years.

3. Management and Corporate Governance

Governance Model

The Board applies the Principles and complies with the provisions set out in the UK Corporate Governance Code issued by the Financial Reporting Council (FRC) in July 2018. Besides complying with corporate governance requirements in the UK, the Company complies with the rules of Euronext Amsterdam as well as Dutch securities laws because of its listing on that exchange. The Company likewise adheres to US securities laws and the New York Stock Exchange (NYSE) rules and regulations because its securities are registered in the USA and listed on the NYSE.

Royal Dutch Shell plc has a single-tier Board of Directors chaired by a Non-executive Chair, Charles O. Holliday. (Figure 19) The executive management is led by Chief Executive Officer, Ben van Beurden (Figure 20).

The Board of Directors

The Board of Directors has the mission of promoting the long-term sustainable success of the Company, generating value for shareholders and contributing to wider society.

Shell`s Board meets eight times a year and has a formal schedule of matters reserved to it. Its responsibilities include:

- Approval of overall strategy and oversight of management;
- Changes to the corporate and capital structure;
- Approval of financial reporting and controls and interim dividends;
- Oversight of risk management and internal control;
- Approval of significant contracts;
- Determining succession planning and new Board appointments;
- Remuneration for the Chair and Executive Directors; and
- Corporate governance matters.

Royal Dutch Shell`s Board of directors is composed by eleven members- the Chairman, three executive directors and seven independent non-executive directors.

There are Board Committees looking after several topics.

- **Audit Committee**: In order to assist the board of the company in fulfilling its responsibilities related to internal control and financial reporting exists the Audit Committee which is formed by four non-executive directors, chaired by Ann Godbehere;
- **The Safety, Environment and Sustainability Committee**: chaired by Sir Nigel Sheinwald, assists the Board in reviewing the practices and performance of the Shell Group of Companies, primarily concerning safety, environment including Climate Change and sustainability

Figure 19– Charles O. Holliday Chair

Age: 72

Nationality: US Citizen

Board since: September, 2010

Chair since: May 2015

Graduation: Industrial engineering at University of Tennessee, 1970

Previous career:

- *CEO and Chair of DuPont from 1999 to 2009*
- *Chair of Bank of America Corporation*

Board committee membership: Chair of the Nomination and Succession committee

Source: Shell annual report 2019

Figure 20– Ben Van Beurden CEO

Age: 61

Nationality: Dutch

CEO since: January 2014

Graduation: Chemical engineering at Delft University of Technology, 1983

Previous career:

- *Joined Shell after graduation*
- *Executive Vice President Chemicals from 2006 to 2013*
- *Downstream Director in 2013*

Source: Shell annual report 2019

- **Nomination and Succession Committee**: the purpose of this committee is to lead the process for appointments to the Board of Directors of the Company, make recommendations to the Board on all Board appointments and re-appointments, review and make recommendations to the Board on succession planning and review and make recommendations to the Board on corporate governance guidelines. Is chaired by Mr. Charles O. Holliday, the chairman of the company;
- **Remuneration Committee**: the purpose of the Remuneration Committee is to determine and agree with the Board of Directors of the Company the remuneration policy and personal remuneration package for the Chair, the CEO, Executive Directors and senior management of the Company and to monitor the structures and levels of remuneration for other senior executives and make recommendations if appropriate. Neil Carson chairs this committee.

The Executive Commission

The Executive committee operates under the direction of the CEO, Ben van Beurden, in support of his responsibility for the overall management of Shell`s business. The CEO has final authority in all matters of management that are not within the duties and authorities of the Board or of the Sharehoders` general meeting. It is responsible for the implementation of the overall strategy approved by the board, the operational management of the Company and the business enterprise connected with it.

Currently the composition of the executive committee is as follows:

- Ben van Beurden, CEO;
- Jessica Uhl, CFO;(Figure 21)
- Harry Brekelmans, Projects and Technology Director;
- Donny Ching, Legal Director;
- Ronan Cassidy, Chief Human Resources & Corporate Officer;
- Wael Sawan, Upstream Director;
- Huibert Vigeveno, Downstream Director; and
- Maarten Wetselaar, Integrated Gas and New Energies Director

The executive committee members long experience at the industry (eg. CEO Ben van Beurden is employed by Shell for the last 35 years) is a good assurance that the strategy is going to be well deployed. Alongside this, the way Directors Remuneration bonuses (Figure 22) are calculated, guarantees that the **directors` interests are aligned with the shareholders` interests** as the long-term incentive plan (LTIP) is designed to ensure that the executive committee efforts are to transform Shell in order to deliver shareholder value and better performance. Besides this, **bonuses are paid 50% in cash and 50% in shares subject to a three-year holding period**, which applies beyond an Executive Director`s tenure. The CEO`s target bonus was also reduced to 125% from 150%.

Furthermore, the Remuneration Committee believes that Executive Directors should align their interests with those of shareholders by holding shares in Royal Dutch Shell plc. The CEO is expected to build a shareholding with a value of 700% of base salary, and the CFO 400% of base salary (increased to 500% from 2020).

Figure 21– Jessica Uhl CFO

Age: 52

Nationality: US Citizen

CFO since: March 2017

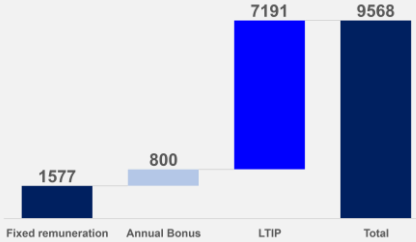
Graduation: Business Administration at Berkeley

Previous career:

- *Joined Shell in 2004 supporting the renewables business*
- *Head of external reporting from 2007 to 2009*
- *Vice President Finance for the Lubricants business from 2009 to 2010*
- *Vice President Controller for Upstream and Projects from 2010 to 2012*
- *Vice President Finance for Upstream Americas Unconventionals from 2013 to 2014*
- *Executive Vice President for Upstream Americas from 2014 to 2015*
- *Executive Vice President Finance for the Integrated Gas business from 2016 to 2017*

Source: Shell annual report 2019

Figure 22– Mr Van Beurden`s salary build up (€ thousand)



Source: Shell annual report 2019

Since Ben van Beurden was named CEO, Shell has achieved some milestones such as ending scrip dividend; starting the current $25 billion Buyback programme; establishing Shell New Energies; Shell has announced industry-leading initiatives regarding energy-transition to a lower-carbon future, including the introduction of Shell`s Net Carbon Footprint ambition; Shell acquisition and integration of BG Group; and has executed a reshape of its portfolio completing also a $30 Billion divestment of non-core assets, which transformed Shell Group to a simpler organization (Table 2).

Such track record of delivery is founded in a strong framework of good governance that is recognized by independent assessments.

Since 2014, when the current CEO took office, Shell reshaped itself into a more modern organization. Clearly assuming a path taking into account new and cleaner ways of producing energy and also with a different approach of society matters. The governance framework seems to us appropriate given that the CEO, and remaining executive members, have an independent structure that controls its actions, and simultaneously protects the interests of the company in case of misconduct.

Table 2- Major achievements since 2016 which are the base of LTIP of CEO`S salary

Ending scrip dividend	☑
Start of $25 billion Sharebuyback	☑
Establishment of Shell New Energies	☑
Introduction of Shell`s Net Carbon Footprint initiative	☑
Establishment of Methane Guiding Principles	☑
Acquisition and integration of BG Group	☑
Divestment programme of $30 billion non-core assets	☑

Source: Shell annual report 2019

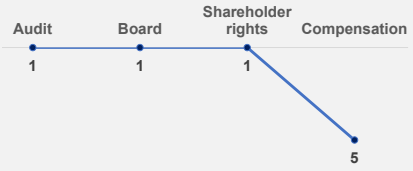
Sustainability and ESG metrics

Shell is committed to United Nations sustainable development goals, which seek to tackle the world`s economic, social and environmental challenges by 2030. **Sustainability at Shell means providing more and cleaner energy solutions in a responsible manner** – in a way that balances short- and long-term interests, and that integrates economic, environmental and social considerations into decision-making.

Reiterating that positioning about ESG, Shell is included in some of the leading indices that assess companies' environmental, social and governance (ESG) performance on behalf of investors such as **the CDP (Carbon Disclosure Project) in which Shell achieved a B Score (Scores range from A better to D worst)** or FTSE4Good, since its inception in 2001. Shell also responds to other ESG data indices and benchmarks, including the Dow Jones Sustainability Index or MSCI ESG ratings[2] in which it is "A" rated, which means that there are only 20% of companies better ranked.

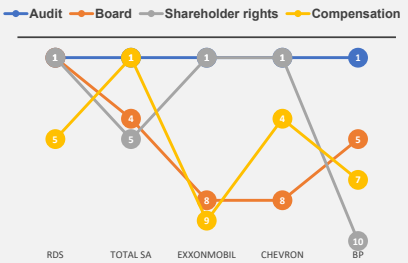
Royal Dutch Shell plc's ISS governance QualityScore[3] as of 12 June 2020 is 1. The overall score is based on the following single pillar scores: Audit- 1; Board- 1; Shareholder rights- 1; Compensation- 5 (Figure 23).

Figure 23– ISS Governance QualityScore pillars



Source: Yahoo Finance | Profile

Figure 24– ISS Governance QualityScore peers comparison



Source: Yahoo Finance | Profile

[2] https://www.msci.com/esg-ratings/issuer/royal-dutch-shell-plc/IID000000002137074
[3] Scores indicate decile rank relative to index or region. A decile score of 1 indicates lower governance risk, while 10 indicates higher governance risk

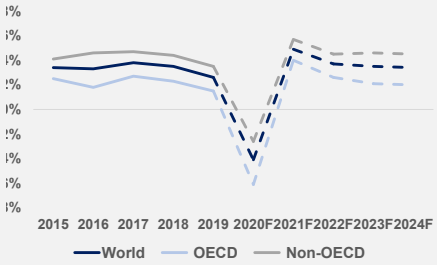
4. Industry Overview and Competitive Positioning

World Economic Outlook

Shadows over world economic GDP growth

After the crisis in the early 2010's, the world real GDP growth has stabilized until 2017, having a mild degradation from 2017 to 2019. In late 2019 and early 2020 as COVID-19 started to impact the global economy so World real GDP growth is expected to decline abruptly to -5%, mainly explained by OECD countries` widespread lockdowns. In 2021, as the Pandemic begins to ease, the world GDP growth is expected to recover in a "V" shaped movement (Figure 25).

Figure 25- World GDP growth (%)



Source: EIU Forecasts

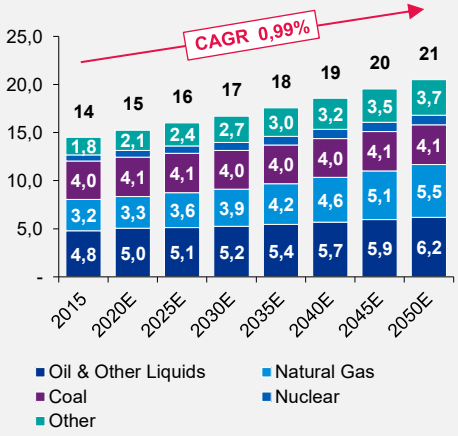
World Population Growth

World Population is expected to increase to 3,5 Bn People 2022F, resulting in a 2% CAGR, between 1990 and 2022F, mainly explained by Asia and Australasia region, increasing from 0,8 Bn people to 1,9 Bn People.

Demand for Primary energy, Oil & Gas

Between 2015/6 and 2050E, the demand for energy consumption is expected to increase from 14 to 21 Gigatonne of Oil Equivalent (GTOE), due to the growth of population and the economic development in non-OECD countries. Despite the development of new sources of energy, particularly, renewables, it is expected that Oil & Gas remain as the main primary sources of energy in the world (56% in 2015 vs 57% 2050E) (Figure 26).

Figure 26– World Primary energy consumption forecast by source (MToe)

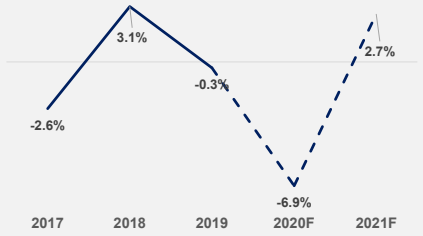


Source: USEIA - International Energy Outlook

Volatile production of Crude Oil, with a slightly predicted growth

Global oil production has been volatile in the first half of 2020 due to the referred declined demand and the implosion of the so-called OPEC+ partnership, after Saudi Arabia and Russia failed to reach an agreement over production levels in 2020Q1. The OPEC+ agreement reached in April 2020, defined that OPEC countries and Russia would cut their production by a collective 9.7 MBbls/d in 2020Q2. Assuming the participants comply with the agreement, it is expected an average contraction of oil supply 6.7% yoy in 2020F, followed by a growth of 2.7% yoy in 2021F (Figure 27).

Figure 27- Petroleum and other liquids total world supply growth y/y (%)



Source: EIA STEO

Crude Oil Price influenced by lower demand

With the surge of Covid-19 cases and consequent widespread lockdowns the demand for crude oil plummeted as global transportation and trade movements nearly stopped. Demand decreased by 8% and the crude oil price reacted in panic mode reaching a minimum of $9.12. Suppliers reduced production, some because they just can not be profitable at that level of prices, some to control oil glut and to prevent even harsher price movements. As the new balance between supply and demand has reached price stabilized around $40. Further movements, in the short term, are dependent of the evolution in demand, mainly conditioned by the severity of future waves of the pandemic.

Global Oil & Gas Industry Overview

Oil & Gas Industry includes global processes of exploration and extraction (upstream), transportation and commercialization of petroleum products (midstream), as well as refining (downstream).
The market structure is an Oligopoly composed of a small set of large players that controls the market and by a group of small companies conditioned by them.
Oil & Gas Industry life cycle is mature, in which market is expected to grow slowly and the presence of its players is high.

