POLITECNICO DI MILANO

School of Industrial and Information Engineering

Master of Science in Management Engineering

POLITECNICO
MILANO 1863

Evaluation of M&A deals in the Energy sector: a comparative approach

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Academic Year 2017/2018

Acknowledgements

We both would like to thank our supervisor, Prof. Alessandro Gandelli, for the patient guidance, the inspiration and the advices he handed over throughout the writing of this research. It is harsh to express how lucky we feel, to have had a supervisor who cared so much about our work and our path, and who responded to our questions and queries so promptly.

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ABSTRACT

Literature demonstrates how performances of the M&A activity are highly correlated with external sectorial factors that influence the outcome of the deals. As evidenced in recent studies, the activity is influenced not only by macroeconomic cycles that affect the dynamism of the period, but also by industry specific cycles depending only on variables characterizing a specific sector. The objective of this thesis is to access the impact of those industry specific variables on the outcome of M&As in the energy sector. The analysis is carried out using three case studies of merges and acquisitions in the sector of energy because related, for their purpose and extension, to the field of our interest. Once identified the factors impacting most the final performances, the work focuses on a second sector with completely different logics governing the business activity. Also in this case the methodology used is that of the case studies: three further examples are developed in order to access the whole process. This comparison has the objective to highlight the sectorial performances regardless the variables governing each sector, focusing on the underlying logic of the M&A. The research clearly shows that the mechanisms governing the M&A activity are far away from a sector to another, and those causing influence and lastly are the determinants of the final outcome, rendering the activity strongly subject on the needs of each sector. In Energy the priority is to build a sustainable and continuous business, independently by costs of the raw materials. In this way we are able to render the firm capable to overcome difficult periods through solid operations conferring resilience to the conglomerate. Interpretations of M&As in the sector have been different, such as the methodology to test it, leading to contradictory results. In this industry the research found no evidence of operating performance improvement, considering the activity more forced than desired. The hospitality sector is governed by well different rules, where full profit logic drives the activity with much less pressure from institutions, public opinion and government. Operations are so justified by the value addition they carry to the company.

ABSTRACT – ITALIAN VERSION

La letteratura dimostra come le performance delle M&A sono fortemente correlate con fattori esterni settoriali che influenzano il risultato delle operazioni. Come evidenziato in recenti studi, l'attività è condizionata non solo dai cicli macroeconomici che influenzano la dinamicità del periodo, ma anche da cicli specifici del settore che dipendono solo dalle variabili che lo caratterizzano. L'obiettivo di questa tesi è mostrare l'impatto delle suddette variabili sul risultato delle M&A nel settore energetico. L'analisi è condotta usando tre case studies di M&A nel settore energetico perché relazionati, per la loro portata ed estensione, al campo di nostro interesse. Una volta identificati i fattori che impattano maggiormente sulle performance finali, il lavoro si focalizza su un secondo settore con logiche completamente differenti. Anche in questo caso la metodologia usata è quella dei case studies: tre ulteriori esempi sono stati sviluppati per indagare sull'intero processo. Questo paragone ha l'obiettivo di sottolineare le performance settoriali senza considerare le variabili che contraddistinguono ogni industria, focalizzandosi sulla logica sottostante le M&A. La ricerca mostra chiaramente che i meccanismi che governano le attività di M&A sono molto distanti da un settore all'altro, e questa influenza è causa del risultato finale, rendendo l'attività fortemente soggetta ai bisogni di ogni settore. Nel campo energetico la priorità è costruire un business sostenibile e continuo, indipendentemente dai costi delle materie prime. In questo modo si è capaci di rendere l'azienda in grado di superare periodi difficili grazie a solide attività operative che conferiscono resilienza al conglomerato. Interpretazioni sugli M&A nel settore, così come le metodologie usate per testarle, sono state differenti, portando a risultati contraddittori. In questo settore la ricerca non ha trovato evidenza di miglioramento delle performance operative, considerando l'attività di M&A più come un qualcosa di forzato che desiderato. Il settore hospitality è governato da regole ben differenti, dove la logica del profitto conduce l'attività con molta meno pressione da parte di istituzioni, opinione pubblica e governo. Le operazioni sono quindi giustificate dal valore aggiunto che ne ricava la compagnia.

SUMMARY

Growth and creation of value are, and have always been, fundamental factors for the success of a firm and, in a dynamic and international market as the actual is, a fundamental requisite to survive. Systems through which enterprises can face new competitive scenarios are different, such as different are instruments created by legislation with the purpose of reaching those fundamental objectives of development and creation of value.

The present work focuses on M&A activity, desiring to evaluate its efficiency and desirability, in terms of maximization of growth potential and creation of value for the companies of a specific sector. Searching for synergies and strategic downsizing, it is allowed to different economic actors to tack rapid responses, coherent with change, flexibility and innovation demand, compatibly with the company's competences and disposable wealth.

Chapter 1 focuses on the energy sector and lays the foundations for the following considerations. It is a context-based chapter where the work is added in the general framework. After a brief history of oil, the production is divided between OPEC and non-OPEC supplier examining the fundamentals of the industry in the most important oil producers. Production methods are than explored to highlight the development of the sector and the latest progresses. In the chapter a specific insight is given to financing options available to the players.

Chapter 2 is largely theoretical and digs into M&A strategy. The focus of the chapter is on the vast variety of drivers for mergers and acquisitions, considering the key factors that underlie the activity. Motivations that lead the management to carry on those operations rather than pursuing another strategy are explored, evaluating principal advantages and disadvantages. Strategic motivations causing their realization will therefore be brought to light, adequately pondering relative risks and costs, as well as obstacles to their diffusion. Finally is given an insight on historic M&A waves.

Chapter 3 fixes the centre of the phenomenon in the Energy field. The first part studies the last trends with particular attention to the renewable sector, attracting most of the public attention. Trends and premium paid in the transactions are exposed to give an outlook of the activity in the sector. The second part of the chapter illustrates three examples that encase the

characteristics of M&A in the sector for dimension and importance of the companies participating the transaction.

Chapter 4 shifts the attention on Hospitality sector, used as a comparison in the evaluation of the phenomenon. Symmetrically with chapter three, here M&A process has been considered in the context of Hospitality. The introduction give an insight on the business models and on the waves that affected the industry, than three further case studies are addicted to evaluate the variables at the basis of the business.

Chapter 5 opens with considerations of antitrust laws governing the economy, starting with a general overview and than passing to sector specific mechanisms. The study is used to defined constrains under which both industries are operating. In conclusion the results of the strategy of the case studies previously examined are presented. Each strategy is justified in an industry specific context. The last section on performance measurement, that will need further researches to be accessed, displays to the reader the evolution of the firms during the M&A activity.

CHAPTER 1: INTRODUCTION

BRIEF HISTORY OF OIL

Oil has been part of human history for more than usually acknowledged. The first references to the use of petroleum date back to the third millennium B.C. in Mesopotamia and East Asia, where it was mainly used in war and for recreational purposes. The modern conception of oil as an energy resource became common knowledge after the wave of discovery and experimentation happened from late 1840s in the United States. AT the time, the common source of illumination, for the minority of riches who could afford it, was the whale oil, a natural fat with good efficiency compared to the main competitor of the time, the dangerously inflammable camphene (cheap derivative of turpentine). The economic rationale for oil to be produced in mass quantities came after unrelated events caused the crises of the two main sources of the time: the shortage of whales in the Atlantic coast, a consequence of the fiery hunting of the past decades, meant that shippers had to sail through the shores of Africa to find preys, thus lifting the price upwards to make a reasonable profit; on the other hand, the burst of the Civil War in 1861 caused the sudden stop of imports of camphene from the South. The innovations in methods of extraction and treatment of oil played an important part in the development of the industry, passed from a niche product collected through blankets and rags immerged into superficial outbreaks, to country wide industry with exports in Europe and Asia. As the industry developed, the advantages of integration and vertical integration became ever clearer, especially to J.D. Rockfeller, founder and owner of Standard Oil. The company famously wielded control of most of the market (at the time of the dissolution it accounted for roughly 90% of the north America production) through an investment campaign of expansion in the midstream and downstream segments of the market. The company was divided in 1911 after an intervention from the US antitrust, based on the Sherman act passed in 1890. The dismemberment of Standard Oil is a pivotal moment in the history of oil industry and can be considered the start of the second modern era of oil. This period, which ranges from 1911 and the 1960s, was characterized by strong dominant

players, some of which the direct heirs of the Standard Oil assets itself: the degree of power wielded by these major companies awarded them the eponym "The seven sister", as Enrico Mattei, then head of Italian state oil company ENI, berated them. The companies maintained nearly absolute control of the markets through obscure practices and agreements, mostly finalized at market share allocation or quotas, price fixing and the elimination, through acquisitions and other suitable means, of the potential competitive impact of companies outside this restricted circle. Still in 1972 the seven companies produced 91% of oil from Middle East and supplied 77% of oil consumption outside US and URSS.

The era of private domination ended in the 1970s, to be substituted by another form of market monopoly, this time from national companies. In 1960 the Organization of Petroleum Exporting Countries (OPEC) was founded by Iran, Iraq, Kuwait, Arabia Saudita e Venezuela. The aim of the organization was initially to curtail the bargaining power of the Seven Sisters, but with time it expanded in a powerful force, now reckoning 14 countries with the addition of United Arab Emirates, NIgeria, Libya, Qatar, Algeria, Indonesia, Ecuador, Gabon, and Angola. Its presence and its clout (OPEC reckons to have 82% of world oil reserves) gives it exceptional bargaining power in fixing the price for oil.

OIL PRODUCTION

Today, the production of oil is spread disproportionally in the world, due to both available resources and national interests. For the purpose of this analysis, two separate groups of countries will be examined in detail: one is represented by countries of the Organization of the Petroleum Exporting Countries (OPEC), and the other by the rest of the world (NON-OPEC).

OPEC PRODUCTION

The cartel of Oil exporters is one of the most powerful in terms of market monopoly. Its members accounted in 2016 for 82% of proven resources of oil in the world and produced approximately 44% of the total of oil [1,2].

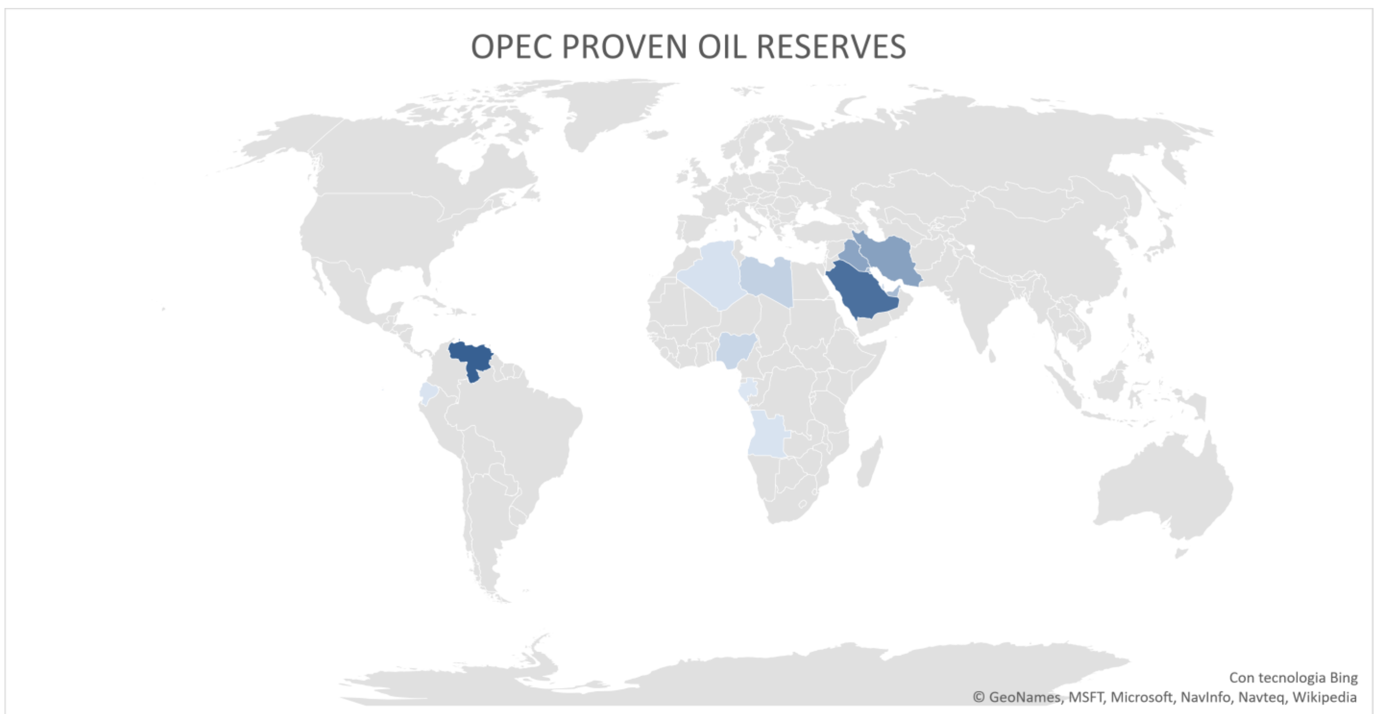

Figure 1.1: OPEC proven oil reserves

Source: OPEC 2017 annual market oil report

According to most recent available data from OPEC [3], the bulk of oil reserves is located in the Middle East, with a total presence representing 65.5% of OPEC total. However, the

region with the biggest share of oil reserves for the cartel is Venezuela, which at the end of 2017 reckoned 302,25 billion barrels of oil available for exploitation [1]. Indeed, these huge amounts of resources make Venezuela the most important country for oil reserves not only among OPEC's participants, but in the entire world. The economy of the Central America state is indeed heavily dependent on oil exports and was one of the most hit by the collapse of oil prices in recent years: the state-run company for oil extraction and refining is PDVSA, which has a formal monopoly on the country resources and platforms. The second largest region of the organization is Saudi Arabia, which accounts for 266,21 billion of oil barrels of proven reserves, roughly 22% of the total and slightly less then Venezuela, whose share is 25% [1]. Even in this region the operation connected to oil transport and exploitation are regulated by the state, which is the manager of Saudi Aramco, a firm with the effect monopoly on operations. However, the situation is about to change, thanks to the rise of Moḥammad bin Salmān, member of the royal family and possible disrupter of the Saudi economy, thanks to a decennial plan to distance the country from oil dependency. Part of this project, called Saudi Vision 2030, expects the deployment of nearly 30 billion of dollars in futuristic technological start-ups, thanks to the participations in SoftBank's 100 billion dollars venture capital fund and the direct investment in established companies in the clean energy sector [4]. On the other hand, a big source of financing for the transition should come from the IPO of Saudi Aramco itself, aimed to raise a figure near to 2 trillion dollars in Saudi's intentions: despite this, it is not clear where the listing would eventually take place and even who would be entitled to invest, let alone if the operation would ultimately see the green light, since many doubt still persist on the company's obscure practices and undisclosed financial statements. For some time still, the country's economy is probable to maintain its dependency form oil [5].

After these two champions, the remaining part of OPEC's oil proven reserves in distributed in three blocks, where members were grouped according to their share of the total:

- Iran and Iraq, accounting for 13% and 12% respectively. The former has been plagued by exports' restrictions in recent years, in part motivated by geopolitical tensions prompted by its rogue nuclear program, while the second saw its economy weakened

by war and part of its reserves at risk from the requests of independence from Kurdistan, a region at the country's north [1,3].

- Kuwait and United Arab Emirates, which have roughly the same share, at 8% of the total. Kuwait was a founder of the cartel, which was joined by United Arab Emirates in 1967 [1,3].
- Libya, Nigeria, Qatar, Algeria, Angola, Ecuador, Gabon form the third a final block, comprising states with less than 4% of OPEC's reserves [1,3].

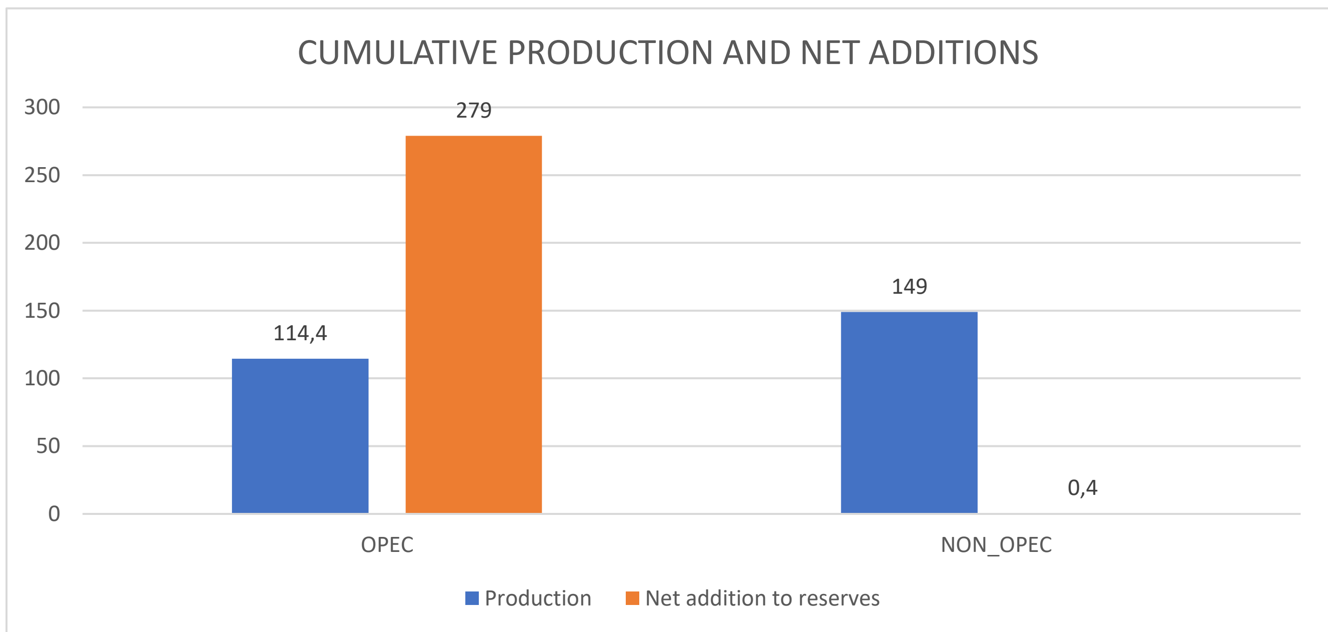

Figure 1.2: cumulative production and net additions, 2007-2016

Source: OPEC 2017 annual market oil report

The share of world proven oil reserves increased in the first decade of the millennium thanks to a surge in oil prices; but when they plummeted to the low peak in 2016 many national energy companies were forced to underwrite huge impairments, since many existing resources became not economical to produce [6].

Due to the plunge of oil prices at the beginning of 2016, OPEC decided to limit the production of crude oil [3]. Targets for the cut were set for all its members except for Libya and Nigeria, still strife-torn at the period, and for Iran, which had already been hit by sanctions and was therefore allowed to lightly raise its production target for 2017. The Vienna Agreement in the same year officialized the targets in 4.6% production cut for each country and 2.4% increase for Iran.

The targets implied a reduction of 425 million barrels from the OPEC-11's production compared to the reference level estimated for 2017 in absence of cuts [3]. The outcome was a dwindle of 438 million barrels, meaning a total 103% compliance level, even if countries differed in their performances.

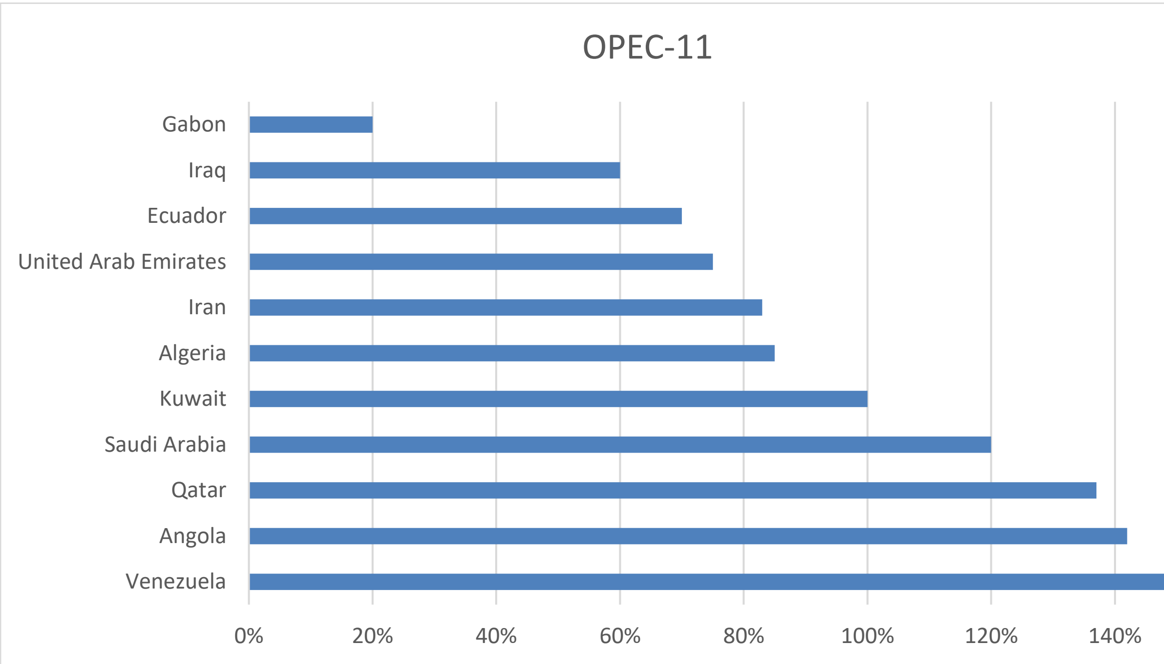

Figure 1.3: OPEC-11 compliance with supply cuts in 2017

Source: elaborated from Bloomberg

The contribution of most zealous countries offset overproduction by weakest members: Saudi Arabia cut an extra 40 million barrels from the committed 177 million barrels per year;

Venezuela reduced its production by an excess 17 million barrels in the year; Angola extra contribution of 12 million barrels limited the damage from UAE excesses. On the over hand, Iraq was the worst performer in absolute terms, missing its target cut for a staggering 32 million barrels, or 40% of the compliance level [7].

However, the various achievements were not motivated only by strong commitment by member states: Venezuela had been through a political and economic turmoil for most of 2017 and has seen its economy seized and sanctioned, while the government's budget drowned beneath a mountain of hardly repayable debt; Angola has failed to entice foreign investments for the turnover of its ripe fields, from which it exports the majority of what is pumped out [7]. The recovery of oil prices, which rallied at the end of 2017 to return to acceptable 70 dollars level, was fueled even by Russia joining the cut agreements as an external member.

NON-OPEC PRODUCTION: CHINA

China is the world's top crude oil consumer and importer. For each day in 2017, China consumed 11,8 million barrels of oil, over a half million barrels increase from 2016, with its consumption's growth that is expected to continue at a rate of 5% per year. Being the domestic production around 4 million barrels per day, China relies heavily on the international market for its supply [8]. Statistics from Chinese Energy Information displays that China imported 7,6 million barrels per day in 2016, an increase of 13,6 percent over the previous year, and In 2017 China surpassed the U.S. as the world's biggest crude importer. Indeed, China has been a net importer of oil since 1996, year in which its purchase of oil surpassed the value of its exports. In order to achieve autarchy, the country would have had to raise its production for 65,2% in 2017. Following Chinese own estimates, the share of net domestic imports of oil may reach 60% of the country consumption by 2030 [9].

China's oil and gas markets are dominated by three national and provincial oil companies: PetroChina, Sinopec and China National Offshore Oil Corporation (CNOOC), which focuses on offshore oil development and has limited refining capacity. Sinopec controls 46 percent

of total crude refining capacity, while PetroChina accounts for 31 percent [8]. The remaining part is processed by smaller refineries with limited potential. China always suffered from a substantial unbalanced coming from a geographic dispersion, as the industry is concentrated in the north and west while demand is concentrated in the south and east [10]. Problems in the transportation arising from the phenomena are unlikely to be resolved in the near future and the issue is far from a solution. The efforts required to face the situation got harder because oilfield service companies and equipment manufacturers were also hurt badly by low oil prices, as their customers stopped or delayed purchases to try to minimize expenditures. Some service companies and equipment manufacturers have reported that their businesses revenues dropped between 30 to 50 percent in 2017 alone.

In 2016, China's capital investment in oil and gas exploration and production dived by 31.9% to 233,1 billion Yuan (about 32,4 billion dollars). As a result, China's oil output dropped 6.9% to 3,98 million bbl/d. Despite these challenges, low global crude oil prices have allowed the Chinese Government to fill its strategic petroleum reserve with inexpensive foreign crude oil [8].

U.S. manufactured oil and gas equipment represents between 50 and 60 percent of China's imports of crude. This will likely increase in the future as China intends to further raise its shale gas reserves, much of which are in locations affected by geopolitical difficulties which make them more dangerous than those of the United States. This view is supported by China's substantial proven reserves, reassessed at 150-200 trillion cubic feet (tcf). Roughly 5% only of the estimated potential, giving substantial credit to a solid domestic-based industry. The first pillar consists of the exploitation—from exploration to distribution–of the most significant domestic deposits in Xinjiang (Tarim Basin, 30 tcf to 40 tcf). International Oil Companies (IOCs) and international service companies have established their presence in China, as it happens in other sectors, mostly through partnering with Chinese companies [9].

Just in late 2000-2001 the three above mentioned Chinese companies successfully entered the international financial and business market with their IPO; they were listed as PetroChina,

Sinopec Corporation and CNOOC Limited. China owns now a trio of globalized champions: a peculiar situation in a market usually dominated by monopolies [10].

THE 1998 SHOCK THERAPY

In 1998 Chinese oil industry was transformed and shaped to fit the economy-led globalisation trend. The industry picture changed from 1995, when the government started to increase efforts to merge the constellation of small to medium-sized oil and gas, with the intention of forming regional players ready to front global concurrency. Three years later, in 1998, the entire industry was fully restructured in a territory-based division among three giant companies: CNPC in the north and west (12 provinces) with the majority of oil and gas reserves, Sinopec Group in the south and east (19 provinces) with the bulk of the refining and chemicals assets, and CNOOC keeping its almost monopolistic off-shore perimeter intact [10].

The major impact has been the emergence of a real competition phenomenon between CNPC's and Sinopec's affiliates, specifically significant on two distinct grounds: manufacturing and technology-led on one side through process and technical upgrades initiatives; market and client-base dynamic through products, quality improvements and marketing campaigns for market share. After decades of uncompetitive and old-fashioned practices, the two companies aggressively restructured their assets base, implementing production enhancements plans and using sales and marketing innovative tools, as much to set up programmes to improve their cost structures as to attract a brand new customer base. Western-style battles for market demand surged and the competitive field brought with it unprecedented price wars and spot periods of undervalued production [11].

CNPC AT A GLANCE

China National Petroleum Corporation (CNPC) is a state-owned Chinese oil and gas corporation and one of the largest integrated energy groups in the world. Its headquarters

are in Dongcheng District, Beijing. CNPC was ranked the third in 2016 Fortune's Global 500, with 299.271 million dollars in revenues [12].

- Crude output: 105.45 million tons per year in China [11]
- Natural gas output: 98,1 billion cubic meters per year in China [11].
- Domestic service stations: 20.895 [11].
- Domestic pipelines: 81.191 kilometers, including 18.897 kilometers for crude oil (69,2% of China's total), 51.734 kilometers for natural gas (75,8% of China's total) and 10.560 kilometers for refined products (42,3% of China's total) [11].
- CNPC accounts on its own for about 50% of the national production [8].

A brief timetable is provided here below:

1998: China National Petroleum Corporation is reorganized to become an integrated group.

2000: American Depositary Shares (ADS) and H shares of PetroChina are listed on the New York Stock Exchange (stock code: PTR) and on the Stock Exchange of Hong Kong Limited.

2007: listing on Shanghai Stock Exchange. By the end of 2014, China National Petroleum Corporation possessed over 86% of PetroChina shares.

CNPC IPO

PetroChina became the world's first company to pass 1 trillion dollars in market capitalization with the entrance on the Shanghai Stock Exchange. PetroChina's booming share price, which trebled the value of the company on its opening day, made it possible to pass the U.S. energy behemoth Exxon Mobil as the world's most valuable company in 2007. At its intra-day high in Shanghai trading, it was valued at almost 1,2 trillion dollars, compared to Exxon Mobil's market capitalization in the same moment close of 487 billion dollars [13]. To put this value

in perspective, at that level PetroChina was worth more than the gross national product of Australia. Though PetroChina's share price tripled on debut in Shanghai and overtook Exxon Mobil in value, the Chinese behemoth was about half as profitable as its rival: in the first half of 2007, when it was listed, PetroChina's net income was 10,9 billion dollars, compared to 19,5 billion dollars for Exxon Mobil. The oil and gas company raised 66,8 billion yuan, or 8,9 billion dollars, ahead of its listing on Monday by selling 4 billion shares at 16,70 yuan a share, but only 13 percent of the company has been floated. The rest is in the hands of its state-owned parent China National Petroleum. The ebullience of Shanghai investors for the stock is not matched elsewhere and the challenge for the company is to match the invertor's euphoria with real performance [13].

DOMESTIC MARKET FOR DERIVATIVES TRADING

On March 26, 2018, China launched a crude futures contract in a bid to gain more weight in the global market. If successful, the yuan could be seen as a competitor of the dollar in oil trading (as of now, though, that is still far from the facts). A previous attempt to introduce oil futures in yuan, in the early 1990s, failed because of unstable pricing [14]. This time things may be different, since regulators prepared methodically to dismiss speculators, notorious in Chinese markets, by making the storage of oil very expensive. Volumes were light in the first days of trading less than a tenth of the averages for similar contracts in New York and London. China has two goals. The priority is to help its companies hedge against volatility. Chinese traders and refiners have struggled to manage currency risks due to the restriction on currency markets. Thus, an onshore contract able to lock the future price of oil in yuan may be strongly appreciated by domestic investors. More ambitiously, China hopes to create a standard for oil pricing fitting its own supply and demand as a rival to Brent in Europe and West Texas Intermediate in America. Furthermore, this move is intended to attract foreign investors, accumulate volumes and scale the market: indeed, trading will run until 2.30am Chinese time, to overlap with daytime in America and Europe. The debut was positive: Glencore and Trafigura, two of the world's biggest commodity traders, largely participated on the contract's debut. Nevertheless, the same hurdles that make it hard for domestic firms

to trade abroad will partially prevent foreigners from deeply digging into China's market [14]. Special offshore bank accounts need to be opened to gain the access, while the profits gained cannot be reinvested in the Chinese territory. The market should be particularly appealing for those under American sanctions. Iran, Russia and Venezuela would build an off-dollar base trading oil in yuan and consequently gain field on American banks [10]. The potential to attract foreign investment and build the biggest ever oil derivatives market is perceived to be limitless, the effective traction of the initiative will unravel in next years.

NON-OPEC PRODUCTION: RUSSIA

The biggest Russian oil company is Rosneft (1,5 billion barrels in 2017) followed by Lukoil (707 million barrels of oil in 2017), Gazprom Neft (482 million barrels of oil in 2017), Surgutneftegaz (447 million barrels in 2017) and Tatneft (193 million barrels of oil in 2017). Oil pipelines (except for Caspian Pipeline Consortium) are owned and operated by the state-owned monopoly Transneft and oil products pipeline are owned and operated by its subsidiary Transnefteproduct [15].

Russia's natural gas reserves are the second widest in the world, and Russia exploits them to the point of being the world's largest exporter; it has the second largest coal reserves and the eighth largest oil reserves. Russia's oil output edged up in March 2018 to 10,97 million barrels per day. It produces 12% of the world's oil and has a similar share of global oil exports. Russian exports go mainly to the European market using Kazakhstan as transit country. BP credits Russia has by far the largest proven reserves of natural gas, with 31.3 tcm (trillion cubic meters) which would place it in second place, slightly behind Iran (33.1 to 33.8 tcm, depending on the source). The USGS estimate of Russia's undiscovered oil is 22 billion barrels, second in the world only to those of Iraq.

ROSNEFT

Rosneft is the leader of Russia's petroleum industry and the world's largest publicly traded petroleum company. its main activities include prospection and exploration of hydrocarbon

deposits, oil, gas and gas-condensate production, upstream offshore projects, processing, as well as oil, gas, and production marketing in Russia and abroad. The Company is included in the list of strategic companies and organizations of Russia, since the firm's largest shareholder (50.00000001% of the equity) is JSC ROSNEFTEGAZ, fully owned by the Russian Government Rosneft is also the world's largest producer of hydrocarbon liquids among public oil and gas companies. The Company's share in oil production was near 40% in the Russian Federation and 6% globally in 2017, reaching 2,6 million bpd [16].

IPO

On July 14, 2006, Rosneft completed the Initial Public Offering, and its shares started selling on the London Stock Exchange and on the Russian venues of RTS and MICEX. In the landmark 10,7 billion dollars IPO, a total of 1.411 million shares were placed, including 1.126million shares held by OJSC Rosneftegaz and 285 mln. newly issued shares: this made the operation the largest IPO completed to date in Russia and the fifth largest ever worldwide. Rosneft's market capitalization at the IPO was 79,8 billion dollars, the second largest for any Russian company. As a result of the IPO, the Russian Government's stake in Rosneft decreased to 75,2%. In 2016, Rosneft's main financial operation was the completion of an integral transaction to privatize a 19,5% stake in the company and the majority share of Bashneft, as a result of which the State received 1,04 trillion rubles (the Company's total payments to the budget for 2016 exceeded 3 trillion rubles) [16].

RUSSIA'S ROLE IN THE OPEC SUPPLY CUT AGREEMENT

The Organization of Petroleum Exporting Countries and Russia joined forces in late 2016, after being sworn enemies for decades, against the threat posed by a boom in US shale oil, which flooded markets and sent prices plunging [17]. To offset the American advance, OPEC and Russia assembled a coalition of 24 nations that would cut their own production. Russia needs much lower oil prices to balance its budget than OPEC's leader Saudi Arabia, which

is much more dependent from oil exports to support its economy and would hence benefit from pricier crude. After oil prices rising above 60 dollars, Russia expressed concerns that an extension for the whole of 2018 could prompt a spike in crude production in the United States, which is not participating in the deal. The country itself has pledged to cut 300,000 b/d starting from the first quarter of 2017 and the deal was prolonged throughout 2018. Russia ramped up production in the preceding months to a historic maximum to cut from a higher base [17]. Therefore, Russia will feel the economic and political benefits of the deal without making a major market share sacrifice. Twelve major companies that control 90% of output agreed to partake. The producers were supposed to decrease output in accordance with their share of Russia's total mix, after the initial idea of trading quotas between companies was rejected. More than a half of Russia's oil output is controlled directly by the state, which helped ensure high compliance levels, which at the end of 2017 stood at 95.2% [17].

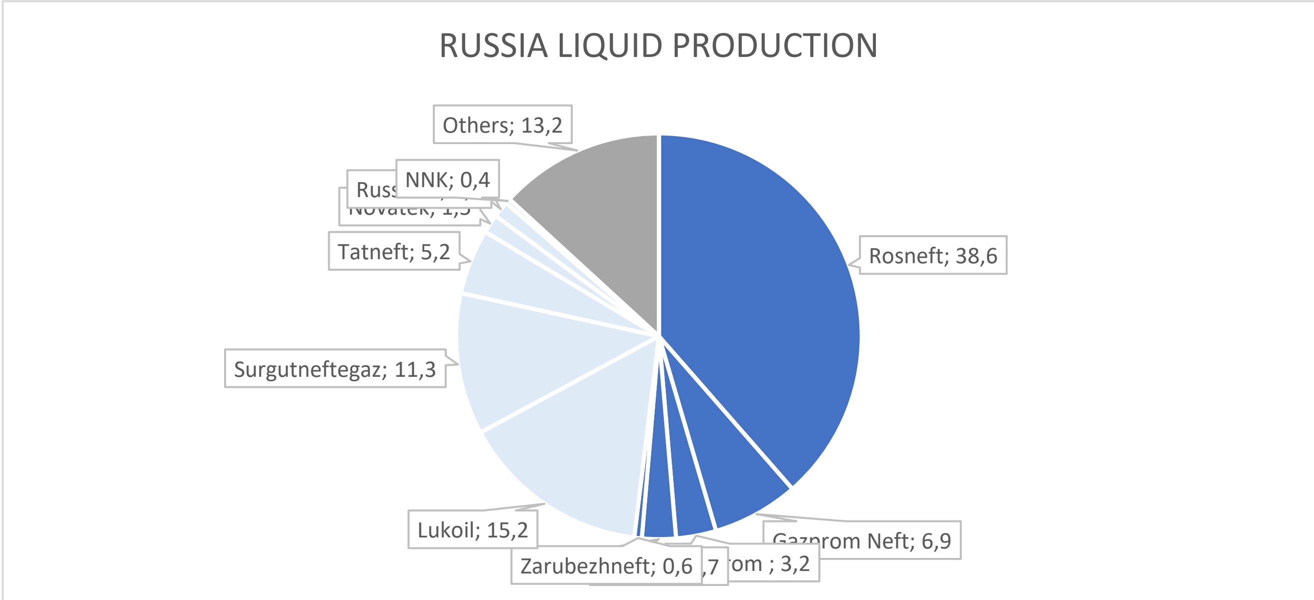

Figure 1.4: Russian liquid production divided per company output

Source: elaborated from EIA

The Urals-Brent differential has been gradually narrowing down, further increasing oil revenues for Russia. Backing key energy players should also elevate Russia's image in the

world arena. In particular, negotiating a compromise between Saudi Arabia and Iran aided in further strengthening the Moscow-Tehran relationship, which fostered a 100,000 b/d oil swap contract at the beginning of 2018 and is the latest in a row of high-profile energy deals between the two countries [17]. However, compliance with the agreement may be more attractive than it seems for Russia. Its production costs are almost entirely based on the local currency, the ruble. After the announcement of the agreement with OPEC, the ruble gained around 10% in a year, increasing production costs accordingly. A temporary decrease in activity could therefore be appealing to operators, who can ramp up output again once currency fluctuations improve project economics.

After America re-established sanctions against Iran with characteristics similar to those of 2012-2015, Russian Ural could be interested in covering the shortage of supply having characteristics similar to Iranian light-brent, renegotiating as a consequence the production cuts.

SANCTIONS

The EU’s sanctions announced in late 2017 targeted Russia's state finances, energy and arms sectors: they were prompted by Russia’s illegal annexation of Crimea from Ukraine in 2014. Three major state oil firms are targeted: Rosneft, Transneft and Gazprom Neft, the oil unit of gas giant Gazprom [18]. EU will not export a wide range of oil industry technology and the US will match those measures banning exports of services and technology to Russian state oil firms engaged in Arctic and deep-water exploration. Russian companies, however, are used to relying on foreign partners and do not yet have the capabilities for solo exploration and development in deep-water. As West Siberia, the bedrock of the Russian oil industry, continues to mature, venturing into frontier projects will be essential for maintaining stable output. Sanctions eventually stopped Exxon’s investments, a step back from the early years of the Obama administration, when there was a brief warming of US-Russia’s relations, which fostered Exxon Mobil’s investment in an exploration project, with the Russians agreeing to invest 3,2 billion dollars to drill millions of acres on and offshore from Russia’s Arctic to the Black Sea [19].

NON-OPEC PRODUCTION: AMERICA

In 2015, the U.S. imported 24% of the petroleum it used, the lowest since 1970. A decade before, U.S. net oil imports reckoned more than 12 million barrels a day. The largest sources of US imported oil in 2015 were the following countries: Canada (40%), Saudi Arabia (11%), Venezuela (9%), Mexico (8%), and Colombia (4%) [20]. According to the American Petroleum Institute, the oil and natural gas industry supported nine million US jobs and accounts for seven percent of the national GDP in the same year. In 2017, daily US crude output was just lower than 10 million barrels and the target for the end of 2018 is to become the world's biggest oil producer. Last time the US was producing 10 million barrels a day was in early '70s. Furthermore, the Trump's administration is planning a vast ocean offshore exploration in the Arctic National Wildlife Refuge, to exploit the widely untouched reserves of Alaska, estimated at 11,8 billion barrels of crude oil [20].

PRICE WAR

When in late 2014 Saudi Arabia targeted rivals in the west, shale's triumph was still far from reality. Saudi Arabia persuaded OPEC to sink prices lower than 40 dollars a barrel, down for about 100 dollars from a month to another. As a consequence of the drop in oil prices, US production fell from 9,6 million barrels a day to 8,5 million barrels a day [22]. As a reaction to the attack, shale oil industry became leaner and faster, adopting technology as driver for the revolution. Fracking, blasting water and sand deep underground to free oil from shale rock improved drastically, till the point that many started talking about a second shale revolution, or Shale 2.0. Meanwhile, Exxon Mobil Corp., Chevron Corp., and other major oil groups adapted to lower prices and continued their growth. When the cartel cut production, shale drillers increased their output, stealing market share from OPEC nations and undermining their effort to manipulate prices.