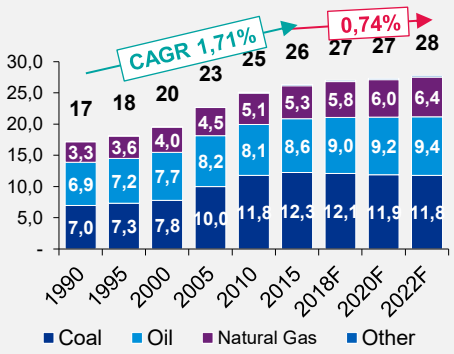
Cyclical activity

By inference, the business cycle of the Oil & Gas industry ranges between 7 and 9 years, considering the correlation between the sales growth rate of the two largest US players, and real GDP USA growth (correlation coefficient amounting to 46%).

Paris Climate Change Agreement and Legal changes

The Paris Climate Change agreement was celebrated following the growth of total CO2 emissions from fuel combustion by a CAGR of 1,71%, between 1990 and 2015. This evaluation was mainly due to coal and other sources of fuel combustion including industrial waste and non-renewable municipal waste (Figure 28). Following the celebration of the agreement, total CO2 emissions from fuel combustion, are expected to increase at a slower CAGR rate of 0,74%, between 2015 and 2022F (Figure 27), resulting from incentives of governments to lower taxes on renewable energies and raising taxes on fuel combustion sources of energy.

Figure 28- Total CO_2 emissions from fuel combustion (Mt of CO_2)



Source: Economist Intelligence Unit

Key Drivers of Industry Profitability

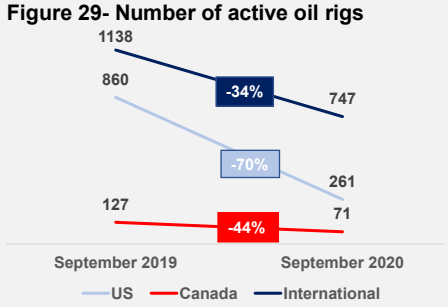
Price (driven by supply and demand) is the Oil & Gas industry most relevant profitability driver, conditioning the level of return. Nevertheless, this is also the most difficult driver to manage, because it is an input from the market. Given this, companies can only act over it by taking long-term contracts, or developing a hedging strategy with derivatives. (Appendix 7)

In addition, price dictates which rigs are profitable, conditioning the production volume and stating the importance of rig portfolio management (Figure 29).

Besides that, to be profitable and create value, companies can lever other value drivers along the value chain, such as refinery yield, flexibility and refining margins, among others.

Major players in the Oil & Gas industry also add enterprise value, through synergies captured over the value chain, by adopting an integrated operating model.

Figure 29- Number of active oil rigs



Source: Baker Hughes Rig Count

Major competitors/ peers

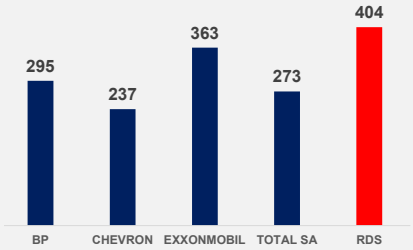
Industry peers were selected based in the Bloomberg Integrated Oil Companies (IOC Group). This Group comprises the companies that operate in the three levels of the value chain (i.e. upstream, midstream and downstream) and are **publicly traded**. Only the top five (by market cap) were selected, Shell is one of the companies in that group.

Additionally, Shell`s management also identifies **Total Sa, Bp plc, ExxonMobil and Chevron** as their strongest competitors.

Common Strategies among Peers

Diversification in emerging markets, M&A, strategic agreements and partnerships, business models integration, portfolio optimization (Figure 30), cost cuts, increase in production, raise profits and returns and maximize value from technology are the major strategies that these companies have in common. European based companies also have in common a strong will to be relevant players at the **renewables** business.

Figure 30- Assets ($ billion)



Source: Companies` 2019 Annual reports

Competitive Positioning

SWOT Analysis

As we focused our analysis at the biggest Oil & Gas integrated companies, they face virtually the same challenges and also have similar competitive advantages, (Figure 31).

Figure 31– Shell SWOT analysis

STRENGTHS	WEAKNESSES
• Brand Power • Fully integrated business • Strong research and development • Strong financial framework and resilient portfolio • Project management skills to develop large and complex projects (e.g. Prelude FLNG) • Worldwide presence (global portfolio) • Strong cash flow generation • ESG framework among strongest of the industry	• Volatility of oil price • High indebtedness • Labor union strikes • Cyclical business
OPPORTUNITIES	**THREATS**
• Emerging markets increasing demand for oil & gas • Deep water and Shales business • Planned Expansions • Commercial opportunities linked to the energy transition (biofuels, hydrogen, wind and solar power) • Energy system becoming increasingly electrified (Currently with more than 10,000 MW of power generation, with more than one-third of that power generated from renewables) • Petrochemicals (fastest-growing hydrocarbon demand sector, with annual growth of 3.7% over the last 10 years)	• Governments regulations • Geopolitical events (e.g. Qatar exit of OPEC; Iran ban) • Terrorism/ Sabotage (e.g. strong presence in Nigeria) • Environmental laws (Paris climate agreement) • COVID-19 impact on demand • Faster than expected global energy transition

Source: Author analysis

Porter's 5 forces

Threat of new entrants | LOW

- The threat of newcomers into the industry is relatively low, given the following factors:
- Industry economies of scale, being necessary a high level of production to reach the break-even and dilute the infrastructure fixed costs;
- Need of high capital requirements (WC and CAPEX), in all stages of the value chain, from Exploration (where investments do not even have a return guaranteed) to Refining (with large facilities), passing by R&D (for new technology e new products) (Figure 33)
- Hard access to distribution channels, dominated by major companies that are vertically integrated, operating in almost every stage of the value chain;
- Restrictive government policies and competitive processes to obtain production licensing, which stands for the long term and protect the actual players; and,
- Expected retaliation from actual players, with substantial financial resources to overcome almost any strategy from newcomers, and with a track record of M&A processes over smaller players.

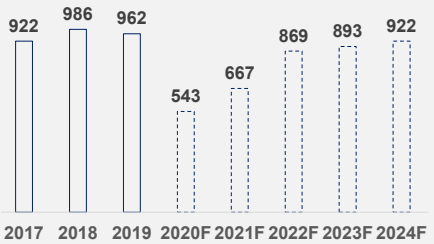
Bargaining power of suppliers | MEDIUM

- Given that most of the players in the industry are vertically integrated throughout the value chain, the most relevant suppliers are oil producer countries, because of the following factors:
- States detain the power to allocate the exploration and production licensing;
- There are no alternative substitute products;
- Oil producer countries cartelization, with a major market share (Figure 34); and,

Figure 32- Porter`s Five Forces

Source: Author analysis

Figure 33- Shell`s R&D Expense ($ million)



Source: Author analysis

- Oil producer countries might integrate forward in the value chain, creating a NOC to explore their own national resources;
- Although this is the powerful side of the negotiation, some factors might offset this power, such as:
- Disruption in cartel organization (e.g. although Qatar is a minor oil producer, its exit from OPEC may become a precedent or a source of future instability in the market structure);
- Political tension and economic sanctions (e.g. Syria and Iran); and,
- Many countries heavily depend on oil exportation for financial stability.

Bargaining power of buyers | LOW

- Bargaining power of buyers is relatively small, by the following factors:
- Vertical integration over the value chain and cartelization within the industry gives companies a higher bargaining power than its customers;
- There is a massive group of different kinds of buyers, comprising since single customers (e.g. refined products), to industries (e.g. petrochemical) and state companies/incumbents (e.g. gas contracts);
- Price is determined in the market (match of supply and demand), being the three main quotations the Brent Blend, the West Texas Intermediate, and the Dubai/Oman;
- Buyers are not price sensitive, given that there is no viable solution to massive alternative product substitution; and,(Figure 35)
- High costumer switching costs, because changing from oil or gas, and other petrochemical or derivatives, to another source of energy is expensive and only possible in the long run.

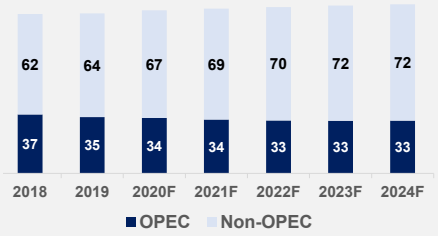
Threat of substitute products or services | MEDIUM

- The actual threat of substitute products is growing to medium-high levels, but:
- No viable solution to massive substitution of plastic and most of petrochemicals;
- Some actual sources of energy tend to lose importance in global energy mix, for environmental (e.g. coal is the dirtiest source of energy in CO2 emissions) and political reasons (e.g. reduction of nuclear mix in France, to 50% in 2035); and,
- Alternative sources only offset the rising demand for energy, doesn't being expected to substitute hydrocarbons in the short-term (Figure 36).
- Despite this, the threat of substitute products tend to rise in the mid-term, with the search and development of alternative fuels (e.g. ethanol from Brazil) and expansion of renewable energy production.

Rivalry among existing competitors | MEDIUM

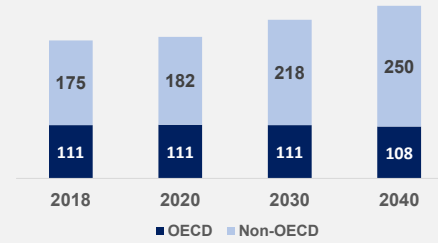
- Being this industry a mature oligopoly, there is a medium-high intensity of rivalry, given that:
- Industry is under stress, so players must fight for additional market share;
- NOCs might not act based on economic rationality, for instance, pursuing political agendas;
- Products have little or no differentiation; and,
- Exit barriers are high given the decommissioning costs of production stoppage (e.g. costs of shut down a well or to abandon a refinery).
- Although the previous factors, some characteristics of the industry partially offset the competition level, such as:
- Players do not compete on price, which is formed in the market by supply and demand match; and,
- Players try to differentiate on brand and services delivered.

Figure 34- Medium-term global liquids supply outlook (mboe/d)



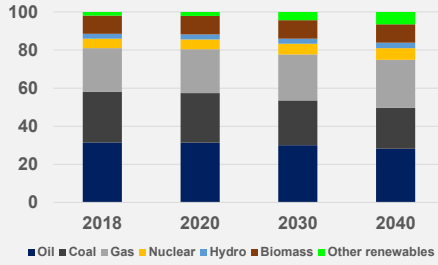
Source: OPEC 2019 World oil outlook

Figure 35- Total primary energy demand, 2018-2040 (mboe/d)



Source: OPEC 2019 World oil outlook

Figure 36- Share of global energy demand (%)



Source: OPEC 2019 World oil outlook

5. Investment Summary

Shell has a **REDUCE** recommendation with a **target for 2021YE of $ 33.58**, representing an **upside potential of 13.2%** or a potential **annualized return of 9.9%, with high risk**, when compared to its **August 31st** closing price of $29.68. (Figure 37)

The divergence of the current price with our recommendation is due to: i) too optimistic prospects about **the capacity to contain a second wave of COVID-19 globally**; ii) the drop in consumption due to the confinement resulting from the COVID-19 pandemic; iii) **supply glut of oil on the market**; iv) the global economic **recession** environment; v) some **financial leverage** compared to the main direct competitors; vi) the need for high levels of costs in optimizing the asset portfolio through expensive acquisitions and the sale of assets that until recently were seen as strategic; vii) **low prospects of a sustainable rise in oil price**.

Shell`s fully integrated business model acts like a shield against volatility, defending (in part) the company of the harshness of economic and commodity price cycles. A very disciplined control of production costs is also among Shell`s main strengths.

Although new energies and power generation is one of Shell`s top strategic priorities, the financial impact of those choices is hard to assess as the company does not disclose that data separately but encompasses the enormous Integrated gas segment.

Despite the will to be one of the greatest players in new energies landscape globally, Shell will remain very focused on its historical core business maintaining **Upstream segment as the heart of the company providing strong and resilient cash generation**. The kind of cash generation that will be used to enable energy transformation and to continue to remunerate shareholders via dividends (that we expect to grow as demand recovers) and/or share buybacks. (Figure 38)

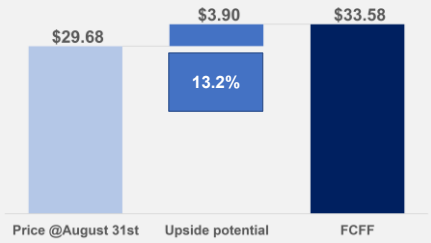
Valuation Methods

We have proceeded to Shell`s **valuation using several absolute methods** and with all of them we have reached consistent valuations, ranging from $32.06 (DDM) to $33.58 (FCFF). In a context of price instability, strategic changes among the different players in industry and consequent unstable future earnings, we have considered the absolute methods to be more accurate. (Figure 39)

Using the flow to equity method (FTE) we value the company at a TP ($33.38), but, such TP is relative to 2021YE, a year when the current **capital structure is not stable** (2019 gross debt to equity is 42% and in 2021 is estimated to be 58%) and by that reason we do not consider that method to be the most suitable to the valuation. Through Total payout model (DDM) our valuation points to a TP of $32.06 2021YE but we took bold assumptions about Shell resuming buybacks and raising dividends that might or might not be accurate. By all absolute methods we reach very similar target prices, which support our reduce recommendation.

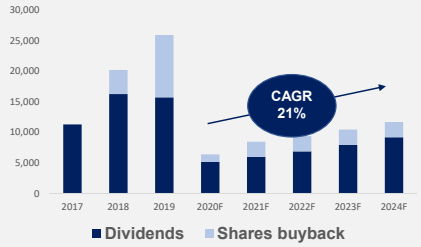
We have also considered relative methods to complement the valuation. About these methods is important to state that the industry passes through a period of high impairment of assets and negative earnings. As the timing and amount of write-downs often are, at least in part, discretionary we tend to consider the EV/EBITDA superior to P/E and EV/EBIT given that EV/EBITDA gives us a better proxy of real performance as nonrecurring items are left out of calculations.[4]

Figure 37- FCFF TP and upside potential



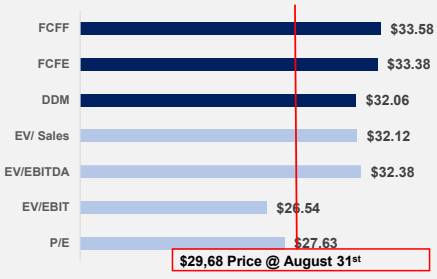
Source: Author analysis

Figure 38- Distributions to the shareholders ($ million)



Source: Shell annual report and author analysis

Figure 39- TP through different methods



Source: Author analysis

[4] Equity asset valuation 2nd edition CFA Society

Investment risks

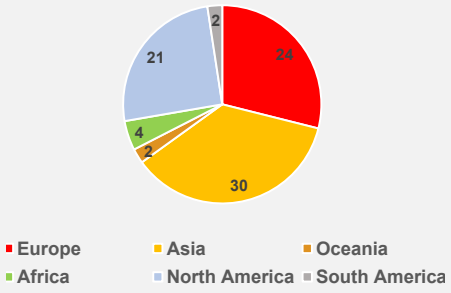
Actual Oil & Gas industry landscape and therefore Shell`s is very unstable. There are certain risks that an investor must be aware prior to his/ her decision of investment in Shell.

Commodity price volatility is very high with the near-term pression to the price to be downwards. Demand has plunged because COVID-19 pandemic induced a slowdown in the global economy and at the same time supply is very abundant with OPEC+ cuts being the main driver of glut prevention.

Another risk to be taken into account is **civil unrest or political instability**. Shell is present in over 70 countries (Figure 40), many with fragile governance and vulnerable to terrorist action so it is vulnerable to incur in losses due to such activities in any geographical area where they may be felt.

In general, business variables are extremely volatile. Such volatility has high impact on valuation.

Figure 40- Number of employees by geographical area (thousands)



Source: Author analysis

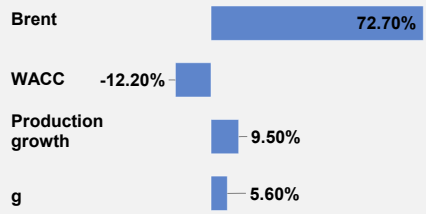
6. Valuation

Forecast

According to our model the main features conditioning Shell`s valuation are:

i) Commodities price; ii) WACC rate and; iii) production growth rate (Figure 41).

Figure 41- TP sensitivity



Source: Author analysis

Figure 42– Brent oil price ($/b)

Source: EIA and author analysis

Commodities price

Commodities price is the most important driver of Shell`s profitability. Oil was always a volatile commodity with price depending on multiple factors, some obvious like World GDP growth and the balance between supply and demand, other with a not so easy to predict outcome like the impact of a storm or more recently a global pandemic. In the first quarter of 2020 Brent price ranged from $68.74 to $51.29. And, after that, in only a few weeks price plunged another 82% (Figure 42). In a totally external manner Shell, and all other industry players, were materially affected and even with its integrated business model, profitability was compromised. A global pandemic aggravated an already started price reduction, and a global recession took place. The extent of generalized lockdowns and consequent balance of supply and demand will condition oil price for the rest of 2020 for sure and, probably, for the most part of 2021 also is expected to be a major issue.

Our valuation was performed with an **estimated average Brent price of $41.42 per barrel for 2020** and a recovery to $49.53 in 2021[5] (average price). For the remaining years of the forecast we used the EIA projections in which Brent is estimated to be priced around mid $60s. Clearly, it is an estimation with a high probability of being inaccurate but in the actual unstable situation is the best source that we found to base our forecast.

WACC rate

After estimating future cash flows, we have used WACC to discount them to 2021YE. Knowing that Shell`s management wishes to maintain rigorous control of debt, stating the desire to return to a **gearing of 15-25%**, we have taken that into account in our financial forecasts. Considering the short-term needs to finance the side

[5] According to EIA STEO

effects of the pandemic, the capex needed to accelerate energy transition we estimate that **the reference gearing range will not be obtained prior than 2023**.

Calculating WACC rate **we have been very conservative**, calculating different cost rates in several different ways.

To compute the **cost of equity** we have considered the **risk-free rate** (RFR) (Appendix 11) for the **US 10 year treasury bonds of 0.55%**. We have chosen to do so because market rates are nowadays historically low and the medium-term estimates are consistent with a lower for longer rates environment. We choose to consider US RFR because **Shell`s debt is issued mainly in USD**.

Regarding **Beta** we have made a regression of Shell`s prices against the MSCI ACWI index (companies of this index are based **worldwide**, just like Shell`s operations) and after, for more robustness, we have proceeded to Blume`s adjustment reaching a value of **0.97**.

We have estimated Beta by other methods but we found more consistence around the number we have calculated with the regression with Blume`s adjustment. (Appendix 12)

Assessing ERP issue, we have taken into account the Operation Based CRP (Table 3), assuming that Shell has operations in so many different locations and in that approach, we can capture risk premia involved in that contrasting locations. (Appendix 13)

All summed up we have calculated a weighted average **Risk Premium of 10.7%**.

Computing all data, the **cost of equity is 10.94%** (Table 4) (Appendix 15).

Calculating **cost of debt** we used historical Shell cost of debt reaching a **4.62%** rate. (Appendix 14)

Computing all data, the proper WACC rate to discount FCFF is 9.55% (Table 5) (Appendix 16).

Production growth rate

To estimate long term growth rates is very inaccurate so we based our forecast mainly in the next two years of production growth. So, according to EIA reports, production growth will be **-6.9% in 2020YE and +2.7% in 2021YE**. For the remaining three years of the forecast we estimate a slow but steady recovery nearer 2019 levels of production with a 0.6% CAGR.

WACC method

The first method used to evaluate Shell was the WACC method. In this method we have estimated financials for the next five years, based on assumptions extracted from the industry and macro-economic landscape. We estimated those cash flows on the firm perspective (FCFF) after having calculated a sustainable growth rate for the terminal period. This approach returned a **$33.58 TP in 2021YE**, with an annualized potential return of 9.9% over the current price of $29.68. (Appendix 19)

Flow to equity method

Through **FCFE DCF method** (Appendix 20) **we reached a TP value of $33.38 in 2021YE**. Flow to equity method is more suitable when the capital structure is stable. Although, in the long-run, capital structure tends to be like the base year, in 2020 company`s leverage is expected to change substantially (Figure 43). Debt increases and remains higher than the base year; by that reason this method is not the best to valuate Shell.

Table 3- ERP build-up

	Europe	Asia, Oceania, Africa	USA	Other Americas
Third-party revenue, by origin	98,455.0	139,916.0	83,212.0	23,294.0
% of total revenue	28.5%	40.6%	24.1%	6.8%
Mature market premium	6.0%	6.0%	6.0%	6.0%
Region risk premium	4.1%	7.6%	0.0%	7.4%
Equity Risk Premium	10.1%	13.6%	6.0%	13.5%
Weighted Average Risk Premiu	10.7%			

Source: Author analysis

Table 4- Cost of equity (CAPM)

EQUITY	ESTIMATION
Rf	**0.55%**
Beta	**0.97**
MRP	**10.75%**
Cost of Equity (Ke)	**10.94%**

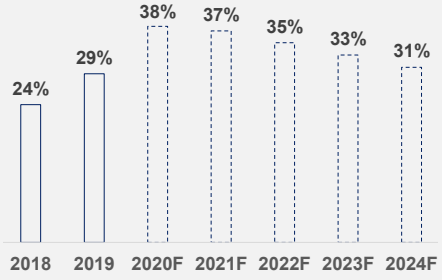
Source: Author analysis

Table 5- WACC build-up

COST OF CAPITAL	
Kd	4.6%
D/(E+D)	29.4%
Ke	10.9%
E/(E+D)	70.6%
(1-t)	64.5%
WACC	**8.6%**
Pre-Tax WACC	9.1%

Source: Author analysis

Figure 43- D/D+E figures



Source: Author analysis

Total payout model

Shell has as a priority shareholder return, either by dividends or through share buybacks. In 2020 as the oil demand and the commodities price collapsed those shareholder returns were compromised but we assume in our estimation that both share buybacks and dividend growth will resume in the coming years, although in a very smooth pace. **We estimate a TP $32.06 2021YE**. (Appendix 21)

We used H-Model, for this estimation. **At the first stage we have estimated the future shareholders cash-flows**. We have considered total distributions from the investor perspective, both dividends and shares repurchases. At the **second stage we expect a period of 10 years** (compatible with expected oil demand peak) in which shareholder **returns will grow at a higher rate of 3.4%** (world GDP growth rate) **and after that** period returns will converge to the company`s **long-term sustainable growth rate of 0.73%**, calculated through the dividend sustainable growth model (PRAT Model) (Appendix 18).

Market-based valuation

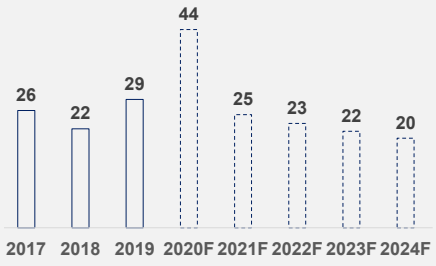
Complementing the DCF models, we approached Shell`s value also by using comparing methods with its peers. (Appendix 23)
Prior to presenting the results is important to state that we used the median of the multiples given by the industry, rather than the mean to avoid distortions by outliers.[6] This approach is very important as the peer group consisting of a small number of companies.
The multiples used in our market-based valuation were: (Table 6)
The **EV/EBITDA** multiple. The market returned a median value of 5.74. Applied to Shell`s financial results we obtained an Enterprise Value of $213,162 which corresponds to an equity value of $126,349 or a Target Price **of $32.38 per ADS share in 2021YE**. EV/EBITDA is by far the most widely used enterprise value multiple[7] and it **is particularly suitable for a company like Shell which operates in a capital-intensive business** which typically have substantial depreciation and amortization expenses;
The **EV/EBIT** multiple. The median value of Shell`s peers is 16.04. Such value applied to Shell corresponds to an EV of $190,366 or an adjusted equity value of $103,553 or a **TP of $26.54 per ADS share in 2021YE**. EV/EBIT is more suitable in businesses where neither depreciation nor amortization is a major item which is not the case of Shell`s business[8].
The **P/E ratio**. Shell peers` median is 19.6. In Shell`s case corresponds to an equity value of $107,826 or a **TP of $27.63 per ADS share in 2021YE**. P/E is often of low reliability even more in a time like the present in which earnings are strongly affected by write-downs. (Figure 44)

Table 6- Peers multiples

2021	EV/EBITDA	EV/EBIT	PER	EV/Sales
BP	3.67	8.81	10.20	0.44
ExxonMobil	7.30	25.48	27.50	0.96
Total	5.12	12.31	11.70	0.90
Chevron	6.35	19.78	27.80	1.44
Average	5.61	16.59	19.30	0.94
Median	**5.74**	**16.04**	**19.60**	**0.93**

Source: S&P Global market intelligence

Figure 44- Shell depreciations, amortizations and impairments ($ billion)



Source: Shell annual report and author analysis

[6] Equity asset valuation 2nd edition CFA Society page 261
[7] Equity asset valuation 2nd edition CFA Society page 321
[8] Equity asset valuation 2nd edition CFA Society page 327

7. Financial Analysis

Focus on what you can control

As the main key driver of profitability is something Shell, and other companies, cannot control, commodity price, the main worry is about **margin**. Shell management continuously reassess its portfolio of assets and via divestments of the least profitable and acquisition of more efficient ones **Shell optimizes its portfolio**. Another way that Shell defends its profitability is **reducing production costs** in upstream and integrated gas **and reducing operating expenses** in downstream. That said Shell has been **successful defending its profitability** and is expected to remain so in the foreseeable years. Shell is expected to defend its gross profit margin at around 20% and return to profits at the near term with a net profit margin rounding 6% in the next years. (Figure 45), (Appendix 4).

Another factor management can control is shareholder distribution. Although the company has a very strong tradition paying high dividends the management showed strong convictions and, why not saying it, courage when in March cut dividend by two thirds, defending company`s liquidity. In the same perspective shares repurchases were suspended.

Strong cash flow stream

Even when bad years occur Shell maintains a reliable cash flow from operating activities generation (Figure 46) (Figure 11). Such figures are essential to provide liquidity to invest in new assets (Figure 3) and businesses and to provide shareholder distribution. Observing Shell`s liquidity ratios (Figure 47) (Appendix 4) it is obvious the impact of the decision of cutting dividend distribution in 2020F, liquidity availability improved providing financial health to upend near and medium-term challenges. Even with profitability compromised by commodities price, at least, for the next two years, Shell still has Integrated Gas and Upstream segments delivering substantial amounts of cash. We estimate Integrated Gas to have an EBITDA of more than $4 billion in 2020 and more than double it to around $10.3 billion in 2021. Regarding Upstream segment we estimate it to maintain strong sales figures with revenues from sales amounting to $28 billion in 2020 before grow to $32 and $45 billion in 2021 and 2022 respectively.

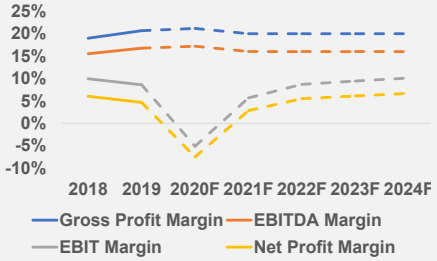
Management bold actions will allow to maintain positive free cashflow in the defying fiscal years of 2020 ($19.25 billion) and 2021 ($10.4 billion) according to our estimations, before improving to low $20s (billion) in the following years, aligned with historical numbers.