OIL DEMAND

In its first report of 2018, the International Energy Agency forecasted total world oil consumption to add 1,5 million barrels per day, breaking the 100 million barrels per day threshold for the first time. In 2017, OECD countries still accounted for most of oil consumption, with a share of roughly 52% of global demand [23]. Nonetheless, the decade starting from 2008 has seen a surge in demand from non-OECD countries, especially China (now the largest energy consumer and the second oil consumer in the world). The share of oil demanded from new, fast developing, economies boomed while the demand in developed countries faltered, wobbling around zero in average. Non-OECD countries experienced a strong growth in demand from the beginning of the century: growth has been an average of 4% per year and demand today is one and a half times what it was ten years ago. Growth peaked up again in 2015 for OECD members and the trend seems to be upward for global consumption [24]. Oil consumption tends to react in different ways in the two groups, according to oil prices and economic growth.

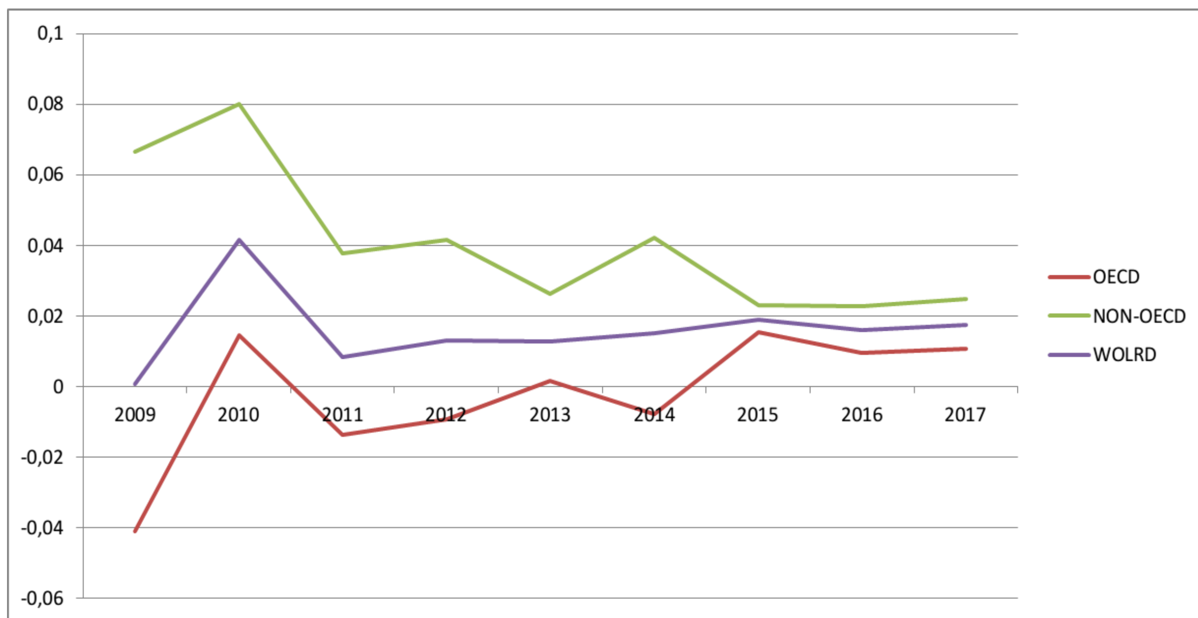

Figure 1.5: World Oil demand divided in OECD and NON-OECD countries

Source: elaborated from IEA

As researches from IEA show, the share of oil used for transportation is higher in OECD countries, not least because they generally have more vehicles per capita. This, together with slower growth and mature demand, causes policies and taxes which affect the transportation sector to have an outsized effect even on the demand of oil. Moreover, policies and incentives in favor of lower impacting energy sources, like renewables or natural gasses, stems the positive effect of economic growth. On the other hand, higher industrialized and less service-oriented economies, common for non-OECD countries, tend to have swifter surges in demand during positive cycles, as manufacturing industries are generally more energy-intensive [24]. Strong growth in these countries is hastened by expanding population: more people need to commute, so more cars are sold, raising the demand for fuel. In this regard, policies aimed to fix or control in other ways the price for end users are difficult to include in analysis and often have impacts on final consumption.

UNCONVENTIONAL OIL

SAND OIL

Oil sands are a mixture of sand, water, clay and a viscous form of crude oil called bitumen. They most important reserves are primarily in Athabasca, Cold Lake and Peace River regions of northern Alberta and Saskatchewan, in Canada, and in Venezuela, Kazakhstan and Russia. Bitumen is too heavy and thick to flow or be pumped out of the ground without being diluted or heated. Though up to 20% of total of a well can be amassed within 70 meters from the surface, the majority is deeper underground. Two main methods are generally used for the extraction of sand oil: the mining and the in situ [25].

Mining is used when deposits are within 70 meters from the surface: shovels are used to harvest the masses from the sites, which are transported with trucks to an area predisposed for the wreaking of the clay. Oil sands are then mixed with hot water and inserted into pipelines which take them to the final process of bitumen separation from other materials.

On the other hand, when the oil sands are too deep underground to be harvested with this method, the separation of viscous bitumen from sand happen directly on the site, with the

injection of hot steam beneath the surface: the heat warms the bitumen, so it can be pumped to the surface through recovery wells [25]. Once bitumen has been separated and pumped up from underground, it is moved through pipelines to the same process of purification as in the previous case.

OIL SHALE

Shale is the most commonly occurring type of sedimentary rock, typically deposited on river floodplains and on the bottom of lakes, lagoons and oceans. Formed by the consolidation of fine-grained detrital rocks, it normally contains 50% silt, around 35% clay and 15% other chemical materials. Silt and clay are differentiated from one another on the basis of their particle diameters. Clay consist of rock of mineral particles having a diameter less than 1/256 mm whereas silt consists of rock or mineral particles having diameters up to 1/16 mm. Shale has a finely laminated structure and readily breaks into thin, parallel layers. The color of shale ranges from green and grey to black depending on the organic matter: the higher, the darker the color. Black shales are common source rocks for natural gas and crude oil. The extraction process consists in heating the rocks with chemical procedures at high temperature and produce bitumen firstly and heavy oil secondly. Oil shale is therefore not extracted from the subsoil but produced in refinery with pyrolysis, hydrogenation and thermic dissolution. Recoverable resources of oil shale are estimated around 1.100 billion barrels and they are placed for the 77% in United States, in particular in the Green River Formation [26].

THE SHALE REVOLUTION

Shale's origins were modest. While major oil companies, such as Shell and Exxon, were seeking to increase oil production through projects in the Artic and in deep-water, small companies in the US were trying to develop more basic techniques to extract oil shale from already well-known and developed formations in the US for decades. Neither fracking nor horizontal drilling were new. Directional drilling goes back to the 1930s and modern horizontal drilling was practiced a quarter century before. However, such techniques were

expensive and unsuitable when applied to shale [27]. The contribution in the late nineties was not radical innovation but rather the development of an approach that enhanced the productivity of the extraction job in the environment of high oil and gas prices that prevailed after 2005, where cost effectiveness was the biggest issue. Innovation and technological development were the key drivers. Since 2000 the expenses in R&D became a consistent slice in the finances and the game was played on optimizing the processes and increasing margins. Main technological improvements were in the extraction field [27].

HORIZONTAL DRILLING

Most oil and gas reservoirs are much more developed in their horizontal dimension than in the vertical. By drilling a well extended in the parallel plane, the site is exposes significantly more reservoir rock to the well bore than a perpendicular layout. This result comes at a price: horizontal drilling costs up to 300% more than a vertical well directed to the same target. when low matrix permeability exists in the reservoir rock (especially in the horizontal plane), horizontal drilling becomes a financially viable or even preferred option producing 2.5 to 7 times the rate and reserves of vertical wells [28]. The initial part is usually drilled using the same rotatory technique that is used to drill most vertical wells. From the kickoff point to the entry point the curved section of a horizontal well is drilled using a hydraulic motor mounted directly above the bit and powered by the drilling fluid. The drill bit can be rotated by the hydraulic motor without rotating the drill pipe from the motor to the surface. A “steerable” downhole motor is than dropped in the location and oriented in the desired direction without rotating the pipe. The hole can be steered around a curve from horizontal to vertical and/or to the left or right. The curved section typically has a radius of 90-150meters. To return drilling straight ahead, the pipe is rotated slowly while the downhole motor also continues to rotate the bit. Downhole instrument packages included near the bit gradually transmit various sensor readings to operators at the surface. Sensors provide the azimuth (direction versus north) and inclination (angle relative to vertical) of current drilling. Modern downhole instrumentation allows the directional drilling crew to calculate the position (x, y, and z coordinates) of the drill bit at all times. Additional information such as the bottom hole

temperature and pressure, bit rotation speed and physical characteristics of the surrounding rocks can also be provided, in this case data are obtained in real time while drilling ahead [28].

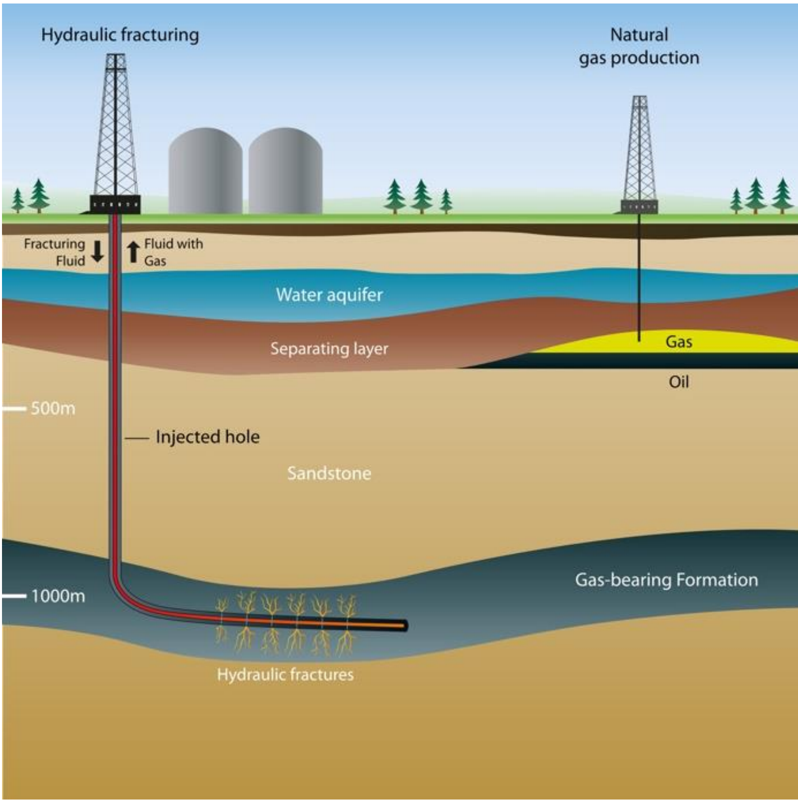

Figure 1.6: illustration of hydraulic fracturing

HYDRAULIC FRACTURING

Hydraulic fracturing, or fracking, is a technique designed to recover gas and oil from shale rock lying deep underground, inaccessible with conventional methods. These reserves likely formed over millions of years, as layers of decaying organism were transformed by extreme pressure and heat. Although fracking techniques had been around since the 1940s, their use boomed in the last two decades, especially in USA [29].

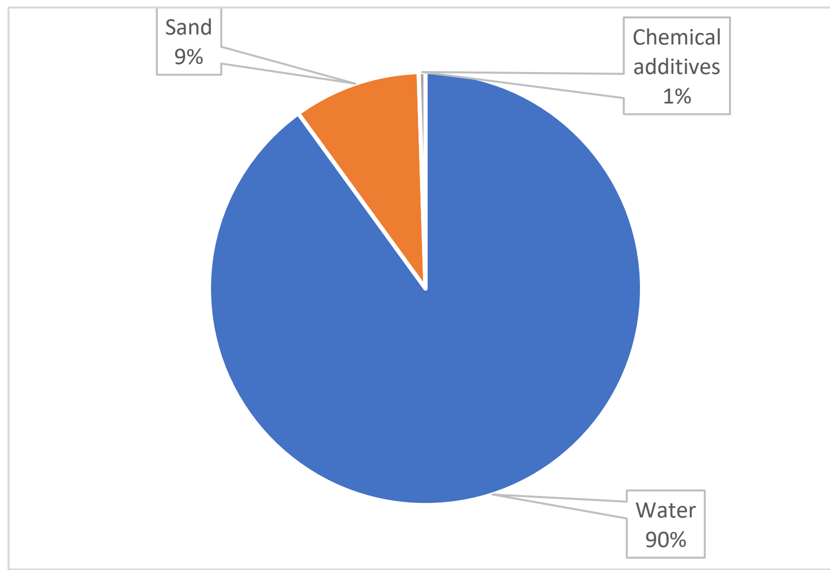

Figure 1.7: fracking liquid composition

The process begins with the drill of a long vertical hole, known as wellbore, through layers of sediment. At 2500-3000 meters of depth from the surface, it reaches the kickoff point, where the process of horizontal drilling begins: it turns 90 degrees and extends for 1.5 kilometers horizontally through the shale rock formation, a compressed black layer. A specialized perforating gun is then lowered and put in action. It creates a series of small, short holes in the rock layer. The whole process usually takes three or four months, after which the actual fracking begins. Fracking fluid is pumped down the tunnel at a pressure high enough to break the shale rocks and form cracks at the extremities: oil and natural gas captured can thus leak in to the tunnel, be pumped out of the well and moved to refineries. The liquid used for fracking is at 90% water, with the addition of sand and chemicals [30]. Adding the sand, or clay, assures that the newly formed cracks don't close when the liquids are pumped out, and the permeable holes remain open for oil to pass when pressure is released. Concentrated chemicals additives are used to swell the efficacy of the fracking. They vary depending on the specific attributes of the site, but three categories are common: acids for clearing debris and dissolving minerals, friction-reducing components used to create a slippery form of water known as slick-water, and disinfectant to prevent the formation and growth of bacteria.

Though it is so effective, fracking is also a controversial technique that caused many concerns about its sustainability and its effects in the long term. Eight million liters of waters are estimated to be used in average for the exploitation of a single well. After the process, this water is contaminated with chemical substances that make it toxic, and difficult to purify; recycling liquids in the next pump also causes problems since the intoxication aggravate with each use and the problem worsen. That's why the tunnels drilled usually become the definitive host of this dangerous fluid, which further movements underground may not be properly followed. Fracking has also an effect on climate. Many times, natural gasses are cited to be less pollutant than other propellants as coal, but the total environmental cost of the hydraulic fracturing technique is not negligible, both for energy consumption and for the leakage in the atmosphere of methane, which impacts with higher magnitude compared with carbon dioxide [30].

SHALE 2.0

As already mentioned, technical improvements and squeezed supply have driven the cost fall of fracking. US shale producers in the seventies were recovering 3%-5% of the hydrocarbons in a shale development. With better technology, the percentage that could be recovered in 2017 was 10%-12% [31]. Production costs are also declining: in just two years the breakeven price of oil passed from 80 dollars a barrel in 2014 to 55 dollars in 2017, drastically augmenting the number of well profitable to exploit. With well productivity still improving, breakeven could furtherly fall to 50 dollars a barrel in the near future, with huge consequences for the production and consumption balance of the US, which could see their oil trade deficit chopped by 300 billion dollars per year at this rate. Thanks to a higher number of fracturing stages and the lengthening of horizontal drilling initial production has dramatically improved, as can be witnessed by the improvements of new extraction plants of the Eagle Ford in the US: in 2010, the initial production capacity of these sites was around 110 barrels per day and it reached 550 barrels per day in 2014 [31].

INNOVATIVE FINANCING OPTIONS IN THE OIL AND GAS INDUSTRY

Oil and gas industry is preparing to finance its contribution to the world's future energy needs for the next 20 years. Growing expected energy consumption pushed companies to search for new ways of finance rather than relying on their operational cash flow. More creative financing techniques will add to traditional sources of capital to ensure the sufficient funding.

BANKING SECTOR

Banks were forced to introduce tighter conditions in response to new legislations regulating the lending activity. Just as Basel III regulations are constraining banks in their long-term lending activity, EU Solvency II limits the ability of European insurers in providing long-term support and funding. In response companies have started to access alternative sources of finance such as bond market, project partners, private equity and export credit agencies. Competition for funding has increased as a consequence of the wider range of debt and equity providers seeking for a market.

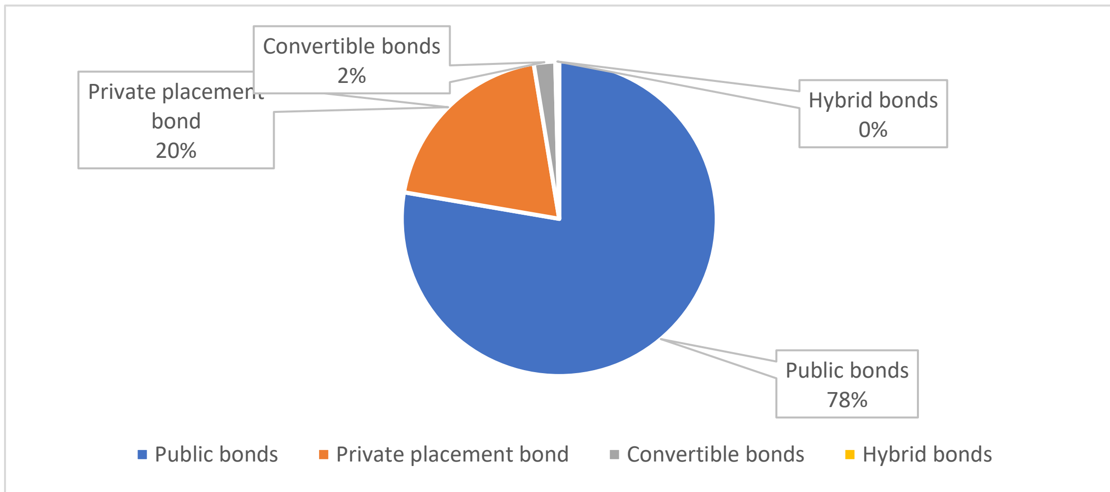

Figure 1.8: oil industry bonds emission by type in 2017

SMALL-CAP EXPLORERS

Companies able to deliver and communicate a proven track record of exploration and commercial success will enable investors to price the risk and the premia, facilitating investments. Equity issuance is often the first option for pure exploration companies, which lack of tangible assets but offer consistent material upside in case success. These companies generally have low debt capacity due to poor proved reserves and cash flow. Confidence in the exploration sector has yet to fully return after the drawbacks of the crisis. Total funds raised from new and further issues by oil and gas companies listed on London's Alternative Investment Market can be used as one indicator of this phenomenon, since the index in 2014 touched the 10 years lowest point.

MID-TO LARGE-CAP INDEPENDENTS

Independent oil and gas companies are the largest users of reserve-based lending (RBL) facilities, mainly used for general corporate purpose. However, the covenant-light nature of alternative funding sources is attracting the companies away from bank market towards non-traditional sources. Bond market is increasingly targeted as the primary source within the mid-cap sector. In the two years before 2017 there were some of the highest volumes of issuance in the public bond market as corporates sought to lock in low rates before the QE tapering. Public bond market is the favorite place for the issues, although companies are increasingly using private transactions for placements with selected investors. The reason of private placement is found in flexibility on maturity and greater certainty around execution.

INTERNATIONAL OIL COMPANIES

International oil companies (IOCs) are maintaining a more conservative balance sheet since a central pillar has always been the maintenance of the investment grade. They are concentrated in controlling the leverage keeping a safe ratio of about 30%. Primary source of funding for these players is still the cash flow generated, However, cash flow is not easy to be forecasted and can be impacted by exogenous factors largely outside of a company's

control, one above all is the movement in commodity prices. In today's flat price environment cash flow from operations is unlikely to fully finance the adequate CAPEX expenditure. In order to close the gap IOCs are relying more and more on non-conventional activities as active management of their bond and bank financing positions and further use of structured products.

NATIONAL OIL COMPANIES

National Oil Companies (NOCs) are the ones with largest funding requirements. They are now more than ever active in seeking cost effective ways of funding resource development or financing the acquisition of international assets. The scale of their spending obligations means that many NOCs are looking to diversify their funding sources. In the last years NOCs activated in local and international debt market, while partially privatized NOCs are now competing with the IOCs on global capital markets. Reducing the state control over the company with a public offering, as in the case of Petrobras and Gazprom, opened the way to new sources of financing. NOCs exploited the opportunity of emerging bond markets, as international investors augmented their exposure on high growth Asian markets. CNPC and Petrobras were responsible for the two largest bond issues in the sector in 2013: the process of operations' financing is increasingly performed on a global stage. Prepayment transactions are progressively being employed as a cost effective way for NOCs (especially in Russia) to obtain immediate funding in exchange for future oil supply. The main risk for the lenders is non-performance of contract delivery. NOCs are also seeking opportunities to form joint ventures for exploration projects by swelling their size and improving their capital structure.

UPSTREAM AND DOWNSTREAM INFRASTRUCTURE INVESTMENTS

Most of institutional investors in this field are public pension funds, insurance companies and private sector pension funds. The time lags elapsing between the initial drilling of the reserve and the recouping of costs from production is furtherly extended by the necessary approvals to be obtained and may come several years after the beginning of the activities in

the site. The composition of the financing players is due to the long-term nature of the majority of oil and gas projects matching the long-term liabilities of insurance companies and pension funds. Upstream projects are collocated in the high end of the risk spectrum dealing with turmoil in commodity prices and the highly unpredictable outcome of their projects. Banks are seeking for a predefined exit at the end of the construction under relatively stable conditions. Insurers are perhaps more likely to invest after the development and construction phase avoiding the construction and engineering risk. Finally, the relatively short-term exit strategies of private equity investments are more distant to the construction and development horizons of the upstream sector. Consequently, PE investments are more suitable for already established and operating assets such as those in the downstream context.

RESERVE-BASED LENDING

A common source employed in the upstream sector is the reserve-based lending (RBL), which enables the fund raising of debt across the various stages of development of the site while still retaining a certain degree of flexibility. As commodity price fluctuates, so too does the amount of available loan commitment. Only proven or probable reserves are considered, excluding possible and contingent reserves. The projected production with its likelihood enables debt service. "Proven reserves" are those with a 90% chance of recovery, "probable reserves" are those with a 50% chance of recovery. This product is often used in refinancing contexts.

PROJECT FINANCE

Future revenue stream, typically less stable and predictable in oil and gas projects than in other large-scale infrastructure projects, is a factor partially limiting the adoption of this channel. The logistic, infrastructure and social issues caused by the huge size of projects made consistently achieving cost and quality targets over time more challenging than ever. Thought the track record is poor and recent, project financing has typically been more prevalent in the downstream sector than in the upstream, more capital intensive and risk-

taker. In 2013, the Sadara Chemical Company JV successfully completed project financing for the Sadara chemical complex in Saudi Arabia. The total raised was approximately 12,5 billion dollars, which represented the largest ever project financing in the Middle East. Consistent projects in this area have been sponsored by the International Finance Corporation (IFC), which supports private investments in the sector. In 2015, IFC's commitment to the sector totaled 920 million dollars: indeed, while it is a relatively low amount compared to the total appetite, this kind of participation in a project act as a catalyst for other investors and lenders.

HEDGING

Typically, minimum and maximum hedging requirements are specified in the terms and agreements of the contracts. In this context the commodity hedging element is fundamental to find a deal between the two parties as long as the outcome is exposed to fluctuations in commodity price without any floor.

CONCLUSION

Oil and gas sector's appetite for credit found an important and valuable alternative in structured finance. Among the others, the development of risk hedging techniques, as the use of derivatives, has been largely employed against interest rate, exchange rate and commodity price risk, particularly relevant in this field. In particular, the role played by CDOs in project finance is becoming crucial. During periods of credit crunch banks are more reluctant to underwrite expensive project whose outcome is uncertain. Project finance CDOs are effectively employed in transferring the risk from the bank to a third counterparty. By bundling multiple projects in a portfolio whose risk takers are primarily non-bank entities, extension of credit, which might have been otherwise impossible to obtain in the current market environment, becomes feasible.

EXPLORATION AND APPRAISAL	**DEVELOPMENT AND PRODUCTION**	**PORTFOLIO EXPANSION**
IPO	RESERVES BASED LENDING	CASH FLOW FROM OPERATIONS
PRIVATE EQUITY	PUBLIC BONDS	BANK LOANS
FURTHER ISSUES	RETAIL BONDS	PUBLIC BONDS
	PROJECT FINANCE	INFRASTRUCTURE FUNDS
	PRIVATE PLACEMENT	PROCEEDS FROM DIVESTMENTS
	MULTILATERAL DEVELOPMENT BANKS	
	MEZZANINE FINANCE	

Table 1.1: new and established financing opportunities for Oil and Gas sector

Chapter 2: M&A operations

DEFINITION

With acquisition is intended a process by means of which a society, the so called bidder, acquires a majority or the total portion of another society, the so called target. Therefore, under payment of target's shareholders, the ownership of the target passes to the bidder. The price at which the target's stocks are valued typically exceeds the value they have on the market in the moment the deal is advanced [38]. Consequently to the operation the bidding company – except when something different is explicitly specified – assumes the ownership of the total assets and liabilities regarding the target company.

Instead in the merging process two companies decide to combine their resources with the intention to form a new society. The peculiarity is in this case that we have the legal fading of one of the two societies, which thing does not necessarily verify in the acquisition process [39]. Terminated the merge, the ownership of the new formed society is shared between the original shareholders of the two companies that decided to undertake such operation.

The red thread uniting merger and acquisition operations is in general the basic motivation, that is the belief that certain synergies will be created and will add greater value to the joint entity rather than to the two separated entities.

TYPES OF M&A

It is worth spending further worlds on the difference among M&A operations basing on the deal type. The variables to be considered are modality of negotiation, attitude of the target society towards the bidder, synergic effects achieved consequentially to the operation.

As previously said, the reason undergoing an M&A operation stands in the fact that the management believe the value of the merged entity is higher than the sum of the values of the two standing alone bidder and target companies. For this reason the bidding company is

generally ready to pay a premium price for the target's shares, and the market is aware of that. Therefore, considering synergies deriving from M&A operations we can propose a first taxonomy, as introduced by W. L. Megginson, A. Morgan and L. Nail [40].

HORIZONTAL M&A

They refer to transactions that take place between firms in the same sector. Those operations can allow to increase the market share, acquiring as a fact a competitor in the same industry and giving as a consequence bargaining power towards clients and suppliers [41]. Another possible benefit lies in the fact that economies of scale can be easily pursued with this kind of acquisition, together with the internalization of core skills that were previously owned by a competitor and will give further productive efficiency to the bidding firm.

VERTICAL M&A

In this case the two firms have different placements in the supply chain (one is upstream, the other is downstream), they are as a consequence tied by a long or short client/supplier relationship [42]. The advantages of this solution lie in economies of integration and economies of scope, obtained thanks to the absorption of activities that were previously performed outdoor.

CONGLOMERATE OPERATIONS

This time the firms involved in the transaction belong to very different universes in terms of business. The principal benefit researched from a society setting up such a deal is that of diversification, that is the reduction in total volatility thanks to the increased number of portfolio activities, translated in a lower risk perceived by the market. Economies of scope could further rise in the case in which there are divisions in common for technology or know-how [44]. In order to maximize all the benefits coming from diversification it is necessary to negatively correlate yields coming from the two separate businesses, making it extremely unlikely to suffer contemporarily from negative trend in both businesses.

NEGOTIATION TYPE

A further M&A classification refers to the type of negotiation. It is possible that the deal is closed by private negotiation: in such a case we have a private placement, accessible even to small enterprises that do not have the means to list the firm.

The alternative is the recourse to the financial market: the bidder company has in this case two options available. The first one consists in an offer directed to existing shareholders aiming to acquire the control over the target firm. The second option consists in launching a takeover bid addressed to the public without a specific target. In Italy it is coded by "Testo Unico della Finanza, art. 102-112", that distinguishes two typologies: voluntary takeover bid, where the bidder acquires the desired amount of stocks specifying the price that it is ready to pay; and mandatory takeover bid, where the bidder, once overcame a determined threshold of detention of the target, is substantially obliged to extend its offer to the total of the remaining outstanding shares with the intention to buy them (in the case the shareholders are well disposed to sell them). One of the principal benefits of the public offer lays in the restrained transaction costs due to the elevated quantity of punctual and precise information regarding the listed firms [44].

A third classification of the M&A refers exclusively to takeover bids and regards the attitude assumed by the management of the target company towards the bidder company. The desirable situation is that of a friendly takeover, that expects a shared agreement from both the counterparties. On the contrary, a hostile acquisition underlies that, disregarding the dissent manifested by the target company, the bidder company intends anyway to pursue its strategy carrying on with the operation [44]. In this case the opposition usually comes, rather than from the shareholders - desiring to capitalize the premium promised by the bidder -, from the management itself, fearing to be relieved from its role once the operation comes to an end. Anyway, a lot of defensive tactics can be adopter in order to avoid the main dangers.

ROLE IN THE ACQUISITION

In case an outlying group takes control over a target company, two situations can verify: a friendly takeover or a hostile takeover. In the first case, the board of directors of the target company agrees to the acquisition and is willing to accept the contract; in the second case, generally involving firms with low performances in mature businesses, it is common to replace the existing management team and divest the underperforming division reallocating resources in a restructuring process [45]. Every one of those tactics is heavily dependent on the income tax law of the country. For example a proportional exchange of shares in common stocks is a non-taxable exchange. The tax basis is the same for both shares and in the transaction is compensated. In every other case, such as a cash and/or debt payment for the acquisition, the process generates by its nature a taxable transaction where the shareholders of the target company will be subject to capital gains taxes following the policy of the country [45]. This is particularly true in hostile takeover contexts where the payment of common shares is in cash without a further negotiation.

FRIENDLY TAKEOVER

Friendly takeovers can regard a stock purchase as well as asset purchase growing the share owned in the company every time a new lot is acquired. At least three advantages associated with the purchase of the assets can be cited: first, only the top performing assets can be acquired leaving out of the transaction the underperforming units; second, the contingent liabilities do not influence the agreement; third, it is an easier and more slim process from a decisional point of view since it is required only the approval of the management, leaving the shareholders of the target company outside of the deal [46].

HOSTILE TAKEOVER

Hostile takeovers occur when the board of directors of the target company actively opposes to the transaction. In this situation the acquiring firm has two different ways to proceed in the deal: formulate a tender offer or a proxy fight. The first way consists in the purchase of

the stocks of the target company either directly from the shareholders or indirectly through the secondary market [47]. As can be seen from the study of historic acquisitions, this tends to be an expensive method of acquisition since the share price bids up in anticipation of the move so that the acquiring firm will pay an extra price on the market [47]. For this reason, it is usually preferred to buy the stocks of the target company directly from the board of directors with a mutual agreement, and eventually proceed with a tender offer just in the case of a negative outcome [48].

The intention of a tender offer must be disclosed as required by the Federal securities regulation. The acquiring firm must deposit and register the intentions of the deal giving a 30 days notice to both the management of the target firm and the Security and Exchange commission, as disposed under the William Act [49]. This enables the target company to prepare a reaction strategy whatever the answer will be. When a hostile takeover is near the acquiring firm tries to secure enough proxies to have control over the board of directors by obtaining as much share from the shareholders as it can. The incumbent's management will in a second moment be replaced in favor of a more performing C-level. Those fights are very expensive and challenging for the bidding firm since the management of the target firm will use the funds of the company to pay the costs arising from presenting their case and obtain votes.

DEFENSIVE TACTICS

Unwanted suitors can be discouraged with a number of defensive tactics. The categories are mainly two: pre-offer and post-offer tactics. Pre-offer tactics are those employable before the receipt of any bid, friendly or hostile that is. An example comes from private companies being indifferent to takeovers since they have a rock-hard basis of almost 50% of outstanding shares avoiding the loss of ownership. This blocking threshold is often held by an individual and/or an affiliated group. Another example is high stock price: since hostile takeover is a way to capitalize the unexploited potential of undervalued firms, a high price paid for the ownership could erode and finally nullify the advantages of the transaction rendering the deal unattractive for any company [50].

Target companies can use charter amendments to discourage a hostile takeover. The most diffused policy consists in splitting the board of directors into three groups where only one group per year can be elected. Such a policy denies a suitor from obtaining immediately full control of the board even after the acquisition of the ownership of the target company through a tender offer. Furthermore, under a supermajority amendment, where the control over a company is granted by 50% or more of ownership, it is generally required the agreement of two third (up to 80%) of shares for the merge [50]. Under a fair price amendment two tier bids are prohibited: if the first 80% of shares received a price, the same price must be offered for the rest of the shares avoiding different prices to be paid. With the dual class recapitalization a new class of equity is distributed bringing superior voting rights. This enables the target firm to have the majority of the voting rights without the ownership of the majority of shares, furnishing a way to shield against hostile votes. Finally, with the poison pill the existing shareholders of the target company own the right to purchase additional quantities of shares at a privileged price in order to extend their control whether required by the circumstances [51].

Post-offer tactics are adopted after the bidder firm starts moving toward the target firm. A first step consists in recurring to the legal office alleging violations at the antitrust body. This first mechanism should automatically be moved in the moment the bidder company is identified as hostile by the management of the target company [51]. The main post offer root to be followed is starting and asset and liability restructuring. Liability restructuring is obtained selling shares to a friendly third party to dilute the quota of the bidding hostile firm and soften its position or alternatively leveraging up the firm through a leveraged recapitalization (where possible), this will make it much more difficult to finance the acquisition using further debt. With asset management the target company sells assets the bidder is interested in getting rid of them and becoming a less coveted pray, or buys assets that are far away from the interests of the hostile firm [50]. Post-offer tactics can involve greenmail, where the target company repurchases from an unfriendly suitor shares paying a premium just to conquer the majority, and golden parachute, where the managers of the target firm ward themselves with lucrative supplemental compensation packages [52]. Those

additional benefits are activated in case the takeover will be followed by the resignation of the actual executive level.

MOTIVES FOR M&A

The ultimate reason for an M&A and any process leading to a consolidation is an increase in shareholders' wealth. Literature is full of examples extrapolating from the context of M&A a primary source of wealth justifying the whole procedure where the creation of wealth is synonym with the creation of synergies [44,48,53]. For a better comprehension of the M&A operations, they can be grouped in five sets: strategic, economic, financial, fiscal and speculative motivations.

Strategic motivations refer to the competitive positioning that would characterize the society resulting from the M&A operation. In this ambit, principal synergies created can take origin from the increased market share and from a better understanding of the positioning; from the entrance in new sectors or markets; from the re-focusing of the core business; from the acquisition of a key supplier or a key customer, boosting with its consequent integration the production; from a gain in corporate image [45]. Among these the increase of the market share occupies a privileged place since detaining for example 30% instead of 20% of the market is a proof of strength towards internal shareholders and external stakeholders. Moreover, if the acquisition aims at the total or partial elimination of a direct competitor, the firm has the primary benefit of a stronger market position and the secondary benefit of adopting a pricing level that before was not permitted [54]. Further motivations entering the strategic set are the construction of entry barriers, the acquisition of key employees and the brand consolidation.

Economic motivations regard the decrease of operational costs. Their strength lays in the creation of synergies among different resources that maximize the overall exploitation.

The creation of synergies is explored as follow:

- *(a) Economies of scale:* gains that can occur in the areas of finance, marketing or production due to the accumulation of volumes. Note that once reached the efficient volume, there is no need to further push into economies of accumulation since the critical mass is the most efficient giving the maximum gain with the minimum volume [55]. A further accumulation in volume could lead to diseconomies of scale that will destroy value because of their excessive weight in infrastructure, management and operations. Economies of scale are typical benefits researched in horizontal mergers, where the acquisition of a company remains in the same line of business without scaling backward or forward the value chain [55].
- *(b) Economies of vertical integration:* some companies try to expand along the production chain buying other companies, that could be for example raw material suppliers or final retailer, with the aim to cape the margins that were cut by the man in the middle in the precedent structure of business. This is pursued by vertical merge or acquisition that expands the control of the company over a wider part of the production process; costs such as coordination, administration and bargaining costs are cut as an additional effect [56].
- *(c) Surplus funds:* In the literature we find the process of deals as a way to use the surplus cash generated during the years and retained by the firm. This process is particularly evident in the energy sector where managers are reluctant to distribute surplus cash liquidating the value of the firm; they would rather go for a purchase of shares [53]. Repurchasing their own shares, the control over the firm would be expanded, purchasing new shares of another company a merging or acquisition deal would be performed. Whether internal growth and investments are limited, it is the most used way to open to new opportunities in the market [57].
- *(d) Economies of scope:* exploiting complementary resources, knowledge, competences of the two firms participating in the M&A operation, economies of scope allow the efficiency in the production to considerably grow. Those gains can be obtained for example combining firms operating in two different sectors [53].

Financial motivations regard advantages directly related to the different conditions the merged entity can enjoy in matter of capital request and investment of financial resources.

Those conditions could allow the realization of investments that before were prohibited being outside the buyer's capabilities and they can represent better opportunities of capital employment even for the target company [58]. The entrance of new shareholders brings further amount of equity capital, representing an additional means for value creation. It is worth to remind that societies created through M&A operations can count on a higher rating conceded by the agencies in respect to the one pre-merge, and that allows a better treatment on the market. Those motivations can be reassumed in:

- (a) *Diversification*: Diversifying investments leads to a lower overall risk of the company. The more the financial portfolio is diversified, meaning that resources are allocated to uncorrelated businesses, the more a down-cycle in the operations of the company is unlikely [59].
- (b) *Diversification and financing*: Variability of the cash flow can be significantly reduced if the two companies combined have a low correlation in their operating cash flows. The result of the process is a more stable cash flow for the overall merged entity that is as a consequence more attractive on the market for the shareholders, willing to receive a constantly growing payment of dividends [58,59].

Fiscal motivations refer indeed to all the fiscal benefits the operation is able to bring. The possibility to fruit of what were the past losses of the previous target firm is a key factor. It is fundamental to underline how possessing excess cash allows the buyer to reduce the tax base. The dimension of the new company enables to have a higher debt to equity ratio and as a consequence fruit of a higher deductibility of interest expense from taxable income [60].

Speculative motivations are the changes occurring in the market in the phase of negotiation as a consequence of the bigger dimension and higher market power of the merged entity. M&A operations generate a series of advantages also for the employees of the societies involves. From 1974 with the Retirement Income Security Act the benefits of employees became central, with particular attention to the field of M&A: the presence of retirement treatments and systems of social welfare is more and more influencing the feasibility of the M&A being an heavy weight in the deal. Furthermore, the two counterparties involved in the transaction must level endogenous differences in the staff to maintain a high grade of

satisfaction [61].

DISADVANTAGES

Disregarding the above mentioned advantages, M&A have some potential disadvantages. The most important problem in these operations is the cost itself, particularly relevant in hostile takeovers . They are a very expensive way to enter in a new market: it is common that during those operations the price grows up to a 30% premium over the market price [52]. As a consequence, the additional gain searched with the acquisition could disappear or anyway comes in delay for the excessive effort of the purchase. Legal costs are another important factor to be taken in consideration when evaluating the performances. The costs of the deal could be much higher if other competitors are involved in the transaction causing the price to grow. This situation is defined as “the winner’s curse” because the winner is deprived of wealth as a consequence of the price war and could pay the price of potential errors coming from an erroneous valuation and an excessive perseverance in pursuing its objectives [62].

Another disadvantage refers to a series of activities considered less useful or not interesting: it is common that in such operations involved societies bring with them a series of divisions and capabilities that are just in part desired. The management of these secondary activities, in absence of a divesture, spin off or portfolio rebalancing, could be source of elevated costs [63]. Tightly linked to this problem is the risk that the society of new creation could dismiss the irrelevant activities, reducing job offer and number of employees, focusing on core activities and eliminating what absorbs more resources adding less value to the firm [64]. A relevant disadvantage is given by the difficulty of integration among societies following M&A operations. Post-integration process is often complex because of different organization culture and values, in addition with the different modus operandum that must meet halfway. Underlying this difficulty Porter demonstrated that only 45% of the target societies continues to be part of the acquiring society after seven years [65]. Due to this problem Haspeslagh and Jemison proposed four different kind of integration basing on the necessity of organization autonomy and strategic independence: Holding (respectively low and low), absorption (respectively low and high), preservation (respectively high and low), symbiosis (respectively high and high) [66].

A further disadvantage is linked to the complexity of the organization growing with the volume of the enterprise. Managerial, administrative, financial complexity requires the efforts to grow more than proportionally. Diseconomies of scale are a red light of the factor [59].

CRITICAL FACTOR OF INSUCCESS

As illustrated before, M&A in the any sector may lead to a flop. The failure rate on in very high, considering recent researches: esteems and reports considering a period going from five to ten years after the deal found out that about half of the deals did not lead to the results the management was trying to achieve in the moment of the merge or acquisition. Only the other half of deals exhibited desired or even superior performance overcoming the declared results [67,68,69].

During the process of decision making timing plays a key role: the mechanism is tightly linked to the performances of the market with a high correlation with the price of the stock. During a period of negative price performances investors are typically cautious and prefer safer strategies aiming to cost cutting rather than going for riskier moves such as M&As [68].

The management involved in the process highlights pricing and financing of the deals as the key obstacle to outbound M&A activity, followed by obstacles related to financing such as the credit crunch and difficulties related to the availability of credit and free sources of finance [69].

The main causes of failure can be pointed out as:

(a) Over-optimistic assessment of economies of scale: management often overestimates benefits deriving from the merge without taking with the right consideration the effect coming from an infrastructure sovra-dimensioning. As highlighted in the previous chapter the growing complexity is the biggest obstacle for size, easily leading to diseconomies of scale and mining the efficiency of the organization. Such economies are easily achievable at small-medium size; overcoming those boundaries the more-than-proportional growth of costs will nullify the benefits searched and destroy value [70].

(b) Inadequate or insufficient preliminary investigation and research: the problem relates to limited rationality in the market, where the decision-making process comes with imperfect information and limited calculus potential. This leads to unprecise esteems driving results often far away from the reality. Large volumes make it quite impossible to forecast with accuracy the outcome of an acquisition [71].

(b.1) Inability to implement the amalgamation efficiently: Sometimes the two entities are too much different and culture and values factors play the central role. Where the objectives of the two do not converge or there is a lack of commitment. The result is often disappointing [59].

(c) Insufficient appreciation of the personnel problems which will arise. Problems in this field must be faced with the adequate support structure managing the changes taking in consideration a sufficient time gap for the employees to adapt to their new role and mansions.

(d) Dominance of subjective factors such as the status of the respective boards of directors [72].

SUBJECTIVE MOTIVES FOR MERGERS AND ACQUISITIONS

According to Yaghoubi, the motives for a merger or an acquisition can be gathered into four groups: managerial theories, industry-level theories, economic conditions and behavioural theories [74].

First, managerial theories state that bidder firms engage in the operation due to overconfidence of their means or self-interest, as a consequence we can expect the post-merger performance to decline. Examples of this theory is the renewed agency theory and the management entrenchment hypothesis stating that value destroying acquisitions may be driven by self-interested managers that postpone the shareholders' wealth to their on prestige [74].

Second, the industry-level theories are proposed to explain some aspects of the M&A such as industry shocks. For instance, the economic disturbance theory state that with economic

shocks a divergence in the valuation of the value of a target is created in the market causing misalignment and consequently giving birth to waves. The 'eat-or-be-eaten' theory (merger anticipation hypothesis) suggested by Gorton [75] that adds that a M&A process can be a defensive strategy resulting in merger waves that are expected to be value-destroying and harm the post-acquisition performance.

Third, economic conditions as the emergence of a technology breakthrough, a change in anti-trust policies or a change in regulations regarding the financial condition of the industry could be constitute a decisional factor of interest. For example, the Q theory of mergers that denotes that high-Q acquirers overall create higher profits announcement returns from mergers [76,77,78] and the dynamic model consequentially developed in 2008 analysing takeover activity and indicating that trend and timing of merger activity should be determined by favourable economic conditions such as a period of constant growth of the revenues of the firm (in an internal context) and a symmetric growth in the domestic consumption (in an external process), or by the risk of being anticipated by competitors interested in the same strategic target.

Finally, the behavioural theories suggest that a firm should take advantage of the mispricing of undervalued stocks acquiring firms with low P/E especially using their own stocks in case of overvaluation. According to several articles the evidence of the existence of theoretical market-driven mergers is that stock acquisitions tends to produce negative results while cash acquisitions are expected to generate positive returns [79].

WAVES

The observation of the number and the value of M&A operations from the beginning of the last century to the first year of the new millennium allows for the underlining of the wobbling feature of the phenomenon's movement at the national and international level.

In the year 2002, economist Gaughan introduced the concept of mergers wave after having researched profoundly on the matter [80]. In doing so, he indicated the serial peaks of merges

and acquisitions coincidental to big shocks in technology, institutions and economics. Over the world, but especially in the Anglo-American context, these events were the main consequence of a particular structure of the markets, the institutional framework and the capitalism model. The economic shock, as defined by Gaughan, is caused by the inflation of a market's size, which prompts companies to expand through organic growth or, more interesting for the purpose of this work, through M&A operations aimed to the saturation of the aggregated demand. Since M&A are the swifter way to keep up to the market, they reached a high level of development and penetration. An institutional shock can be defined as the removal of bureaucratic restrictions and regulatory limitations, which hindered the process of companies' combination in past. Technological shock was instead carried forward by all the scientific, industrial and managerial improvements of last century.

The operations of merger and acquisition between two firms started to gather pace at the end of the 18th century, firstly in the US market and then in UK and continental Europe. Italy is characterized by a low volume of M&A transactions, mostly because of the peculiarities of its market economy, much of which is constituted by small family-managed companies, while national champions are almost all marked by the presence of state quotes. From these seeds, it is easy to understand why the Italian economy never experienced a real merger wave, contrary to the US market, which is now dominated by hundreds of multinational groups [81].

For the purpose of this study, six merger waves have been identified: from 1897 to 1904; from 1916 to 1929; from 1965 to 1965; from 1984 to 1989; from 1992 to 2000; from 2004 to 2009 [82].

The first wave, between 1897 and 1904, chiefly regarded horizontal acquisitions, accounting for almost 75% of total operations [83]. It was characterized by the fast development of new sectors like electric generation and distribution, chemical, oil and transport; this phase represented the natural evolution of the Industrial Revolution which, among other things, allowed for the exploitation of economies of scale. This wave was even defined as "merger for monopoly", as many of the operations in the period concerned consolidations of big companies in sectors like manufacture and extraction: indeed, this process led to the origin

of big monopolies and huge industrial companies, like General Electric, Standard Oil, American Tobacco and DuPont [83]. As can be intuitively understood, this wave was hardly hastened by the demand for greater regulation in the market, culminated in the US in the enactment of Sherman Act in 1890, which was an enacted provision aimed at blocking anti-competitive deals [83].

The second wave began in 1916 and abruptly terminated with the crash in the US stock market of 1929. This phase was characterized by a consolidation of operations initiated in the precedent wave: the main purpose was to strengthen the reach of existing oligopolies. Indeed, after the weakening caused by the First World War, many companies entered in a vertical transaction to recover their leading position: During this period, many yet existing firms were born, like IBM and General Motors. Furthermore, there was the emergence of new sectorial clusters in transport and utilities, which leveraged on the existence of network effects to exploit economies of scale [82].

The third great wave started in 1965 and endured till 1969, fostered by a worldwide economic boom and surge in industrial production and GDP growth. The total number of operations in the period easily surpassed ten thousand, leaving behind both precedent waves. Roughly 85% of the transactions concerned conglomerate M&A operations, prompted by a general spreading of the concept and importance of diversification in the period: the main benefits expected from these activities were the reduction of overall risk and augmentation of the volume of cash flows [82]. It is debatable whether these desired improvements were ever achieved, since the general consensus of the studies over the period is overwhelmingly negative. The anticipated gains form economies of scales were scarce, and the general identification of diversification as a universal panacea ended.

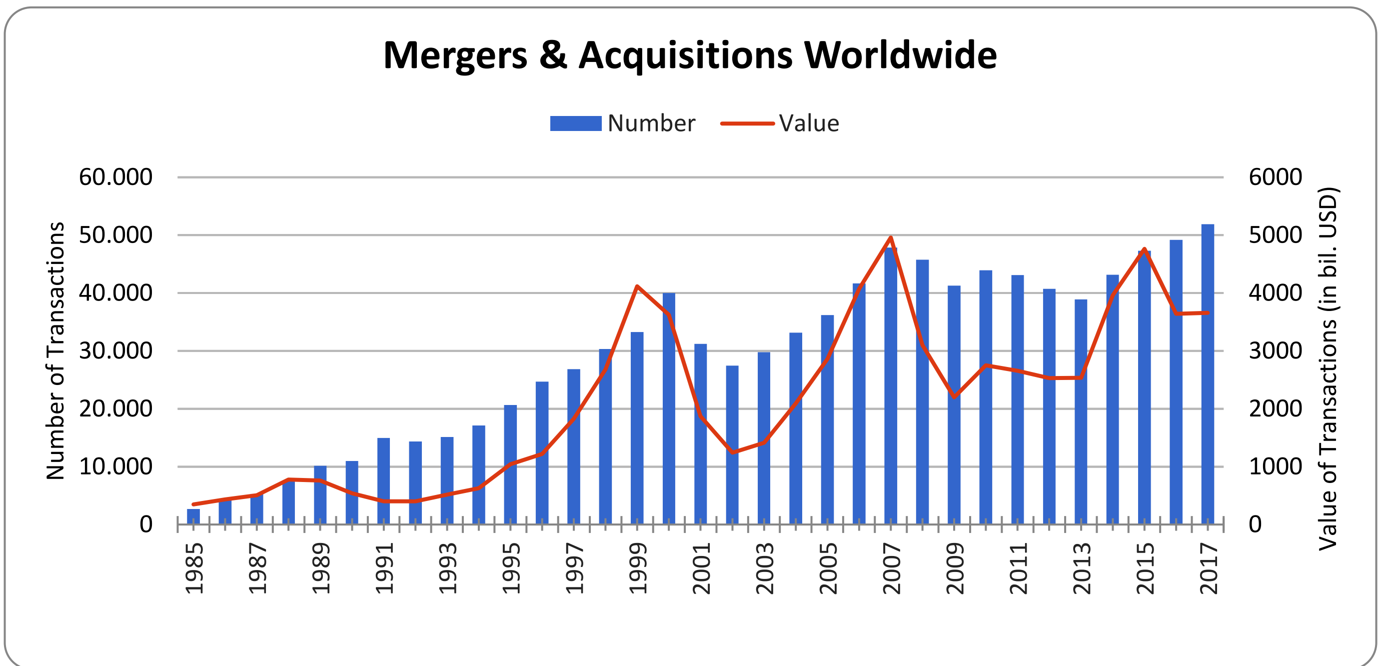

Figure 2.1: M&A operations' number and value worldwide for 1985-2017

Source: Bloomberg

The fourth wave of acquisitions, beginning in 1984 and ending in 1989, was constituted by many hostile takeovers, the cumbersome role of banks, multinationals' increasingly developed transaction strategies, high levels of debt and over border operations. Partly due to the consequence of poor results generated from the precedent wave, this phase was characterized by many hostile takeovers, in which companies were negatively impacted from the crisis at the beginning of the decade, especially in the US, were easy pries for the survived entities [84]. The reduction of antitrust' interventions, prompted by new liberal economic policies, together with the wave of deregulation of commercial banking activities, driven the start of this phase, which was also peculiar for the greatness of the transactions, sometimes referred to as mega-merges. This was also the first wave to overflow from the US to the European market, whose sectors of ICT, media, oil, chemical and luxury goods were among the most flourishing [84].

The fifth big wave of acquisitions started in 1992 and ended with the beginning of the millennium. The main theme of the wave was internationalization, driven by the globalization push, which led to the rise of the concept of open market economy: one of the most important effect was the exposition of national companies, in Italy and elsewhere, to competition from foreign entities. Intra-country operations were replaced by cross-border M&A, characterized by a higher level of complexity due to different administration at the local level and inexperience with foreign regulation. At world level, the hastening in the pace of operations led to a peak in transaction value recorded in 2000, reaching the sum of 2.900 billion euros [85].

The sixth and most recent recognized M&A wave originated in 2004. It was a rebound after a triennial, from 2001 to 2003, defined by a strong decline in a number of deals. The wave ended between the years 2007 and 2009, when the financial crisis crashed the mainstream motivations for firms' combination and hindered companies' financing possibilities [82,85]. The number and the value of deals in this wave was very high for historical standards, comparable to the levels of the fifth wave. Furthermore, this phase was marked by many M&As with cross-border nature, fostered by the integration of the markets; the need to consolidate companies core business by the union with competitors; the bigger dimension of the business; the increasing importance of the role of institutional investors; the entrance in the market by operators from developing economies, mostly left out from previous waves of M&A [85].

More recently, the signs of a new wave of transactions began to show in 2014, whose first six months saw an increase of 9% compared to 2013's. The recovery, as per-usual, started in the US, with almost ten thousand deals. On the other hand, Europe still found itself in a limbo, since the effects of the euro crisis were still lingering onto the prospects of many companies, however, there were some signals of a rebound in M&A activities [86].

LITERACY REVIEW

The objective of this chapter is to contextualize the already descripted theme of Merger and Acquisitions in the current flow of research. In particular, the branch of literacy that focuses on the post-merger operating performances, which analyzes the impact of an industry's specific features, will be broken down.

Despite being one of the most universally studied topics of economic and financial academic literature, the opinion of pundits is discordant when the performances of firms after M&A deals are considered. Generally speaking, the effects of the acquisition of another entity can be divided in three broad categories:

- Cases in which the net effect is a deterioration of operating performances in the post-deal environment.
- Cases in which the net effect is an improvement of operating performances in the post-deal environment.
- Cases in which no net effect is observable over operating performances in the post-deal environment.

One of the seminal works in this field of research is dated 1992 and was signed by Healy, Palepu and Ruback [87]. Indeed, the purpose of this paper does not lie merely on its result, but more specifically, in the technique adopted. As a matter of fact, previous researches heeded their focus on market performances before and after the deal, with an aim to prove the hypothetical presence, of a clear market consensus on the effectiveness of the deal. If this consensus could be identified, which was the case in the majority of studies since it is not harsh to harvest a trend, even from pure noise, it was used to express an evaluation of the overall deal. The problem with this method is straightforward, since the general wobbling of the market was, and still is, poorly understood. Additionally, more difficulties still appeared in the cutting work required to eliminate additional biases emerging from other operations of the firm, general macroeconomic conditions and socio-political factors. Furthermore, even neglecting the inherent biases of the analysis, a huge limitation of the methodology laid in its

explanatory power: in the best case it could assert the bold positivity or negativity of the deal, but no specific case-related reason could be addicted, once more because of the difficulty in separating real improvements in economic factors from market distortion.

On the other hand, Healy, Palepu and Ruback introduced an industry-adjusted regression model, modulated on sector' average performances benchmark. Their sample included 50 M&A deal operated by big US companies in the period from 1979 to 1983. The results implied an overall gain in the productivity of assets, if weighed against sector averages. Interestingly enough, companies would also tend to have a flat trend of growth for investments, since the expenses of Capex and R&D remained constant after the merge, after the adjustment for the industry's movements. Unfortunately, they fail to identify the reason for such improvements: the only hypothesis put forward is the benefits of industry-relatedness, being in products, production or market, which create the scope for gains in economies of scale, economies of scope or synergies development, incrementing cash inflows.

An additional development of the argument was elaborated by Switzer, who in 1996 confirmed the results of Healy, Palepu and Ruback [88]. His paper focused on operating performances of 324 M&A deals from 1967 to 1987 and explained how these insights were not sensible to the magnitude of the offer, the leverage of the target and the industry-relatedness between bidder and target: the chief explanation for efficiency gains is in fact findable in developed synergies and consequent effects.

Further studies by Cornett e Tehranian in 1991 [89] and by Linn e Switzer in 2001 [90] confirmed the outcomes. The formers utilized the model introduced the same year by Healy, Palepu and Ruback [87] to study the increase in performances for thirty companies in the banking sector. The second paper was instead heed at US companies in general, and using the change-model theory to show significant gains in operating performances if compared with industry's benchmarks.

This last methodology, based on the development of industry benchmarks using average operating performances, was disputed by Ghosh in 2001 [91]. The attack was mainly aimed

at the model used by Healy, Palepu and Ruback [87]. The critic unraveled in two separate arguments: companies tend to undertake M&A deals when their performances are above the average of the sector; the sample collected by Healy, Palepu and Ruback [87] contained many companies that were bigger than industry average. More specifically, Gosh [91] selected a sample of a big acquisition in the US from the 1981-1995 period. He applied both the model introduced by Healy, Palepu and Ruback in 1992 and the model developed in 1996 by Barber e Lyon [92]. Indeed, the findings confirms the outcomes of precedent analysis, but Gosh noticed that companies with above the average operating performances after the deal had, for the most part, performances already over the par in the pre-deal period. Most troubling, applying the second model the conclusion was that no excessive value was created.

These findings were replicated on a European sample of firms by Martynova, Oosting, Renneboog five years later than Gosh [91]: they included M&A activities from the 1997-2001 quinquennial, without discovering any excess return [93]. The main innovation of their study stands in the introduction of new parameters of evaluation which took into account even changes to net working capital, in parallel to the classical ones already used by Healy, Palepu and Ruback [87], Linn e Switzer [90] and Gosh [91].

In 2005, Powell and Stark applied a matching system already partially developed by Gosh (2001), together with indicators considering even net working capital, to study M&A deals in the UK's market in the period from 1985 to 1993, finding a small increase in the value generated [94]. The authors underlined the benefits of industry-relatedness in synergy creation and the fostering effect of the CEO substitution in the target company at the moment the ownership changes. Other scholars replicated the results already demonstrated by Gosh [91] on their sample, showing that applying Healy, Palepu and Ruback [87] the increment in operating performances is higher.

On the other hand, many studies found results discordant with the ones presented till this point: as already remarked this branch still lack a unanimous consensus. Indeed, the disagreement concerned not only the results of the operation, but also the methodology used to evaluate these results, other than the correct way to adjust financial voices against industrial averages. Among the papers presenting insights on the compounding of the post-

merger results: Meeks [95], which analyzed 223 companies entering in M&A deals in UK in the period from 1964 to 1972, finding a small decrease in operating performances after the merge; Herman e Lowenstein [96] studied 56 hostile acquisitions over the world from 1975 to 1983, finding declining operating performances; Yeh e Hoshino [97] collected a sample of Japanese companies performing M&A transactions in the period from 1970 to 1994, finding a drastic drop in operating performances.

Since the compelling outcomes of the analyses lie not only in the final judgement, but perhaps even more in the indication of the variables impacting on the results, some of the studies which further deepened this topic will be presented below.

PAYMENT METHOD

One of the first feature to be analyzed, probably because it has an important impact on the perception of the deal, is the method of payment: cash or stocks. Among the scholars leaning toward the cash payment there are Linn e Switzer [90], Ghosh [91], Moeller and Schlingemann [98]. A first reason to prefer cash over stocks, suggest by Jensen and Meckling [99], is that the former is usually financed through debt capital, which weighs on available funds for managers of the bidder company, limiting the scope for mismanagement and improper use of shareholders' money. A diverse explanation could be the higher probability of substituting bad management in the target company after a cash payout, as firstly proposed by Ghosh and Ruland [100]. Further reasons for the superiority of acquisitions performed in cash over stocks are suggested by Fishman [101] and Berkovitch and Narayanan [102]. The former advanced the hypothesis that bidder companies, which have privileged internal information on the possible creation of synergies in the final entity, raise the offer to stave off other firms. Berkovitch and Narayanan [102] noticed instead that cash offers have more probabilities to be accepted from the target company's shareholders, eliminating the possibility of higher offers by other interested firms, which bring the risk of creating an auction: indeed, they observed that the higher the possibility to exploit synergies, the higher the percentage of cash in the offer. Gosh [91] catalogued the impact of the offer's feature on the management of the acquired firm: companies acquired through cash tend to improve

performances thanks to a raising level of sales, while the other case is characterized by cost cutting and efficiency pursued through the reduction of employees. There is however no general consensus on the matter, and other studies had found no impact of the type of payment on the operations' performances: Martynova et al. [93]; Powell and Stark [94]; Healy et al. [87]; Heron and Lie [103].

ACQUISITION TYPE

As already mentioned, acquisition can friendly or hostile, with the last which intuitively should bring to better results in the integration of the companies, so in the outcome of the merge. This type of transaction leads to higher disbursement from the bidder company, which is compelled to pursue through the acquisition only if it has sound conviction of synergies' efficiency, as suggested by Burkart and Panunzi in 2006 [104]. Unfortunately, empiric studies on the matter tend to demonstrate the opposite, among the others by Healy et al. in 1992 [87]; Ghosh [91]; Powell and Stark in 2005 [94]; Martynova in 2006 [93]. Among other type of acquisition's studies found in academic researches, neither official public offers nor negotiate agreement seem to portend different performances.

LEVEL OF DEBT

Scholars are discordant even for what concerns the impact on operating performances of the level of debt of the final entity. Theoretically speaking, a higher volume of debentures should prompt a more sever scrutiny from lenders, including chiefly banks and institutional investors. This deep level of control should then avert the conclusion of inefficient acquisitions, as demonstrated by Ghosh, Jain [105] e Harford [106]. But it is worth noticing that other studies didn't found this type of correlation, including Linn and Switzer in 2001 [90], Switzer in 1996 [88], Clark and Ofek in 1994 [107], Martynova et al.2006 [93].

LIQUIDITY

In 1999 Harford demonstrated [106], and Moeller e Schlingemann confirmed in 2004 [98], that higher levels of liquidity have negative consequences on the company's operating performances. This seems to descend even from Jensen's theory, formulated in 1976 [99], which stated that higher level of liquidity compounded company's results because of the possibility of money mismanagement from executives. Indeed, Martynova et al. [93] found some evidences of better performances for companies with lower levels of liquidity, but no statistical significance of the results.

INDUSTRY-RELATEDNESS

Acquisitions may have as target companies in the same sector or from other sectors. In the case of vertical acquisitions, the advantages brought forward by synergies and corporate costs reductions may be counterbalanced by problems related to rent-seeking, as illustrated by Scharfstein and Stein [108], bargaining, as illustrated by Rajan et al. [109], and bureaucratic slowdowns and hinders, as illustrated by Shin and Stulz, [110]. Even related to this matter, studies are inconclusive: Healy et al. in 1992 [87] and Heron and Lie in 2002 [103], noticed worsening performances in diversified acquisition; Gosh signaled improved performances in 2001 [91]; no evidence of the impact of the type of relation between target and bidder's businesses was found by Powell and Stark [94], Linn and Switzer [90], Switzer [88] and Martynova e al. [93].

SCALE OF THE TARGET COMPANY

On a general level, big companies' acquisitions should produce better results thanks to economies of scale and synergies if compared with purchases of small firms, but at the same time it may lead to longer integration processes and harsher coexistence. Among the scholars convinced of the advantage of big acquisitions over smaller ones, there are Linn and Switzer [90], Switzer [88] and Martynova et al. [93]. On the other hand, Clark and Ofek [107] found evidences of the superiority of smaller firms in the consolidation process. However, the

majority of papers found no statistically significant impact of the scale of the target on the merger's performances [87,94, 98, 103, 111].

The acquisitions which involves targets of other nationalities (cross-border) can bring benefits in terms of expanding business in other countries but must face the difficulties arising from managing companies subjected to different standards and cultures.

Moeller and Schlingemann [98] show that returns after the announcement of the operation are minor for cross-border acquisitions than domestic ones. Instead, Martynova and al. [93] underline no significant differences.

The literature has outlined a situation in which evidences regarding the impact of M&A on operational performance are not yet clear. In this context we will go to insert our research with the aim to check whether acquisitions and mergers will impact on the variation of profitability.

Chapter 3: M&A in energy sector

CONTEXT

M&A activity in 2017 was very similar to 2016 – down somewhat from 2015's record highs but certainly robust, with mid-market transactions continuing to be a driver of volume [112]. Indeed, these are the real players leading the expansion and revamping the value of the arena. There are mixed global factors exerting an impact on 2017's activity, among the firsts we can certainly cite low interest rates, geopolitical issues and US tax legislation that was in the works. The impact of the recent tax law changes should drive M&A as more cash is repatriated to the US and companies continue to focus on their growth agenda [112].

M&A activity started to pick up in Q3 and through Q4 of 2017 to close the year strongly, with December the best month of the year and featuring two of the year's largest deals [113]. Looking forward, demand for good assets is expected to continue with its consistence remaining very high. M&A players are actively bidding up valuations even as companies are trading at historically high multiples [113].

Demand for technology companies, aiming at acquiring knowledge and competencies otherwise hard or impossible to be internalized, remains the key driver of deal volume. A consistent contribution to the number and value of M&A comes from the technology sector attracting capital from the energetic sector in the form of investments finalized in acquiring knowledge and competences from most advanced companies. Most of those deals are repurchase of spun off companies, that in few years have demonstrated a solid business line and competitiveness in the sector, carrying convincing results and the proof of being useful to the holding company. The quest for innovation through technological development is now

kindled and companies must face efforts as big as other technology players in order to maintain a competitive advantage over rivals. Exxon Mobil itself spent 1.053 million dollars for the R&D activity in 2017, doubling the levels of 10 years before [112].

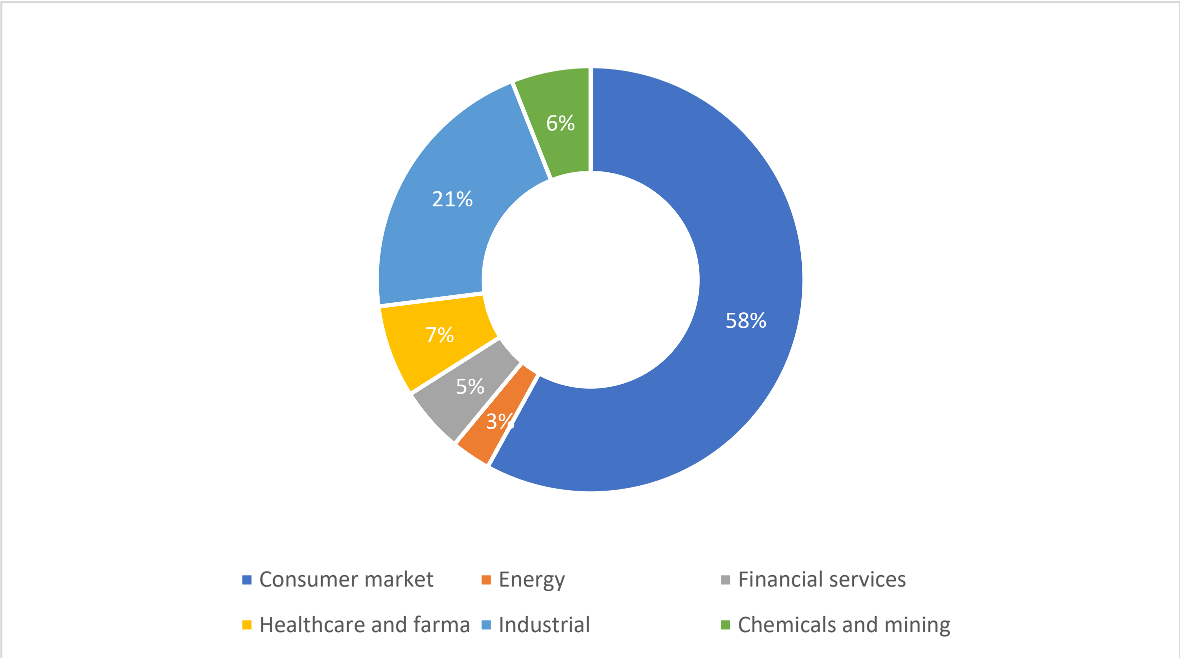

Figure 3.1: M&A operations in 2017 divided by sector
Source: elaborated from Imaa

THE TREND OF 2018

The activity is involving more and more players operating in different national markets. The interest of the sector is now oriented in managing jointly gas and energy activities, as confirmed by many recent mergers at European level focusing their attention on the parallel development of these two sources (a relevant case will be analyzed next in the chapter). Regarding the geographical application of the transactions, the trend goes towards the creation of European wide players even through a network of contractually fixed joint ventures, completed by the growing tendency towards the construction of "national champions" giants, imposing their presence in a nation as a defensive mechanism against foreign and hostile takeovers ready to expand when the liberalization of markets will be

completed [113]. In which case, European companies will boost their investments in foreign infrastructures and benefit from a broader range of activities in oil, electricity and natural gas allowing the creation of a single market where their presence will be dominant.

The market continues to stabilize and companies aim to reposition themselves for greater earnings growth. The capacity of corporations and conglomerates to fund M&A growth is expected to rise again, since their cash inflows started to recover from the lows of post-crisis period. “Although they might never get back to the profitability levels of 2014 and earlier, energy companies will continue to realize that they are making money, paying down debt and getting healthier - and are now in a much better position to pursue transactions. The gap between the bid and the ask in the oil and gas markets could fully close in 2018, prompting the beginning of an increase in deal activity,” says Henry Berling, country manager of KPMG in the United States [112].

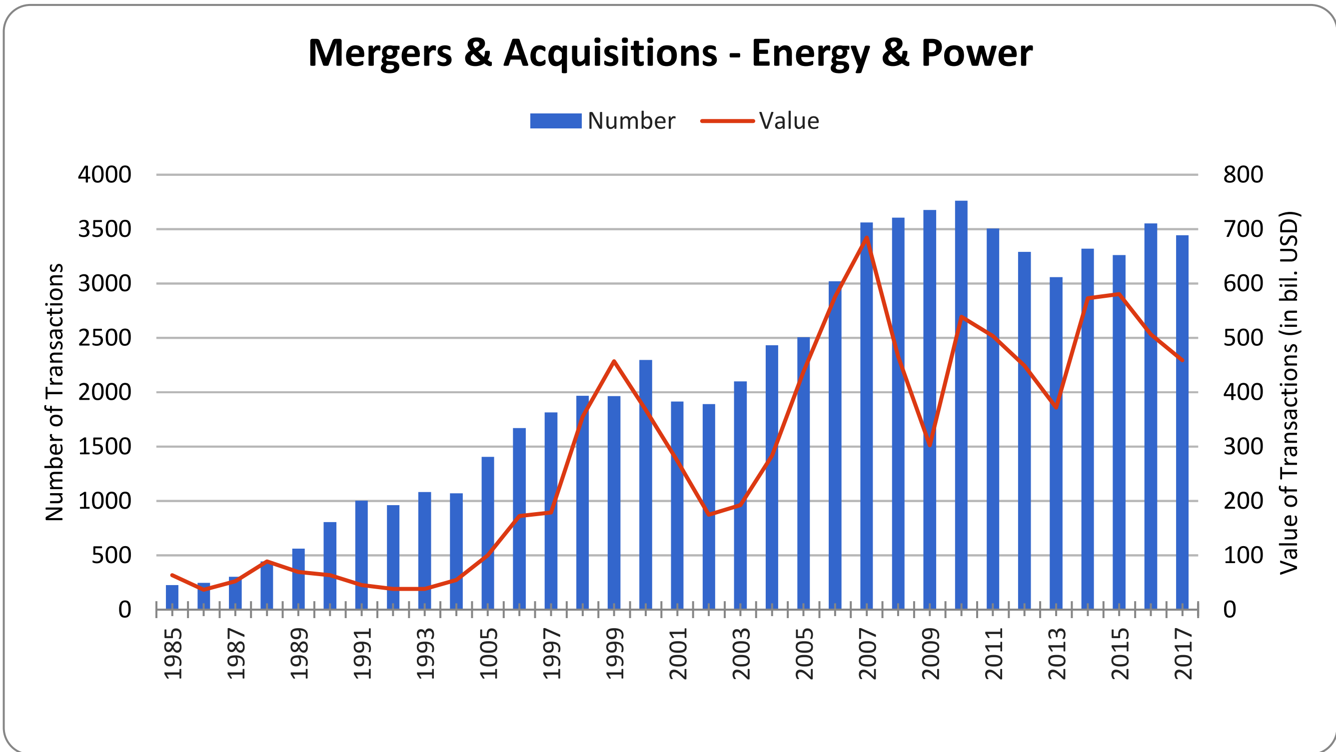

Figure 3.2: M&A operations' number and value in the energy sector worldwide for 1985-2017

Source: elaborated from Imaa

The environment is paying back: it can be seen in Q1 2018 how the deal value rose about 11 percent to 184 billion dollars, despite the 18 percent drop in deal volume, to 484. This average size of deals represents the 10 years highest by a significant margin with its 380 million dollars. The 2018 renewables market continues to be attractive and promising and the activity is expected to continue moving toward clean energy over, at least, the next decade. As at the beginning of 2018, the trend toward cleaner generation sources is attracting the attention of the most powerful companies and countries: specifically, Southeast Asia, China and India will continue their healthy growth into renewable energies and will follow as a consequence the transactions [113].

The total sector deal value is expected to reach the highest level in the current decade; what's in store for the upcoming 2018 is growth, transformation and the search for yield. These three key factors are playing different roles around the world:

- USA: deal momentum has been strong but shows signs of slowing. Upward pressure on interest rates is creating uncertainty for US utility M&A with some companies likely to focus on strengthening balance sheets as valuations tighten while others may look to build scale through acquisition [114].
- Europe: deal activity has played out against a background of constrained economic growth and an already fairly consolidated sector landscape. Growth through acquisition has been reigned back by many companies in recent years. But with several companies emerging from a period of restructuring and transformation, the balance between divestment and acquisition is likely to shift as they seek to deliver on their new strategies [114].

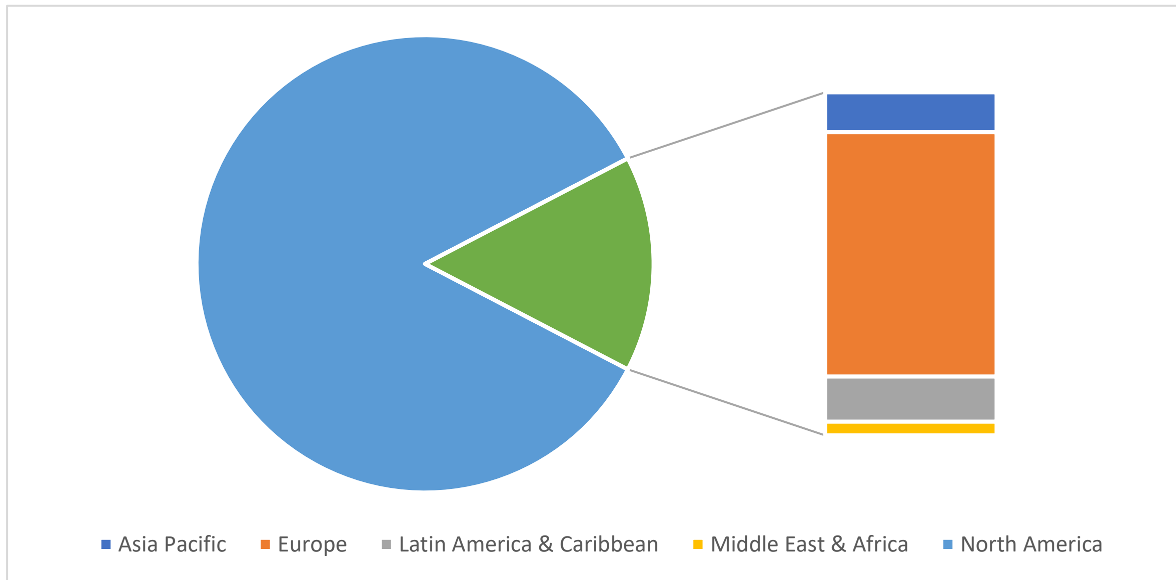

Figure 3.3: bidder's region of provenience in deals with target company in North America

Source: elaborated from Imaa

- Asia Pacific Region: Buyers from this region have been out in force in the past 12 months and we expect that to be the case again in 2018. Within the region, the flow of Australian network deals looks set to continue, making it potentially a bumper year for mega deals in Australia. Underpinning these network deals, and similar transactions in Europe and the US, investor appetite for the steady long-term yields that flow from regulated power and gas infrastructure assets is increasing. It can be anticipated that such deals will continue to strongly attract investor's interest, generating upward pressure on acquisition premium [115].
- Australia: Both domestically and globally, the trend for Mergers & Acquisitions across the energy and resources sector is upwards. 2016 was a point of low, but in 2017 there were a lot more transactions in the 50 million-dollars-plus space, driven by metals and mining and, especially, coal assets rather than oil and gas [115]. However, there were also several failed transitions in metals and mining, most likely a result of companies testing the market or pricing expectations being above market.

We're starting to see Brent crude oil heading back up towards 80 dollars a barrel, and as a result, activity in oil sector will likely follow.

THE US CONTINUES TO DOMINATE THE M&A MARKET

Among the top 100 global deals during 2017, 54 involved the US. A significant proportion were domestic deals (44), versus the US as the cross-border buyer (10) and the US as the cross-border target (10) [116]. A large gap in the top 100 deals between the US and other countries persists and that trend seems set to be just as pronounced, or more so, in 2018.

CROSS-BORDER DEALS

Many more companies, particularly mid-market and private-equity players, are going global to pursue the best assets and the trend is driving up M&A cross-border deal volume. This is particularly true in the US, where horizons are rapidly expanding beyond North American targets. While the proportion of cross-border deal volume remained relatively steady over the last eight years, at about one-fifth to one-quarter of global deals, this mix is shifting toward more cross-border transactions as companies pursue real and rapid growth wherever it can be found.

PREMIUM OF TRANSACTIONS

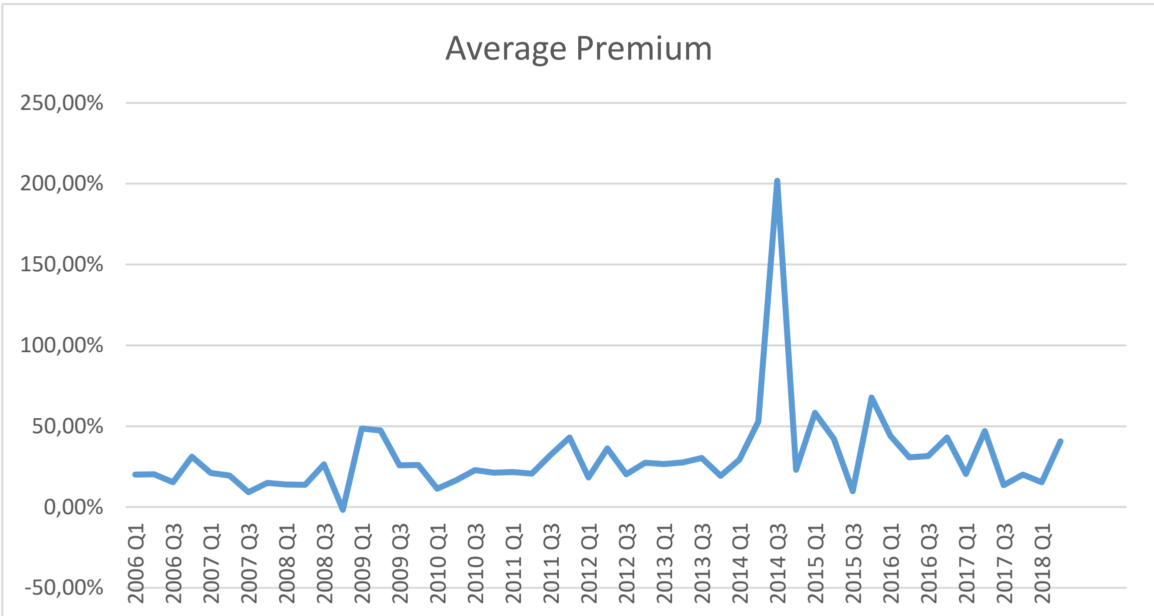

Figure 3.4: Average premium of the target company in M&A activities worldwide for 2006-2018

Source: Bloomberg L.P. M&A premiums Q1 2006 to Q1 2018. Retrieved April 16, 2018 from Bloomberg terminal.

During the years the premium paid by the acquiring firm grew from an average of 20% recorded in early 2006 to levels well above 40%, that were agreed starting from 2014. The process outcomes in a CAGR of 5,604% over the period 2006 – first half of 2018, with a revitalized trend that despite the crisis restarts growing in the second part of the graph and in correspondence with a new cycle of M&A. This dynamism in the sector captures the attention of private equity and real estate funds willing to invest in a promising business and pushes the price upwards inflating the premium. The most consistent part of the premium is imputable to the synergistic effect created with the acquisition of strategic assets or line of business. The outlier in third quarter of 2014 is representative of Chinese investors, particularly cash rich state-owned power groups, ramping up their foreign assets portfolio with particular attention to European gas and power network assets. The peak registered comes from the sale of a 35% stake in Italian energy-grid holding company CDP Reti to

China’s state grid corporation for 2,8 billion dollars, Shanghai Electric Group taking a 40% share in Ansalfo Energia for 400 million dollars and renewable assets transaction in North America contributing to more than half of the 7,3 billion dollars [117].