Resilient financial framework

Keeping a solid financial situation is one of Shell management priorities. Shell keeps its gearing ratio under 30% (Figure 2). Assessing solvency ratios (Figure 48) (Appendix 4), we can observe that interest cover ratio, for instance, shows healthy numbers which allows Shell to maintain its credit rating in the greatest agencies good enough to obtain liquidity whenever it could be needed (Table 7). Such a strong financial position and agile decision making, allows Shell to look at the future in a positive way even when we are in the middle of a market crisis like the COVID-19-induced one.

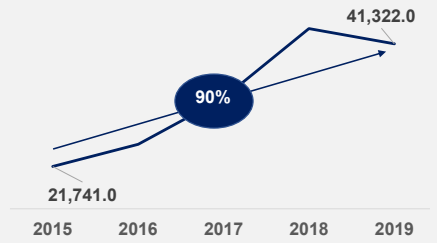
It is paramount to emphasize that management, despite having strong convictions about debt control, in the midst of COVID-19 pandemic and consequent revenues crash did not hesitate to prepare itself for a defying short-term future and postponed gearing target of 15-25%, preserving liquidity by raising total debt to above $100

Figure 45- Shell`s business margins



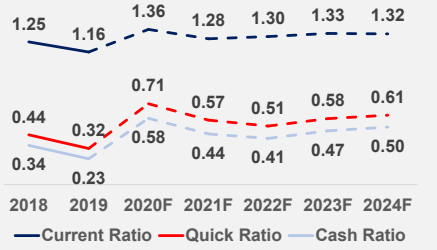
Source: Shell annual report and author analysis

Figure 46- Integrated gas third-parties sales ($ million)



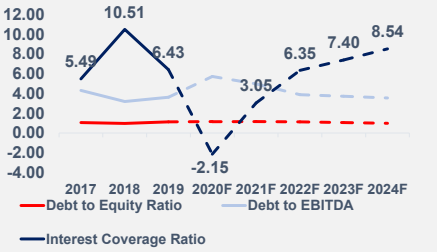
Source: Shell annual report and author analysis

Figure 47- Liquidity ratios



Source: Shell annual report and author analysis

Figure 48- Solvency ratios



Source: Shell annual report and author analysis

billion, a level that it did not reached not even in 2016 when BG Group was acquired. So, in order to protect company`s cash needs, we estimate leverage to increase with net debt to equity to grow from 34% in 2019 to 41.6% and 44% in the following two fiscal years, before starting to recover slowly to levels around 30% in 2023 and 2024.

Table 7- Major notation firms credit ratings

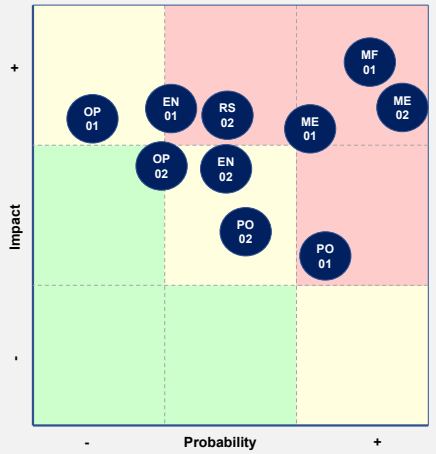
Agency	Rating	Outlook
Fitch Ratings	AA-	Stable
Moody`s	Aa2	Negative
S&P Global Ratings	AA-	Negative

Source: Agencies websites

8. Investment Risks

Royal Dutch Shell, as a major global company, is exposed to various risks, some could have material adverse effect separately, or in combination, on its financial condition (Figure 49).

Figure 49- Risk matrix



Source: Shell annual report and author analysis

Macroeconomic Risks

(ME01) World GDP growth- deterioration/ slowdown reducing Oil & Gas demand. Oil & Gas business is strongly linked to economic growth, Shell operates a diversified portfolio but even though when world economy slows so Shell is affected on its profitability. A good example of that is the current year in which GDP growth is expected to be -4.9% and Shell will have a negative bottom line.
(ME02) Second wave of COVID 19- growing number of cases of COVID 19 globally that implies a second period of locally or generalized lockdowns, consequent reduction of economic activity and decrease on oil/ energy demand. At the date of this writing the health authorities consensus is that a global treatment will not be available until, at least, the second half of 2021[9].

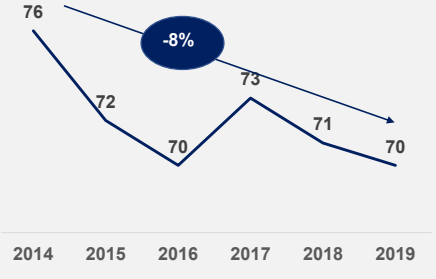
Market and financial Risks

(MF01) Commodity price– Volatility/ decreases in oil or natural gas prices impacting negatively operating results and future prospects. Although Shell use derivatives to hedge market risks it does not cover the entire value of its activities. The upstream segment is the one most affected to sudden negative price movements but the other segments are also affected especially if the low prices perdure in time.

Environmental Risk

(EN01) Natural disaster– Natural catastrophes leading to interrupted or reduced production or industrial accident
Shell is particular exposed to this kind of risk in its Groningen (Netherlands) gas field as its operations causes earthquakes that affect local communities.
(EN02) Climate change concerns– Demand for a net carbon footprint reduction faster than anticipated
If Shell is unable to keep pace with society's energy transition or to provide the desired low-GHG-emissions (Figure 50) products needed to facilitate society's energy transition, it could have a material adverse effect on earnings, cash flows and financial condition

Figure 50- Direct Greenhouse gas emissions (MT of CO2 equivalent)



Source: Shell annual report and author analysis

Operational Risk

(OP01) Safety– Major accident or oil spill resulting in life losses, environmental damage, regulatory fines, civil liability, loss of license to operate and reputational damage. Accordingly, this could have a material adverse effect in Shell`s financial condition.
(OP02) Energy transition– Changing energy landscape, rising electrification.

[9] https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/when-will-the-covid-19-pandemic-end

Future performance depends on the successful development of new technologies and new products. Those developments are essential to meet world`s energy demands and to assure Shell financial success.

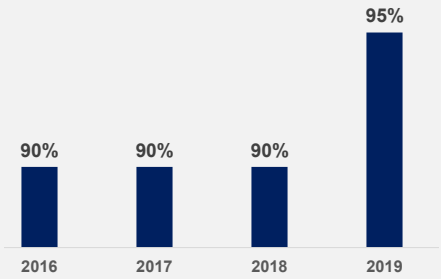
Resource Risk

(RS01) Resource availability– Material change in estimates regarding Oil & Gas reserves.
Future oil and gas production will depend on the access to new reserves as well as on developing and applying new technologies and recovery processes to existing fields.

Political Risk

(PO01) Political instability– Disruption of supply due to war, civil war, local theft (Figure 51), terrorism or other political instability. Major companies have significant operations in unstable countries; and,
(PO02) Legal and regulatory requirements– Regulatory and law changes; trade regulations & tariffs. Potential impacts include forced divestments of assets; expropriation of property; cancellation or forced cancellation of contract rights; additional taxes; antitrust claims; changes to trade regulations; price controls; changes to environmental regulations. Any of these could have a material effect on Shell`s financial results.

Figure 51- Share of oil spills major than 100 kilograms caused by theft in Nigeria



Source: Shell annual report and author analysis

Sensitivity analysis

Taking into account the risks previously identified we stressed those factors in a simulation in order to assess the possible effect on Target Price. That simulation allowed us to validate the expected impact on TP of the major risks and on the other hand also allowed to measure those impacts so we can estimate the probability of occurrence of our recommendation.

Brent Price Vs. Oil & Gas production available for sale growth rate

In our valuation average Brent Price in 2020 is $41.42[10] with the prices for the years to come depending on this reference price (linked to it). In our analysis we estimate that for **an increase (decrease) of $2 in Brent price our TP would increase (decrease) $6**, with all other factors remaining equal (Figure 52)

Figure 52- Sensitivity analysis on oil price Vs. production growth

Oil & Gas production available for sale (kboe/d) growth rate for 2020F	Annual avg. Brent price ($/b) for 2020F										
	31.2	33.2	35.2	37.2	39.2	41.2	43.2	45.2	47.2	49.2	51.2
-11.9%	-22.5	-17.3	-12.2	-7.1	-2.0	3.0	8.1	13.1	18.2	23.3	28.3
-10.9%	-17.6	-12.3	-6.9	-1.7	3.5	8.8	14.0	19.3	24.5	29.7	35.0
-9.9%	-12.6	-7.1	-1.6	3.8	9.3	14.7	20.1	25.6	31.0	36.4	41.8
-8.9%	-7.4	-1.7	3.9	9.6	15.2	20.8	26.4	32.0	37.7	43.3	48.9
-7.9%	-2.1	3.8	9.6	15.5	21.3	27.1	32.9	38.7	44.6	50.4	56.2
-6.9%	3.4	9.5	15.5	21.5	27.6	33.6	39.6	45.6	51.7	57.7	63.7
-5.9%	9.1	15.3	21.6	27.8	34.0	40.3	46.5	52.7	59.0	65.2	71.4
-4.9%	14.9	21.3	27.8	34.2	40.7	47.2	53.6	60.1	66.5	73.0	79.4
-3.9%	20.8	27.5	34.2	40.9	47.6	54.3	60.9	67.6	74.3	81.0	87.6
-2.9%	27.0	33.9	40.8	47.7	54.7	61.6	68.5	75.4	82.3	89.2	96.1
-1.9%	33.3	40.5	47.6	54.8	61.9	69.1	76.2	83.4	90.5	97.7	104.8

Source: Shell annual report and author analysis

The base case for the production growth in 2020 is set at -6.9% (COVID-19 impact) [11] with a slow recovery in the coming years. In our estimation we can observe **that a decrease (increase) of 1% over the base case would have a negative (positive) impact of around -20% (+20%) on the estimated TP** (all remaining factors equal).

[10] EIA STEO
[11] EIA STEO

Long-term sustainable growth rate (g) Vs. Cost of capital (WACC)

WACC rate could have a material impact on our estimation. We have set the WACC rate at 8.6% in our base case scenario. When we stress this factor in our simulation **for each 50 bps decrease (increase) we can expect an increase (decrease) of around 11% in the TP** set, all others items remaining the same (Figure 53).

When we simulate an increase (decrease) on the long-term sustainable growth rate of 10 bps we can expect an increase (decrease) of 2% over the TP, all other factors remaining stable.

Figure 53- Sensitivity analysis on "g" Vs. WACC

Cost of Capital (WACC)	Long-term sustainable growth rate										
	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	1.2%
6.1%	53.0	54.0	55.1	56.3	57.5	58.7	60.0	61.3	62.7	64.1	65.6
6.6%	47.2	48.1	49.0	50.0	51.0	52.0	53.0	54.1	55.2	56.4	57.6
7.1%	42.3	43.0	43.8	44.6	45.4	46.3	47.2	48.1	49.0	50.0	51.0
7.6%	38.0	38.7	39.3	40.0	40.7	41.4	42.2	43.0	43.8	44.6	45.4
8.1%	34.3	34.9	35.4	36.0	36.6	37.2	37.9	38.5	39.2	39.9	40.6
8.6%	31.0	31.5	32.0	32.5	33.0	33.6	34.1	34.7	35.3	35.9	36.5
9.1%	28.1	28.5	29.0	29.4	29.9	30.4	30.8	31.3	31.8	32.3	32.9
9.6%	25.5	25.9	26.3	26.7	27.1	27.5	27.9	28.3	28.8	29.2	29.7
10.1%	23.2	23.5	23.9	24.2	24.6	24.9	25.3	25.7	26.1	26.5	26.9
10.6%	21.1	21.4	21.7	22.0	22.3	22.6	22.9	23.3	23.6	24.0	24.3
11.1%	19.1	19.4	19.7	20.0	20.2	20.5	20.8	21.1	21.4	21.7	22.1

Source: Shell annual report and author analysis

Monte Carlo simulation

In order to complement the sensitive analyzes made we have proceeded to a Monte Carlo simulation with 10,000 runs. We have introduced the main drivers of profitability as the inputs for the simulation in which we have tested its simultaneous variation (Figure 54)

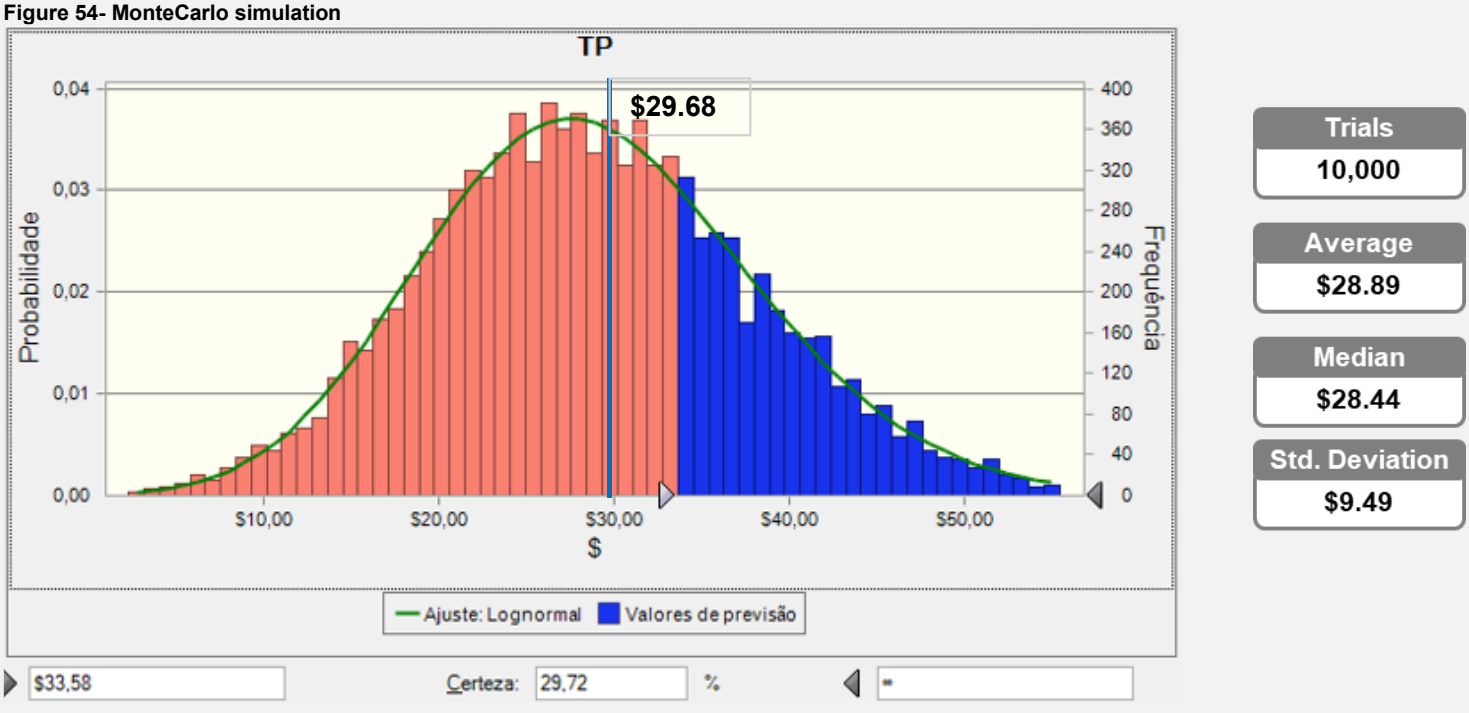
a) average Brent price for 2020F;

b) oil & gas production available for sale growth rate;

c) long-term sustainable growth rate;

d) WACC rate.