M&A DEALS BY GEOGRAPHIC REGION

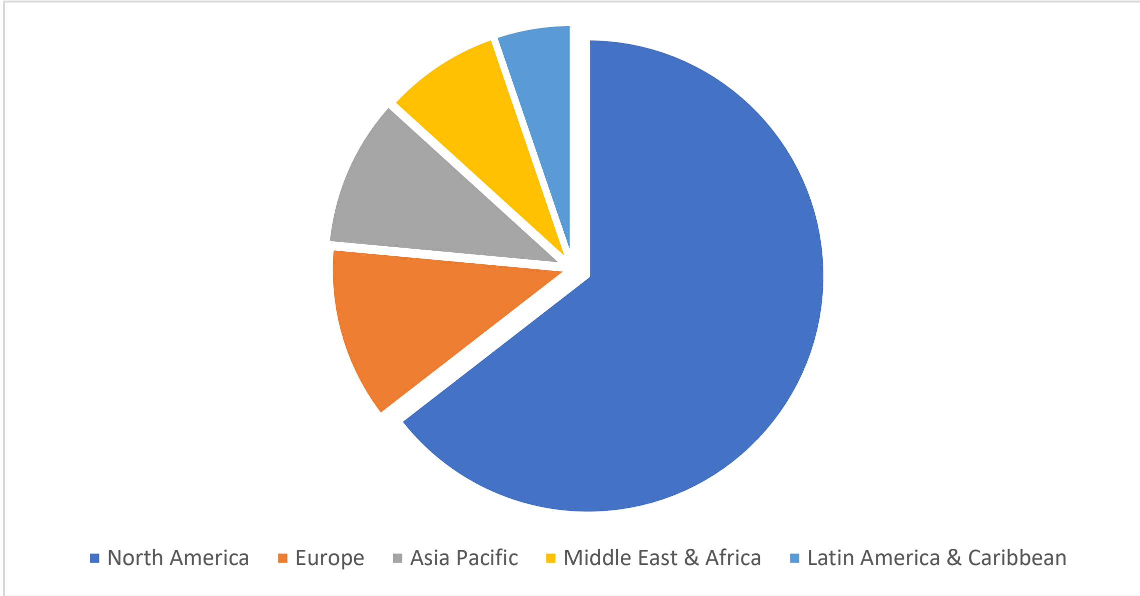

Figure 3.5: M&A activity worldwide divided for geographic appartenance of the target

Source: elaborated from Imaa

The table summarizes the geographic scope of the companies that made an M&A deal in the energy industry in the period from 1999 to the first quarter of 2018. It is a from-to graph, where the first instance is referred to the acquirer company, the second to the target company. As we can see most of the activity in number of deals happens between global companies fighting to survive. Data are displaying the number of deals rather than the value to overcome the problem that the weight of global companies in deal making is way far from other kind of companies by volume and extent. Global companies typically maintain their scale investing in competitors that have the same geographic and operational extent. Only a few part of the budget is allocated in developing niche projects with ultra-specialized companies

such as thermal energy companies can be. Their appetite remains strong on the main guideline of the business concentrating in cost cutting and efficiency. Investments in different infrastructure are the research for innovation and remain a different and marginal path from that followed by the management.

North America is focusing on the development of projects in Canada and is pushing for new concessions and permission in that soil. Their third position is due to the deals of the last decade, with particular importance to the last three years where about one third of the dedicated financial resources were driven building a strong infrastructure between USA and Canada.

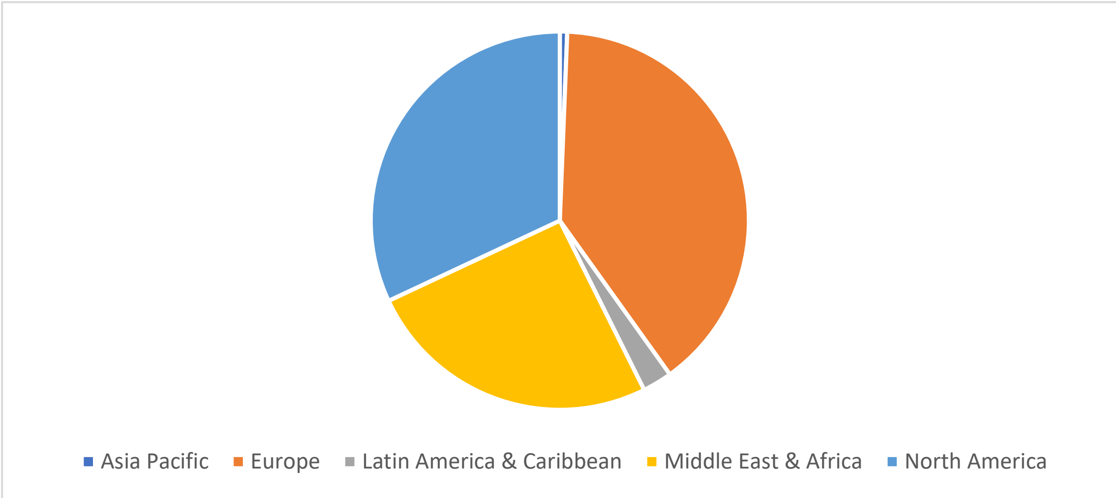

Figure 3.6: target's region of provenience in deals with bidder company in Europe
Source: elaborated from Imaa

RENEWABLEW ENERGY SECTOR

Since global warming has become a topic under the spotlight for political as well as social factor of interest, the main focus is shifting towards renewable and sustainable sources of energy. Renewable energy is well defined by IEA, the International Energy Agency, as "any source of energy derived from natural processes that are replenished constantly. In its various forms, it derives directly or indirectly from the sun, or from heat generated deep within the

earth. Included in the definition is energy generated from solar, wind, biofuels, geothermal, hydropower and ocean resources, and biofuels and hydrogen derived from renewable resources" [114]. There are three main areas in the overall energy ecosystem where renewable energy finds its employment: electricity production, installed generating capacity and primary energy supply. As of 2017 worldwide power generation from renewables led to an annual decrease of CO2 emissions by 1,2 billion tones [119].

The energy market gradually saw an increase in its share of renewable energy production mainly between 2009 and 2013 and this led to a more dynamic deal activity in this direction through vast alliances in general and M&A in particular. The activity reached its peak in 2011 with a US$73,4 billion in volume, than the cycle started slowing down. In the following years refinancing and asset acquisition declined to a total volume of US$ 48,92 billion (2012) and US$40,28 billion (2013) [118]; still in the same time pure corporate mergers and acquisitions increased from US$7,91 billion to US$11,49 billion [118]. This decrease in value can be partly imputable to an overall decrease in prices along the value chain. Corporate M&A deals are mainly driven by the acquisition of projects and the effort for their development and power generators. Often a green premium is recognised to the sector especially when it is attracting government attention and funds.

The main driver pushing the activity in the sector is innovation: M&A have the scope of acquiring new competencies and internalize process and procedures owned by companies specialized in the sector. An internal development would require too long times, meaning a big temporal disadvantage in contrast to the most developed agencies competing for market share with an already formed and delineated offer. Economies of scale or economies of scope are rarer in the field since the demand is not yet big enough to justify vast investments delivering huge industrial quantities: knowledge and quality are the priorities. Competitive advantage is therefore created through the absorption of know-how exceeding the capabilities of a single company, gaining as a further consequence the entire innovation ability of the target firm.

The bounce in large-cap M&A transaction is led by the hydroelectric sector accounting for six of the ten top deals for value registered in the period among renewables. At the top of the list there is the US$6 billion acquisition of power generating units in the Three Georges

Hydroelectric facility in China from the parent company China Three Gorges Project Corporation to its majority-held, China Yangtze Power a power producer company listed in the Shanghai Stock Exchange [115]. The deal is the most notable example of an emerging process of primary importance among Chinese energy corporations: power generation assets moving into listed companies as part of their restructuring plan through the integration of core assets.

OUTOLOOK ON MAIN FACROTS

Soaring up deal value

2016 and 2017 have been bumper years but the outlook is more clouded for 2018. The momentum is anyway expected to slow down as dealmakers assess the implications of a changed economic outlook and rising interest rates [120].

A big part of the impetus for soaring deal value has come from big network infrastructure contracts. A significant flow of such arrangements will continue to come to the market in 2018 but together they may not match the total of the previous periods which was boosted by a number of big gas network transactions.

A new chapter in corporate strategic moves is opening up

As the programmes for major corporate restructuring and divestment are completed by a number of leading European, they are resetting their sights outward on future strategic moves. For example, increased investment in US onshore wind energy is part of the agenda for both Innogy and its German rival E.ON as it is the time to fund future-oriented investments in the renewables, grid and infrastructure business areas as well as in retail innovations [120].

Thirst for yield set to raise valuations still further

Last M&A period has characterized by steady, predictable and often inflation-hedged regulated returns. With interest in regulated utilities still strong, valuations have hit historic highs. Demand side is expected to continue its trend in 2018 with the key questions being the level of impact from rising interest rates and the availability of assets on the supply side [118]. Any shortage of targets could put pressure on deal premium pushing them furtherly.

The opposite effect is expected to be given by rising interest rates that potentially will put pressure on valuations, widening the bid-ask spread and slowing deal activity.

Chinese and Far East investor appetite

The appetite of Chinese and Far East investors for international power sector investments remains very strong. China and Hong Kong are showing economically their interests especially in renewables both through offers for acquisition of companies well positioned in the segment and through direct investments, using the surplus cash to open new divisions and gain shares in the emerging market [115]. National interest and security concerns are reinforcing the trend towards participation in joint and consortium arrangements, reinforcing the offshore position with direct equity investments primary in U.K. and in France, where the attention is concentrated on corporations' nuclear projects.

Renewables delivering significant deal share

Recent renewables total deal value has been subdued in Europe and the Asia Pacific region and has been relatively flat in North America on downward volume. Nonetheless, we expect renewables to maintain a significant share of sector deal activity. Deals for renewable targets now comprise more than half of worldwide sector deal volume although typical deal sizes remain small. Larger deals continue to be often mainly focused on hydropower assets [120].

Thermal assets

Critical period in many territories for some thermal generation assets, particularly coal-fired power stations. Buy side market is expected to be dominated by specialized, niche clients that will claim for the entire share of thermal assets. In Europe, Czech-based energy group EPH is building a business purchasing fossil fuel generation assets that other utilities want to get rid of that will quite entirely cover the entire demand of the sector [121]. 2018 is set to see the company Engie to close the deal of the Hazelwood brown coal-fired power station, which has been meeting up to 25% of the state of Victoria's energy requirements and 5.5% of the whole of Australia's energy demand [120].

ENERGY CASE STUDY 1: ENEL ACQUISITION OF ENDESA

ENEL GROUP

ENEL is a multinational energy company and one of the world's leading operator in integrated electricity and gas industry. Basing its operations in 34 countries across 5 continents, it generates energy with a managed capacity of more than 88GW and distributes power across a network of approximately 2,2 million kilometres. Its customer base accounts for more than 72 million end users: the largest base of users among European competitors. The company's portfolio of power stations is highly diversified, running on hydroelectric, wind, geothermal, solar, thermoelectric, nuclear and other renewable sources of power. ENEl is nowadays the second utility in Europe behind the public company EDF sited in French.

ENDESA CORPORATE

Endesa is the major firm in the electric energy sector operating in Spain furnishing services to almost 13 million customers. Its activity is mainly focused on the hiberic market while the production activity has the main branches in Moroccan soil. The activity of the firms focuses in the production of energy in the forms of nuclear energy, hydroelectric energy and energy coming from fossil soil. In 1988 the government actuated a privatization process of the corporation reducing its participation in Endesa through a public offer. In the same year the stocks were quoted on the New York stock exchange serving the purpose.

SCOPE OF THE DEAL

ENEL searched in the acquisition benefits mainly linked to potential for industrial synergies and combinations of skills and best practices coming from the joint management of the conglomerate. Scale benefits are the first to make their impact visible on the income statement acting on the line of the costs. They are particularly important in the procurement activity consolidating the position of the entity against the suppliers.

A second reason for the operation is that ENEL and its management found the acquisition more efficient for an industrial and financial growth rather than an organic internal growth, unable to fully grasp the opportunities. ENEL found in Endesa a bridge to Latin America, where the Spanish company could benefit from a consolidated position and a complete network. The direct acquisition established all at a once the position of the Italian company in Latin America's energy market. Finally, the consolidated entity could leverage on its position in the European market: a wider footprint on the inshore territory mitigates regulatory risk since a partial diversification avoid the risk of a monopoly perception that could alert the authorities.

FEATURES

On February 20th, 2009 ENEL acquired 25% of Endesa Corporate and the value of the share of the Hispanic group was fixed at 11,1 billion euros. Acciona, the holding company of the period, earned 8 billion euros cash, with the rest paid in strategic assets of renewable energy production. At the end of the deal Acciona had an inflow of 11,1 billion euros and used part of them to acquire (for 3 billion euros) the part of Endesa focused on renewables, through which Acciona became the second operator in the Eolic sector. The remaining 8 billion euros were used to reduce its net debt. Furthermore, Endesa voted for an extraordinary 6 billion dividend distribution to be served to ENEL: this will partially finance the operation while reducing at the same time the value of the assets to be purchased. Regarding the cash payment, ENEL will receive a syndicated 8 billion euros loan delivered by 12 banks (11 of which are Acciona' creditors). Following the transaction, ENEL now holds 92% of Endesa, which ensures the full control of the acquired company. It was the final step of a consolidation process started between February 27 and March 2 , 2007, where ENEL acquired a 10.0% stake of Endesa and signed swap agreements for an additional 13%, together with Acciona.

PERFORMANCE OF THE STOCK

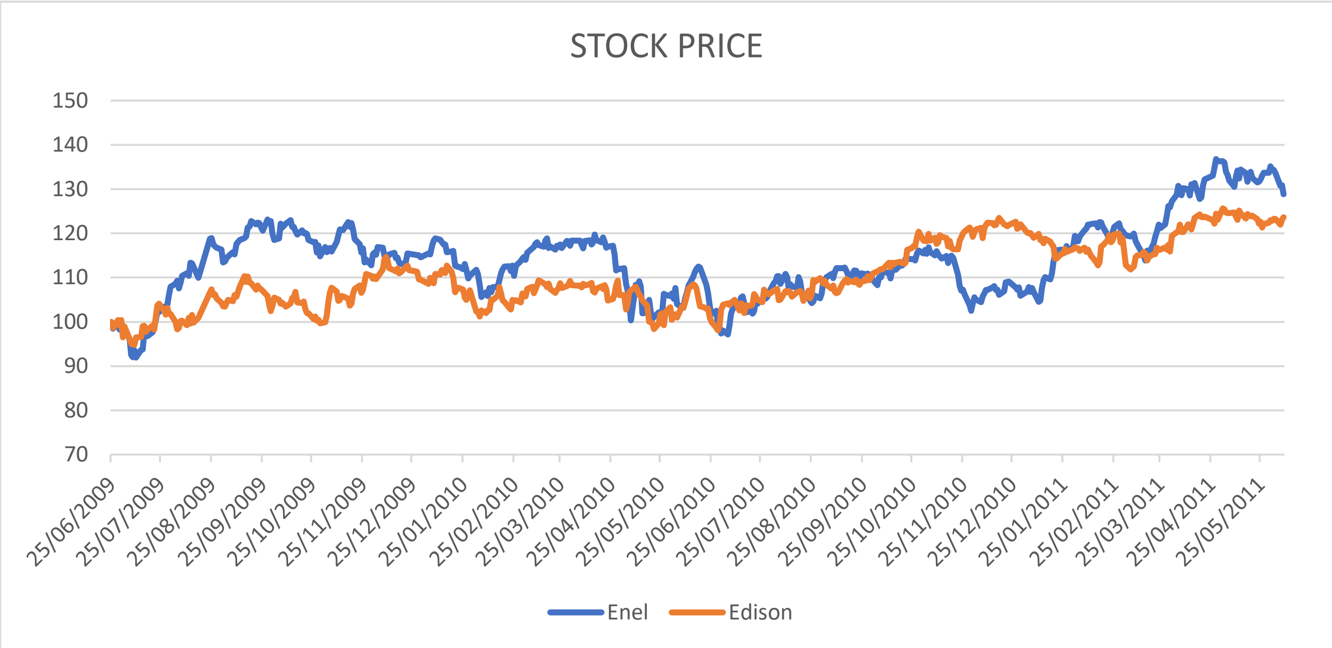

Figure 3.7: Enel stock price after the acquisition, set as 100 on June 25, 2009

Source: Yahoo Finance

The instability of the economic environment surrounding the deal causes the analysis of the stock price, for Enel after the acquisition of Endesa, to be harsher than usual. In mid-2009, the financial sector was still ravaged by the collapse of the credit market of few months before and things were far from normality. In the general context of instability in which Enel concluded the operation, it is then difficult to separate the components of the trend. Surely, Enel and its main domestic rivals were on a small rebound, after being hit by the slowdown, thanks to extraordinary measures of recapitalization both in debt and equity capital markets. Indeed, the path rightly afterword the acquisition was wobbling in nature: a plunge of 10% in the first month, before a high on 20% from pre-deal levels and a final drop which put the half-year performances at 10%. Taking a longer-term view, the gains in value of the company's equity are clearer, as the two-year performance was a solid 30% over pre-deal levels. However, given the spike at the beginning of 2011 and the importance of this climb on overall performances, there are few signs of a clear market sentence on the deal.

ANALYSIS OF INCOME STATEMENT

(Millions of euros)	2013	2012	2011	2010	2009	2008	2007	2006	2005
Revenues									
Sales	77.258	82.699	77.573	71.943	62.498	59.577	42.734	37.497	32.370
Other revenues	3.277	2.190	1.941	1.434	1.864	1.607	954	1.016	1.417
[Subtotal]	**80.535**	**84.889**	**79.514**	**73.377**	**64.362**	**61.184**	**43.688**	**38.513**	**33.787**
Costs									
Raw materials	41.612	46.130	42.901	36.457	32.638	35.695	25.676	23.469	20.633
Services	15.551	15.738	14.440	13.628	10.004	6.638	5.076	3.477	3.057
Personnel	4.596	4.860	4.296	4.907	4.908	4.049	3.263	3.210	2.762
Depreciation and amortization	7.067	9.003	6.327	6.222	5.339	4.777	3.059	2.463	2.207
Other operating costs	2.837	3.208	2.255	2.950	2.298	1.714	927	713	911
Costs for internal labor internalized	-1.450	-1.747	-1.711	-1.765	-1.593	-1.250	-1.130	-989	-1.049
[Subtotal]	**70.213**	**77.192**	**68.508**	**62.399**	**53.594**	**51.623**	**36.871**	**32.343**	**28.521**
Net Gains/Losses from commodity management	-378	38	272	280	264	-20	-36	-614	272
EBIT	**9.944**	**7.735**	**11.278**	**11.258**	**11.032**	**9.541**	**6.781**	**5.819**	**5.538**
Financial revenues	2.453	2.272	2.693	2.576	3.593	2.596	2.128	513	230
Financial expenses	5.266	5.275	5.717	5.774	5.334	5.806	3.013	1.160	944
Gains/Losses from participations	86	88	96	14	54	48	12	-4	-30
Earnings before taxes	7.217	4.820	8.350	8.074	9.345	6.379	5.908	5.168	4.794
Taxes	2.437	2.745	3.027	2.401	2.597	585	1.956	2.067	1.934
Net earnings	**4.780**	**2.075**	**5.323**	**5.673**	**6.590**	**6.034**	**4.131**	**3.101**	**4.132**

Table 3.4: Enel Income statement for selected years

Source: elaborated from Enel's annual reports 2005-2013

The income statement of the company, for the three years before the acquisition and six years after, is considered to analyze the effect of the deal on the group's financials.
Revenues show an evident positive trend, with an increase in all nine years. There is a strong impact on revenues given by "the sale and transport of electric energy", which in 2013 represented 87,01% of the total, including sales to final clients for 33.135 million euros (down from 36.756 million euros in 2012), wholesale revenues of 17.525 million euros (up from 16.974 in 2012), revenues of 4.520 million euros from trading in electric energy and revenues from transport of electric energy for 9.611 million euros (an increase of 580 million euros from 2012).

Other revenues referred mainly to contributes, awards and capital gains. In the last year considered the voice "capital gains from dispose of activities" is particularly important as the dispose of Artic Russia (and indirectly of the part of SeverEnergia controlled through this entity) accounted for an inflow of 964 million euros, together with the minor sale of 51% of Buffalo Dunes Wind Project for 20 million euros. The total effect was dwindled by the annulment of the capital gain recorded in 2009, caused by the deletion of the deal with Acciona for the sale of La Cinqueta for 43 million euros.

On the other hand, costs increased in a noticeable way during the period under observation. Costs for service in 2010, for the value of 13.628 million euros, include the contribution for Endesa of 8.255 million euros (it was 5.175 in 2009); this voice is affected by changing regulation in the application, from July 1st, 2009, of the "Tariffa de ultimo recurso", a tariff valued at 1.437 million euros, and the changes in the consolidation method for Endesa.

	2007	2008	2009	2010	CAGR	Abs. Var.
Employees at year end	73.500	75.981	81.208	78.313	1,60%	4.813
Personnel costs (Millions of euros)	3.263	4.049	4.908	4.907	10,74%	1.644
Cost per employee (Euros)	44.394	53.289	60.437	62.658	9,00%	18.264

Table 3.5: Enel's employees for selected year

Source: elaborated from Enel’s annual reports 2007-2010

From the early beginning of the process of integration of Endesa in 2007, Enel’s number of employees continued to grow at an average pace of 1.6% per year, with final addition of 4.813 people. This was mainly due to the integration of workers from acquired entities, while the net hiring rate, difference between people hired and laid off, was negative in any given year. Related costs of personnel swelled as expected, and in 2010 they were 1.644 million euros higher than before the deal. The costs grew more than proportionally, with cost per head increasing in all four years at an 9% average pace: indeed, the final value is one and a half more than the initial one, reflecting decreased efficiency and higher cost of labor.

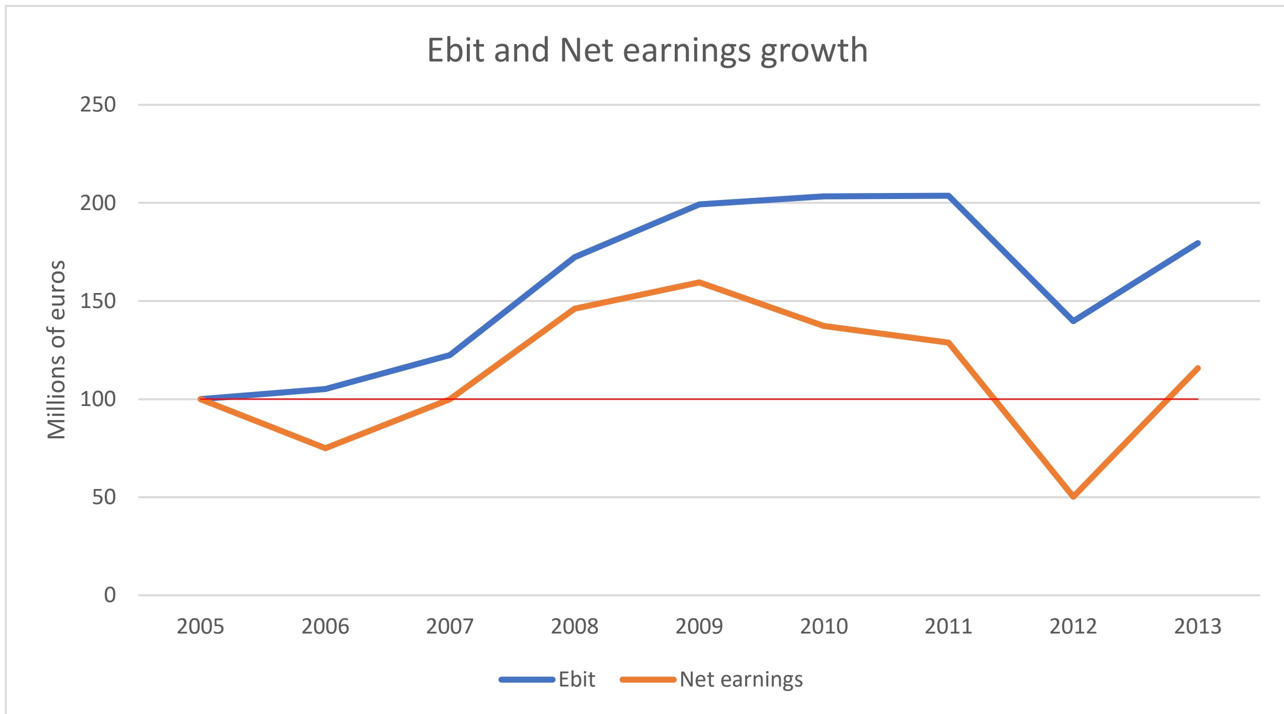

Figure 3.8: Enel EBIT and Net earnings growth

Source: Elaborated from Enel' annual reports 2005-2013

Operating income shows a good performance of growth, with an almost steady progress that finalizes in a level in 2013 that is 1,79 times the level of nine years before. The net profit followed the same curve in the same period, but with a flatter trend of growth and more wobbling walk to a final value in 2013 that was 1,15 times the net earnings of 2005.

The sharp decline in both metrics visible in 2012 is mainly attributable to the rising level of costs, too high to counterbalance even the unusually good level of sales.

The total cost of raw materials in 2012 was 46.130 million euros, a whole 7,5% higher than the year before despite comparable level of inputs: in particular the purchase of 7.252 million euros from "Gestore dei Mercati Energetici" was negatively affected by the stipulation of bilateral contracts and the raising price of electric energy on exchanges and with over the counter counterparties.

Besides, in the same year there is a 326 million euros raise in amortization, due to new production plants starting to operate and the reduction in the useful life of the nuclear plant of Garona. Pertinent with our case study, there was a negative effect generated from the impairment executed on the goodwill referring to the cash generating unit Endesa-Penisola, for 2.392 million euros, and on Endesa Ireland, for 67 million euros.

OPERATIVE DATA

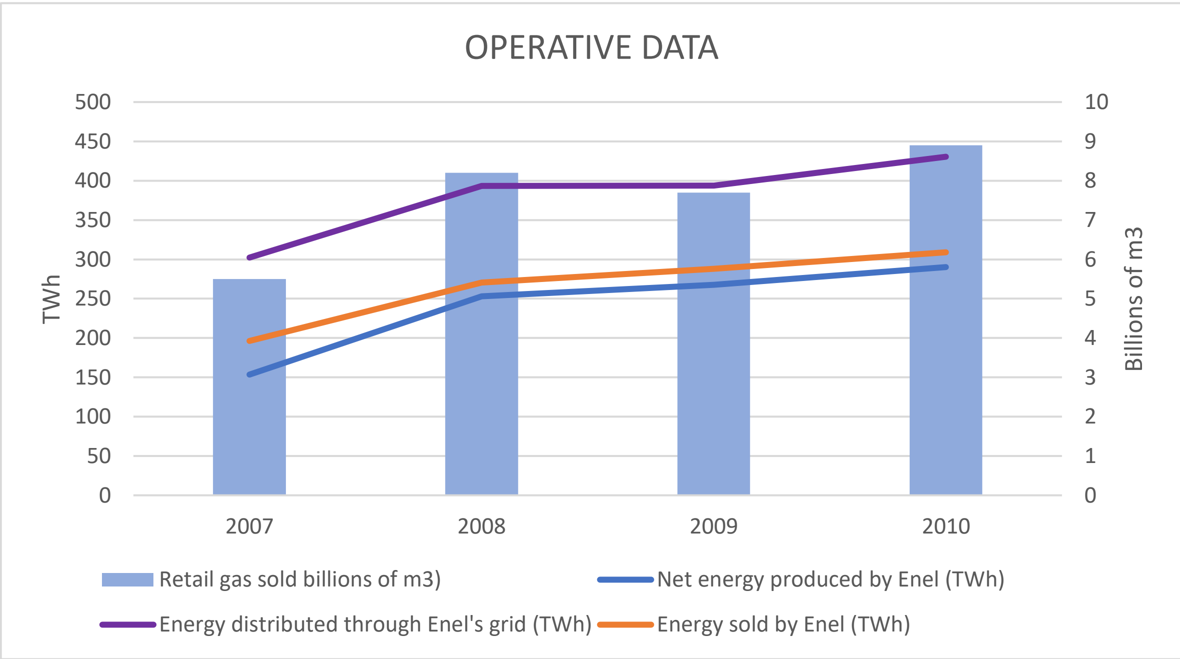

Figure 3.9: Enel operative data

Source: Elaborated from Enel' annual reports 2007-2010

The net production of energy by Enel increased in the period of the deal. It passed from 153,3 thousand watt/hour (TWh) per year in 2007 to 290,2 TWh in 2010: a net increase of 89,06%. The increase in the volume of energy in 2010, equivalent to 22,4 TWh or 8% on the year

before, was substantially driven by the change in the consolidation method for the integration of Endesa, which added 23,2 TWh to the count, and by the increase of output from the International Division, which counterbalanced the contractions in Italy and Spain, particularly hit by the global recession . The volume of energy distributed through Enel's grid swelled from 302,3 TWh in 2007 to 430,5 TWh in 2010, which is equivalent to an average 19,33% increase of the flow in its pipelines. Part of the increment was prompted by the change in consolidation method for Endesa, which accounted in 2010 for 27,1 more TWh, and by bigger demand of energy in the market in Italy and Latin America.

Energy sales from Enel followed a similar path, with a net increase in 2008, when they grew 37,75% to 270,4 TWh, and a small upward trend in the remaining two years of analysis, 6,5% and 7,3% respectively, which led in 2010 to 309 TWh being sold. Part of the uplift was imputable to the change in method of consolidation of Endesa, accounting for 24,8 TWh worth of sales, and by strong demand in Russia, French and Latin America's countries; Italy represented a weak spot, with sales decreasing by 9,8 TWh in 2009 and 14 TWh in 2010 due to low demand.

Sale of gas to retail customers, measured in billions of cubic meters (bcm), grew at an average pace of 27,21% per year in the period 2007-2010, with the greatest swing in 2008, with a 49,09% growth, and in 2010, when a 15,58% growth was recorded. The boost of 2008 was fostered by the consolidation of Endesa, and by a strong Italian demand, which inflated 16,3% on the previous year. Indeed, the small slump in 2009 was prompted by weak domestic demand, while all the referring markets remained stable: when Italian request of gas slightly recovered in 2010, it lead to higher sales and the peak of the quadrennial.

GEOGRAPHIC DISTRIBUTION OF SALES

The basic reason of the deal was the diversification of sources of revenues through the penetration of strategic markets in America and Europe. The rationale behind the acquisition was to avoid the costs and potential failures of the organic growth in an unknown market and in distant areas. Analyzing the geographic distribution of the sources of revenues in the selected period of nine years, after the finalization of the deal the share of revenues coming from American markets exploded, with an instant growth of roughly 345% in just one year,

though starting from a low base. The phenomenon continued at a slower but sustained pace, culminating in America's share of revenues accounting for the 12,58% of the total. Meanwhile, the share of revenues from Italy dwindled from a burdensome 94,42% to a more comfortable 42,14%, while the revenues from EU Europe rose from 5,12% to 40,22%, after being the most important market for the biennial 2011-2012.

(Millions of euros)	2005	2006	2007	2008	2009	2010	2011	2012	2013
Italy	30.563	32.389	32.603	36.202	30.770	30.767	30.678	32.695	32.556
Europe - UE	1.656	4.525	8.394	17.355	21.548	27.586	33.552	35.034	31.070
Europe - extra UE	117	180	1.563	5.983	8.374	9.907	2.846	3.390	3.305
Americas	27	22	7	5	1.746	3.492	10.338	11.006	9.720
Others	7	381	167	32	60	191	159	574	607
Total	32.370	37.497	42.734	59.577	62.498	71.943	77.573	82.699	77.258

Table 6.3: Enel revenues segment for geographic provenience

Source: Elaborated from Enel' annual reports 2005-2013

Even if inserted in a major strategic plan to achieve diversification, the acquisition of Endesa surely played an important part in the hastening of the results. On the other hand, it is difficult to demonstrate that the synergies and efficiencies that were objectives of the managers in the long term were effectively achieved, since all costs continued their trend of growth and the number of people working in the company continued to increase after the deal, raising doubts about the supposed better deployment of the resources on the field.

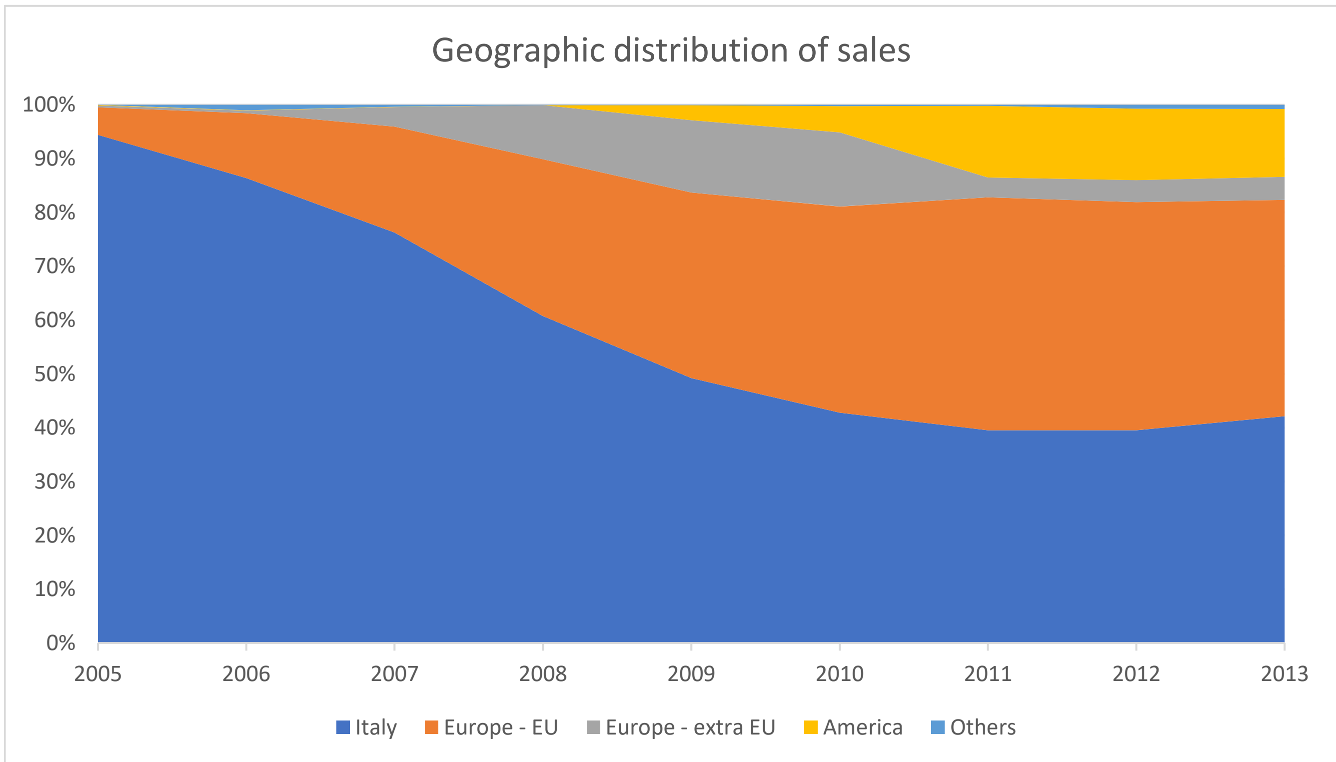

Figure 3.9: Enel revenues segment for country of origin

Source: Elaborated from Enel' annual reports 2005-2013

RETURNS

Analysis of return on equity and return on investments, the last computed as the ratio of operating income over the sum of equity and financial debt, leads to compelling outcomes. ROI had a wobbling path during the acquisition period, firstly raising to nearly 23% in 2008 and then moving downwards to a value of 9,80% in 2011, lower than return on equity. ROE had a much more stable path during the quinquennial, increasing in the first year to 12,34% and then flattening around 10% for the remaining years. The peak in 2009 was largely attributable to improving incomes due to the change in the consolidation
method used for Endesa and lower net financial expenses, fostered by the early exercise of the put option granted by Enel to Acciona for the sale of 25% of Endesa shares.

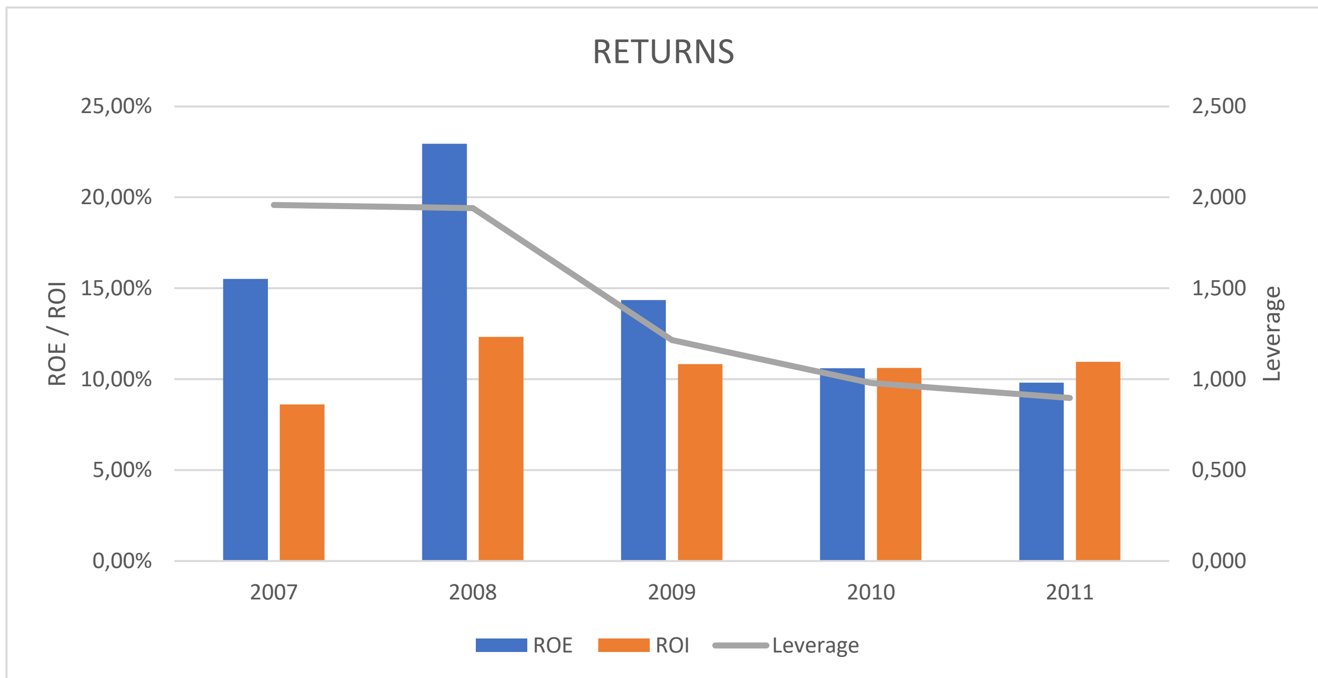

Figure 3.11: Enel's return on equity, return on investment and leverage

Elaborated from Enel' annual reports 2007-2011

Considering the measures together, a convergence of the values can be observed. This is the consequence of falling leverage in the years, driven by a swelling value of the equity, which reduced the leverage effect and pushed the two values close. Indeed, as the value of the debt remained constant, despite important changes in its composition, the value of the equity increased in 2009 regardless of the registration of a net loss recognized in equity of 1.535 million euros due to changing accounting policies. The increase was driven by an addition of net income for the year worth 6.390 million euros and the decision from the company to raise extra capital on April 29. On this date, shareholders mandated the Board of Directors to complete a capital increase for up to 8.000 million euros, with the emission of 3.216.938.192 new shares and a right offered to existing shareholders to buy 13 new shares for every 25 already possessed, at 2.48 euro per share. The final value of the capital harvested was 7.978 million euros, which represented 34,21% of the new total capital of the company.