Figure 54- MonteCarlo simulation



Source: Author analysis

This procedure returned a mean value of $28.89 and a median value of $28.42, both values **reinforce the TP of $33.58** (Figure 54). With a probability of 44.96% of a better price than the current price. **Such output is compatible with the recommendation of REDUCE with high risk involved**.

Assessing the **tornado analysis** of this simulation is possible to **reassume that Brent price is the most important key driver of profitability** with a weight above 72% of the whole price formation (Figure 41).

Appendices

Appendix 1- Income statement

INCOME STATEMENT	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
Sales (including inter-segment)								
Integrated gas	36,652.0	48,617.0	45,602.0	29,632.9	34,764.4	47,574.0	48,882.4	50,448.1
Third parties	32,674.0	43,764.0	41,322.0	26,999.8	31,849.2	43,822.5	45,272.1	46,974.5
Inter-segment	3,978.0	4,853.0	4,280.0	2,633.0	2,915.2	3,751.5	3,610.2	3,473.6
Upstream	40,192.0	47,733.0	46,413.0	28,061.3	32,920.7	45,050.9	46,289.9	47,772.6
Third parties	7,723.0	9,892.0	9,965.0	5,612.3	6,584.1	9,010.2	9,258.0	9,554.5
Inter-segment	32,469.0	37,841.0	36,448.0	22,449.0	26,336.5	36,040.7	37,031.9	38,218.1
Downstream	268,979.0	340,038.0	294,677.0	162,757.2	190,941.8	261,298.1	268,484.1	277,084.1
Third parties	264,731.0	334,680.0	293,545.0	161,129.7	189,032.4	258,685.1	265,799.2	274,313.3
Inter-segment	4,248.0	5,358.0	1,132.0	1,627.6	1,909.4	2,613.0	2,684.8	2,770.8
Corporate	51.0	43.0	45.0	45.0	45.0	45.0	45.0	45.0
Revenue from sales (excluding inter-segment)	305,179.0	388,379.0	344,877.0	193,786.8	227,510.8	311,562.8	320,374.3	330,887.3
Integrated gas	32,674.0	43,764.0	41,322.0	26,999.8	31,849.2	43,822.5	45,272.1	46,974.5
Upstream	7,723.0	9,892.0	9,965.0	5,612.3	6,584.1	9,010.2	9,258.0	9,554.5
Downstream	264,731.0	334,680.0	293,545.0	161,129.7	189,032.4	258,685.1	265,799.2	274,313.3
Corporate	51.0	43.0	45.0	45.0	45.0	45.0	45.0	45.0
Share of profit of joint ventures and associates	4,225.0	4,106.0	3,604.0	1,937.9	2,275.1	3,115.6	3,203.7	3,308.9
Interest and other income	2,466.0	4,071.0	3,625.0	2,009.4	2,359.0	3,230.6	3,321.9	3,430.9
Integrated gas	687.0	2,230.0	263.0	145.8	171.2	234.4	241.0	248.9
Upstream	1,188.0	600.0	2,180.0	1,208.4	1,418.7	1,942.8	1,997.7	2,063.3
Downstream	154.0	345.0	266.0	147.4	173.1	237.1	243.8	251.8
Corporate	437.0	896.0	916.0	507.7	596.1	816.3	839.4	867.0
Total revenue and other income	**311,870.0**	**396,556.0**	**352,106.0**	**197,734.0**	**232,144.9**	**317,909.0**	**326,900.0**	**337,627.1**
Purchases	(223,447.0)	(294,399.0)	(252,983.0)	(141,115.2)	(165,673.0)	(226,879.6)	(233,296.1)	(240,951.6)
Production and manufacturing expenses	(26,652.0)	(26,970.0)	(26,438.0)	(14,846.9)	(20,139.3)	(27,579.7)	(28,359.7)	(29,290.3)
Selling, distribution and administrative expenses	(10,509.0)	(11,360.0)	(10,493.0)	(5,892.6)	(6,918.1)	(9,473.9)	(9,741.8)	(10,061.5)
Research and development	(922.0)	(986.0)	(962.0)	(540.2)	(634.3)	(868.6)	(893.1)	(922.4)
Exploration	(1,945.0)	(1,340.0)	(2,354.0)	(1,372.4)	(1,611.5)	(2,207.5)	(2,270.3)	(2,345.3)
Integrated gas	(141.0)	(208.0)	(281.0)	(239.0)	(281.9)	(387.9)	(400.7)	(415.8)
Upstream	(1,804.0)	(1,132.0)	(2,073.0)	(1,133.4)	(1,329.6)	(1,819.5)	(1,869.6)	(1,929.5)
Operating expenses	**(38,083.0)**	**(39,316.0)**	**(37,893.0)**	**(21,279.8)**	**(27,691.7)**	**(37,922.1)**	**(38,994.6)**	**(40,274.2)**
Integrated gas	(5,471.0)	(6,014.0)	(6,667.0)	(3,744.0)	(4,872.1)	(6,672.1)	(6,860.8)	(7,086.0)
Upstream	(12,656.0)	(12,157.0)	(12,043.0)	(6,763.0)	(8,800.9)	(12,052.3)	(12,393.1)	(12,799.8)
Downstream	(19,583.0)	(20,743.0)	(18,697.0)	(10,499.8)	(13,663.5)	(18,711.4)	(19,240.6)	(19,871.9)
Corporate	(373.0)	(402.0)	(486.0)	(272.9)	(355.2)	(486.4)	(500.1)	(516.5)
Depreciations, amortisations and impairments	(26,223.0)	(22,135.0)	(28,701.0)	(44,322.6)	(25,302.7)	(23,345.3)	(21,565.5)	(20,029.3)
Integrated gas	(4,965.0)	(4,850.0)	(6,238.0)	(10,290.6)	(6,275.6)	(6,185.2)	(6,103.6)	(6,055.6)
Upstream	(17,303.0)	(13,006.0)	(17,003.0)	(24,108.8)	(12,433.2)	(10,076.2)	(7,840.2)	(5,726.6)
Downstream	(3,877.0)	(4,064.0)	(5,413.0)	(9,753.8)	(6,497.2)	(6,994.7)	(7,539.4)	(8,170.5)
Corporate	(78.0)	(215.0)	(47.0)	(169.4)	(96.7)	(89.2)	(82.4)	(76.5)
Interest expense	(4,042.0)	(3,745.0)	(4,690.0)	(4,732.8)	(4,530.9)	(4,339.2)	(4,157.0)	(3,983.9)
Interest incurred and similar charges	(3,448.0)	(3,550.0)	(4,592.0)	0.0	0.0	0.0	0.0	0.0
interest capitalised	622.0	876.0	752.0	0.0	0.0	0.0	0.0	0.0
Other net (losses)/ gains on fair value hedges of debt	(114.0)	(169.0)	(132.0)	0.0	0.0	0.0	0.0	0.0
Accretion expense	(1,102.0)	(902.0)	(718.0)	0.0	0.0	0.0	0.0	0.0
Total expenditure	(293,740.0)	(360,935.0)	(326,621.0)	(212,822.8)	(224,809.8)	(294,693.7)	(300,283.5)	(307,584.4)
EBITDA	48,395.0	61,501.0	58,876.0	33,966.6	37,168.7	50,899.8	52,338.9	54,055.9
EBIT	22,172.0	39,366.0	30,175.0	(10,356.0)	11,866.0	27,554.5	30,773.4	34,026.6
Income before taxation (EBT)	18,130.0	35,621.0	25,485.0	(15,088.8)	7,335.1	23,215.3	26,616.5	30,042.7
Taxation charge	(4,695.0)	(11,715.0)	(9,053.0)	0.0	(1,833.8)	(5,803.8)	(6,654.1)	(7,510.7)
Income for the period	**13,435.0**	**23,906.0**	**16,432.0**	**(15,088.8)**	**5,501.3**	**17,411.5**	**19,962.3**	**22,532.1**
Current cost of supplies adjustment	964.0	(458.0)	**605.0**	**549.0**	**549.0**	**549.0**	**549.0**	**549.0**
Total segment earnings, of which:	12,471.0	24,364.0	15,827.0	**(15,637.8)**	**4,952.3**	**16,862.5**	**19,413.3**	**21,983.1**
Integrated gas	5,078.0	11,444.0	8,628.0	**(6,056.8)**	**3,244.3**	**8,624.5**	**9,776.8**	**10,937.6**
Upstream	1,551.0	6,798.0	4,195.0	**(2,944.9)**	**1,577.4**	**4,193.3**	**4,753.5**	**5,317.9**
Downstream	8,258.0	7,601.0	6,277.0	**(4,406.4)**	**2,360.3**	**6,274.5**	**7,112.8**	**7,957.3**
Corporate	(2,416.0)	(1,479.0)	(3,273.0)	**(2,229.8)**	**(2,229.8)**	**(2,229.8)**	**(2,229.8)**	**(2,229.8)**
Income attributable to non controlling interest	458.0	554.0	590.0	(511.0)	186.3	589.6	676.0	763.0
Income attributable to Royal Dutch Shell plc shareholders	**12,977.0**	**23,352.0**	**15,842.0**	**(14,577.8)**	**5,315.0**	**16,821.9**	**19,286.3**	**21,769.0**
Basic earnings per share ($)	**1.58**	**2.82**	**1.97**	**(1.87)**	**0.68**	**2.16**	**2.47**	**2.79**
Diluted earnings per share ($)	1.56	2.80	1.95	(1.87)	0.68	2.16	2.47	2.79
Diluted Nr of shares (million)	**8,299.0**	**8,348.7**	**8,112.5**	**7,804.8**	**7,804.8**	**7,804.8**	**7,804.8**	**7,804.8**
Basic Nr of shares (million)	8,223.4	8,282.8	8,058.3	7,804.8	7,804.8	7,804.8	7,804.8	7,804.8

Appendix 2- Balance sheet

BALANCE SHEET	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
Assets								
Non-Current Assets	**311,693.0**	**301,712.0**	**311,647.0**	**289,324.4**	**287,021.7**	**287,676.4**	**291,110.9**	**298,081.6**
Intangible assets (business as usual)	24,180.0	23,586.0	23,486.0	23,486.0	23,486.0	23,486.0	23,486.0	23,486.0
NCAssets BAU	311,693.0	301,712.0	311,647.0	269,120.5	245,695.5	224,309.6	204,785.1	186,960.0
Property, plant and equipment (business as usual)*	226,380.0	223,175.0	238,349.0	195,822.5	172,397.5	151,011.6	131,487.1	113,662.0
Joint ventures and associates	27,927.0	25,329.0	22,808.0	22,808.0	22,808.0	22,808.0	22,808.0	22,808.0
Investments in securities	7,222.0	3,074.0	2,989.0	2,989.0	2,989.0	2,989.0	2,989.0	2,989.0
Deferred tax	13,791.0	12,097.0	10,524.0	10,524.0	10,524.0	10,524.0	10,524.0	10,524.0
Retirement benefits	2,799.0	6,051.0	4,717.0	4,717.0	4,717.0	4,717.0	4,717.0	4,717.0
Trade and other receivables	8,475.0	7,826.0	8,085.0	8,085.0	8,085.0	8,085.0	8,085.0	8,085.0
Derivative financial instruments	919.0	574.0	689.0	689.0	689.0	689.0	689.0	689.0
New investments				22,000.0	23,000.0	24,000.0	25,000.0	27,000.0
Integrated gas				3,953.2	4,132.9	4,312.6	4,492.2	4,851.6
Upstream				9,452.5	9,882.1	10,311.8	10,741.5	11,600.8
Downstream				8,209.9	8,583.1	8,956.2	9,329.4	10,075.8
Corporate				384.5	401.9	419.4	436.9	471.8
DD&A of new investments				1,796.1	1,877.7	1,959.4	2,041.0	2,204.3
Integrated gas				322.7	337.4	352.1	366.7	396.1
Upstream				771.7	806.8	841.9	876.9	947.1
Downstream				670.3	700.7	731.2	761.7	822.6
Corporate				31.4	32.8	34.2	35.7	38.5
Accumulated DD&A of new investments				1,796.1	3,673.8	5,633.2	7,674.2	9,878.5
Net new investments				20,203.9	21,122.3	22,040.6	22,959.0	24,795.7
Accumulated net value of "new investments"				20,203.9	41,326.2	63,366.8	86,325.8	111,121.5
Current Assets	***95,404.0***	***97,482.0***	***92,689.0***	***75,621.5***	***72,679.7***	***84,173.6***	***87,258.9***	***88,515.7***
Inventories	25,223.0	21,117.0	24,071.0	12,925.6	15,175.0	20,781.2	21,369.0	22,070.2
Trade and other receivables	44,565.0	42,431.0	43,414.0	23,254.4	25,026.2	31,156.3	28,833.7	26,669.5
Derivative financial instruments	5,304.0	7,193.0	7,149.0	7,149.0	7,149.0	7,149.0	7,149.0	7,149.0
Cash and cash equivalents	20,312.0	26,741.0	18,055.0	32,292.6	25,329.6	25,087.0	29,907.3	32,627.0
Total Assets	**407,097.0**	**399,194.0**	**404,336.0**	**364,945.9**	**359,701.5**	**371,849.9**	**378,369.8**	**386,597.3**
Liabilities								
Non-Current Liabilities	***129,518.0***	***118,847.0***	***134,249.0***	***140,349.0***	***135,976.0***	***131,821.7***	***127,875.0***	***124,125.7***
Debt	73,870.0	66,690.0	81,360.0	87,460.0	83,087.0	78,932.7	74,986.0	71,236.7
Trade and other payables	3,447.0	2,735.0	2,342.0	2,342.0	2,342.0	2,342.0	2,342.0	2,342.0
Derivative financial instruments	981.0	1,399.0	1,209.0	1,209.0	1,209.0	1,209.0	1,209.0	1,209.0
Deferred tax	13,007.0	14,837.0	14,522.0	14,522.0	14,522.0	14,522.0	14,522.0	14,522.0
Retirement benefits	13,247.0	11,653.0	13,017.0	13,017.0	13,017.0	13,017.0	13,017.0	13,017.0
Decomissioning and other provisions	24,966.0	21,533.0	21,799.0	21,799.0	21,799.0	21,799.0	21,799.0	21,799.0
Current Liabilities	***79,767.0***	***77,813.0***	***79,624.0***	***55,608.3***	***57,717.3***	***66,027.6***	***67,034.8***	***68,236.4***
Debt	11,795.0	10,134.0	15,064.0	15,064.0	15,064.0	15,064.0	15,064.0	15,064.0
Trade and other payables	51,410.0	48,888.0	49,208.0	25,192.3	27,301.3	35,611.6	36,618.8	37,820.4
Derivative financial instruments	5,253.0	7,184.0	5,429.0	5,429.0	5,429.0	5,429.0	5,429.0	5,429.0
Taxes payable	7,250.0	7,497.0	6,693.0	6,693.0	6,693.0	6,693.0	6,693.0	6,693.0
Retirement benefits	594.0	451.0	419.0	419.0	419.0	419.0	419.0	419.0
Decomissioning and other provisions	3,465.0	3,659.0	2,811.0	2,811.0	2,811.0	2,811.0	2,811.0	2,811.0
Total Liabilities	**209,285.0**	**196,660.0**	**213,873.0**	**195,957.3**	**193,693.3**	**197,849.3**	**194,909.8**	**192,362.1**
Equity								
Total Equity	***197,812.0***	***202,534.0***	***190,463.0***	***168,988.7***	***166,008.2***	***174,000.7***	***183,460.0***	***194,235.2***
Share capital	696.0	685.0	657.0	657.0	657.0	657.0	657.0	657.0
Shares held in trust	(917.0)	(1,260.0)	(1,063.0)	(1,063.0)	(1,063.0)	(1,063.0)	(1,063.0)	(1,063.0)
Other reserves	16,932.0	16,615.0	14,451.0	14,451.0	14,451.0	14,451.0	14,451.0	14,451.0
Retained earnings	177,645.0	182,606.0	172,431.0	151,467.6	148,300.8	155,703.7	164,487.0	174,499.2
Equity attributable to shareholders	194,356.0	198,646.0	186,476.0	165,512.6	162,345.8	169,748.7	178,532.0	188,544.2
Non-controling interest	3,456.0	3,888.0	3,987.0	3,476.0	3,662.3	4,252.0	4,928.0	5,691.0
Total Equity + Total Liabilities	**407,097.0**	**399,194.0**	**404,336.0**	**364,945.9**	**359,701.5**	**371,849.9**	**378,369.8**	**386,597.3**

Appendix 3- Consolidated statement of cash flows

CONSOLIDATED STATEMENT OF CASH FLOWS	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
Cash flow from Operating Activities	***35,650.0***	***53,085.0***	***42,178.0***	***41,255.9***	***33,422.8***	***41,670.0***	***48,426.8***	***49,209.8***
Income for the period	18,130.0	35,621.0	25,485.0	15,088.8	5,501.3	17,411.5	19,962.3	22,532.1
Adjustment for:								
Current tax								
Interest expense (net)	3,365.0	2,878.0	3,705.0	4,732.8	4,530.9	4,339.2	4,157.0	3,983.9
Depreciations, amortisations and impairments	26,223.0	22,135.0	28,701.0	44,322.6	25,302.7	23,345.3	21,565.5	20,029.3
(Increase)/decrease in working capital	2,250.0	3,442.0	4,779.0	7,289.3	1,912.2	3,426.0	2,742.0	2,664.6
Tax paid	6,307.0	9,671.0	7,605.0	0.0	0.0	0.0	0.0	0.0
Cash flow from Investment Activities	***8,029.0***	***13,659.0***	***15,779.0***	***22,000.0***	***23,000.0***	***24,000.0***	***25,000.0***	***27,000.0***
Cash Capex, of which	21,533.0	24,078.0	23,919.0	22,000.0	23,000.0	24,000.0	25,000.0	27,000.0
Proceeds from sale of property, plant and equipment and businesses	8,808.0	4,366.0	4,803.0	0.0	0.0	0.0	0.0	0.0
Cash flow from Financing Activities	***27,086.0***	***32,548.0***	***35,209.0***	***5,018.4***	***17,385.7***	***17,912.5***	***18,606.6***	***19,490.1***
New borrowings	***760.0***	***3,977.0***	***11,185.0***	***6,100.0***	***4,373.0***	***4,154.4***	***3,946.6***	***3,749.3***
Royal Dutch Shell plc shareholders	***10,877.0***	***15,675.0***	***15,198.0***	***4,995.1***	***5,777.7***	***6,682.9***	***7,729.9***	***8,941.0***
Non-controlling interest	406.0	584.0	537.0	***176.5***	***204.1***	***236.1***	***273.1***	***315.9***
Repurchases of shares	0.0	3,947.0	10,188.0	***1,214.0***	***2,500.0***	***2,500.0***	***2,500.0***	***2,500.0***
Shares held in trust: net purchases and dividends received	717.0	1,115.0	1,174.0	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***
Free cash flow	***27,621.0***	***39,426.0***	***26,399.0***	***19,255.9***	***10,422.8***	***17,670.0***	***23,426.8***	***22,209.8***
Currency translation differences relating to cash and cash equivalents	647.0	449.0	124.0	0.0	0.0	0.0	0.0	0.0
Change in Cash	1,182.0	6,429.0	8,686.0	14,237.6	6,963.0	242.5	4,820.2	2,719.8
Begining	19,130.0	20,312.0	26,741.0	18,055.0	32,292.6	25,329.6	25,087.0	29,907.3
End	20,312.0	26,741.0	18,055.0	32,292.6	25,329.6	25,087.0	29,907.3	32,627.0

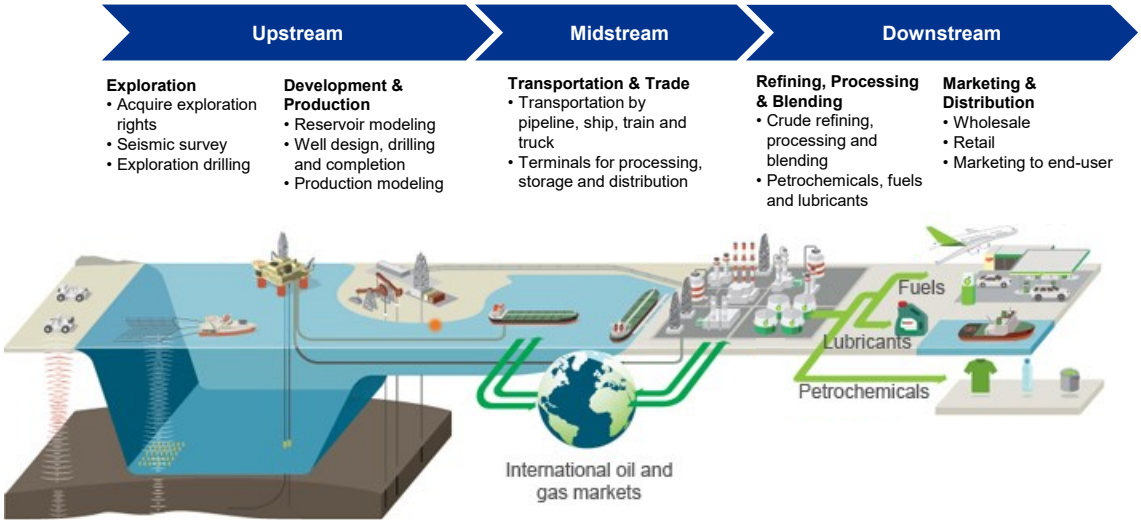
Appendix 4- Shell`s financial ratios

Key Financial Ratios	Units	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
Liquidity Ratios									
Current Ratio	X	1.20	1.25	1.16	1.36	1.26	1.27	1.30	1.30
Quick Ratio	X	0.32	0.44	0.32	0.71	0.56	0.49	0.55	0.58
Cash Ratio	X	0.25	0.34	0.23	0.58	0.44	0.38	0.45	0.48
Efficiency Ratios									
Total Assets Turnover	X	0.75	0.96	0.86	0.50	0.63	0.85	0.85	0.87
Accounts Receivables Turnover	X	6.76	8.93	8.03	5.81	9.42	11.09	10.68	11.92
Collection Period	Days	63.18	45.89	51.97	71.35	43.52	36.57	37.55	33.30
Inventory Turnover	X	10.64	13.87	12.37	8.43	13.22	14.15	12.42	12.44
Days in Inventory	Days	32.80	25.34	28.35	41.58	26.52	24.78	28.25	28.19
Payables Turnover	X	4.26	5.87	5.16	3.79	6.31	7.21	6.46	6.47
Payables Period	Days	71.75	53.47	61.75	56.62	51.53	49.09	49.09	49.09
Operating Cycle	Days	24.23	17.76	18.57	56.30	18.50	12.26	16.72	12.40
Profitability Ratios									
Gross Profit Margin	%	19.81%	18.96%	20.64%	21.13%	19.96%	19.96%	19.96%	19.96%
EBITDA Margin	%	15.52%	15.51%	16.72%	17.18%	16.01%	16.01%	16.01%	16.01%
EBIT Margin	%	7.11%	9.93%	8.57%	-5.24%	5.11%	8.67%	9.41%	10.08%
Net Profit Margin	%	4.31%	6.03%	4.67%	-7.63%	2.37%	5.48%	6.11%	6.67%
ROA	%	3.30%	5.99%	4.06%	-4.13%	1.53%	4.68%	5.28%	5.83%
ROCE	%	6.77%	12.25%	9.29%	-3.35%	3.93%	9.01%	9.88%	10.69%
ROACE	%	6.67%	12.14%	9.34%	-3.27%	3.88%	9.07%	9.97%	10.81%
ROIC	%	4.74%	8.56%	5.73%	-5.56%	2.08%	6.50%	7.30%	8.03%
ROE	%	6.68%	11.76%	8.50%	-8.81%	3.27%	9.91%	10.80%	11.55%
SG&A/Sales	%	3.44%	2.92%	3.04%	3.04%	3.04%	3.04%	3.04%	3.04%
R&D/Sales	%	0.30%	0.25%	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%
EPS	$	1.58	2.82	1.97	(1.87)	0.68	2.16	2.47	2.79
Solvency Ratios									
Long- and short-term Debt Ratio	%	21.04%	19.24%	23.85%	28.09%	27.29%	25.28%	23.80%	22.32%
Long-term Debt Ratio	%	18.15%	16.71%	20.12%	23.97%	23.10%	21.23%	19.82%	18.43%
Debt to Equity Ratio	X	1.06	0.97	1.12	1.16	1.17	1.14	1.06	0.99
Equity Multiplier	X	2.09	2.01	2.17	2.20	2.22	2.19	2.12	2.05
Debt to EBITDA	X	4.32	3.20	3.63	5.77	5.21	3.89	3.72	3.56
Interest Coverage Ratio	X	5.49	10.51	6.43	-2.19	2.62	6.35	7.40	8.54
Value Creation and Cash Flow Ratios									
Economic Value Added (EVA)	M$	(10,934.0)	(108.9)	(8,230.1)	(38,429.3)	(17,207.0)	(5,626.8)	(3,549.8)	(1,584.1)
Debt Coverage	%	15.68%	31.12%	17.04%	-14.72%	5.60%	18.52%	22.17%	26.11%
Cash to Income	X	1.97	1.49	1.66	-2.73	6.08	2.39	2.43	2.18
Payout Ratio	%	84%	68%	96%	-34%	109%	40%	40%	41%
Earnings Quality	X	0.83	1.28	0.86	1.84	1.03	0.96	1.27	1.26