LIQUIDITY

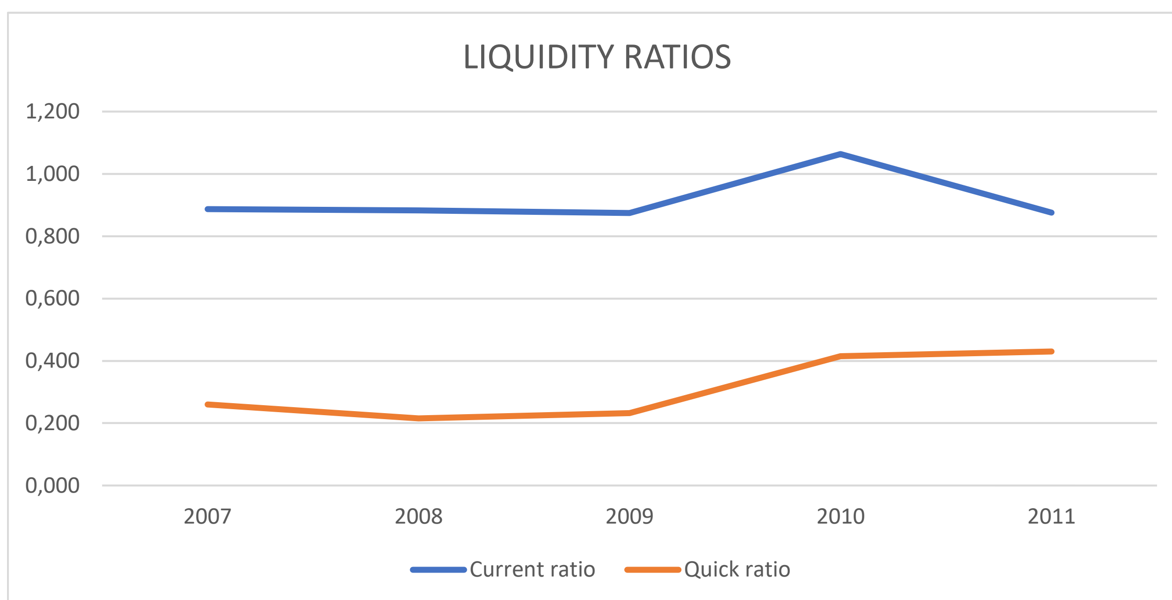

Figure 3.12: Enel's liquidity ratios

Source: Elaborated from Enel' annual reports 2007-2011

Enel capacity to absorb a liquidity shock is arguable. On one hand, the current ratio for the entire period was higher than one in just one year, showing a misbalance between short-term expenses and assets available to pay. Taking in consideration only high-quality liquid assets, like cash and treasuries, does not much to improve the situation in the first three years of the examined period, since the quick ratio for Enel was wobbling around 20%, a disheartening value. The outlook improved in the following 2010-2011 biennial, when it doubled to 40%, a huge increase in the coverage's capability of the current costs, but not exactly the best in class scenario. On the other hand, Enel developed plenty of precautious measure to hedge against liquidity risk, and the acquisition of Endesa played even in this direction. At the end of 2009, Enel had a total value of cash and equivalents worth 4,2 billion euros, of which 1,8 was held by Endesa; committed credit lines for 27,2 billion euros, of which 9,4 billion came from Endesa; uncommitted credit lines worth 2,4 billion euros, of which 58,33% was attributable to Endesa. Also, the company had 9,4 billion euros outstanding in commercial papers programs, of which Endesa participated for 5 billion euros through its subsidiaries.

More illustrative still was the capability of Enel to withdraw resources from the market in a time of market skepticism and financial turmoil. In 2009, just after the beginning of the financial crisis, Enel completed the emission of 10 billion worth of bonds to institutional investors, as well as the arrangement of a syndicated loan for 8 billion dollars to finance the acquisition of Endesa from Acciona. These operations, together with the already cited capital increase of June 2009, show the credibility of Enel on the market and the soundness of its business to investors, as a prove of resilience to unexpected liquidity needs.

LIQUIDITY

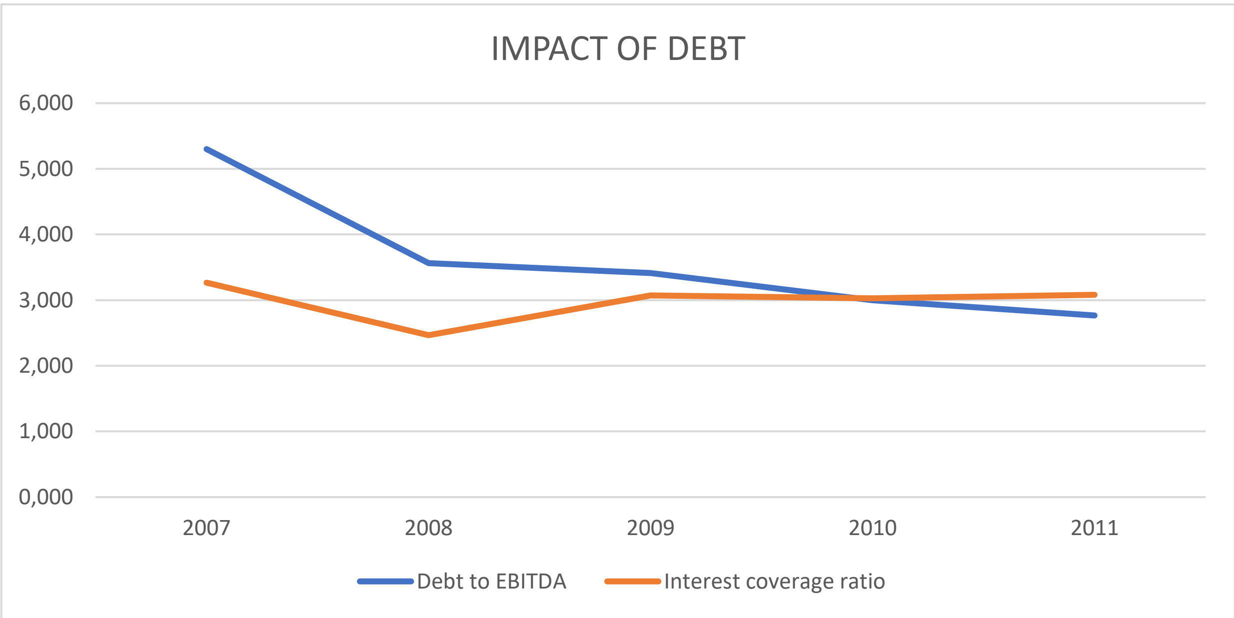

Figure 3.13: Enel's debt coverage

Source: Elaborated from Enel' annual reports 2007-2011

Debt to EBITDA ratio, which measures the number of year it would be necessary to repay long-term debt, improved in the quinquennial, fostered by improving margins and constant level of debt. At the same time, interest coverage ratio remained stable at the value of 3, after wobbling between 3,2 and 2,4 in the first two years of the acquisition. The lack of improvement in the interest coverage ratio is a cue of the important changes in the structure

of the debt. Indeed, the total amount of long term debt didn't change much in the five years, but the relative burden of financial expenses increased from 3.013 million euros in 2007 to 5.707 million euros in 2009. This surge, equivalent in effect to a raise of 89%, is due to an environment conditioned by stressed financial condition, especially in Enel's home country, Italy.

COMPOSITION OF DEBT

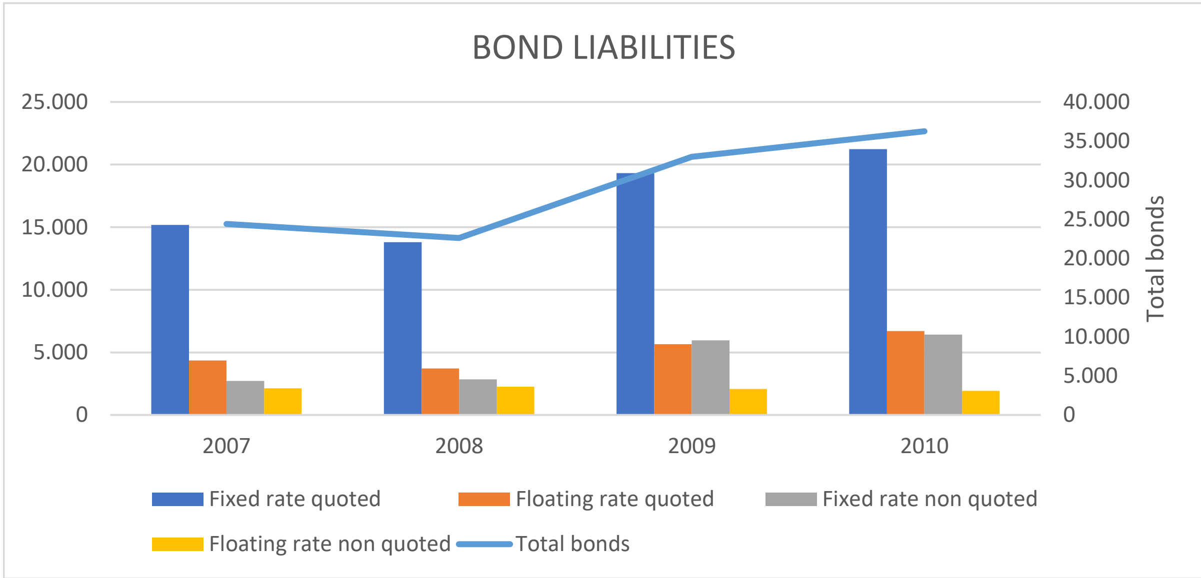

Figure 3.14: Enel's debt structure

Source: Elaborated from Enel' annual reports 2007-2010

The structure of Enel' financial debt mutated in the period concerning the acquisition of Endesa. The debt from banks was reduced and substituted by additional issue of debt in the bond market: indeed, the value of obligations in Enel's balance sheet passed from 15.185 million dollars in 2007 to 21.224 million dollars at the end of 2011, equivalent to an average growth of 18,24% year on year. The starting point was in September 2009, when one of the company' subsidiaries, Enel Finance International, completed a euro and English strling

denominated 6,5 billion euros worth multi-tranche bond issue, targeted to institutional investors in the international market. The transaction, which prompted oversubscription for 21,5 billion euros, was divided in four tranches:

- 1.500 million euros fixed rate 4% bond due in 2016
- 2.500 million euros fixed rate 5% bond due in 2022
- 850 million pounds fixed rate 6,625% bond due in 2024
- 1.400 million pounds fixed rate 5,75% bond due in 2040

One month later, on September 30, 2009, the same subsidiary issued a multi-tranche dollar denominated bond corresponding to a total 3.073 million euros, targeted at institutional investors on international and US markets. Three tranches constituted the transaction:

- 1.250 million dollars fixed rate 3,875% bond due in 2014
- 1.750 million dollars fixed rate 5,125% bond due in 2019
- 1.500 million dollars fixed rate 6% bond due in 2039

The trend continued in 2010, with additional bond issue that further increased the proportion of debt kept in obligations. On February 26, Enel issued a European multi-tranche euro denominated bond worth 3.000 million euros. The transaction, targeted at retail investors, was constituted by:

- 2.000 million euros fixed rate 3,5% bond due in 2016
- 1.000 million euros floating rate due in 2016

Due to all these operations, the proportion of the debt represented by obligations increased from 44% in 2007 to 65% in 2010, becoming the first source of debt capital for Enel.

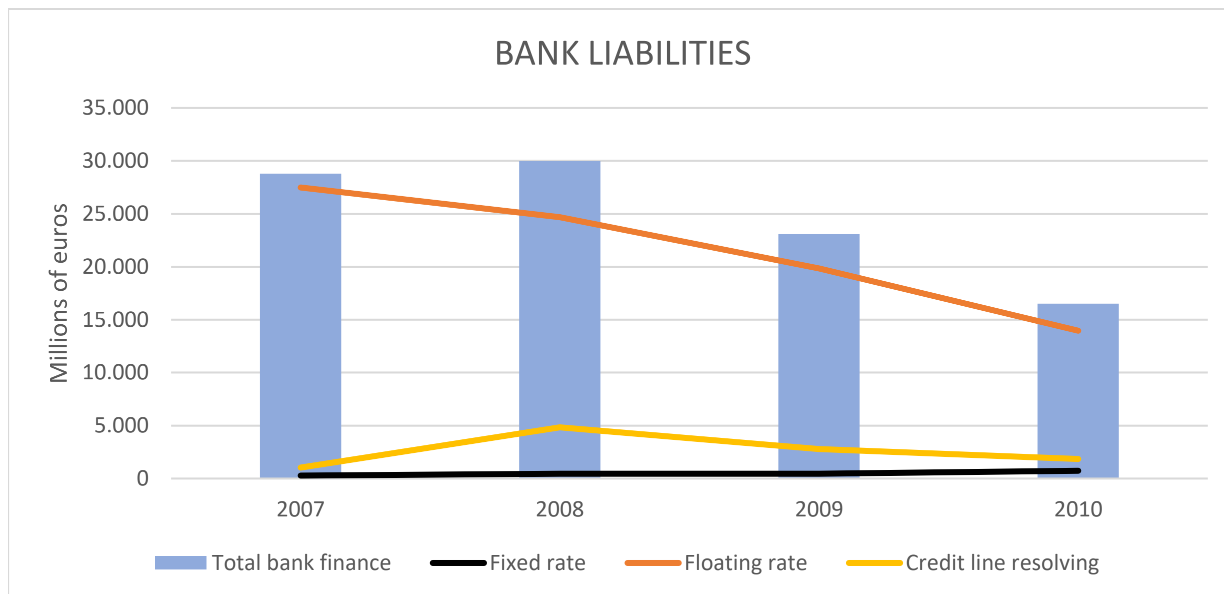

Figure 3.15: Enel's debt from banks

Source: Elaborated from Enel' annual reports 2007-2010

On the other hand, debt from bank contracted in the quinquennial at an average pace of 24,24% year on year. As a consequence, the part of debt kept in bank loans decreased from 52% in 2009 to a value just shy of 30% five years later. Of the total repayments of debt in 2009, equivalent to 23.527 million euros, 78,3% was related to bank's debt terminations. In particular, during 2009 Enel engaged in the following operations of capital reimbursement:

- 10.866 million euros of the tranche falling in 2010 from the Credit Agreement assumed in 2007 to finance company's acquisitions.
- 5.919 million euros of voluntary repayment of debt due in 2012, 2014 and 2016
- 850 million euros related to bank loans contracted by subsidiaries and reaching maturity in the current year.

As for the main contractual obligation for the financing of company's transactions, and in particular for the acquisition of the 25,01% of Endesa still under control of Acciona, the company raised its exposition in the Credit Agreement for 8 billion euros. The contract of the original line of credit contemplated the possibility to withdraw up to 8,5 billion euros more from the original 60-months agreement in the case of the early exercitation by Acciona

of the put option maturing in 2010, which is exactly what happened. The additional 8 billion euros credit line, activated on April 16, 2009, included the following contracts:

- A facility C increase of the 60 months tranche by a total of 8 billion euros, which was repaid in 2012
- A rollover agreement, again worth 8 billion dollars, to renew the loan at the expiration of the facility C in 2012. The newborn loan will be divided in two tranches, worth 5,5 billion euros due in 2014 and 2,5 billion euros due in 2016.

	2008			2010 increase		
(Millions of euros) Due in:	2 years	2-5 years	>5 years	2 years	2-5 years	>5 years
Bonds:						
Fixed rate quoted	2.019	3.711	8.057	14,26%	-5,50%	91,26%
Floating rate quoted	428	976	2.316	283,41%	181,05%	-0,43%
Fixed rate non-quoted	1	866	1.976	21500,00%	103,70%	125,00%
Floating rate non-quoted	410	173	1.679	-72,20%	5,78%	-3,63%
Total bonds	2.858	5.726	14.028	49,69%	43,15%	69,52%
Bank finance:						
Fixed rate	131	83	256	-3,82%	-1,20%	105,86%
Floating rate	12.009	9.756	2.911	-53,31%	-54,07%	33,08%
Credit line revolving	3.847	989	-	-61,11%	-100,00%	NS
Total bank finance	15.987	10.828	3.167	-54,78%	-57,86%	49,70%

Table 3.4: Enel's Bond divided for maturity

Source: Elaborated from Enel' annual reports 2007-2010

Taking a picture at the maturities of Enel's debt at end of 2008 and 2010, two different situations emerges. In 2008, most of the expenditures forecasted for the next two years came from bank loans or credit line maturity, while bond emission maturing in two years constituted a small part of the total. In 2010 the balance is completely turned, with short-term

bank exposures declined for all types of interest rate, while bond contracts with short maturity, lower than two years, swelled to comprise 37% of total near-maturity debt.

Overall, a transfer of financial liabilities of the company in a more distant future can be observed. If in 2008 the portion of the debt with maturity in less than five years amounted to 67,3%, roughly two thirds, of the total: in 2010 the same percentage dwindled to 45,9%.

This reflects the termination of many credit facilities opened to finance the acquisition of Endesa and other corporate transaction; the coming to maturity of most of the debt consolidated in the integration of Endesa; the return in the US to a more stable financial environment, which fostered long term issues of debt. The passage from a bank oriented to a market-oriented form of debt capital financing further hastened the trend, as bank loans usually offer more short-term maturities compared to bonds, which can last as long as 100 years, or even be perpetual. The advantages of delayed debt repayment are straightforward, with less liquidity needs in the short term and more stable outflows from financial expenses during the years, which leads to better resource management and improved budgeting. Furthermore, a flat capital structure over the years sends good signal to the market, which tends to reward reduced uncertainty.

CURRENCY RISK

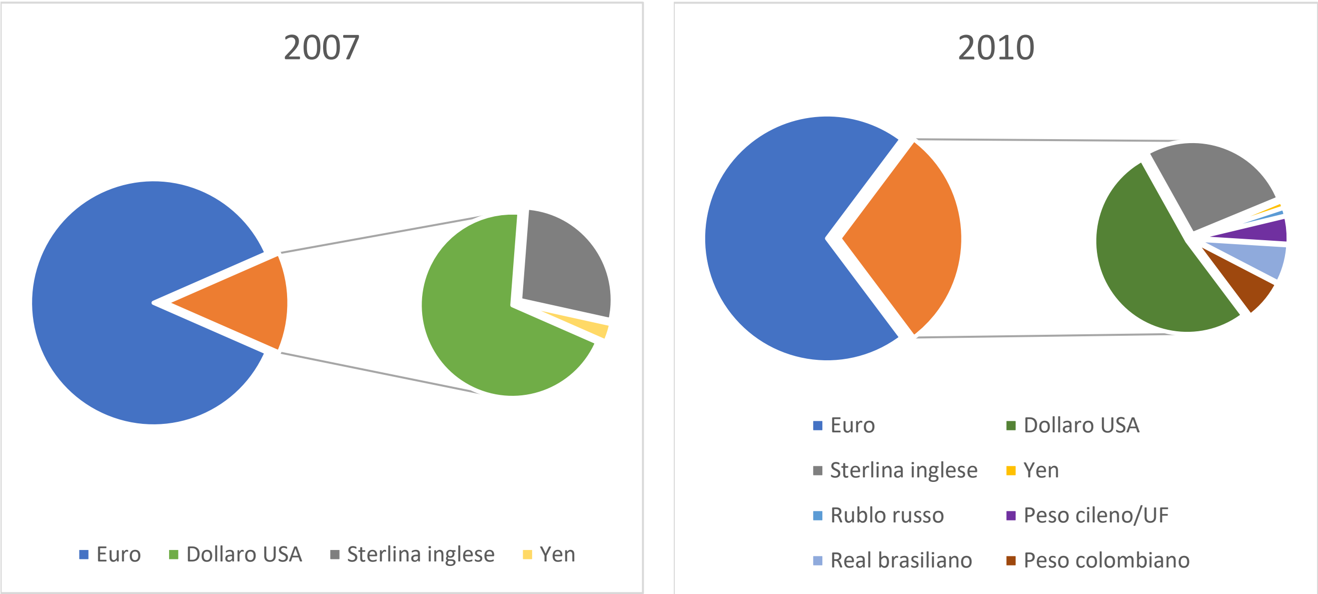

Figure 3.16: Enel's debt divided by currency

Source: Elaborated from Enel's annual reports 2007-2010

Exchange rate risk is chiefly originated by debt denominated in foreign currencies, sales and purchases of fuel or energy in international markets, direct investments in foreign currencies, dividends from associated firms and gains or losses from transfer of equity investments. To hedge from this risk, Enel engages in activities in the derivative markets, in particular trading currency forward, cross currency interest rate swaps and currency options. Currency forwards are contracts in which the counterparties accept to exchange a principal, denominated in different currencies, at a predetermined exchange rate at a fixed date. Cross currency interest rate swaps are transactions in which a long-term fixed, or floating, interest rate denominated in on currency is traded with a long-term fixed, or floating, interest rate denominated in another currency: they differ from interest rate swap because they involve different currencies and because payments are made periodically, not only on the principal. Currency option involve the right, but not the obligation, for the acquirer to buy or sell a

principal denominated in a foreign currency at a predetermined exchange rate: they can be of type “deliverable”, if the entire sum is swapped between the two parties, or of type “non-deliverable”, if just the difference between the two amounts is transferred.
The value of the debt denominated in foreign currencies swelled as Enel reshaped its debt financial structure. The exposition to foreign currencies accounted for 16,2% of the 54.884 million dollars of long-term debt in 2007, of which the dollars, pounds and Brazilian real were the only currencies reckoning more than 1% of the total. In 2010, the portion of debt denominated in currencies other than euro nearly doubled to 30,2% of the total, which was still in line with the starting figure, at 55.439 million euros. The list of foreign currencies with significant relevance on the composition of the debt expanded, comprehending dollars, pounds, Chilean pesos, Brazilian real and Colombian pesos. The green buck still accounted as the most important foreign currency at 15,31% of the total, almost doubling its weight from 2007, when it was 8,5% of long-term debt. On the other hand, the second most important foreign currency was English sterling, which reckoned for 7,9% of total burden of long-term debt in 2010.

THE TRANSACTION

In the fourth quarter of 2007 Enel acquired, through a public tender offer, 42.08% of Endesa which, with the addition of the 24,97% already controlled, took the company to have effective control of the target, together with Acciona, Enel’ Spanish partner. In compliance with IFRS 3 version in force at the time, the 67,05% owned by Enel was consolidated with the proportional method in the financial statements of 2008. Following the acquisition of the remaining part under the control of Acciona on June 25, 2009, equivalent to 25,01% of the target, Enel extended its possession to full ownership, at 92,06%, and has since used line by line method rather than proportional method for consolidation. The fair value of the asset and liabilities acquired was determined in the first quarter of 2010, as in the limitation period imposed by IFRS3 concerning business acquisition achieved in stages. The excess of the price paid over the recognized value of net assets, quantified in 3.424 million euros, was classified as goodwill.

Goodwill computation (Million of euros)	
Net Assets before allocation	5.395
Change in fair value evaluation	
Tangible assets	262
Intangible assets	587
Other assets	31
Other non current liabilities	1.109
Deferred taxes liabilities	-593
Minorities	-526
Net Assets after allocation	6.265
Value of the operation	9.689
Goodwill	3.424

Table 3.5: Goodwill computation for Endesa consolidation (data in millions of euros)

Source: Elaborated from Enel's annual report 2009

Since the first provisory evaluation was made at fair value before the acquisition of the remaining 25,01% in June 2009, the net assets acquired had to be adjusted to consider rectifications due to third party interests, tax benefits and particularities of the Spanish transmission grid: this increment, worth 656 million euros, was included in the share capital of Enel. The net assets acquired after the adjustments amounted to 6.265 million euros, of which 13.208 million euros of plants and equipment, 4.455 million euros of intangible assets and 1.702 million euros of inventories. The financial debt of Endesa, amounting to 6.686 million euros, was part of the total 18.630 million euros in liabilities assumed by Enel at the closure of the deal.

CASE STUDY 2: EXXONMOBIL ACQUISITION OF XTO ENERGY INC.

THE COMPANY

ExxonMobil is an oil giant vaunting the largest market cap in its sector, standing at the actual 350 billion dollars. Since its foundation in 1870 as part of Rockefeller's Standard oil, the company has evolved from a regional marketer of kerosene to the largest publicly traded petrochemical enterprise in the world with US$339,01 billion. In recent times the company generated up to 90% of its earnings from its upstream operations demonstrating a solid presence in extraction and production of oil and gas. This has been a steady condition up to mid-2014 when low oil prices did not permit anymore to have such a distribution of revenues: a fattening of margins coming from refining and distribution was compulsory to maintain a leading position. The result of this process is, as now, 57% of earnings from the upstream, 24% from the downstream where the refining activity plays a dominant role, the remaining 19% coming entirely from the chemical segment. According to the most recent reports of the company, released on July 27th, Exxon Mobil generated earnings-per-share EPS of US$0,92 in the second quarter, with a surprising overperformance of the upstream segment (generating US$3,0 billion profit), back to satisfactory levels thanks to the rising oil price. During the last market's downturn, in which EPS were less than half comparing to the peak achieved in 2008, the resilience of Exxon Mobil ensured analysts and investors since earnings fell less than those of its peers. Its strong balance sheet, one of the most consistent in the sector, helped to maintain the investors' trust without being traded at a discount price. Exxon Mobil is indeed characterized by low volatility compared to the average sectorial, which helped to deliver its 35th consecutive year of dividend increase. The strategic line remains the same in the strong market condition: growth of the output and high focus in the upstream segment. In accord to this business line output is expected to grow by 25% in the next five years reaching 5,0 million barrels per day (starting from the actual level of 4,0 million barrels per day). Projections see Exxon Mobil growing by 135% in EPS over this period if the oil averages at least US$60, considering the actual investments in long term projects aiming at

reducing breakeven price under US$50. The stock has traded at an average P/E ratio of 14,7 over the last ten years.

THE TARGET

XTO Energy Inc. was founded in 1986 in Fort Worth, Texas. Nowadays it is the largest holder of natural gas reserves in the nation, owing its success to one of the highest drilling success rates in the entire industry. Its principal business consists in extracting natural gas from U.S. shale along with other tight formations. The field of operation spaces from the Great Plains to Appalachia covering the entire American soil, where the company holds interests in more than 40’000 producing oil and natural gas wells. As a leading natural gas and oil producer, with expertise in developing tight gas, shale gas, coal bed methane and unconventional oil resources, XTO Energy holds more than 11 million acres of soil. The company is strategically expanding in Western Canada and providing support for unconventional resource development in Argentina; inside the territory it’s expanding the operation across 14 states of the United States with holdings in every major shale play. The portfolio is composed by 11 million acres with 150 trillion cubic feet (equivalent) of natural gas resources in North America.

SCOPE OF THE DEAL

The arrangement has the scope to enhance ExxonMobil’s position in the development of unconventional natural gas and oil resources. “XTO is a leading U.S. unconventional natural gas producer, with an outstanding resource base, strong technical expertise and highly skilled employees. XTO’s strengths, together with ExxonMobil’s advanced R&D and operational capabilities, global scale and financial capacity, should enable development of additional supplies of unconventional oil and gas resources, benefiting consumers both here in the United States and around the world.” said Rex W. Tillerson, chairman and chief executive officer of Exxon Mobil Corporation. XTO’s strong resource base will complement ExxonMobil’s holdings in the United States, Canada, Poland, Argentina, Uruguay, Germany. ExxonMobil intends with the acquisition to establish a new organization managing upstream

the global development, extraction and production of unconventional resources, enabling with such a move a more rapid development and deployment of technologies and operating best-practices aiming to maximize the value of the resources and increase production at the same time. “XTO has a proven ability to profitably and consistently grow production and reserves in unconventional resources,” said Bob R. Simpson, chairman and founder of XTO. “As the world’s leading energy company, ExxonMobil will build on our success and open new opportunities for the development of natural gas and oil resources on a global basis.”

FEATURES

ExxonMobil Corporation performed an all-stock acquisition with a 41 billion dollars transaction. Under the agreement ExxonMobil issued 0,7098 common shares for each common share of XTO, conceding with this valuation a 25 percent premium to XTO’s shareholders. In the transaction 10 billion dollars are included to account for XTO debt, based on the closing share price of ExxonMobil and XTO as of December 11, 2009.

PERFORMANCE

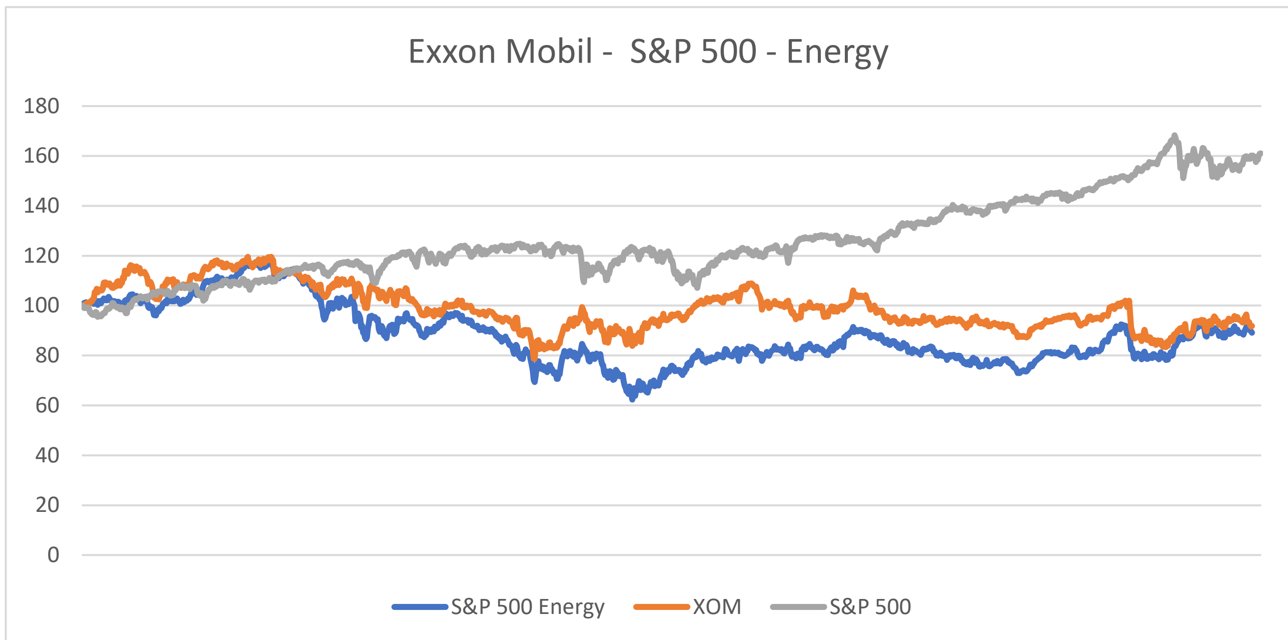

Figure 3.17: ExxonMobil stock price after the acquisition, set as 100 on December 11, 2009

Source: Yahoo Finance

Exxon Mobil is a quoted firm, so the easiest way to evaluate its performances is to look at its market price: in the graph above the stock price of Exxon Mobil is confronted with the Standard and Poor's 500 Energy index for the period in which this last one existed (2013 – today). The stock performed well in a market plagued by low growth and declining margins in recent years, but the overall result to date has not been better than the average energy company; the stock still today is priced at a lower level compared to five years ago. Clearly, the movements of one stock on the exchange is influenced by all matter of factors and it may be misleading if used alone in the assessment of one transaction, especially for a huge and complex company like the one under analysis. However, given the broad scope of the acquisition and the relevance of the price paid, looking at global consensus on the company, as today, gives a feeling of the impact of the acquisition in the long run. A feeling that will be confirmed by the following data.

RATIO ANALYSIS

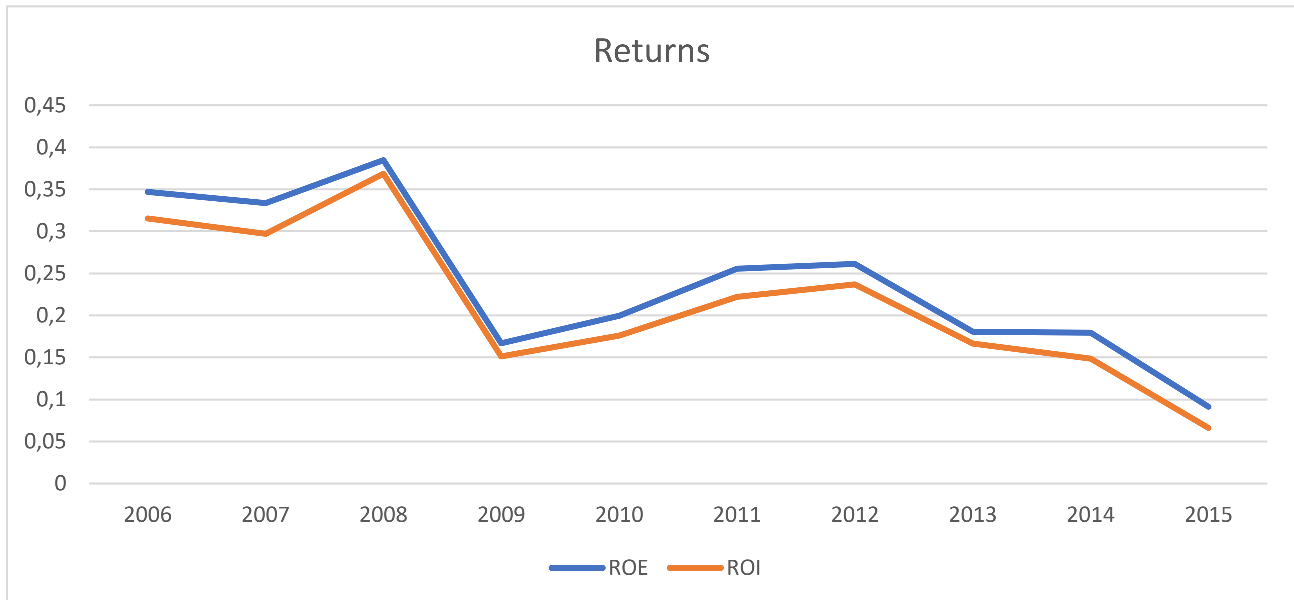

Figure 3.18: ExxonMobil's return on equity, return on investment

Source: Elaborated from ExxonMobil annual reports 2006-2015

The profitability analysis starts from the basic indicators of return on the employed capital: return on equity is weighted against the capital inserted by the shareholders while return on investment measures the return of the company when all its sources of found are taken into account: in this case the ratio is calculated on equity plus financial debt, as taking all assets may create distortion given by the volume of provisions. The difference between the two ratios is minimal, as can be expected given the atypically (for the sector) low level of debt of the company. The capital used for investments and operations disproportionally comes from shareholders and equity investors, not from banks or bonds. This is unusual in a sector characterized by high level of indebtment, to finance current operations and, especially, exploration and discovery of new wells or other sources of energy.

The plunge of the company returns is staggering: in ten years the transition from a cash generating machine to a limping horse was completed, with ROE falling from a strong 30% to coy levels under 10%. Despite this, Exxon Mobil during this period followed the trend of the sector, that has seen its profitability in constant decline after the financial crisis of 2008 and the double plunge in the price of oil in a few years. This very correlation with the

movement of oil prices and the industry general performances cues to imperfections in the diversification of the business and the inability of the firm to eradicate itself from a consolidated business model too dependent on wobbling oil prices.

MARGINS ANALYSIS

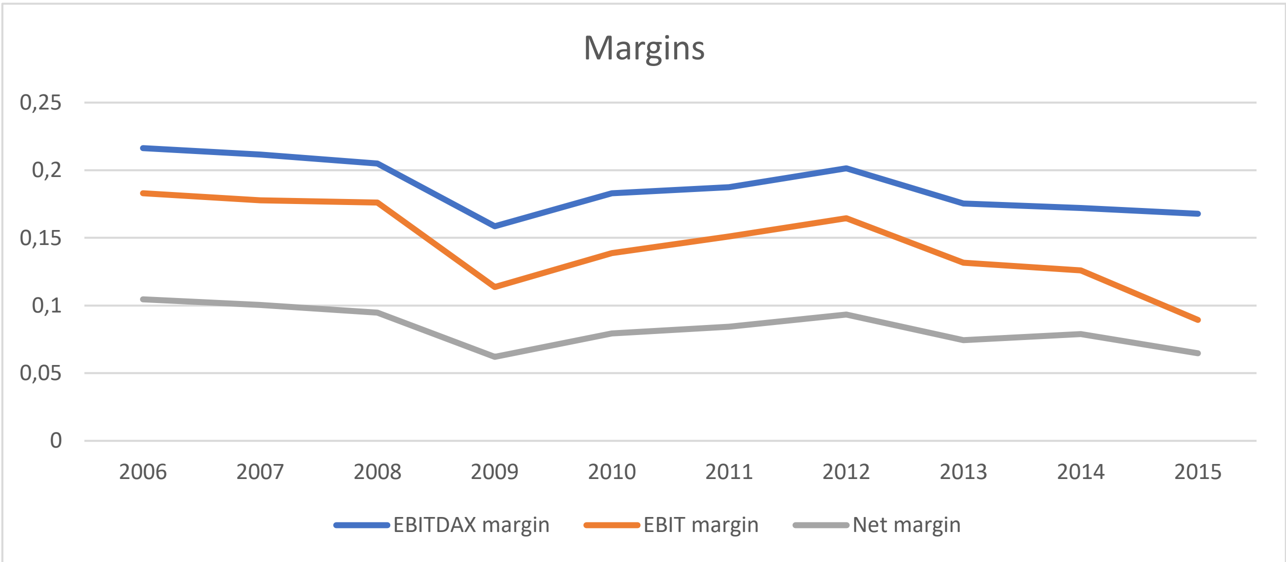

Figure 3.19: ExxonMobil's margins

Source: Elaborated from ExxonMobil annual reports 2006-2015

The above reasoning is confirmed by its margins, which have been less impacted in the last ten years, showing a problem in what the firm does, more than in how it does it. Exxon retained its ability to achieve good results in its historical business, but the lower value of its production squeezed profits in absolute terms.

The analysis of margins takes into consideration three measures, all weighted against the amount of sales in a year. EBIT and net profit are general accounting parameters, while EBITDAX is a specific measure for oil and gas companies. It excludes the costs related to exploration and discovery, that are usually high in this business and impacts disproportionally based on accounting policies used. Disregarding them is a good way to evaluate the real gross margin of a company.

Exxon Mobil uses the "successful efforts" method to account for its exploration and production activities. Under this method, costs are accumulated on an ad-hoc basis, meaning that costs sustained to acquire, lease, or otherwise claim the ownership of a property, whether defined as proved or unproved, are accounted at the moment of the realization. Costs related to the exploration of a well are borne as an asset when the well has found a sufficient quantity of reserves to justify its exploitation as a producing well and where the unit is making sufficient progress assessing the source, and the project overall, economic and operating viability. This policy gives the company some degree of flexibility to indicate whether to record evaluation and exploration as expenditure or as a capitalization: indeed, Exxon Mobil chooses to do both. Capitalization of these assets need impairments assessment to account for any possible decline in value, but this practice is affected by a degree of subjectivity, fostering manipulation. In this case, a surge in the amount of amortization and depreciation prompted a decline in the EBIT margin in recent years, greater than EBITDAX, which doesn't consider D&A, and than Net margin, positively affected by lower level of taxation.

DEBT IMPACT

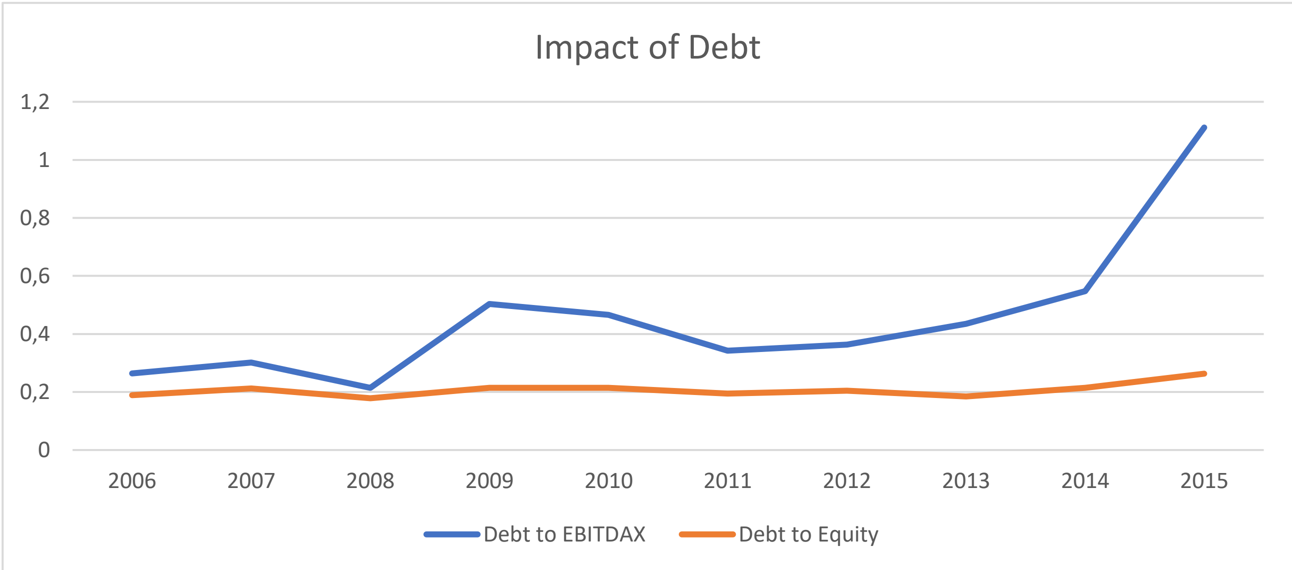

Figure 3.20: ExxonMobil's debt coverage

Source: Elaborated from ExxonMobil annual reports 2006-2015

As already mentioned, the level of debt in the firm is unusually low, and was not impacted by the transaction, all executed through payment in shares. It is still worth noticing that, although the leverage of the company remained stable in the whole period under examination, its impact on the profitability changed: lower volumes of sales and profits swelled the relative impact of debt service on the accounts.

Debt to EBITDAX is a measure of the capacity of a company to repay its debt in the future: it accounts for how many years would be necessary to pay back existing exposures. The lower the better. Though not in a perilous position compared with rival companies, the reduction in the volume of profits prompted a surge in the index that could compromise its future ability to take more debt.

Consolidated Statement of Income - USD Millions	2013	2012	2011	2010	, 2009
Revenues and other income					
Sales and other operating revenue	$420.836	$451.509	$467.029	$370.125	$301.500
Income from equity affiliates	13.927	15.010	15.289	10.677	7.143
Other income	3.492	14.162	4.111	2.419	1.943
Total revenues and other income	438.255	480.681	486.429	383.221	310.586
Costs and other deductions					
Crude oil and product purchases	244.156	263.535	266.534	197.959	152.806
Production and manufacturing expenses	40.525	38.521	40.268	35.792	33.027
Selling, general and administrative expenses	12.877	13.877	14.983	14.683	14.735
Depreciation and depletion	17.182	15.888	15.583	14.760	11.917
Exploration expenses, including dry holes	1.976	1.840	2.081	2.144	2.021
Interest expense	9	327	247	259	548
Other taxes and duties	63819	67967	73476	64.665	60.755
Total costs and other deductions	380.544	401.955	413.172	330.262	275.809
Income before income taxes	57.711	78.726	73.257	52.959	34.777
Income taxes	24.263	31.045	31.051	21.561	15.119
Net income including noncontrolling interests	33.448	47.681	42.206	31.398	19.658
Net income attributable to noncontrolling interests	868	2.801	1.146	938	378
Net income attributable to ExxonMobil	$32.580	$44.880	$41.060	$30.460	$19.280

Table 3.6: ExxonMobil's income statement for selected years

Source: Elaborated from ExxonMobil annual reports 2009-2013

REVENUES

Sales coming from the company itself and fully controlled entities represented almost the totality of the revenues for the period under observation. It is worth noticing that even if in the year to 2010 revenues from equity investments were one and a half higher than the previous value, it still accounted for a mere 3,14% of total.

Revenues expanded almost every year, showing a particularly steep surge in 2009, when they grew 23,38%, and in 2010, with the strongest growth at 26,93%. The boost was mainly attributable to a rebound in oil prices, which more than tripled in the biennium, but also increase in oil production, better efficiency in refining area and doubled level of incomes in chemicals branch, the smallest of the company, contributed to good results.

COSTS

As can be easily seen, Crude oil and product purchase represents the heaviest voice for costs in every year, before respectively production and administrative expenses. The growth in the volume of expenditures mirrored the decline in revenues, eroding margins when sales contracted. The phenomenon is typical of an expansion: managers heeded at higher volumes of sales, in part disregarding margins.

EARNINGS

Earning divided by business segment			
(millions of dollars)	2009	2010	2011
Upstream			
US	16,91%	17,73%	14,80%
Non-US	83,09%	82,27%	85,20%
Total	17.107	24.097	34.439
Downstream			
US	-8,59%	21,59%	50,86%
Non-US	108,59%	78,41%	49,14%
Total	1.781	3.567	4.459
Chemical			
US	33,30%	49,30%	50,54%
Non-US	66,70%	50,70%	49,46%
Total	2.309	4.913	4.383
All Earnings	21.197	32.577	43.281

Table 3.7: ExxonMobil's earning segmented by business stream

Source: Elaborated from ExxonMobil annual reports 2009-2011

In 2011, upstream earnings were 34.439 million dollars, up 10.342 million from 2010. Higher crude oil and natural gas realizations increased earnings by 10.6 billion dollars, while volume and production mix effects prompted a drop in earnings worth 2.5 billion dollars. On an oil-equivalent basis, production was up 1% compared to 2010, whilst if the impacts of entitlement volumes, OPEC quota effects and divestments are excluded production was up 4%. Oil production of 2.312 thousand of barrels per day was 110 thousand barrels lower than in 2010. Excluding the impacts of entitlement volumes, OPEC quota effects and divestments, liquids production was in line with 2010, as higher volumes from Qatar, the U.S., and Iraq offset field's decline. Natural gas production of 13.162 million of cubic feet per day increased 7,7% on the year before, driven by additional U.S. unconventional gas volumes and project

ramp-ups in Qatar. Earnings from U.S. Upstream operations for 2011 were 5.096 million dollars, with a net increase of 824 million dollars. Earnings outside the U.S. were 85,2%, up 9.518 million dollars from 2010.

Downstream earnings were 4.459 million dollars in 2011, improved 25% from 2010. Margins, mainly derived from refining operations, increased earnings by 800 million dollars, besides improved earnings of 630 million dollar thanks to volume and mix effects. All other items, primarily the absence of favorable tax effects and higher expenses, decreased earnings by 540 million dollars. Petroleum product sales of 6.413 thousand barrels in 2011 were flat compared to 2010. US downstream earnings were

50,8% of the total, after being a negative impact in 2009 and a small 21,6% of the total in 2010. Non-U.S. downstream earnings were 2.191 million dollars 21,67% lower than previous year.

Chemical earnings for 2011 were worth 4.383 million dollars, dropping 530 million dollars from 2010. Indeed, the raise of margins fostered a surge in earnings for 260 million dollars, while lower sales' volume contracted earnings by 180 million dollars: besides, the situation compounded due to unfavorable tax effects and higher than planned maintenance expenses, which reduced earnings for 610 million dollars. An illustrative example is represented by prime product sales, which are total chemical product sales, including ExxonMobil's share of equity-company volumes and finished product transfers to the downstream business: they were down 885 thousand barrels from two years before.

The share of chemical earnings coming from US was 50,54% in 2011, in line with the proportion in 2010 and raising 20% from 2009, when they accounted for roughly one third of total chemical earnings. Non-US earnings were worth 2.168 million dollars in 2011, 13% lower than the previous year, but still higher than the 1.540 million dollars figure recorded in 2009.

BALANCE SHEET ANALYSIS

(Millions of dollars)	2013	2012	2011	2010	2009
Crude oil, products and merchandise	12.117	10.836	11.665	9.852	8.718
Property, plant and equipment, at cost, less accumulated depreciation and depletion	243.650	226.949	214.664	199.548	139.116
Total assets	346.808	333.795	331.052	302.51	233.323
Long-term debt	6.891	7.928	9.322	12.227	7.129
Postretirement benefits reserves	20.646	25.267	24.994	19.367	17.942
Deferred income tax liabilities	40.530	37.570	36.618	35.15	23.148
Total liabilities	166.313	162.135	170.308	149.831	117.931
Total equity	180.495	171.660	160.744	152.679	115.392

Table 3.8: ExxonMobil's consolidated balance sheet for selected years

Source: Elaborated from ExxonMobil annual reports 2009-2013

The period before and after the acquisition was characterized by expansion in the size of the company, with assets growing every year to a total of 346.808 million dollars in 2013. Of these, 243.650 million dollars were represented by Property, plants and equipment, that were the highest voice of growth for the period. The long-term debt, an important proxy of the riskiness of the company, remained flat and even dwindled in 2012 and 2013. The greatest voice to swell was the deferred income tax liabilities, in 2013 more than double the value that in 2009.

RESERVES ANALYSIS

Oil-Equivalent Basis (million bbls)	2009	2010	2011	CAGR	Abs. Var.
United States	3.939	6.654	6.767	31,1%	2.828
Canada/South America (1)	3.146	3.155	4.034	13,2%	888
Europe	3.212	2.919	2.697	-8,4%	-515
Africa	2.060	1.951	1.839	-5,5%	-221
Asia	8.826	8.265	8.125	-4,1%	-701
Australia/Oceania	762	1.500	1.470	38,9%	708
Total Proved Reserves	21.945	24.444	24.932	6,6%	2.987

Table 3.9: ExxonMobil's reserves

Source: Elaborated from ExxonMobil annual reports 2009-2011

Taking a look at the total reserves of oil equivalent, it can be seen that, in the year before and the two years subsequent to the acquisition of XTO, total reserves of oil equivalent swelled for an average 6,6% on year, which correspond to an absolute addition of 2.987 million barrels of Oil. At year-end 2011, approximately 8.800 million oil-equivalent barrels (OEB) of ExxonMobil's proved reserves were classified as proved undeveloped. This represents roughly 35% of the 24.900 million OEB reported in proved reserves. This compares to the 7.700 million OEB of proved undeveloped reserves reported at the end of 2010. The net increase of 1.100 million OEB is primarily due to the addition of new projects in Canada and the United States. The largest individual transfer was related to completion of drilling and the initiation of production activities on new pad locations in the Cold Lake field in Canada. Overall, investments of 23.1 billion dollars were made by the company during 2011 to progress the development of reported proved undeveloped reserves, the majority of which, 20.5 billion dollars, for oil and gas producing activities and an additional 2.6 billion dollars for other non-oil and gas producing activities. These investments represented 70% of the 33.1

billion dollars in total reported capital and exploration expenditures for the upstream segment.

The biggest rate of average growth was recorded in US, were reserves increased at an annual averaged pace of 31,1% on the year before: indeed, having added 2.828 million OEB, US is now by far the second important region after Asia, which is still ExxonMobil's biggest location for reserves, with 8.125 million OEB.

Crude Oil (millions bbls)	2009	2010	2011	CAGR	Abs. Var.
United States	1.972	2.303	2.008	0,9%	36
Canada/South America (1)	172	163	118	-17,2%	-54
Europe	517	454	346	-18,2%	-171
Africa	1.907	1.799	1.463	-12,4%	-444
Asia	2.894	3.296	2.976	1,4%	82
Australia/Oceania	641	275	170	-48,5%	-471
Total Proved Reserves	8.103	8.290	7.081	-6,5%	-1.022

Table 3.10: ExxonMobil's crude oil reserves

Source: Elaborated from ExxonMobil annual reports 2009-2011

Total proved reserves of oil decreased in the triennial concerning the acquisition, with a value of 8.103 million barrels in 2011 that has dropped 6,5% on average from 2009. The main reason for this contraction was the cancellation of proved reserves in Europe, which decrease for 171 million barrels, and Africa, which in 2011 accounted for 444 million barrels less than two years before. The wells were deemed at the end of the year impossible to be profitably developed under current technical processes and oil prices.

On the other hand, regional reserves in US swelled by 36 million barrels, thanks in part to the addition of 294.4 million barrels as a result of the integration of XTO, which majority of oil's reserves were located in US.

Natural Gas (million cubic ft)

	2009	2010	2011	CAGR	Abs. Var.
United States	11.802	26.111	26.730	50,5%	14.928
Canada/South America (1)	1.368	1.258	852	-21,1%	-516
Europe	16.173	14.788	3.655	-52,5%	-12.518
Africa	920	908	1.194	13,9%	274
Asia	35.589	27.210	7.136	-55,2%	-28.453
Australia/Oceania	727	7.351	7.339	217,7%	6.612
Total Proved Reserves	66.579	77.626	46.906	-16,1%	-19.673

Table 3.11: ExxonMobil's natural gas reserves

Source: Elaborated from ExxonMobil annual reports 2009-2011

A similar trend can be observed in natural gas reserves, as the total amount dwindled from 66.579 million scf in 2009 to 46.906 million scf two years after. The average reduction of 16,1% was mainly imputable to dropping reserves in Asia and Europe, down respectively 28.453 and 12.518 million scf in two years. The biggest increase in relative terms was recorded in Oceania, which passed from almost nihil to 7.339 million scf of natural gas reserves, an average growth of 217,7% year on year. The acquisition of XTO accounted for most of the surge in the value of natural gas reserves in US: of the 14.928 million scf added during the triennial, 12.501 came from the integration of the company.

PRODUCTION ANALYSIS

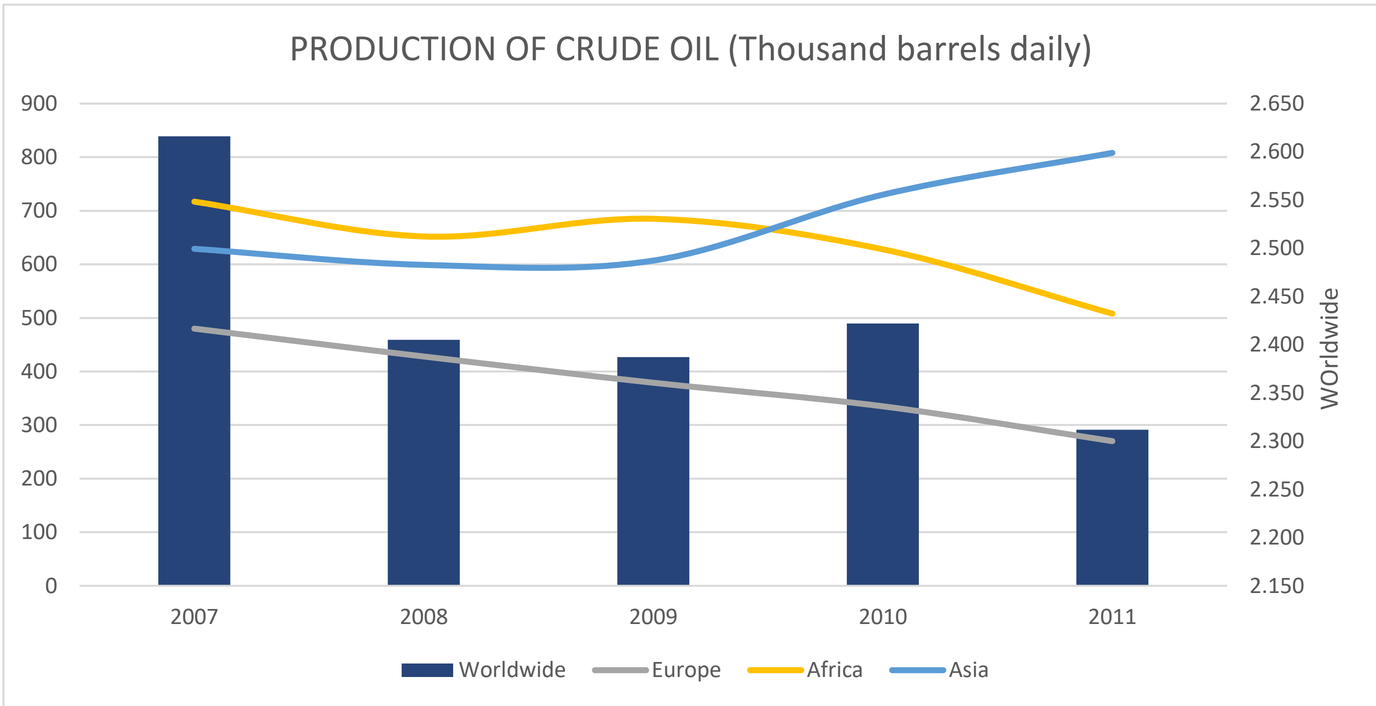

Figure 3.20: ExxonMobil's crude oil production

Source: Elaborated from ExxonMobil annual reports 2007-2011

In the 2007-2011's quinquennial, ExxonMobil's oil production was hit by numerous unforeseen events. One of these was the 2008 financial crises, which reshaped the world of oil impacting on demand and prices. Subsequent restriction from the OPEC cartel translated in limitation for many of the company's places of drilling. Moreover, the higher exploitation of the drilling facilities not impacted by OPEC restriction hastened their maturity, which illustrate why the contraction of output for ExxonMobil was firstly compulsory and then chosen. The biggest reduction in the five years was in Europe, whose production dwindled 25% on average to 270 thousand barrels per day in 2011. Besides, Africa's output contracted 209 million thousand barrels in the same period, a drop worth -15,83% a year. The only regions with augmented output in the period were US and Asia, propelled by acquisitions and high demand from emerging countries. Together they raised production for 210 thousand barrels a day, reaching respective output of 423 and 808 thousand barrels daily. Asia

confirmed itself as the first region for oil production in ExxonMobil portfolio, raising the gap from Africa, which was still ahead of US despite the drop.

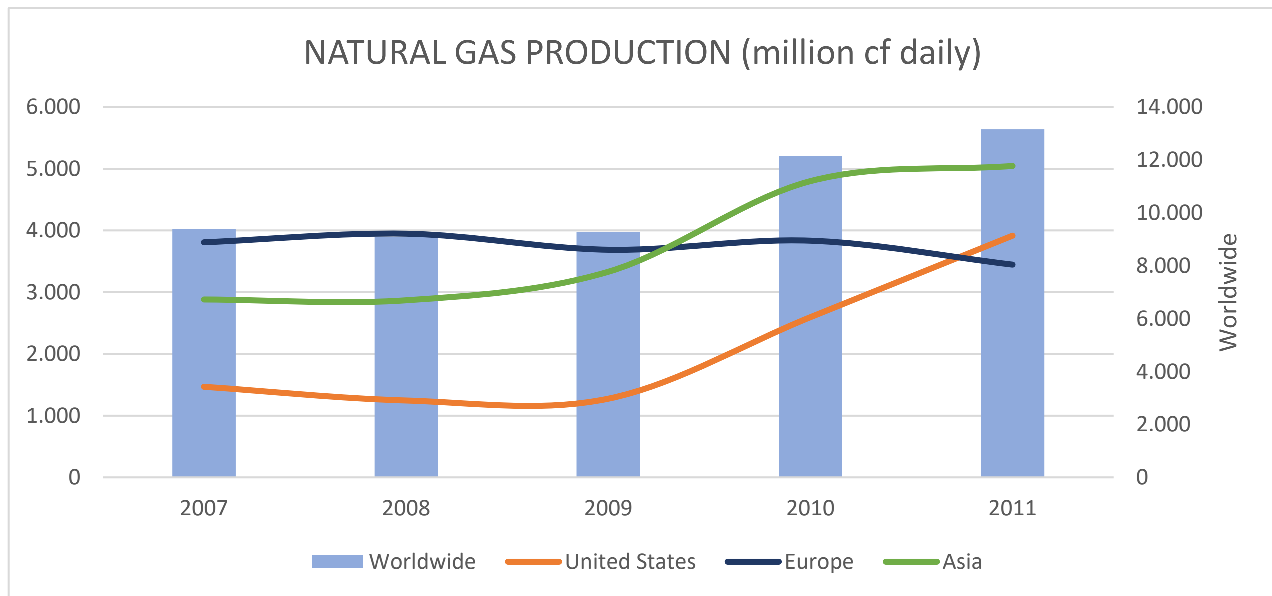

Figure 3.21: ExxonMobil's natural gas production

Source: Elaborated from ExxonMobil annual reports 2007-2011

Production of natural gas increased in the examined quinquennial, inversing the trend observed for oil. Worldwide production augmented at an average pace of 18,43%, passing from 9.384 in 2007 to 13.162 million scf in 2011. The regions which expressed the higher growth rate were Asia and US. The US production swelled by 2.449 thousand barrels per year, corresponding to 63,35% average advance on the year before. This increase is mainly imputable to the addition, in 2010's consolidation, of 2.342 million scf of daily production coming from XTO' production plans. Other gains came from the conclusion of the works to build the Golden Pass terminal, located in Texas in the part of the Gulf of Mexico under the US jurisdiction. The construction is the third LNG receiving terminal for ExxonMobil in this important area for of access to the U.S. marketplace

Europe was subpar, contracting 43,75% in five years, despite huge investments to raise production capacity: ExxonMobil ventured with Qatar Petroleum and Edison to develop the

Adriatic terminal, which was the first offshore gravity-based structure in the world for liquified natural gas. The terminal is located approximately 10 miles offshore of Italian coasts in the Adriatic Sea and its capacity is approximately equal to 10% of Italy's annual gas consumption and to about 10% of installed LNG regasification capacity in Europe.

TRANSACTION

On June 25, 2010, ExxonMobil finalized the acquisition of XTO Energy Inc. (XTO) by merging a wholly-owned subsidiary of ExxonMobil with and into the target company, with XTO continuing as the surviving corporation and wholly-owned subsidiary of ExxonMobil. At the effective time of the merger, each share of XTO common stock was converted into the right to receive 0.7098 shares of ExxonMobil's common stock, with cash being paid in case of any fractional shares of ExxonMobil stock. Moreover, at the same time, each outstanding option to purchase XTO common stock was converted into an option to purchase a number of shares of ExxonMobil stock based on the defined exchange ratio, and likewise each outstanding stock-based award converted following the same rules.

The fair value of ExxonMobil's common stock on the day of the deal was 59,10 dollars per share, based on the closing value on the NYSE. The firm issued 416 million shares of stock previously held in treasury: the cost of the operation, based on the average price, was valued at 21.139 million dollars. The excess of the fair value on the transferred value surpassing the cost the issue was 3.520 million dollars. It was included in common stock without par value.

The transfer of the assets was reckoned using the acquisition method of accounting,
which recognizes acquired assets and liabilities at their fair value on the day of conclusion of the deal.

TRANSACTION VALUE (Millions of dollars)	
Current assets	2.053
Property, plant and equipment	47.300
Goodwill	39
Other assets	620
Total assets acquired	**50.012**
Current liabilities	2.615
Long-term debt	10.574
Deferred tax income	11.204
Other long-term obligations	960
Total liabilities assumed	**25.353**
Net assets acquired	**24.659**

Table 3.11: XTO's consolidation details

Source: Elaborated from ExxonMobil annual report 2009

Property, plant and equipment were measured primarily using an income approach. The fair value computation for oil and gas assets was based, for most part, on significant inputs not directly observable in the market. IFRS 13 requires, in case of opacity of resources worthiness, that the entity develops unobservable inputs using the best information available in the circumstances, which might include the entity's own data, taking into account all information about market participant assumptions that is reasonably available. This situation thus represents a Level 3 measurement: significant inputs included XTO resources, assumed future production capacities, commodity prices and investment in exploration and refining projects. The property, plant and equipment added to ExxonMobil accounting book were prevalently related to upstream business, with substantially all of the assets in the United States.

Goodwill was the excess of the sum payed over the identifiable value of the assets and represented the future economic benefits arising, almost entirely, from upstream units.

CASE STUDY 3: ROYAL DUTCH SHELL ACQUIRES BG

THE COMPANY

Royal Dutch Shell is a British-Dutch multinational oil and gas company born from the collaboration of Royal Dutch Petroleum Co. –funded in 1890– and The Shell Transport and Trading Company Limited of the United Kingdom, –funded in 1897–. After many years of partnership the two companies were joined under a single parent holding company, of which royal Dutch holds 60%, Shell holds 40% of the total. The review of structure and governance of the Group was carried out during 2004 in order to simplify the boards of Royal Dutch and Shell Transport and the management structures of Royal Dutch and Shell Transport streamlining the two in a single Group; to simplify the decision-making process and the overall accountability and to define new ways in which effective leadership for Royal Dutch and Shell Transport and the Group as a whole could be enhanced. In 2016 the company was ranked as the sixth largest company in the world by revenues and the largest based in Europe being able to count on US$305,1 billion coming from all over the world. Thanks to its fully vertically integrated structure Shell can be active in any area of the oil and gas industry, locating its activities in more than 70 countries. The company has a daily output of 3,7 million barrels and disposes of 44’000 service station worldwide. Its proved reserves are estimated around 13,7 billion barrels mainly located in the region of the Gulf of Mexico. The market capitalization of GBP185 billion ranks Shell as the first company for market capitalization on the London Stock Exchange.

THE TARGET

British Petrochemical corporation became one of the largest oil companies after its merger with Amoco Corporation back in 1998. BP was founded in 1909 as the Anglo-Persian Oil Company and just with the new century, after the consolidation with Amoco, the company assumed the name BP PLC. The Anglo-Persian oil company was initially constituted to take over and finance a concession granted by the Iranian government to an English investor. The

oil field pumped crude oil that was primarily exported in Europe and the success was such that by 1938 it was the largest single refinery in the world. Since 1914 the British Government is the company's principal stockholder with the actual participation amounting to 46% of the total. The ties are so close that, according to The Guardian, that around 7% of UK pension fund annual income comes from BP. The biggest investment of the company is a joint project with Rosneft with BP's equity exposure amounting to US$14-15 billion in deep water drilling in the Arctic. Regarding the upstream segment the most important oil fields are built in Prudhoe Bay in Alaska and in United Kingdom's North Sea, where British Petroleum discovered several reserves of natural gas in 1970 and started investing in several exploration and drilling projects partially financed by the government. The expansion of the company in the United States was favored by the strategic acquisition, in 1970, of the Standard Oil Company. The acquisition was concluded in 1987 for US$8 billion and from that moment on BP definitively enlarged its operation in the US under the Ohio headquarter. In late 20th century BP largely promoted the employment of green energy opening a solar energy unit to expand the business in the renewable field.

THE DEAL

Royal Dutch Shell agreed to buy British Petroleum for US$53 billion (GBP47 billion) becoming the second largest energy company, beyond only Exxon Mobil, for market capitalization. "This is an important moment for Shell," CEO Ben van Beurden said in a statement. "It significantly boosts our reserves and production and will bring a large injection to our cash flow". The principal strength of the deal lies in supporting the presence of the company in natural liquefied gas exploiting reserves and years of exploration in North Sea, off the UK's coast. Other advantages are the expansion in Brazilian oil business and deep-water assets. The company also declared that under its projections there will be an annual pre-tax combined cost cuts and revenue improvements of US$3,5 billion. The takeover is expected to be the largest for years and created an entity with the value of about GBP180 billion. The management of BG, which actually sees its leading positions occupied by Helge Lund, will leave once the deal will be operating at its full potential. The takeover was advised by Goldman Sachs who worked for BP receiving GBP33 million and by Bank of America

Merrill Lynch who worked for Shell receiving GBP55 million. Shell offered both cash and shares paying GBP13,50 per share, 50% more of what was the actual value of BG at that time.

PERFORMANCES

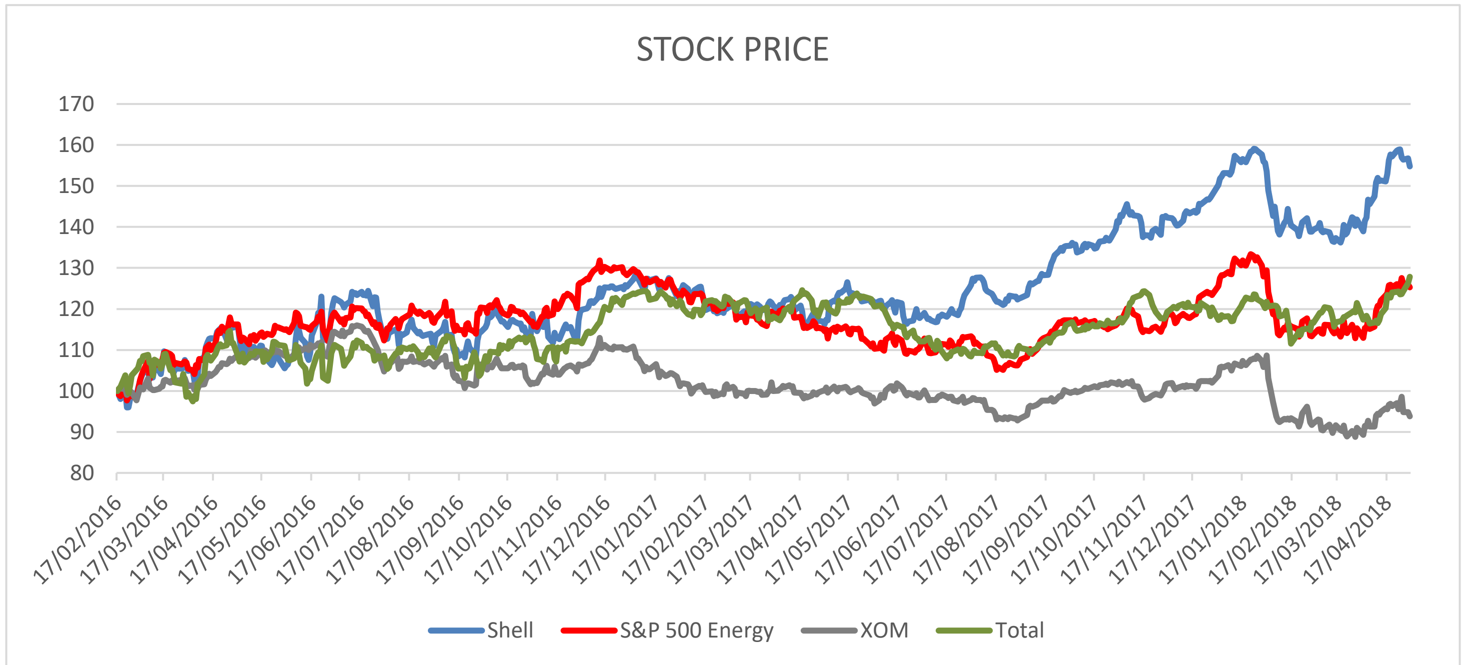

Figure 3.22: Shell stock price after the acquisition, basis set on February 17, 2016

Source: Yahoo Finance

Looking at Royal Dutch Shell's share price after more than two years from the conclusion of the deal, a clear improvement can be observed. One year's performances were a 20% net gain, while after another year the value of the company's equity increased to 60% more than pre-deal levels. The strong performance reflects a good outlook of the company's results and a recognition by investor of the good performances of the acquisition in terms of timing and integration. Shell's outcomes are all the more compelling if compared with its main competitors. ExxonMobil's share price was down ten percent in February 2018, probably even for the incapacity of the firm to replicate its adversaries and sign a significant acquisition in the same period, making it one of the worst performers in the sector. Shell's results are impressive though compared to the S&P 500 Energy index, reference for the industry, which at the times of Shell's highs had gained only 30% from the beginning of the period under examination, making the relative performance of Shell's stock a convincing 30%. On the other hand, a single parameter is not sufficient to capture all the movements of a gigantic

company like Royal Dutch Shell, since the value of the company is determined by a complex interaction of dynamic variables, from which it is difficult to extrapolate the path of a single operation, like the acquisition of another company or the sale of important assets. This is why, even in the case of the acquisition of BG, which was at the time the third company in UK in energy sector, further analysis is necessary to understand the impact of the target's asset on the acquiring company, and their fitness in the new business model.

Consolidated statement of income (Millions of dollars)

	2017	2016	2015	2014	2013
Revenue	305.179	233.591	264.960	421.105	451.235
Share of profit of joint ventures and associates	4.225	3.545	3.527	6.116	7.275
Interest and other income	2.466	2.897	3.669	4.123	1.089
Total revenue and other income	311.870	240.033	272.156	431.344	459.599
Purchases	223.447	162.574	194.644	327.278	353.199
Production and manufacturing expenses	26.652	28.434	28.095	30.038	28.386
Selling, distribution and administrative expenses	10.509	12.101	11.956	13.965	14.675
EBITDAX	51.262	36.924	37.461	60.063	63.339
Research and development	922	1.014	1.093	1.222	1.318
Exploration	1.945	2.108	5.719	4.224	5.278
EBITDA	48.395	33.802	30.649	54.617	56.743
Depreciation, depletion and amortization	26.223	24.993	26.714	24.499	21.509
EBIT	22.172	8.809	3.935	30.118	35.234
Interest expense	4.042	3.203	1.888	1.804	1.642
Income before taxation	18.130	5.606	2.047	28.314	33.592
Taxation charge/(credit)	4.695	829	-153	13.584	17.066
Income for the period	13.435	4.777	2.200	14.730	16.526

Table 3.12: Shell's income statement for selected years

Source: Elaborated from Royal Dutch Shell's annual reports 2013-2017

FINANCIAL RESULTS

Shell's revenues in the past five years were largely influenced by a wobbling price of Oil. Indeed, though the company achieved a good degree of diversification thanks to strong presence in the Chemical and Natural Gas segment of the market, the drop in Oil prices inflicted evident damages to sales value. When the price of oil collapsed in 2015 to around 35 dollars a barrel from a high of over 110 dollars a barrel in June 2014, as OPEC nations flood the market with cheap oil in a bid to drown out US shale suppliers, revenues contracted 37% from the year before, drop worth 156.145 million dollars. The trend carried on in the following years, as oil prices flattened at around 45 dollars a barrel and Shell revenues dropped another 12%, amidst falling revenues for the industry. Luckily for the firm, 2017 was the year of rebound in oil prices, with WTI terminating the year at 75 dollars a barrels, an increase that translated for Shell in total revenues worth 305.179 million dollars which, though representing a cheering 30,64% surge from previous year, were still down a gloomy 32% from pre-deal levels.

On the other hand, Shell is a big acquirer of oil and has benefited from falling prices making important savings from the purchase of raw materials. In fact, the pace of the reduction in costs was faster than the reduction in sales, the final effect being a gain in margins. In the same period, improved efficiency in central operations meant administrative costs dropped constantly in the five years for an average 7,8%, translated in savings worth 4 billion dollars.

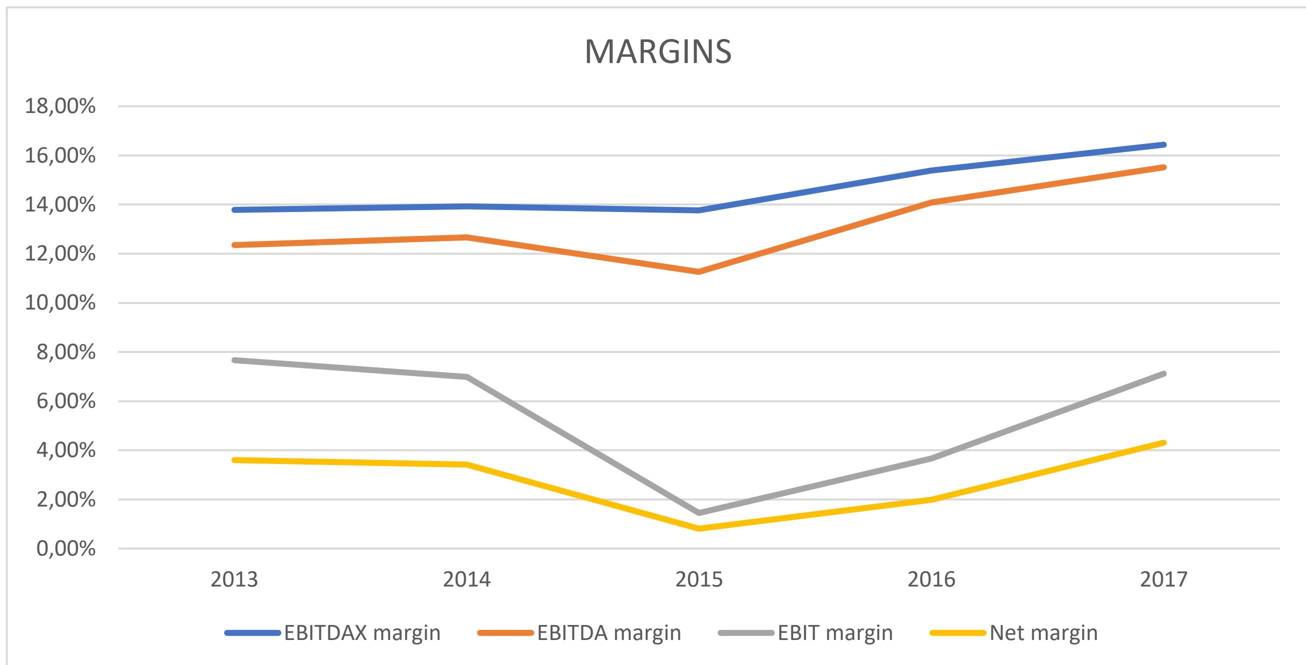

Figure 3.23: Shell's margins on sales

Source: Elaborated from Royal Dutch Shell's annual reports 2013-2017

EBITDAX remained flat in the first three years of the analysis, with a slight improvement of two percentage points in the final biennial. The positive effect of lower relative purchasing prices was counterbalanced by increasing cost of production in the initial triennial. When they began to fall in the same trend as administrative costs, the gains associated fueled the surge in operating margins.

The small difference between EBITDAX margin and EBITDA margin reflects some changes in corporate strategy. As a response to falling oil price, Shell decided to allow for greater diversification, a move meant to hasten its path to become an electric company. In this sense, raising investments in renewables and in natural gas deviated resources from stagnant projects aimed at the discovery of new wells of traditional oil, since most of the new findings would not be profitably exploitable if oil prices would not recover almost the totality of the lost value, hypothesis thought improbable by Shell' executives. In this perspective, it's illustrative the decision to stop exploration efforts in the Artic, a choice that comes after the project had already been suspended for three years in 2012, when an enormous drilling rig

broke free and grounded. The total cost of the stop was estimated to be 4,1 billion dollars, which adds to the 7 billion dollars already spent in the project for a total failure cost of more than 11 billion in ten years. That is how much Shell cares to free itself from oil, as can be observed even from the plunge in exploration costs in the last five years.

Depreciation and amortization costs remained flat during the period, meaning that their impact on contracting incomes swelled in proportion. This effect can be observed in the movement of EBIT margin in 2015, when it dropped 5,54% on the year before, and in 2016, when it was still a dismissal 2,22%. Net margin followed a similar path, but was also hit by raising interest expenses due to higher level of debt.

LIQUIDITY

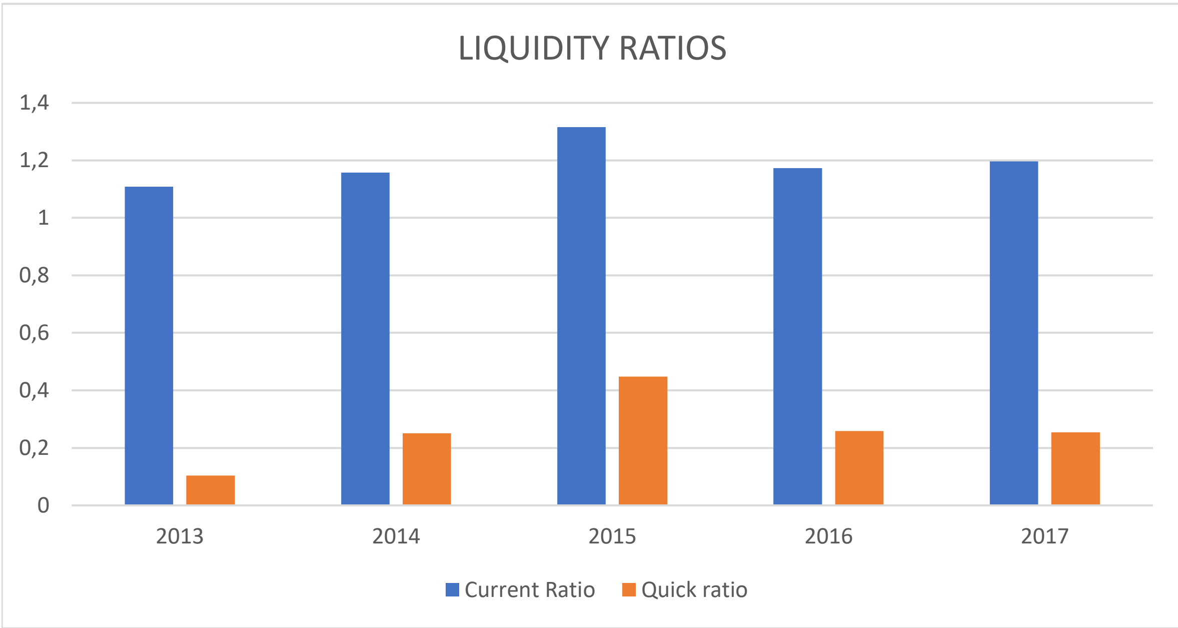

Figure 3.24: Shell's liquidity ratios

Source: Elaborated from Royal Dutch Shell's annual reports 2013-2017

Liquidity is an important source of risk for Shell. Its current ratio has been over than one for most of the last five years, reflecting the firm ability to properly sustain the short-term costs of its business. Indeed, most of current assets and current liabilities are constituted respectively by trade receivables and trade payables: this reflects a good balance between

expenses and source of income, showing the company capability to pay its suppliers. On the other hand, if only high-quality sources of capital are considered, Shell seems to have a high exposure to liquidity shocks, in case it had to repay its short-term debt before due date. Quick ratio's value is illustrative of this risk since, though increasing from 2013's level, is still lower than 0,5 in any given year.