Appendix 5- Financial forecasting main assumptions

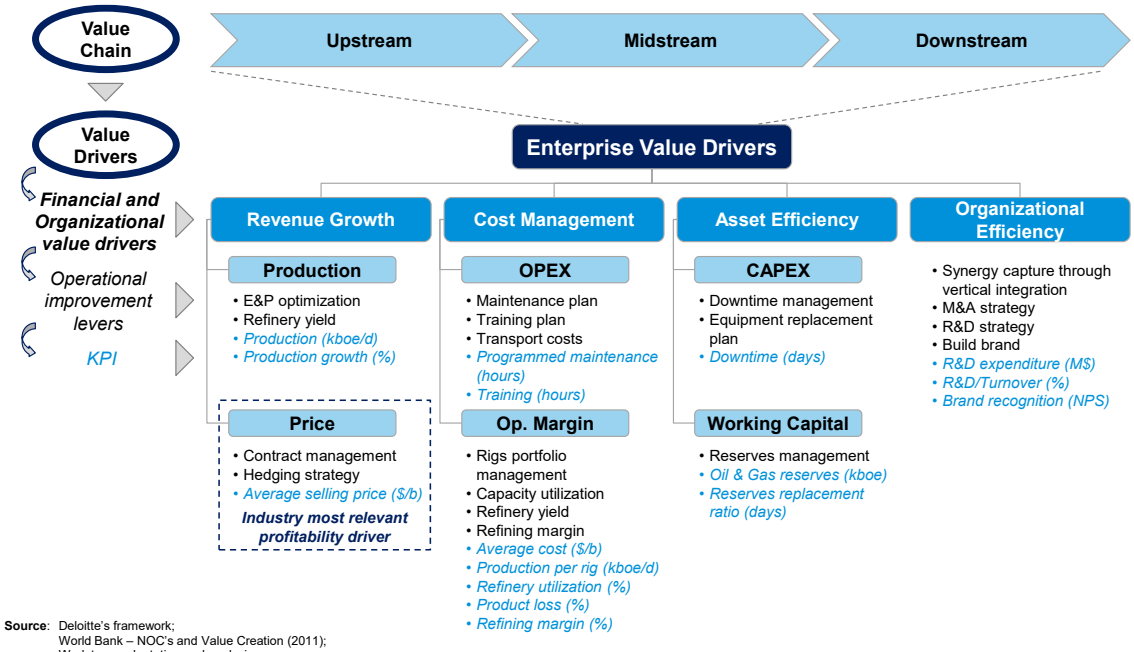
	2018	2019	2020F	2021F	2022F	2023F	2024F	Units
Macroeconomics								
World GDP growth	3.6	2.9	-4.9	5.4	3.7	3.5	3.4	%
Population growth	1.09%	1.10%	1.09%	1.09%	1.09%	1.05%	1.07%	%
Energy market								
Brent price	$ 71.34	$ 64.30	$ 41.19	$ 47.07	$ 64.00	$ 65.34	$ 67.00	$
y/y ($)				$ 5.88	$ 16.93	$ 1.34	$ 1.66	%
Brent price model (sensitivity analysis)			$ 41.19	$ 47.07	$ 64.00	$ 65.34	$ 67.00	$
Henry Hub ($/MMBtu)	$ 3.15	$ 2.56	$ 2.07	$ 3.13	$ 2.49	$ 2.52	$ 2.62	$/MMBtu
Petroleum and other liquids production and consumption								
Total World Demand	100.44	101.04	92.89	99.88				Million boe/d
y/y growth (%)	1.7%	0.6%	-8.1%	7.5%				%
Total World Supply	97.96	97.64	90.92	93.34				Million boe/d
y/y growth (%)	3.1%	-0.3%	-6.9%	2.7%	0.64%	0.26%	-4.11%	%
Production for sale variation y/y			-6.9%	2.7%	0.6%	0.6%	0.6%	%
Production for sale variation y/y model				9.5%	-2.0%			%
Corporate tax rate								
RDSA Effective tax rate	32.89%	35.52%	25%	25%	25%	25%	25%	%
Average realised price								$/barrel
Crude oil and natural gas liquids (Shell subsidiaries)	$ 63.96	$ 57.56	$ 36.88	$ 42.14	$ 57.31	$ 58.50	$ 59.99	$/barrel
Ratio (Realised/Brent)	35.87%	33.88%	37.36%	37.36%	37.36%	37.36%	37.36%	%
Production								
Oil and gas production available for sale (kboe/d)								
Crude oil and natural gas liquids	1,749.0	1,823.0	1,658.5	1,703.9	1,715.2	1,726.6	1,738.0	thousand boe/d
Total, of which	3,665.0	3,665.0	3,412.8	3,503.6	3,526.1	3,548.8	3,571.7	thousand boe/d
Integrated gas	957.0	922.0	858.5	881.4	887.1	892.8	898.5	thousand boe/d
% of total	26.10%	25.16%	25.16%	25.16%	25.16%	25.16%	25.16%	%
Upstream	2,709.0	2,743.0	2,554.2	2,622.2	2,639.1	2,656.1	2,673.2	thousand boe/d
% of total	73.90%	74.84%	74.84%	74.84%	74.84%	74.84%	74.84%	%
Total	3,666.0	3,665.0	3,412.8	3,503.6	3,526.1	3,548.8	3,571.7	thousand boe/d
Integrated gas	349.3	336.5	313.4	321.7	323.8	325.9	328.0	million boe
Oil and gas production available for sale	957.0	922.0	858.5	881.4	887.1	892.8	898.5	thousand boe/d
LNG liquefaction volumes	34.3	35.6	33.1	34.0	34.3	34.5	34.7	million tonnes
REVENUES (BY SEGMENT)								
Integrated gas								
Revenues								
Reported	$ 48,617	$ 45,602	$ 29,633	$ 34,764	$ 47,574	$ 48,882	$ 50,448	$ million
Liquids	$ 22,342	$ 19,371	$ 11,557	$ 13,558	$ 18,554	$ 19,065	$ 19,675	$ million
Other products/ activities	$ 26,275	$ 26,231	$ 18,076	$ 21,206	$ 29,020	$ 29,818	$ 30,773	$ million
Total	$ 48,617	$ 45,602	$ 29,633	$ 34,764	$ 47,574	$ 48,882	$ 50,448	$ million
Liquids	46.0%	42.5%	43.6%	43.6%	43.6%	43.6%	43.6%	%
Other products/ activities	54.0%	57.5%	56.4%	56.4%	56.4%	56.4%	56.4%	%
Upstream								
Revenues								
Reported	$ 47,733	$ 46,413	$ 28,061	$ 32,921	$ 45,051	$ 46,290	$ 47,773	$ million
Oil	$ 43,777	$ 39,447	$ 23,535	$ 27,610	$ 37,784	$ 38,823	$ 40,067	$ million
Gas	$ 7,789	$ 6,882	$ 4,526	$ 5,310	$ 7,267	$ 7,467	$ 7,706	$ million
Other products/ activities	$ -3,833	$ 84	$ -	$ -	$ -	$ -	$ -	$ million
Total	$ 47,733	$ 46,413	$ 28,061	$ 32,921	$ 45,051	$ 46,290	$ 47,773	$ million
Downstream								
Revenues								
	$ 340,038	$ 294,677	$ 162,757	$ 190,942	$ 261,298	$ 268,484	$ 277,084	$ million
FINANCIAL ASSUMPTIONS								
Capex	(24,078.0)	(23,919.0)	(22,000.0)	(23,000.0)	(24,000.0)	(25,000.0)	(27,000.0)	$ million
Working capital	7,163.0	11,584.0	(7,289.3)	1,912.2	3,426.0	(2,742.0)	(2,664.6)	$ million
Dividend per share	1.89	1.89	0.64	0.74	0.86	0.99	1.15	$
Cash flow from operating activities	53,085.0	42,178.0	41,255.9	33,422.8	41,670.0	48,426.8	49,209.8	$ million
Free cash flow	39,426.0	26,399.0	19,255.9	10,422.8	17,670.0	23,426.8	22,209.8	$ million
ROCE	12.2%	4.9%	-4.7%	1.8%	5.5%	6.2%	6.8%	%
Earnings	23,352.0	15,842.0	(14,577.8)	5,315.0	16,821.9	19,286.3	21,769.0	$ million
Earnings per share	2.82	1.97	(1.87)	0.68	2.16	2.47	2.79	$
OPERACIONAL ASSUMPTIONS								
Production available for sale (boe/d)	3,666.0	3,665.0	3,412.8	3,503.6	3,526.1	3,548.8	3,571.7	boe/d
LNG liquefaction volumes (million tonnes)	34.3	35.6	33.1	34.0	34.3	34.5	34.7	million tonnes
Direct greenhouse gas emissions	71	70	70	69	69	68	68	million tonnes of co2 equivalent
Operacional spills of more than 100 kilograms	92	70	64	58	53	48	44	number
DEBT								
Current debt	10,134.0	15,064.0	15,064.0	15,064.0	15,064.0	15,064.0	15,064.0	$ million
Non current debt	66,690.0	81,360.0	87,460.0	83,087.0	78,932.7	74,986.0	71,236.7	$ million
Gross debt	76,824.0	96,424.0	102,524.0	98,151.0	93,996.7	90,050.0	86,300.7	$ million
Cash and cash equivalents	26,741.0	18,055.0	32,292.6	25,329.6	25,087.0	29,907.3	32,627.0	$ million
Net Debt	50,083.0	78,369.0	70,231.4	72,821.4	68,909.6	60,142.8	53,673.7	$ million
Total Capital	252,617.0	268,832.0	239,220.1	238,829.6	242,910.3	243,602.8	247,908.9	$ million
Gearing	19.8%	29.2%	29.4%	30.5%	28.4%	24.7%	21.7%	%
Equity (market value)	242,527.0	231,184.0	168,988.7	166,008.2	174,000.7	183,460.0	194,235.2	$ million
Gross debt to equity	31.7%	41.7%	60.7%	59.1%	54.0%	49.1%	44.4%	%
Net debt to equity	20.7%	33.9%	41.6%	43.9%	39.6%	32.8%	27.6%	%
D/(D+E)	24.1%	29.4%	37.8%	37.2%	35.1%	32.9%	30.8%	%
Total debt	76,824.0	96,424.0	102,524.0	98,151.0	93,996.7	90,050.0	86,300.7	$ million
YoY($)	(8,841.0)	19,600.0	6,100.0	(4,373.0)	(4,154.4)	(3,946.6)	(3,749.3)	$ million
YoY (%)	-10.32%	25.51%	6.33%	-4.27%	-4.23%	-4.20%	-4.16%	%

Appendix 6- Oil and gas value chain



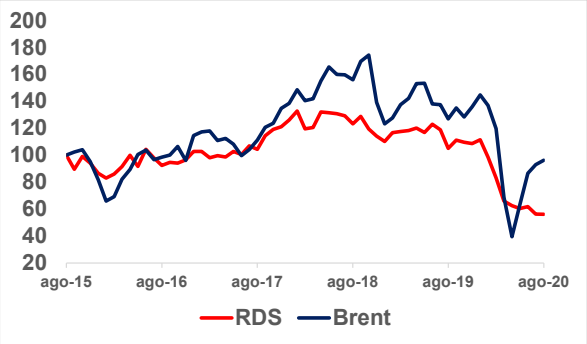
Infograpic: BP

Appendix 7- Key value drivers of profitability

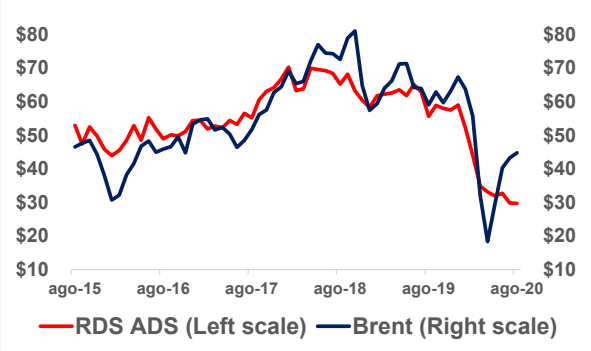


Source: Deloitte's framework;
World Bank – NOC's and Value Creation (2011);
Work team adaptation and analysis

Appendix 8- RDS vs Brent price evolution (100 base)

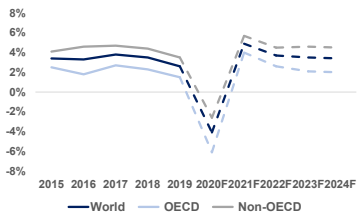


Appendix 9- RDS vs Brent price evolution ($)



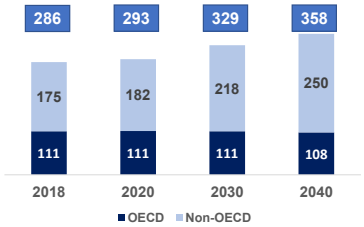
Appendix 10- World economic and energy outlook

World GDP growth (%)



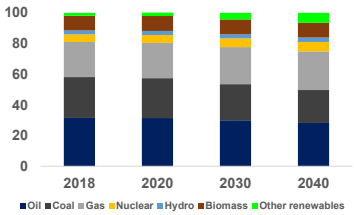
Source: EIU forecasts

Total energy demand (mboe/d)



Source: OPEC 2019 world oil outlook

Share of global energy demand (%)



Source: OPEC 2019world oil outlook

Appendix 11- Risk-free rate

RISK-FREE RATE	
10-Year US Treasury Rate	
observation_date	
2020-07-31	0.55%
AAA european rated bonds	
Observation_date	
2020-07-31	-0.49%
Fernandez survey	
2020	1.90%

Appendix 12- Beta estimation

MARKET PLAYERS			
Entity	Beta	Source	Comments
NYSE	0.82	NYSE	
Reuters	0.81	Reuters	
Yahoo finance	0.85	Yahoo.finance	5Y monthly
Investing.com	0.81	investing.com	
Financial Times	0.79	FT	
Average	**0.82**	*All values extracted at 01/08/2020*	
BETA: COVAR (RDSA ADS) / VAR (MSCI ACWI)			
VAR (MSCI ACWI)	0.001728485		
COVAR (RDSA ADS)	0.001642536		
BETA	**0.95**		
SLOPE	**0.95**		
REGRESSION	0.95		
R^2	0.336979674		
BLUME`S ADJUSTMENT BETA	**0.97**		
PURE PLAY METHOD, FROM THE INDUSTRY- OIL INTEGRATED			
Unlevered beta	1.14	Damodaran 2020	
D/E	34%		
Corporate tax rate	35.52%		
Levered Beta	**1.28**		