To fence itself from this possibility, Shell developed three auxiliary sources of liquidity: a 10 billion dollars global commercial paper program, with maturities not exceeding 270 days; 10 billion dollars US commercial paper program, with maturities not exceeding 397 days; an unlimited Euro medium-term note (EMTN) program, which is a flexible instrument allowing an issuer to enter foreign markets more easily to obtain capital; an unlimited US universal shelf (US shelf) registration, which eases the emission of additional bonds or shares under the same prospectus.

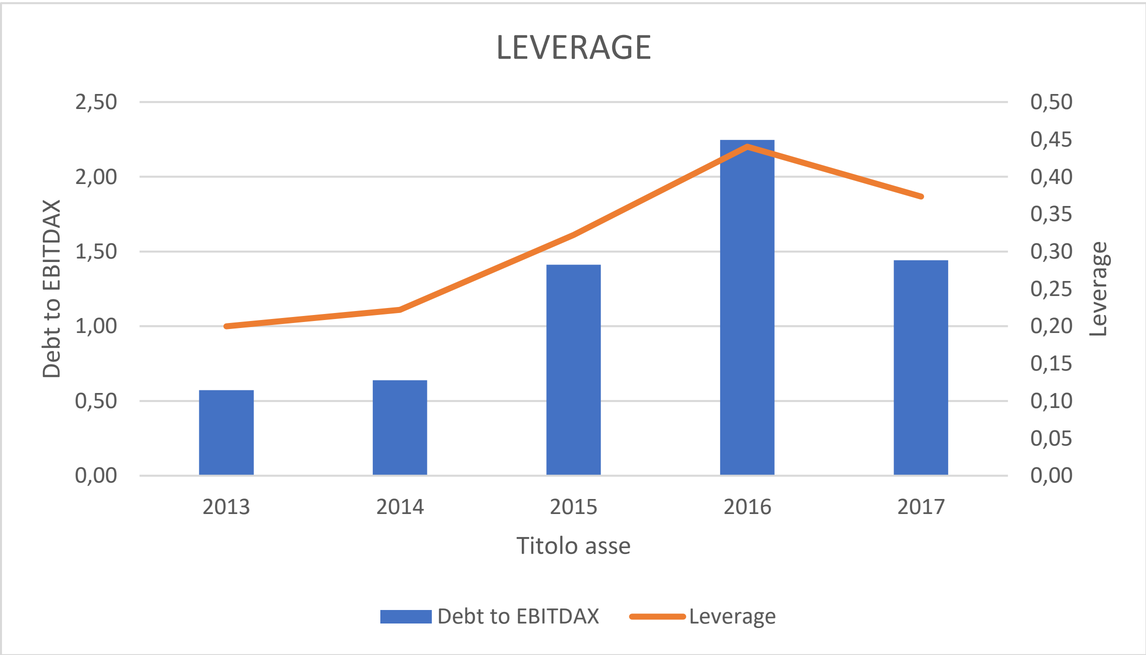

Figure 3.25: Shell's leverage in selected years

Source: Elaborated from Royal Dutch Shell's annual reports 2013-2017

In 2012 Shell was a low-leveraged company with debt to equity ratio of just 20%. Its debt to EBITDAX ratio was as low as 50%, meaning it could repay its full debt in just under two years, while it was more than covered for current expenses on debt, its interest coverage ratio being a gigantic 38,6. The situation was different in 2017, after a huge wave of debt issuances in 2015 and 2016, that raised total debt of the company to 73.870 million dollars, an increase of 37.652 million dollars on the starting figure. The main reason for raising indebtment was to finance acquisition and expansion in new markets, plus major investments in natural gas and renewables to diversify the business from oil. The impact on the company's debt position was net: its leverage doubled in 5 years and the debt to EBITDAX ratio tripled. What is more impressive is the reduction in the company capability to meet its short-term interest on debt, illustrated by its interest coverage ratio dwindling, although from a high base, to 12,7.

DEBT COMPOSITION

Absolute Debt (Millions of dollars)	2014	2015	2016	2017
Commercial paper	0	0	1.018	341
Bonds	34.826	49.475	72.758	67.899
Bank and other borrowings	3.255	2.395	3.403	1.763
Total	38.081	51.870	77.179	70.003

Relative debt	2014	2015	2016	2017
Commercial paper	0,00%	0,00%	1,32%	0,49%
Bonds	91,45%	95,38%	94,27%	96,99%
Bank and other borrowings	8,55%	4,62%	4,41%	2,52%
Total	100,00%	100,00%	100,00%	100,00%

Table 3.13: Shell's debt composition

Source: Elaborated from Royal Dutch Shell's annual reports 2014-2017

Looking more closely at company's debt in the exanimated period, the composition of the debentures changed through the years. Bank debt and bonds followed inverse trends, with the former in contraction and the second swelling. As leverage was increasing, Shell was reducing its exposure to banks under three percent of the total, drop worth 1.492 million dollars. At the same time, Shell exploitation of debt capital market increased and in 2018 constituted almost 97% of its total debentures: indeed, bonds roughly doubled in value to near 68 billion dollars in five years. Low interests on debt asked from the market probably compelled Shell's executives to leverage the firm at low historical costs. In 2008 Shell emitted 2.750 million dollars' worth of 30 years obligation at a 6,375% interest rate, while the same type of obligation was emitted in 2016 with a coupon of just 4%. Moreover, Shell passed from almost total dollar denominated issues to a more flexible equal division in dollars and euros. This move was probably intended to capture the benefits, in terms of low interest rates demanded from investors, of Quantitative Easing's regime in Europe, at the same in which the Federal Reserve was increasing its target for interest rates. In 2016, Shell participated in 12 separate bond issues, raising a total of 4 billion euros and 12 billion dollars. In 2018, most of its exposition in bonds was denominated in dollars, which represented the 76% of the total, while euros denominated bonds accounted for 20% of total debentures; the remaining part was held in English sterling, for 2,55%, and in Swiss Francs, for 0.96%.

DEBT CAPITAL MARKET (BONDS)

Due in 2 years			Due in 2-10 years			Due in more than 10 years		
		Amount			Amount			Amount
Maturity	Currency	(M)	Maturity	Currency	(M)	Maturity	Currency	(M)
10/08/2018	USD	1.500	12/09/2021	USD	1.000	11/05/2035	USD	1.500
15/11/2018	USD	1.250	21/08/2022	USD	1.000	15/12/2038	USD	2.750
10/11/2018	USD	1.250	06/01/2023	USD	1.000	25/03/2040	USD	1.000
10/11/2018	USD	500	12/08/2023	USD	1.000	21/08/2042	USD	500
10/05/2019	USD	1.750	11/05/2025	USD	2.750	12/08/2043	USD	1.250
22/09/2019	USD	2.000	10/05/2026	USD	1.750	11/05/2045	USD	3.000
25/03/2020	USD	1.250	12/09/2026	USD	1.000	10/05/2046	USD	2.250
11/05/2020	USD	2.000		Total USD	9.500	12/09/2046	USD	1250
11/05/2020	USD	750	21/08/2023	CHF	800		Total USD	13.500
12/09/2019	USD	1.000	21/08/2028	CHF	525			
12/09/2019	USD	500		Total CHF	1.325			
10/11/2020	USD	1.250	06/04/2022	EUR	1.000			
10/05/2020	USD	1.500	15/03/2022	EUR	250			
	Total USD	16.500	12/05/2024	EUR	750			
15/09/2019	EUR	1.200	15/02/2025	EUR	1.250			
24/03/2020	EUR	1.000	24/03/2026	EUR	1.000			
	Total EUR	2.200	15/09/2025	EUR	1.000			
20/12/2019	GBP	500	20/01/2027	EUR	1.250			
	Total GBP	500	12/05/2028	EUR	1.000			
			15/08/2028	EUR	1.000			
				Total EUR	8.500			

Table 3.14: Shell's bonds outstanding divided for maturity

Source: Elaborated from Royal Dutch Shell's annual report 2017

A keener glance at the composition of Shell's obligations unveils a major challenge facing the company in the near future. In two years a total worth of 16.500 million dollars, 2.200 million euros and 500 million pounds will mature. This sum alone represents 37% of the company's debt from obligations and comprehends the 500 million pounds assumed as part of the acquisition of BG in 2015, which came in with a hefty interest rate of 5.125%. To face this huge request of money the firm will need to exploit new sources of cash, coming from improved incomes, divestures or issuing more debt still. The strategy of the company is already focusing on this problem, since 22 billion worth of divestures have been announced for 2018-2019's biennial. Furthermore, the spread of the maturities throughout the year means the company will have time to generate a higher level of cash inflows to fund the repayments, while the effects of these expenditures on income is harsher to assess.

EMPLOYEES

(Millions of dollars)	2013	2014	2015	2016	2017
Remuneration	12.047	13.092	12.558	11.985	10.855
Total Personnel Cost	16.375	16.356	17.122	15.726	14.316
Head Cost (dollars)	$ 177,99	$ 174,00	$ 184,11	$ 170,93	$ 166,47
Total Employees	92	94	93	92	86

Table 3.15: Shell's employees data for selected years

Source: Elaborated from Royal Dutch Shell's annual reports 2013-2017

After the acquisition of BG, total number of employees dwindle through the year and in 2017 roughly six thousand less people were working for Shell. The reduction concerned for the most part Europe and North America, with reduction of personnel of 7 and 1 thousand people respectively. Opposite trends in Asia and South America, were in five years the company hired one thousand people each. As a consequence of the deal, ten thousand people of both Shell and BG lost their job in reorganization efforts. Reduction in the number of workers translated in lower personnel cost for the company overall, with savings worth 2.059 million

dollars corresponding to a 12,57% drop from 2013's levels. While most of the saving could be attributed to the reduction in the number of workers, the exam of the cost per head throughout the five years shows successful efforts from the company to improve efficiency and raise the savings from unproductive work. The average cost per employee in the year before the acquisition was of 184 dollars, which represents the peak for the period. The same measure was 166,47 dollars in 2017, falling 9,58% in two years.

RESERVES

Proved Reserves

	2014	2015	2016	2017
Crude oil and natural gas liquids (million barrels)	3.939	3.359	4.242	4.613
Natural gas (thousand million scf)	40.316	37.375	40.541	40.432
Synthetic crude oil (million barrels)	1.763	1.941	2.014	649
Bitumen (million barrels)	428	3	2	—
Total (million boe)	13.081	11.747	13.248	12.233

Table 3.16: Shell's proved reserves

Source: Elaborated from Royal Dutch Shell's annual reports 2014-2017

The rationale for the acquisition of BG was never hidden: to strengthen the position of Shell in the natural gas segment, forming a powerful company that could untether its business from oil. Oil reserves swelled in 2016, year of the finalization of the deal, to 4.242 million barrels, an increase of 883 million barrels, or 26%, on the year before. Natural gas reserves even increased to 40.451 thousand million standard cubic feet in 2016, or 8,4% on the year before. However, the total number of reserves in equivalent oil slightly decreased in the period,

because of the exhaustion of some wells of synthetic crude oil and the elimination of others from the book due to unprofitability in extraction.

PRODUCTION

OIL AND GAS PRODUCTION AVAILABLE FOR SALE					
(Thousand bbls daily)	2015	2016	2017	CAGR	Abs Var.
Total Europe	64.548	86.200	89.609	17,82%	25.061
Total Asia	168.712	201.352	187.119	5,31%	18.407
Total Oceania [B]	7.858	8.524	9.098	7,60%	1.240
Total Africa	86.463	85.004	75.090	-6,81%	-11.373
Total North America	112.862	113.678	120.205	3,20%	7.343
Total South America	13.883	81.412	114.418	187,08%	100.535
Total	454.326	576.170	595.539	14,49%	141.213

Table 3.17: Shell's oil and gas available for sale

Source: Elaborated from Royal Dutch Shell's annual reports 2015-2017

To analyze the trend in production available for sale, measured respectively in thousands of bars for oil and million standard square feet for natural gas, the absolute change in production throughout the years has been analyzed together with the compounded average growth rate: the scope is to capture the triennial average trend of growth. The best performing regions in this perspective have been Europe, which grew at 17,82% on average, and South America, that with a staggering 187,08% growth and an absolute addition of 100.535 thousand barrels represented the most improved area in terms of production in the triennial. Indeed, production coming from South America was an eighth of the value coming from North America: in 2017, the two values almost coincided and were second only to the production amount from Asia, which reckoned for 187.119 million barrels. The only decreasing trend appeared in Africa, were the production contracted to 75.090 million barrels in 2017 from 86.463 million barrels two years before, with an average fall of 6,8%, mainly motivated by the divestment from the interest in Vivo Energy in Egypt.

NATURAL GAS (Million standard cubic feet)

	2015	2016	2017	CAGR	Abs Var.
Total Europe	476.717	586.283	583.577	10,64%	106.860
Total Asia	712.678	862.148	772.472	4,11%	59.794
Total Oceania	188.115	477.032	643.803	85,00%	455.688
Total Africa	260.066	364.287	394.996	23,24%	134.930
Total North America	498.406	562.807	511.058	1,26%	12.652
Total South America	12.853	184.604	211.143	305,31%	198.290
Total	2.148.835	3.037.161	3.117.049	20,44%	968.214

Table 3.18: Shell's production of natural gas

Source: Elaborated from Royal Dutch Shell's annual reports 2015-2017

On the other hand, natural gas production increased for 968.214 million scf in the triennial. At a relative 20,44%, it is more than the value for oil available for sale, which grew 14,49% in the same period. Even here, the greatest increase in production came from South America, which saw gas storage surging for an average 305,31%. At 211.143 million scf, it still accounted as the minor source of output in the world. While the first country for production was Asia, which constituted nearly a quarter of total outcome, the best growth in absolute value was attributable to Oceania, which swelled its output for 455.688 million scf, becoming Shell's second most productive region in the world. Inverse to the trend for oil, Africa increased its production of natural gas for an average 23,24%, increasing its output from the area to 394.996 million scf. What is important to notice, is that production of gas increased in all regions in which Shell's operate: though disproportionally for each country, the improvements brought by the acquisition of BG are evident. The worst results of the triennial in fact manifested as slow growth, not contraction, so still contributing, even if in for a smaller part, to strengthen both the position of Shell against its competitors and its importance as a natural gas champion.

OIL AND GAS PRODUCTION AVAILABLE FOR SALE

(Thousand barrels oil equivalent daily)	2015	2016	2017	CAGR	Abs Var.
Europe					
Denmark	17.396	15.423	15.467	-5,71%	-1.929
Italy	11.179	6.818	8.733	-11,61%	-2.446
Norway	14.337	21.656	19.529	16,71%	5.192
UK	20.762	41.426	45.020	47,25%	24.258
Other [B]	874	877	860	-0,80%	-14
Asia					
Brunei	823	952	1.138	17,59%	315
Kazakhstan	—	21.330	29.491	17,58%	
Malaysia	22.980	27.241	26.574	7,54%	3.594
Oman	78.404	80.567	77.687	-0,46%	-717
Russia	22.016	22.134	22.049	0,07%	33
Other [B]	44.489	49.128	30.180	-17,64%	-14.309
Africa					
Gabon	12.472	12.838	9.750	-11,58%	-2.722
Nigeria	67.832	62.739	56.337	-8,87%	-11.495
Other [B]	6.159	9.427	9.003	20,90%	2.844
North America					
USA	104.263	102.795	109.430	2,45%	5.167
Canada	8.599	10.883	10.775	11,94%	2.176
South America					
Brazil	13.307	78.477	111.093	188,94%	97.786
Other [B]	576	2.935	3.325	140,26%	2.749

Table 3.19: Shell's production segmented by country

Source: Elaborated from Royal Dutch Shell's annual reports 2015-2017

Looking at the detail for oil production, some of the facets of BG' acquisition emerges. BG produces a quarter of its oil output from Brazil, region that will become increasingly more important in the structure of the firm, which forecast its production from the country to rise even more, to a third of the total, by 2020. The effect of this addition on Shell's consolidated results is evident: in 2014 its total production from Brazil was a meagre 13.307 thousand barrels, almost insignificant compared to its biggest outposts in Oman and Nigeria. In 2017, after two years of average growth of 180,94%, Brazil was the most important region for oil production, overtaking even the US. This allowed the company to reach an overall growth in oil production despite unexpected events that conditioned production capacity in some of the most important countries. Like the 11.495 million barrels reduction from Nigeria, which was caused by a leak on a key pipeline and prompted the company to declare force majeure on Bonny Light's terminal for crude exports.

NATURAL GAS (Million standard cubic feet)

	2015	2016	2017	CAGR	Abs Var.
Europe					
Denmark	48.211	47.143	52.105	3,96%	3.894
Germany	58.230	51.483	48.002	-9,21%	-10.228
Ireland	27000	44.660	52.515	39,46%	25.515
Netherlands	—	—	—		
Norway	253.108	242.736	243.352	-1,95%	-9.756
UK	101.276	190.185	174.478	31,26%	73.202
Other [B]	15.865	10.076	13.125	-9,04%	-2.740
Asia					
Brunei	21.337	26.918	29.880	18,34%	8.543
China	46.481	43.699	43.899	-2,82%	-2.582
Kazakhstan	—	77.122	80.623	2,24%	3.501
Malaysia	254.523	221.661	221.590	-6,69%	-32.933
Philippines	41.430	45.070	42.958	1,83%	1.528
Russia	3.887	4.141	4.052	2,10%	165
Thailand		59.774	60.742	0,81%	60.742
Other [B]	345.020	383.763	288.728	-8,52%	-56.292
Oceania					
Australia	132.209	418.793	591.860	111,58%	459.651
New Zealand	55.906	58.239	51.943	-3,61%	-3.963
Africa					
Egypt	65.002	145.198	122.439	37,24%	57.437
Nigeria	195.064	184.188	236.370	10,08%	41.306
Other [B]	—	34.901	36.187	1,83%	1.286
North America					
USA	264.351	309.298	286.529	4,11%	22.178
Canada	234.055	253.509	224.529	-2,06%	-9.526

South America					
Bolivia	—	67.191	59.673	-5,76%	-7.518
Brazil	3.029	31.020	70.100	381,07%	67.071
Trinidad and Tobago	—	78.433	73.000	-3,53%	
Other [B]	9.824	7.960	8.370	-7,70%	-1.454

Table 3.20: Shell's gas production segmented by country

Source: Elaborated from Royal Dutch Shell's annual reports 2015-2017

The acquisition of BG made Shell the third biggest producer of natural gas in the world, after Gazprom and the National Iranian Oil Company. As for the production of oil, the biggest change coming from the acquisition was the swelling amount of gas produced from Brazil, which grew at an average 381,07% in two years. BG Group holds significant acreage positions with interests in three offshore blocks in the Santos Basin, with permanent production facilities on the Lula, Iracema and Sapinhoá discoveries, and operates 10 offshore exploration blocks of Barreirinhas Basin, in the north. But the increment is modest in absolute terms, it was 67.071 million scf, compared to Australian division, which managed to grow its output for 459.651 million scf, making it by far Shell's largest producer in the world, above US and Nigeria. This performance is linked to BG's acquisition, that bore even a majority ownership of the operations of the two-train 8.5 million tons per annum Queensland Curtis liquefaction plant (QCLNG). Other direct consequences of the deal were the 37,24% average increase in Egypt and the 31,26% average increase in UK. In Egypt BG had many interests: operatorship of two gas-producing areas offshore the Nile Delta, Rosetta and West Delta Deep Marine concessions; a major share in the Egyptian LNG project (Train 1 at 35.5% and Train 2 at 38%). Likewise in UK, where BG held widespread interests focused in the UK's central North Sea, including a number of operated production hubs (Armada, Everest and Lomond) and exploration and appraisal interests, together with minor interests in pipelines and processing facilities and participation in other groups' ventures, including Buzzard, J-Block and Jasmine.

Chapter 4: Hospitality

THE HOSPITALITY INDUSTRY

The backbone of hospitality industry is constituted by customer service, shared across all the segments of the macro area forming the business. The economics of hospitality spins around different businesses induced one by the other ensuring that the travellers' needs are covered in a holistic manner [122].

- Travel and Tourism: Area encompassing transportation. This includes trains, airlines, cruise ships and the staff for each one of those. The staff on the cruise such as flight attendants during the journey have the function of food servers and this make those figures part of the hospitality sector [123].
- Food and Beverage: Can take the form of catering establishments and events, bistro or high-end restaurants. When the restaurant is part of the hotel and it's managed by the same ownership, it constitutes one of the largest element taking part in the revenue flow [123].
- Lodging and Accommodations: Area built by hotels, bed and breakfast enterprises and structures offering lodging for the customers. There are three main types of hotel and accommodation services:
    1. Lodging: they are often a checkpoint where to sleep and the permanence can be from one to three nights, passing the five nights just in particular occasions or after unexpected events. This results in last-minute bookings searching for the best price/quality ratio [123].
    2. Suites: they are on a higher level for luxury and comfort, apart from general lodges. Usually the demand is more formal, searching for a suitable and comfortable permanence. The first difference lays on price being suites much more expensive than lodges.

3. Resorts: the third type of accommodation are the resorts. The distinctive characteristic is in the position: resorts are defined by the closeness with the nature and their immersion in the landscape.

In lodging and accommodations segment we find an evaluation of the performances based upon chain scale segments, defined as follows:

- Luxury, typically offering first class accommodations and an extensive range of on-property services, including restaurants, spas, recreational facilities, business centers, room service and local transportation. The average cost per night is typically greater than US$210 for hotels in this category [124].
- Upscale, typically offering a full range of on-property accommodations and services, including restaurants, spas, recreational facilities, business centers, concierges, room service, and local transportation (shuttle service to airport and/or local attractions) but still remaining a step under luxury segment for exclusivity. Average cost per night normally falls in the range of US$110 to US$145 for hotels in this category [123].
- Upper Midscale, typically offering something more than the standard facilities, extending its service to restaurants, selected business services, recreational facilities (either a pool or fitness equipment), and limited transportation (airport shuttle). Average cost per night normally falls in the range of US$90 to US$110 for hotels in this category [124].
- Midscale, typically offering a standard service such as limited breakfast, selected business services, limited recreational facilities (either a pool or fitness equipment), and limited transportation (airport shuttle). cost per night in this category is in the range of US$65 to US$90.
- Economy, typically offering basic commodities and limited extra services. Average cost per night is normally less than US$65 for hotels in this category.

BUSINESS MODELS

1. Lease: Defined as a contract by which one party conveys land, property or services for a specified period of time usually in return for periodic payments. Under the pressure of major shareholders and investors to lighten their balance sheets, the most important chains are moving away from ownerships as well as leases, as fixed payments must be disclosed as a liability on the balance sheet [125]. Adopting variable lease payments partially circumvents this hurdle, helping the lease to remain a viable option especially in Europe where it has large examples in Germany and Spain. This model is much less present in North America [122].
2. Hotel Management Agreement: A management company or a brand will take over all the operations around a property from the owner in exchange of a periodical variable or fixed fee. The owner is still bearing all the risks including employment contracts. Usually is adopted a long-term nature of the contract to avoid discontinuity in the policy and ensure coherence in the management of the structures since loyalty is built meeting of the clients' expectation along different experiences over time [125]. This kind of model is significantly used in Europe and slightly less in America [122].
3. Franchise: A franchisee has the right to use a brand, distribution channel and other proprietary knowledge of a franchisor. The owner retains all risks and liabilities of the business but he also retains control over the property. Hiring a third-party operator revising the management can bring value to the whole structure [125].

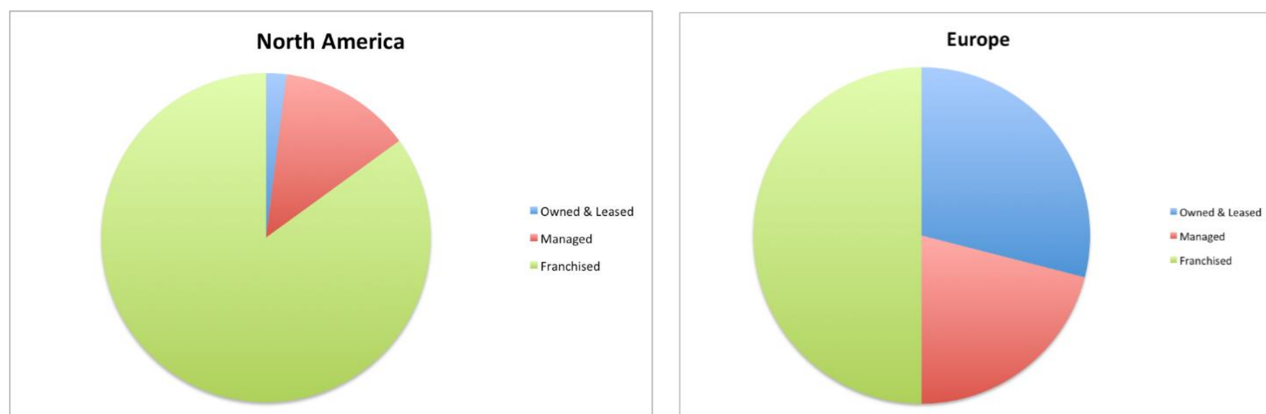

Figure 4.1: North America vs European operating models in major hotel chains

LEASES

Characterised by stable and predictable returns that lead to a lower degree of risk. This make it easier to obtain financing and participation of institutional investors. However, it is unlikely to adopt a fully owned or leased operating structure due to the rigidity and the excessive weight on balance sheet. Adopting the owner's view this kind of strategy gives full control over the operations, product and positioning [125]. In good times it constitutes the most profitable and valuable option, but just under the condition of growing economy and stable incomes with very low volatility. In difficult times, however, the risk of meeting the rent payments from the client side creates an additional risk and a second debt-like liability on the balance sheet. This favoured the advent of hybrid leases where the owner is willing to share the business with a third party in exchange of a simultaneous risk sharing [126].

MANAGEMENT AGREEMENTS

Management agreements provide the owner with potential solid earnings after payment of fees when comparing to a lease. The owner anyway still assumes the operating risk. In the contract can be included multiple provisions allowing the owner to increase control over maintenance and condition of the building. Brand operators will almost always go for a management agreement rather than for a lease since it allows for easier and rapid brand

expansion and the opportunity to earn management and brand fees locking the minimum capital. The risk is to negatively impact the brand image when insufficient funds are provided by the owner of the structure, in cash-shortage cases the management will see its reputation mined. The contracts are quite always binding to overcome the risk of a fold of the management.

FRANCHISE

When the hotel owner choses the franchise he gains instant access to global distribution and acknowledgement on the market. Design, development and operations gain an immediate support from the brand. They benefit from a strongly protected and supported brand name: the tried-and-tasted formula. Many of the benefits come from the scale of the franchisor, that on its side can grow its brand at accelerated pace. Royalty fees are earned by the counterparty without operating risks [126]. As a result we have increased efficiency and cost saving with little exposure to market risk. Usually in the contract the franchisee will be able to use the brand for more than a structure with limits imposed by the geographical region.

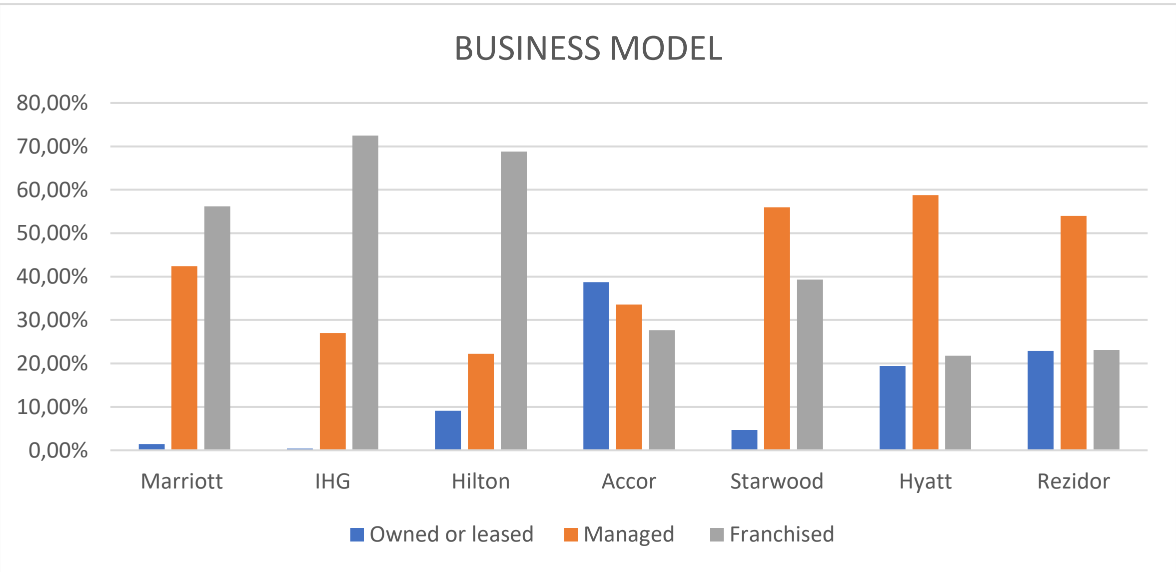

Figure 4.2: business models for selected hotel chains

Source: elaborated from [122]

BIG CHAINS

There is no one size fit model, what remains - statistics by hand - is that an increasing number of companies are putting more and more emphasis on franchise. Branded companies account for an estimated 53% of the global hotel market. Five of the largest branded companies as IHG, Accor, Marriott, Hilton and Starwood together accounts for 30% of the total supply of rooms globally present and 65% of the development pipeline. Large differences still remain between North America and Europe: IHG in an example leaning heavily towards franchise and having 76% of its properties in American soil [127]. In the USA the franchise formula covers more than 90% of the current room supply while the percentage is around 80% in Europe. At the other end of the spectrum we find Accor with 55% of the room supply located in Europe: just 20% of its global pipeline is franchised, the remaining part is 70% managed and 10% owned [127].

INDUSTRY OVERVIEW

the global hospitality industry is one of the largest and fastest growing sector in the world with its peak of US$1,6 trillion of gross bookings in 2017. The indirect contribution accounts globally for 10,2% of GDP [122]. The industry growth has its roots in the strengthening global economy. Each year this industry can count on new traveller and consumers coming both from emerging and developed markets, thanks to the growing disposable income allowing more and more customers to experience the world. Considering the last two decades, the number of international travellers across the globe has more than doubled from 600 million to more than 1,3 billion. Emerging countries play a central role in the development of the industry with many travellers that are leaving domestic borders for the very first time, contributing to the global GDP growth. The trend appears stable in 2018 and beyond. The US market is the one attracting more benefits being the most successful pool able to intercept the rising trend. International arrivals in the US rose by 72% starting from 2000, from 55 million to 76 million. This drove a cash inflow in six main segments comprised airlines, lodging, travel packing, rail, cruise and car rental hitting the record of US$353

billion in 2017. Forecasts for 2018 are positive expecting a further rise of 5% setting a new record by the end of the year at US$370 billion [127].

THE GLOBAL HOTELS LANDSCAPE: CITIES

Currently the global industry is being reshaped due to technological disruption causing structural shifts, new players entering the market and leisure patterns constantly changing and evolving in different directions hard to be forecasted. These factors are favouring new dynamic markets gaining field on the destinations that were well affirmed in the past, changing year by year the composition of the global geography. Basing on factors such as performances, investments, constructions, demand growth and scale we can identify five dynamic groups of cities with the relative risks and opportunities creating a geographical clusterization between the cities [125].

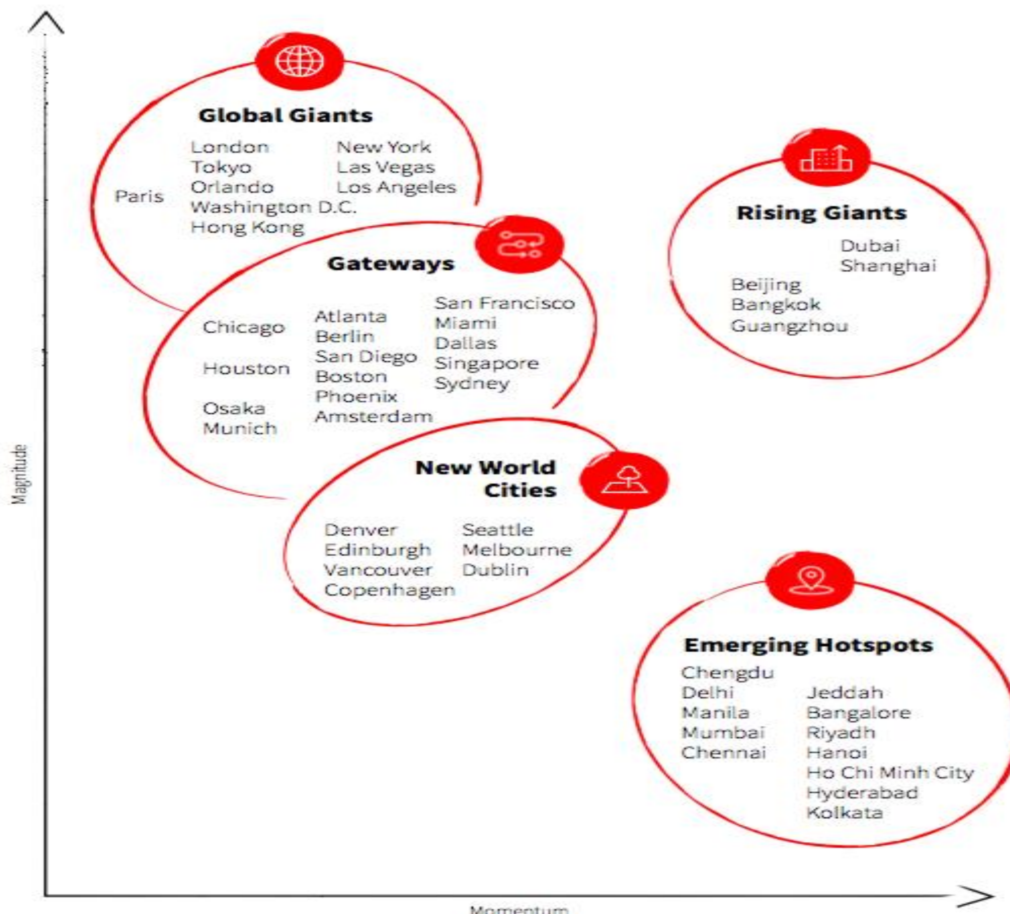

Figure 4.3: Mapping the world of hospitality

Source: "The Changing Global Landscape of Hospitality", JLL Global Research (2017)

Magnitude – measuring scale and importance of a city's hotel market based on number of rooms and hotel real estate investment. This includes: Number of Hotel Rooms, Hotel Investment Volumes and Intensity, Number of Rooms under Construction, Hotel Meeting Space, Air Passengers, Home Sharing Site Listings, Occupancy Rate and RevPAR (US$).

Momentum – measuring the speed of change in a city's hotel sector, in terms of socio-economic growth, new hotel room supply and hotel sector performance over the past two years. Socio-Economic Growth (including GDP growth, population growth, FDI intensity,

air passenger growth), Hotel Room Future Supply (as a proportion of existing rooms), Hotel Performance (covering changes in demand, occupancy and RevPAR).

- **Global Giants:** Elite cities attracting half of the investments pooled in the real estate. New York and London are the two cities leading the group having the deepest concentration of business and activities to support the industry. The group counts nine cities dominating the industry with the word's most established market. Together they account for 50% of the total investments and contain seven of the ten largest markets by room number, accounting for 23% of the total. They are on top of the list of investors, attracting particular attention from China, Asia and Middle East and the top shelf, quality capital [128]. New York and London attract themselves 30% of the total real estate investments amounting to about US$23 billion spread over the last three years. Nevertheless, this category is still vulnerable and can be harmed by geopolitical tensions, excess of supply and economic weaknesses constituting the major threats. Just think about Paris, whose demand has seen a huge decline under the fear of further terrorist attacks; London whose effects of Brexit are still to be discounted; while the appreciation of Hong Kong's currency is impacting visitors coming from China to be aware of the phenomena. Yet the timeless prestige of those giants is their main strength allowing them to rise back quickly from shocks. Las Vegas and Orlando are standing alone in the group as tourists-dominated cities which have nowadays reached the scale of New York and London talking about number of rooms: Indeed, Las Vegas has more hotel rooms than any other city in the world [124].
- **Rising Giants:** including Dubai and Shanghai in their raws, this cluster is maturing quickly and competing with the market leaders for size and clients. Successful growth cities with a strong visibility on a global scale, Shanghai, Beijing, Guangzhou, Dubai and Bangkok compose the group. Shanghai is between the largest hotel markets worldwide, ranking in the top 10 cities for magnitude. In the period from 2014 and 2016 it attracted US$1,3 billion in volume of hotel transactions [129]. Beijing draws over US$1 billion investments every three years, which place the city among the top

20 hotel investment destinations in the world. However, its growth has slowed down after the decreasing government demand and lower levels of new development. Dubai is an established hub for business and tourism. The demand is flourishing and continues to increase making the city a central spot for investments in real estate. Bangkok is the world's most popular overnight visitor destination according to MasterCard's latest Global Destination Cities Index. Guangzhou is seeing a growing demand for rooms largely coming from corporate and domestic visitors. Istanbul and Sao Paolo have in last years fallen outside the group underlying the vulnerability of these markets such frenetic and fast moving to geopolitical tensions and economic trends.

- **Gateways:** This cluster accounts for 25% of global hotel investments. Composed by mature markets with a strong position in the sector and high barriers to entry. The group is dominated by US cities, once again reinforcing the position of the United States in the hospitality business. In Europe this group can count the consolidated hubs of Amsterdam, Berlin and Munich, while in the Asian Pacific region Sydney, Singapore and Osaka are the major players. They have smaller scale markets comparing with the global giants but still a strong interest of the investors since they represent a solid choice, with well defined returns. They attract about 25% of the global real estate investments, with San Francisco, Miami and Boston ranking in the top ten hotel investments destinations and Berlin, Munich, Sydney and Amsterdam among the leaders for investments intensity. In the group Dallas stands out as the city with the strongest momentum with a significant pipeline of new rooms in recent years followed by robust performance. Sydney is one of the leader in the group since starting from 2017 it saw a strong wave of new supply matched with high levels of occupancy and demand [130].
- **New World Cities**: mid sized cities high liveable. They have outperformed in terms of rooms occupancy rate, demand and revenue per available room (RevPAR) in recent years. These cities have grown their global status together with the global attention. In Europe, they are represented by Dublin and Copenhagen who have seen a double-digit RevPAR growth backed by higher and higher demand with a shortage of supply.

The situation has encouraged the planning of a capillary pipeline and an infrastructural development especially in Dublin. Edinburgh leads the rank for investment intensity, which is the volume of investments as a proportion of the GDP of the city [127]. Melbourne is facing exceptional levels of occupancy rates but the city is still well positioned to absorb the increased visitors with the growing number of new rooms and always high levels of new supply.

- **Emerging Hotspots:** cluster dominated by Middle Eastern rising stars and Asian emerging giants, it is experiencing a quick globalization driven by the rapid expansion. We can find the world's most dynamic markets located in Middle East and South-Southeast Asia. Spots such as Riyadh and Jeddah are following the steps of Dubai absorbing the same characteristics in the supply of hotel rooms. Jeddah is beneficing from the flow of tourists visiting Makkah and is consequently shaping its offer providing services able to face a demand so diversified. In Africa the fastest growing market is represented by Nairobi, strongly backed up by a sustained economic growth. Southeast Asia is nowadays fully integrated in the global network attracting huge levels of foreign investments. In India the megacities as Delhi, Bangalore and Mumbai are showing a strong momentum combining rapid growth with high levels of demand constantly faced by new supply. Mumbai saw more than US$250 million invested between 2014 and 2016 [129].

HOSPITALITY IN EUROPE

Market share of Europe decreased in the last 30 years from over 60% (it was 1990) to the actual 51%; still Europe keeps being the first tourist destination. The European Union alone accounted in 2017 for 40,3% of international tourism reaching 478,4 million of visitors. This generated €336,5 billion in terms of receipts placing EU in second position behind the Asia and Pacific region that leads without rivals with €377 billion. In third place we find the Ameircas with €273,7 billion, where North America has the highest weight accounting alone for €214,9 billion [127].

The hospitality sector is one of the key drivers of the European economy thanks to its leading role in the global tourism market, both for employment as well as for direct contribution to

the real economy. In the EU this sector occupies the third position in the scale for largest socio-economic activity. In terms of enterprises, one on ten of the European non-financial business belongs to the tourism industry. Hospitality itself employs 80% of the total workforce occupied in the tourism sector counting for 1,9 million enterprises. Among those over 90% is constituted by micro enterprises (employing from 1 to 10 people). It is confirmed a strong driver for the creation of new jobs and opportunities with its +2,5 million of new jobs created in the last decade. As for now, the tourism industry absorbs 16,6 million jobs in Europe and represents 7,8% of the active workforce [122].