Appendix 13- Equity risk premium

LOCATION BASED CRP		
Moody`s rating	Aaa	
Mature market premium	6.0%	Source: Damodaran
Rating-based default spread	0.0%	Source: Damodaran
Country risk premium	0.0%	Source: Damodaran
Equity Risk Premium	**6.0%**	**Source: Damodaran**

OPERATION BASED CRP						
	Europe	Asia, Oceania, Africa	USA	Other Americas	**Total**	
Third-party revenue, by origin	98,455	139,916	83,212	23,294	344,877	
% of total revenue	28.5%	40.6%	24.1%	6.8%		
Mature market premium	6.0%	6.0%	6.0%	6.0%		Source: Damodaran
Region risk premium	4.1%	7.6%	0.0%	7.4%		Source: Damodaran; Average of CRP
Equity Risk Premium	10.1%	13.6%	6.0%	13.5%		
Weighted Average Risk Premium	**10.7%**					

SURVEY ESTIMATES		
USA	5.6%	Source: Fernandez (2020)
Netherlands	5.9%	Source: Fernandez (2020)

Appendix 14- Cost of debt

Cost of debt			
Historical average interest rate			
Total Debt	99,474.0		
Interest expense	4,592.0		
Cost of debt	**4.62%**		
Credit rating agencies	Rating	Outlook	
S&P	AA-	Negative	S&P
Moody`s	Aa2	Negative	Moody`s
Fitch	AA-	Stable	Fitch
Damodaran online cost of debt estimator			
Output			
Interest coverage ratio =			**6.57**
Estimated Bond Rating =			**Aa2/AA**
Estimated Default Spread =			**0.86%**
Estimated Cost of Debt =			**1.41%**

Appendix 15- Cost of equity

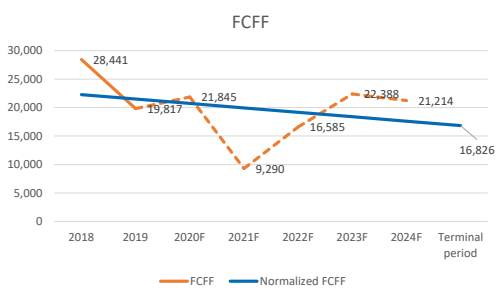
EQUITY	ESTIMATION
Rf	**0.55%**
Beta	**0.97**
MRP	**10.75%**
Cost of Equity (Ke)	**10.94%**

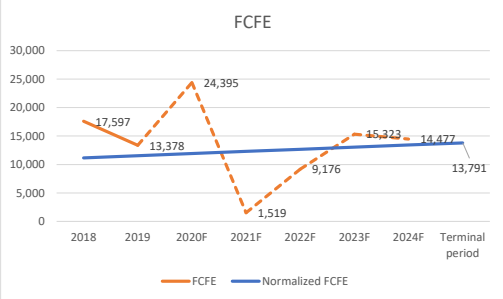
Appendix 16- Cost of capital (WACC)

COST OF CAPITAL	
Kd	4.6%
D/(E+D)	29.4%
Ke	10.9%
E/(E+D)	70.6%
(1-t)	64.5%
WACC	**8.6%**
Pre-Tax WACC	9.1%

Appendix 17- Terminal value

TERMINAL VALUE								
	2018	2019	2020F	2021F	2022F	2023F	2024F	Terminal period
FCFF	28,441	19,817	21,845	9,290	16,585	22,388	21,214	
Normalized FCFF	22,276	21,497	20,719	19,940	19,161	18,383	17,604	16,826
	2018	2019	2020F	2021F	2022F	2023F	2024F	Terminal period
FCFE	17,597	13,378	24,395	1,519	9,176	15,323	14,477	
Normalized FCFE	11,168	11,542	11,917	12,292	12,667	13,041	13,416	13,791





Appendix 18- Long-term sustainable growth rate (g)

GROWTH RATE												
REAL GDP GROWTH RATE (Annual % change)	2014	2015	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	Terminal period
Real GDP growth (PPP exchange rates)												
World		3.4	3.3	3.8	3.5	2.6	-4.1	4.9	3.7	3.5	3.4	3.4%
OECD		2.5	1.8	2.7	2.3	1.5	-6.1	4	2.6	2.1	2	
Non-OECD		4.1	4.6	4.7	4.4	3.5	-2.6	5.7	4.5	4.6	4.5	
Source: The Economist Intelligence Unit.												
STABLE GROWTH MODEL: REINVESTMENT RATE*ROE	2014	2015	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	Terminal period
Capex	33,102	27,027	34,867	21,533	24,078	23,919	22,000	23,000	24,000	25,000	27,000	285,526
DD&A	24,499	26,714	24,993	26,223	22,135	28,701	44,323	25,303	23,345	21,565	20,029	287,830
ΔNWC		-2,907	6,734	3,791	-3,965	4,421	-7,289	1,912	3,426	-2,742	-2,665	716
EBIT	30,118	3,935	8,809	22,172	39,366	30,175	-10,356	11,866	27,554	30,773	34,027	228,440
Corporate tax rate	47.98%	-7.47%	14.79%	25.90%	32.89%	35.52%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Reinvestment rate	55%	-61%	221%	-5%	-8%	-2%	381%	-4%	20%	3%	17%	-1%
ROE	8.65%	1.19%	2.45%	6.68%	11.76%	8.50%	-8.81%	3.27%	9.91%	10.80%	11.55%	11.55%
g												-0.11%
DIVIDEND SUSTAINABLE GROWTH MODEL: PRAT MODEL	2014	2015	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	Terminal period
Net income	14,874	1,939	4,575	12,977	23,352	15,842	-14,578	5,315	16,822	19,286	21,769	122,173
Dividends	9,560	9,487	9,857	11,283	16,259	15,735	5,172	5,982	6,919	8,003	9,257	107,513
Sales	421,105	264,960	233,591	305,179	388,379	344,877	193,787	227,511	311,563	320,374	330,887	3,342,213
Total Assets	353,116	340,157	411,275	407,097	399,194	404,336	364,946	359,701	371,850	378,370	386,597	4,176,639
Equity	172,786	164,121	188,511	197,812	202,534	190,463	168,989	166,008	174,001	183,460	194,235	2,002,920
SGR (g)	3.1%	-4.6%	-2.8%	0.9%	3.5%	0.1%	-11.7%	-0.4%	5.7%	6.2%	6.4%	0.73%

Appendix 19- WACC method

DCF VALUATION- FCFF						
Royal Dutch Shell Enterprise Value						
ENTERPRISE VALUE	2020F	2021F	2022F	2023F	2024F	Terminal period
EBIT	(10,356.0)	11,866.0	27,554.5	30,773.4	34,026.6	
RDSA Effective tax rate	25.00%	25.00%	25.00%	25.00%	25.00%	
(+)EBIT*(1-t)	(7,767.0)	8,899.5	20,665.9	23,080.1	25,520.0	
(+)DD&A	44,322.6	25,302.7	23,345.3	21,565.5	20,029.3	
(-)ΔNWC	7,289.3	(1,912.2)	(3,426.0)	2,742.0	2,664.6	
(-)CAPEX	(22,000.0)	(23,000.0)	(24,000.0)	(25,000.0)	(27,000.0)	
=FCFF	21,844.9	9,290.0	16,585.2	22,387.6	21,213.9	16,826
Ke		10.9%	10.9%	10.9%	10.9%	10.9%
Kd		0.0%	0.0%	0.0%	0.0%	0.0%
Kd* (1-t)		3.5%	3.5%	3.5%	3.5%	
Debt/EV		37.2%	35.1%	32.9%	30.8%	29.4%
Equity/EV		62.8%	64.9%	67.1%	69.2%	
WACC		8.60%	8.60%	8.60%	8.60%	8.60%
g						0.73%
=Enterprise value		217,871.5	236,600.8	238,929.2	235,156.5	
(+) Non operational assets		48,876.0				
(-) Non operational liabilities		59,206.0				
(+) cash and cash equivalents		25,329.6				
(-) (gross) debt		98,151.0				
(-) Non-controlling interest		3,662.3				
(=) Equity		**131,057.8**				
Nr of shares		7804.8				
Price		$ 16.79				
Each ADS is equivalent to two ordinary shares		$ 33.58				
Price @August 31st		$ 29.68				
Upside potencial		13.2%				
Annualized return		9.9%				

Appendix 20- Flow to equity method

DCF VALUATION- FCFE						
Royal Dutch Shell Enterprise Value						
EQUITY VALUE	2020F	2021F	2022F	2023F	2024F	Terminal period
(+) FCFF	21,844.9	9,290.0	16,585.2	22,387.6	21,213.9	
Interest	4,732.8	4,530.9	4,339.2	4,157.0	3,983.9	
Corporate tax rate	25.00%	25.00%	25.00%	25.00%	25.00%	
(-) interest*(1-t)	3,549.6	3,398.2	3,254.4	3,117.7	2,987.9	
(+) net borrowing	6,100.0	(4,373.0)	(4,154.4)	(3,946.6)	(3,749.3)	
(=) FCFE	24,395.3	1,518.8	9,176.5	15,323.2	14,476.7	13,791
Ke	10.94%	10.94%	10.94%	10.94%	10.94%	10.94%
g						0.73%
(=) Equity value		130,259.4	144,510.4	150,140.2	149,566.6	
Nr of shares		7,804.8	7,804.8	7,804.8	7,804.8	
Price		$ 16.69	18.52	19.24	19.16	
Each ADS is equivalent to two ordinary shares		$ 33.38				
Price @August 31st		$ 29.68				
Upside potencial		12.5%				
Annualized return		9.3%				

Appendix 21- Total payout model

DDM VALUATION											
Royal Dutch Shell Enterprise Value											
EQUITY VALUE	2020F	2021F	2022F	2023F	2024F	Terminal period		Comments			
Dividend discount model	3	4	5	6	7	8					
Dividend per share	0.64	0.74	0.86	0.99	1.15						
y/y growth	-66.1%	15.7%	15.7%	15.7%	15.7%						
Dividends	5,171.6	5,981.8	6,919.0	8,003.0	9,256.9						
Payout ratio	-34%	109%	40%	40%	41%						
Shares buyback	1,214.0	2,500.0	2,500.0	2,500.0	2,500.0						
Shareholders cashflow	6,385.6	8,481.8	9,419.0	10,503.0	11,756.9	12,156.6					
Cost of capital equity	10.94%	10.94%	10.94%	10.94%	10.94%	10.94%					
gS						3.40%					
H						5		Assuming 10 years untill oil demand peak			
gL						0.73%					
(=)Equity Value		125,119.1	138,807.8	143,544.6	147,597.0	135,840.1					
Nr Shares		7805	7805	7805	7805						
Price		$ 16.03	17.78	18.39	18.91						
Each ADS is equivalent to two ordinary shares		$ 32.06									
Price @August 31st		$ 29.68									
Upside potencial		8.0%									
Annualized return		6.0%									

Appendix 22- Peers multiples

2021	EV/EBITDA	EV/EBIT	PER	EV/Sales
BP	3.67	8.81	10.20	0.44
ExxonMobil	7.30	25.48	27.50	0.96
Total	5.12	12.31	11.70	0.90
Chevron	6.35	19.78	27.80	1.44
Average	5.61	16.59	19.30	0.94
Median	**5.74**	**16.04**	**19.60**	**0.93**

Appendix 23- Market based valuation

MARKET BASED VALUATION			
ENTERPRISE VALUE MULTIPLES			**2021F**
EV/Sales	Peers median		0.93
	RDSA Sales		227,510.8
	RDSA EV		212,153.8
	(+) Non operational assets		48,876.0
	(-) Non operational liabilities		59,206.0
	(+) cash and cash equivalents		25,329.6
	(-) (gross) debt		98,151.0
	(-) Non-controlling interest		3,662.3
	RDSA Equity		125,340.0
	Price	$	16.06
	Each ADS is equivalent to two ordinary shares	$	32.12
	Price @August 31st	$	29.68
	Upside potencial		8.2%
EV/EBITDA	Peers median		5.74
	RDSA EBITDA		37,169
	RDSA EV		213,162
	(+) Non operational assets		48,876
	(-) Non operational liabilities		59,206
	(+) cash and cash equivalents		25,330
	(-) (gross) debt		98,151
	(-) Non-controlling interest		3,662
	RDSA Equity		126,349
	Price	$	16.19
	Each ADS is equivalent to two ordinary shares	$	32.38
	Price @August 31st	$	29.68
	Upside potencial		9.1%
EV/EBIT	Peers median		16.04
	RDSA EBIT		11,866
	RDSA EV		190,366
	(+) Non operational assets		48,876
	(-) Non operational liabilities		59,206
	(+) cash and cash equivalents		25,330
	(-) (gross) debt		98,151
	(-) Non-controlling interest		3,662
	RDSA Equity		103,553
	Price	$	13.27
	Each ADS is equivalent to two ordinary shares	$	26.54
	Price @August 31st	$	29.68
	Upside potencial		-10.6%
EQUITY VALUE MULTIPLES			
PER	Peers median		19.60
	RDSA earnings		5,501
	RDSA Equity		107,826
	Price	$	13.82
	Each ADS is equivalent to two ordinary shares	$	27.63
	Price @August 31st	$	29.68
	Upside potencial		-6.9%

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Recommendation System

Level of Risk	SELL	REDUCE	HOLD/NEUTRAL	BUY	STRONG BUY
High Risk	0%≤	>0% & ≤10%	>10% & ≤20%	>20% & ≤45%	>45%
Medium Risk	-5%≤	>-5% & ≤5%	>5% & ≤15%	>15% & ≤30%	>30%
Low Risk	-10%≤	>-10% & ≤0%	>0% & ≤10%	>10% & ≤20%	>20%