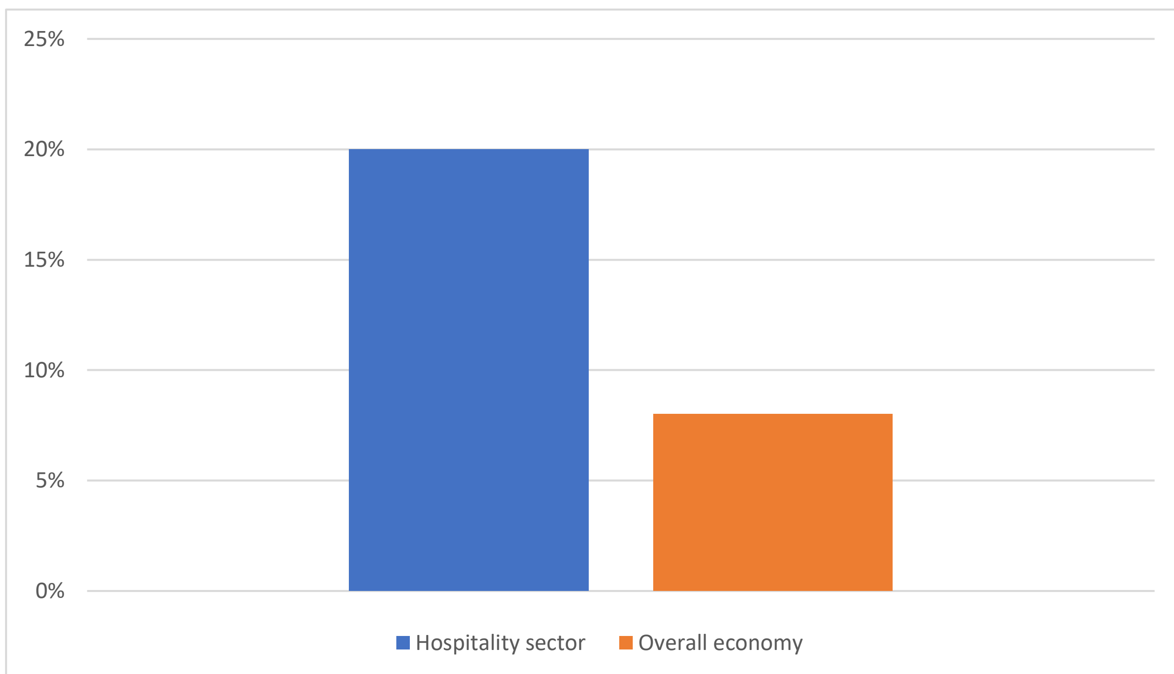

Figure 4.4: Youth employment in hospitality sector in comparison to the overall economy

Hospitality occupies a large slice in the pie directly providing 11,1 million jobs, representing 4,7% of the total EU employment. Including indirect workers and induced production, additional 16,6 million workers are captured under the umbrella of hospitality. The sector is especially important for the occupation of the under 25: overall in the economy only 8,2% of the people employed are under 25, in the hospitality industry the rate grows to 19,6%.

The impact on women is particularly significant: while women account for 46,1% of people employed in the overall economy, in the hospitality sector their presence rises to 53,7%. Hospitality in EU is furthermore a well known pool for relatively unskilled workers as it has a valid offer for the first job experience. 30% of the employed workforce in the sector has up to the secondary education (or lower), compared to an average of 18% in the rest of the economy [122]. The percentage is fed by the possibility of a part-time job attracting over one third of the workers participating in hospitality.

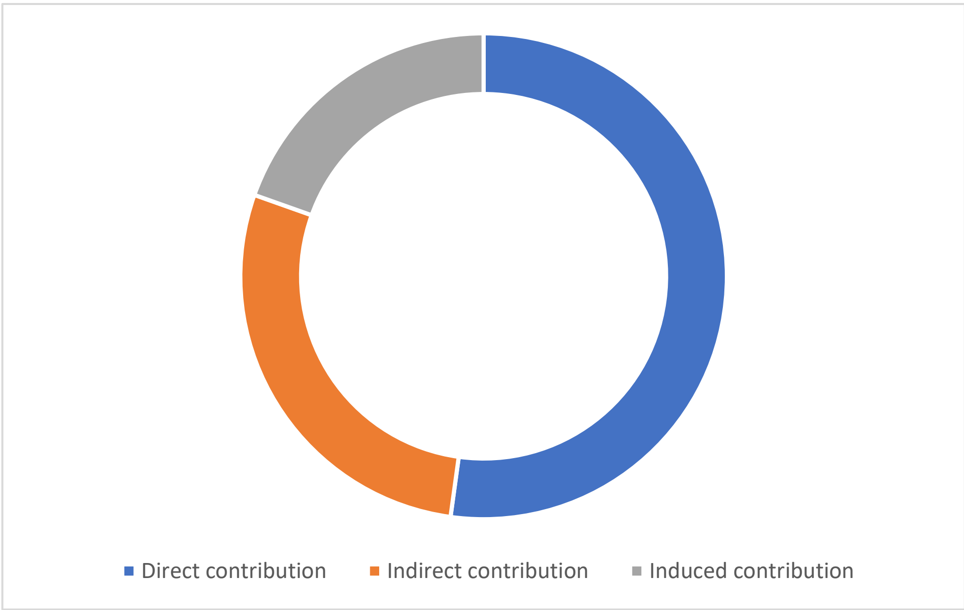

Figure 4.5: GVA impact of hospitality sector

Source: data elaborated from [122]

Its role in further economic contributions make hospitality the one of the leaders of economic growth. The turnover of the industry amounts for €1 trillion and over, approximately equal to 8,1% of the total economic output of the Eurozone, with a GVA (gross value added) in the sector of more than €460 billions, or 3,7% of the gross domestic product. Unbundling the contribution, €236 billion came from direct contribution while other €131 billion are generated through inducements such as supply chain. About two third (63%) of this gross

value added is generated by small enterprises employing less than 50 people. Regarding the contribution to government treasuries, in 2017 the hospitality sector poured €216 billion in excise duties, VAT and employment and social security taxes.

From a hospitality perspective, UK is one of the most visited countries in the world with London occupying the second place in the most visited destinations global rank.

US GROWTH DRIVERS

- Healthy economic indicators for consumer spending: Projections for 2018 give a continued growth at a rate of 2,0%-2,5% protracted even for the following year. Consumers are benefitting from the strengthening labour market providing them with new opportunities and more spending budget, low inflation and rising income are giving a further push to the sector. Increasing housing prices and robust stock market are giving confidence to consumers despite some geopolitical uncertainty [129].
- Healthy corporate travel spending: Business activity drives a strong growth in hospitality sector. Corporate travel spending is always at good levels and it is forecasted to rise once again in 2018 by 6,1%, the highest levels since 2011 [129].
- Spending shift from products to experiences: Historical personal consumption expenditure (PCE) data reveals that the spending on durable goods - those that we can consider typical mainstays of consumer life such as cars, sofas, refrigerators – has been dropping. Demand for goods has been outpaced by travel. Even the spending reserved to clothing and apparel has dropped. Instead, experiential spending has stolen the first place substituting concrete goods with recreation, travel and eating.

Hotel sector is projected to follow a 5% to 6% growth in 2018 setting the industry to break all past records for booking with its US$170 billion [129]. The effects on the business are immediate: average daily rates ADR and revenue per available room revPAR registered respectively +2,4% and +3,0% over the last 12 months. Hovering around 66%, occupancy seems to have hit the all time peak.

However, some industry analysts consider the favourable actual condition not to be durable since the sector is subjected to long cycles. Historically, long run growths were followed by intense downturns. The last cycle began in 2010 and since generally they have a duration of

about 10 years, a change of the condition can be considered imminent. While we continue hearing positive signals, local markets may face significant hurdles in 2018. New York, for example, has grown the number of hotel by 55% since 2008 to 634 properties and 115’000 rooms [130]. The increase of private accommodation rentals is rising the competition causing a struggle in the business, with hoteliers aiming to keep their properties full. The so caused oversupply issue is weakening the sector that now must find new revenue streams such as lobbying with city officials for property tax reform.

CHINESE INVESTMENTS BONANZA

Outbound Chinese investment significantly increased spacing in particular towards North America and Europe, focusing the efforts in the global lodging markets. The record of US$9,4 billion was reached for the end of 2017, nearly doubling from the US$4,9 billion of the previous year. This represents a compound annual growth rate of 108,1% considering the modest levels of US$240,5 million spent in 2011 [131]. Those conspicuous investments are led mainly by China’s insurance companies, interested in expand their business outside the territory. This is due to the limited performance of the domestic hospitality market and the higher yield offered abroad.

For certain companies, like HNA Group, these investments have a synergistic effect supporting the other tourism-related activities such as airlines and travel agencies. Furthermore the recent deregulation in China’s insurance industry has unlocked capital and potential for new investments and offshore diversification, offering grater opportunities for real estate investments. Back in 2015 overseas investment accounted for just 1,9% while now the target – according to the Insurance Regulatory Commission – is set at 15,0% of the total assets. Chinese insurance companies are hedging against the risk of their continuous currency devaluation by investing abroad a consistent part of the available capital: as of November 2017 China’s Yuan has devalued by 5,7% against US dollar considering a period of the last 12 months, and since August 2015 the Yuan devalued by 10,0% [132]. Anyway overseas deals exceeding US$1,0 billion are under rigid scrutiny of the government, while state-owned companies are prohibited to invest in the sector more than US$1,0 billion in a single foreign real estate transaction. Abroad, Chinese investors in 2016 focused on entity-level transactions

and joint ventures as a way to maximize scale and build brand recognition. Recent examples include:

- Anbang Insurance Group’s US$5.5b acquisition of Strategic Hotels & Resorts, including in the deal 15 of its 16 luxury US hotels, in September 2016 [132].
- China Life Insurance formed in late 2016 a joint venture with sovereign wealth funds with the aim to acquire a US$2.0 billion portfolio of 280 US hotels from Starwood Capital Group [124].
- HNA Group announced plans to acquire 25.0% of Hilton Worldwide Holdings [133].

Gateways markets are in the centre of Chinese focus with cities such as Manhattan, London, San Francisco and Chicago dominating the scene. In the last year those cities alone accounted for approximately 38,2% of the total Chinese outbound lodging investment amounting to US$3,6 billion. Manhattan remained on the top shelf with US$1,4 billion invested, while San Francisco and Chicago attracted respectively US$1,2 and US$1,0 billion [122].

GLOBAL CHALLENGES

The hospitality sector is among the most sensitive to competitive and economic conditions such as the GDP growth and trend. Because of its nature, the absence of a pure asset-light solution make this sector technology, maintenance, energy, marketing, management, personnel and capital intensive. Demand has continued to expand in recent years with a not decreasing trend, but in parallel customer expectations have grown. The population desiring additional convenience and personalization of service has amalgamated and grown favoured by the globalization wave, particularly strong in this sector. The hardest challenge comes from the online presence of hospitality and leisure establishments, meaning an exceptional flexibility for the clients. Now booking a room is based on several factors on which the competition must be spread: from the specification, to the clients’ pictures, to the list of reviews and votes. Platforms such as Airbnb provide an example of digital disruptors. Asset light, owning no hotels and still reaching easily economies of scale they represent a new entrant triggering the revenue stream oh hospitality sector [130].

The industry must meet those challenges understanding the clients’ needs and establishing a coherent strategy addressing the trends and the demand. A support in the field is coming from

data analytics that is transforming the way leading hospitality companies are doing business. Analytic tools are assisting transactions, including a support in the creation of the outlook for the market, developing target identification and enhancing the approach to evaluate a transaction. Analytics are also improving the overall guest experience as booking apps can understand the customer journey and provide personalised solution optimised client by client.

M&A IN HOSPITALITY

As anticipated in the previous chapter, the process of divestment followed to free capital and have lighter balance sheets made hotel companies managers rather than owners. As this trend continues consolidation becomes a must more than an advice. A deal peak verified a few years ago in 2015, not in the number (they have continued to grow all along 2016 and 2017), but in the total value of the transactions. This was mainly helped by Marriott and Accor who pushed the value of deals up to 200,3 billion dollars with their recent acquisition activity.

WAVE 1: 1995 – 1997

Hotel industry mergers and acquisition reached the value of US$4,1 billion in first half of 1997, the Coopers & Lybrand Lodging Research Network Reports More Than Double the Year-Earlier Period. The soaring is more than double comparing to the first half of 1996 when the M&A activity totalled an amount of US$1,7 billion. But considering the overall 1996 the hotel industry M&A activity reached the US$8,8 billion value, a record for the period. The whole movement started in 1995 when the process, still at its first stage and far away from its maturity, totalled the US$3 billion in value.

This has been the starting year of the deal in the hotel industry led by the dynamic US market. The key factors driving the wave are record profits for the industry, record levels of equity capital raised and the growing attention of Wall Street and its merger and acquisition expertise, driving global attention and a consistent flow of capital in the sector. Just in the first half of 1997 there were a total of six transactions, the remaining part of the year recorded

eight M&A deals, in 1996 there were nine transactions in the first six months and 20 transaction in the overall year. The formula has been the quite the same for all: big companies getting bigger and bigger. The second type of deal following this majority is represented by small companies combining together not only to survive but to remain competitive benefitting from economies of scale and complementary resources. For those small companies the coming mergers were the only opportunity to compete with the strongest brands.

A lot of operators took the favourable moment of the market signing a deal: ITT spun off three of its division (Sheraton, Caesars World and Madison Square Garden) into a separate company operating as a separate entity, segmenting the brand into a low to mid offering and a mid to high offering, Granada bought Forte for US$8,1billion, CUC bought HFS, the owners of Ramada and Super 8, for US$14,7 billion and Starwood bought ITT for US$13,9 billion.

The largest of the hotel industry's six M&A deals in of 1997 came in April, when Parsippany, New Jersey-based HFS Inc. HFS acquired vehicle leasing, mortgage and corporate relocation services provider PHH Corp. of Hunt Valley, Maryland for US$1,8 billion. Today HFS in the largest lodging C-Corporation with market capitalization of approximately US$9.5 billion.

The second largest transaction that took place during the year came in February when Marriott International MAR acquired Renaissance Hotel's portfolio of 150 hotels as well as the Renaissance, New World and Ramada International hotel brands for US$1 billion.

The third-largest transaction was Host Marriott's HMT June purchase of the Forum Group's portfolio of 29 retirement resorts from Marriott Senior Living Services Inc., a unit of Marriott International, for US$540 million.

The fourth-largest hotel industry M&A deal was in January when Extended Stay America ESA acquired Studio Plus hotels for US$290 million.

The fifth-largest M&A transaction was Starwood Lodging Corp.'s February acquisition of HEI Hotels LLC for US$327 million.

The sixth-largest M&A transaction, and the only one in the first half of 1997 to involve a time-share entity, was Signature Resorts' SIGR purchase of timeshare developer Plantation Resorts Group for US$59,1 million.

WAVE 2: 2005 – 2007

In this golden era of M&A in the hospitality the market boomed, registering just in the period 2006-2007 the record of a total US$45 billion. In addition we must say that the statistic is not telling the whole story since it is recording just deals above 10 million, leaving unexplored a sea of micro deals often for the acquisition of minority assets such as franchised Red Roof and Econo Lodges trade for few million dollars could be. In these years of favourable market conditions buyers are getting 80% and 90% loan to value by lenders. The environment is strongly favoured by a low interest rate condition having its lowest point in the examined period. Thanks to this we see a heavier entrance of private equity in the deals supporting the size of the mergers and acquisitions.

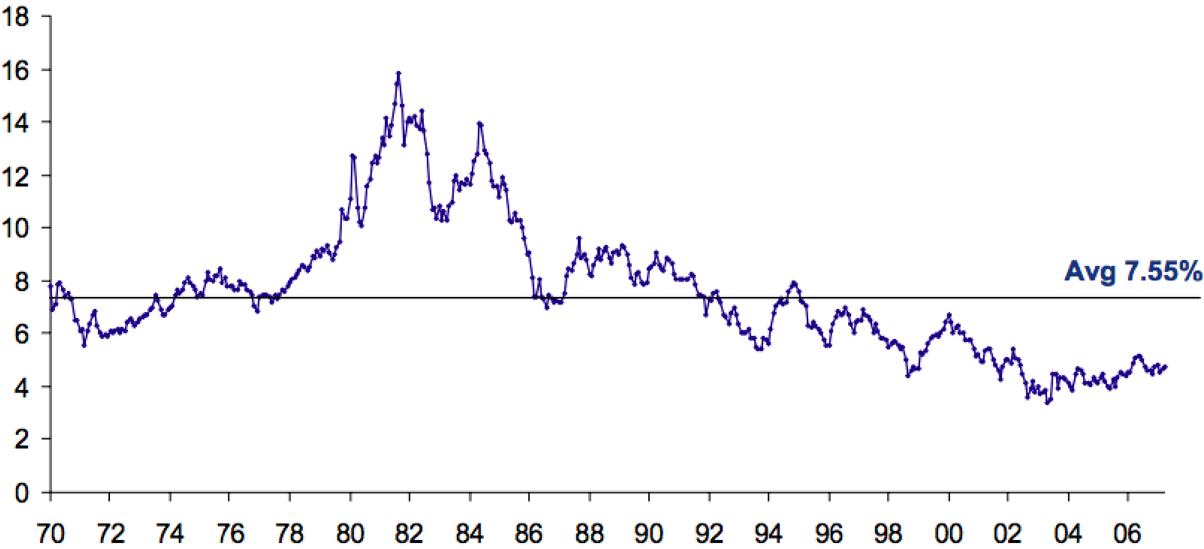

Figure 4.6: 10-Year treasury rate

Source: adapted from Bloomberg

More factors closely industry specific determined the wave. In the hospitality sector this wave is for a consistent part attributable to growing statistics such as the number of foreign tourists, often used as a proxy for hospitality expansion in the literature. Tourism expansion is directly impacting the financial performances of hotel chains close to popular tourist destination.

Another factor strongly significant is the GDP growth and household disposable income. As we can see from the chart a strong correlation emerges for RevPAR growth and global GDP growth significantly interconnecting the sector growth with the available expenditure of the households.

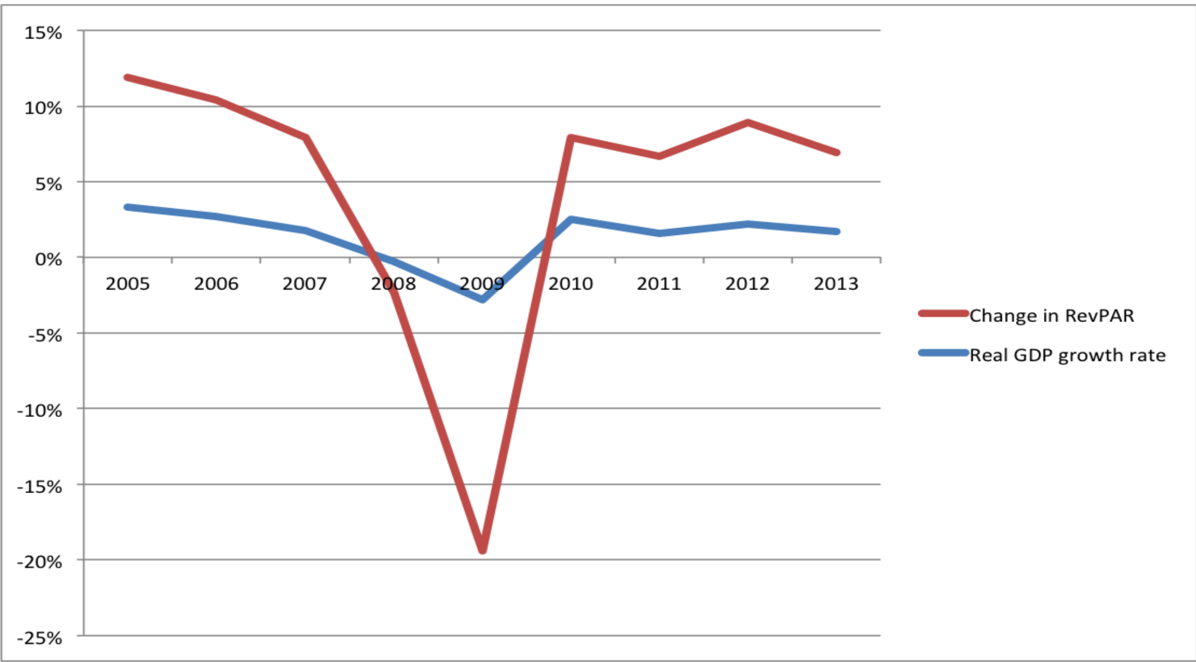

Figure 4.7: Correlation between RevPAR growth rate and GDP growth rate

Source: elaborated from [126]

Down in detail, from 2005 to 2007, Hilton spun out its hotels business of Park Hotels & resorts and Hilton Grand Vacations resulting in three independent and publicly trades companies due to their excessive capital absorption despite being a standing-alone business. Cendant spun out in 2006 its Wyndham hotel business in a move that created one of the

world's largest publicly traded hospitality company, listing on the New York Stock Exchange the division which immediately became part of the Standard & Poor's 500 index. The move was intended to meet the diverse needs of the travelers by offering locations and accommodations in more than 100 countries on six continents. Property group Lightstone paid US$8 billion for Extended Stay, the mid-range hotel company. Apollo paid US$27,8 billion (including the absorption of US$10,7 billion of bank debt) for Harrah's hotel and casino group. Under the agreement Harrah's stockholders received US$90,00 in cash for each outstanding share, representing a premium of 36% justified by the Special Committee as the price paid for a strategic merge, increasing the size and the brand of the company by acquiring a target in the same line and direction of business. Blackstone bought Hilton for US$26 billion paying a premium of 40% and pursuing its strategy of international expansion in the hotel companies (considering the past three years where Blackstone invested more than US$15 billion in the sector). The acquisition made Blackstone owner, manager or franchiser of 3'700 hotels representing about 600'000 rooms.

WAVE 3: 2016-TODAY

2016: Marriott International's US$12,2 billion approach for Starwood Hotels & Resorts signals the beginning of a new wave of dealmaking flooding the sector. After that the mechanism continued with a US$3billion deal for FRHI Hotels & Resorts, the owners of Fairmont, Raffles and Swissotel, a £1,5billion deal for the UK budget chain Travelodge, a €1billion deal for the French group B&B Hotels and a £595 million deal for Atlas, a portfolio of 48 UK hotels. Consolidation is effective when dealing with big online travel agents since it is the fastest and cheapest way for growth and scale. It can give an immediate answer being the only way enough quick to match the rapidity of growth of competitors such as Airbnb.
Arne Sorenson, the chief executive of Marriott, explained the phenomena: "We were watching a lot of the online travel agencies consolidate and platforms like Google doing more in the travel sphere," he said. "These things caused us to conclude that having 1m rooms and more resources would allow us to compete better. We compete in an industry that is highly dispersed. No one really has significant market share. Even after this deal, we will not have significant market share. Marriott has 10 per cent of the US market, for example, and

Starwood has 3-4 per cent. But being bigger we can have more dollars to spend effectively on technology, marketing, loyalty and so on."
Since 2014 more than 300 deals took place

Year	Number of deals
2017	358
2016	354
2015	344
2014	375
2013	274
2012	257

Table 4.1: Business models of the principal chains

Source: Bloomberg

We must look back at 2007 when Blackstone bought Hilton Worldwide for US$26 billion to see a period of equal importance for the sectorial M&A activity. The recent acquisition signed the birth of a new cycle that will presumably last from six to ten years. Each cycle is determined by new levels of occupancy and room rates that fluctuate along the decades giving birth to prosperous and poor periods. The sector is particularly sensible to economic cycles: high elasticity in the customer's demand make the whole arena much more volatile than the average. Just this year revenue per average room, the most significant statistic in the business and the one more indicative when valuing a business, rose up 13% above where it was the previous peak in the US cycle, registered in 2007 and just before the financial crisis, leading to the conclusions that this cycle may be approaching to its peak.
The landscape is dominated by large-scale, cross-border merges and acquisitions. This involved a specific rick varying depending on the jurisdiction and the parties involved, so impossible to generalize. Although it is possible to mitigate the exposure through proper planning and efficient preparation, actions such as a frequent communication to the whole staff are mandatory for the good final result of the deal.

What's next?

It is expected a continuation of the activity in a more refined way, where operators will still proceed at a rapid pace but pursuing a smaller, more targeted acquisition in order to expand their business in a more controlled way. Examining the current environment and the key factors driving the activity:

1. The sector continues in its climb upwards in terms of operating and financial performance, with margins getting fatter especially after acquisition waves or restructuring periods. 2018 should see another growth in occupancy, profits and average daily rate ADR.
2. The largest transactions in the sector, such as those that took place between 2015 and 2016, will deliver synergies at full potential after few years of adjustments and amalgamation. Hotels will focus on further driving the operating and synergistic efficiency up
3. Hotel company valuation is currently high, in line with the overall equity market and in particular the real estate sector, this favour merges and acquisition involving shares rather than a payment by cash.
4. Credit is in this period largely available in the sector, but the prospect of a future increase in the interest rates in the short to medium term will limit the enthusiasm and the recourse of any form of acquisition plan involving a large employment of debt.

Private Equity

The interest of private equity in the sector remained robust all along 2017 with a significant boost over the previous year, rising from 25,6% of the deals in 2016 to almost half (47,8%) of the deals in 2017. Investors in this space target top tier operators preferring niche offerings, a pipeline of new site opened in emerging and dynamic markets, luxurious offerings with a strong brand, a strong management with long experience backing the operations.

MOTIVES FOR MERGERS AND ACQUISITIONS

- A quest for vertical integration to fill product gaps across the value chain, covering all the different kind of offerings possible in the sector. Loyalty to the brand is built across all the line of possible products the client asks for, starting from the basic accommodation to the luxurious residence. Each brand should furnish a wide range of choice to avoid loosing the customer to a competitor. In this context it's easy to imagine a eat-or-be-eaten logic (suggested by Gorton) stating that a merger or acquisition can be a defensive strategy against a competitor that is consolidating its business through external growth, giving birth to a wave of deals.
- The need for more efficient and affective global platforms increasing and protecting the market share particularly in response to online travel agents. Building innovative platforms is compulsory to confine the network of new entrants such as Travelmob (offering a service similar to Airbnb).
- Huge availability of free cash both for developing economies in Asia and for supporting the mature businesses in finding new revenue streams

INDUSTRY FRAGMENTATION

Hospitality industry is – and has always been – very fragmented, remaining dominated by many micro individual businesses. Cumulating the top 10 branded hotel companies they have less than one third of the rooms in the market and no one, not even the market leader, overcomes the 4,7% of the rooms globally. It is the third more fragmented sector behind airline (first) and packaged food (second) [124].

The situation in Europe is even more evident with the top five European operators summing up only 14% of the total rooms (in the US top five operators account for 48% of the total).

Over the years the propensity has detached from owned structure. In such a model it is extremely expensive to win scale and the considerable amount of capital locked could give low returns, which made it difficult to catch the required capital. Today, brands are easier to expand and it is easier to manage a consistent product even across different countries,

providing a more various and valuable offer. Hotel rooms can be considered fairly similar products and the only factor really impacting the customer relies in the geographic location.

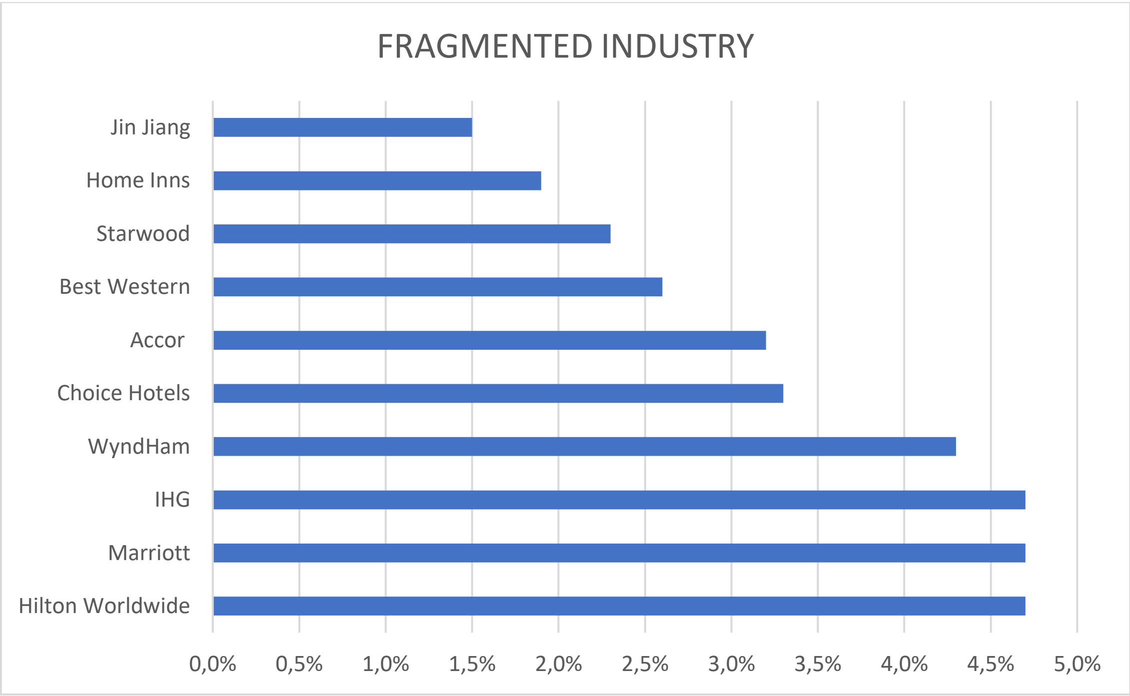

Figure 4.8: Share of the global market for hotel chains in 2016

Source: Morgan Stanley

GEOGRAPHY

The world's three largest groups for revenue size couldn't build a global business over the years due to their excessive focus on their own territory, without considering with the appropriate attention the opportunity of a geographic dispersion and diversification. The result is that Hilton, Marriott and InterContinental Hotels have respectively 83%, 81% and 65% oh their rooms inside American boundaries. Still diversification is extremely valuable especially in this sector considering the asynchronous economic cycles intervening in different regions. In 2007 and 2008 the middle east boomed, in 2010 and 2011 Asia

outperformed the rest of the market returning results higher than the expected. These last years is US turn looking at the growing occupancy rates all over the territory.
The opportunity of diversification for risk hedging is looked forward with particular care from US operators that are considering either buying European or Asian rivals, but such deals are difficult to occur because of the critical bid-ask spread that rarely closes. Marriott managed in something similar buying a wide presence in Asia thanks to the organic expansion in China, India and Korea of Starwood Group. Marriott is decided to continue with perseverance the expansion in this direction: in recent month Marriott grew at the pace of more than two new hotels per month. Starwood and Accor represent the two most balanced and diversified portfolio with the most dispersed distribution of the business by far. Jin Jiang Plateno, one of the most important Chinese companies, is decided to pursue a similar strategy having the urgency to move beyond the mainland by acquisition of foreign assets rather than by organic growth.

LOYALTY

The process of divestment from fixed structures and acquisition of diversified chains is close to an end and now, especially in US, hotel companies have become a collection of brands rather than hotel owners. Online travel agents have played a central role in this process pushing towards consolidation to avoid the margins of the major players being eroded. The trend is to shop on comparison websites, offering various brand on the same platform, rather than going directly on the official website of the hotel. This gives more bargaining power to online travel agencies stealing considerable margins when they charge for the service.
As a con sequence, many hotel companies are evolving into online travel agencies directly on their website: Hilton, Starwood and Marriott have opened up their owned booking website accessing to all the offering available on the market. This allows to book for an independent hotel directly on their platform. Consolidation is the most obvious answer to this problem bringing more marketing budget to advertise hotel brand and launch national or international campaigns.

Hotels are also strengthening the role of their loyalty programmes prioritizing loyalty efforts on the annual budget. Besides providing insights into customer behaviour and profiling the best offer for each client, they give incentives to registered clients for a higher expenditure during the permanence. Starwood, for example, registered that customers who are part of its loyalty program spend on average 20% more than customers who are not and pay for more extra activities while they are staying at a hotel [122]. Consolidation is the way to build bigger loyalty programmes which will carry a long list of benefits attracting more and more members.

As now, InterContinental has the most developed and widespread loyalty program with a reward scheme splayed to 84 million members, with Marriott and Starwood positioned at 49 million and 20 million members each. To make a comparison with other sectors heavily affected by membership programmes, Delta Airlines and American Airlines both have between 90 million and 100 million members.

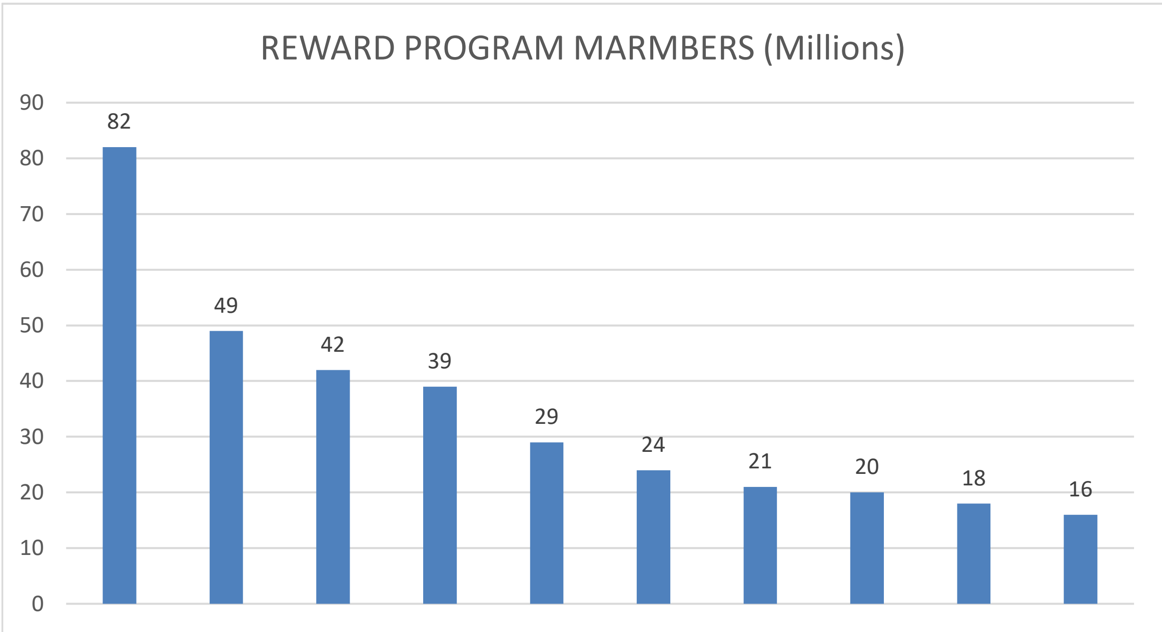

Figure 4.9: Members of the reward program for hotel chain in 2016

Source: Morgan Stanley

VALUE DRIVERS

Beyond strategic value drivers (such as opening key new markets and expanding the network, deeper penetration into key existing markets, broader customer offering and deeper understanding of their needs, etc.) and operational value drivers (such as improved marketing budgets and reservation systems, expanded and more capillary loyalty programs, consolidation of corporate management, etc.), that can be quite the same for all the companies operating in service industry, there are other three key items driving value of a hotel brand that we can consider more sector specific:

1. Global trademark portfolio;
2. Value of potential management and/or franchise agreements; and
3. Value of existing management and/or franchise agreements.

Existing portfolio

At the base level to evaluate an agreement, we must consider the value as a function of the discounted present value of fees expected to be generated over the term of the agreement. Estimated future fees, terms of the contract and the discount rate applied to value the agreement are the principal part of the equation. The other terms impacting the final results are:

- Actual portfolio: an analysis of the assignment provisions must be carried out as it is critical to define the actual portfolio of the target company. It is essential to uncover potential obstacle and hurdles to the completion of the deal. part of those obstacles can be represented for example by a third party (hotel owner, lender, third party operator in a case of leasing agreement) having a big part of approval rights spare after the contract over the assignment of the potential future acquisition. A special consideration should be given to the strength of these particular approval rights examining all the particular cases situation by situation. Such rights could immediately result in (a) certain hotel not included in the final acquisition, leaving the portfolio without some critical assets, (b) a delay in completing the acquisition or a timeline following the owner's preferences (such as the main purchase of assets in

a period where prices in real estate are high), (c) hidden or unintended costs to complete the acquisition.

- Sensitivity analysis of discounted present value of the fee stream: the stream of fees previously established could encounter problems and distortions if (a) the returns of the hotel owner are prioritized or guaranteed over a certain threshold, leaving the managing chain with just residual incomes, (b) the hotel operator fees are anyhow subordinates to the senior or junior debt contracted by the hotel owner, in which case the predictability of the stream is mined and just secondary to the debt service. A further threat to the fee prong is represented by any threshold on which the total compensation is based, since it is common to adapt the compensation to the half-yearly or annual results. Those threshold that must be met should be calibrated under the objectives and constraints of short, medium and long term. All those items must be subjected to periodic or continuous review to underline the precision and consistence of results.
- Security of tenure: another common feature of the deal is a performance termination right that allow the owner to cease any relationship with the actual manager in case of one or recursive bad performances. In this case understanding the intensity and the level of the threat can mitigate the impacts of a weakness, for example the hotel operator can ask by contract to "cure" a failure in the performance test or there can be by contract some circumstances that would excuse the hotel operator from satisfying the performance test such as force events outside the full control of the operator. If the right to terminate the agreement is unilateral this must be explicated in the contract and agreed by both parties. A review should periodically be carried to see whether any termination agreement is at risk
- Potential growth inhibiters: the most common is the radius restriction provision were, while an agreement acquired through an M&A transaction should have the consequence and objective of unlocking certain key strategic markets, the provision before cited could have the consequence of knocking out other key strategic markets. The provision is usually in the form that the acquirer has full rights on acquired assets

but has the prohibition to operate over a determined radius for a certain period of time commonly 2 years)

- Ensuring product quality: if the agreement does not provide provisions to ensure product integrity over the entire term of the agreement including obligations of the hotel owner to fund capital projects or maintain a funded FF&E (Furniture, fixtures and equipment), a higher discount rate should be applied to the future fee stream particularly where further expenditure programs will be required over the agreement term

CASE STUDY 4: MARRIOTT INTERNATIONAL ACQUIRES STARWOOD

THE COMPANY

Marriott International, Inc. is a worldwide operator, franchisor, and licensor of hotel, residential, and timeshare properties under numerous brand names at different price and service points. Its focus is on management, franchising, and licensing, while it owns very few of its lodging properties. As of December 31, 2017, the Company operated, franchised, or licensed 6,520 properties in 127 countries across the world, with 1,257,666 rooms. In 2017 it amassed revenues of 22,894 million dollars, a net income of 1,372 million dollars, and had an asset base of 23,948 million dollars. It owns an impressive portfolio of more than 30 brands, including elements of the luxury segment like Bulgari, Ritz-Carlton and St. Regis among the others. It loyalty program aggregates more than 110 million people and makes it one of the largest travel company for customer base.

THE TARGET

Starwood Hotels and Resorts Worldwide, LLC is an American hotel and travel company headquartered in Stamford, Connecticut. It is one of the world's largest lodging companies that maintains, runs, franchises and manages hotels, resorts, spas, residences, and general vacation properties. At the end of 2015, it reckoned 11 brands under its, while it owned, managed, or franchised over 1,200 properties in different countries around the world, with a staff of over 180,400 people, of whom 46,900 in the United States. The company owns and operates hotels under leading brands such as Sheraton, Westin, St. Regis, Four Points, and its recently developed W brand. In 2015 it had revenues of 6,115 million dollars, with net profit of 635 million dollars and an asset base of 8,762 million dollars.

SCOPE OF THE DEAL

Marriott's acquisition of Starwood should enable the combined company to expand the scope of its distribution and portfolio while deploying its larger scale to realize cost efficiencies in its corporate and property operations. Marriott was confident in the possibility to achieve 250 million dollars in annual corporate cost synergies. Additional synergies at the property level should come in the form of leveraging scale in operations and sharing best practices. Combined sales expertise and improved account coverage are expected to provide both enhanced efficiencies and increased revenue opportunities for managed and franchised properties. All enhances in management and operations should, in the company perspective, drive development of new structures while improving levels of profitability for the merged entity. The unification of the portfolio of brands, together with the widespread presence of the two company throughout the world should unleash new marketing possibilities, directed at broader customer base.

The new company will operate or franchise more than 5,700 properties and 1.1 million rooms, representing 30 leading brands from the moderate-tier to luxury in over 110 countries. With the completion of this acquisition, Marriott's distribution has more than doubled in Asia and the Middle East & Africa combined.

The deal was finalized on September 23, 2016. Marriott payed a total of 12.4 billion dollars: Starwood’s shareholders received plus 0.8 of Marriott’s shares plus 21 dollars for every share sold.

STOCK PERFORMANCE ANALYSIS

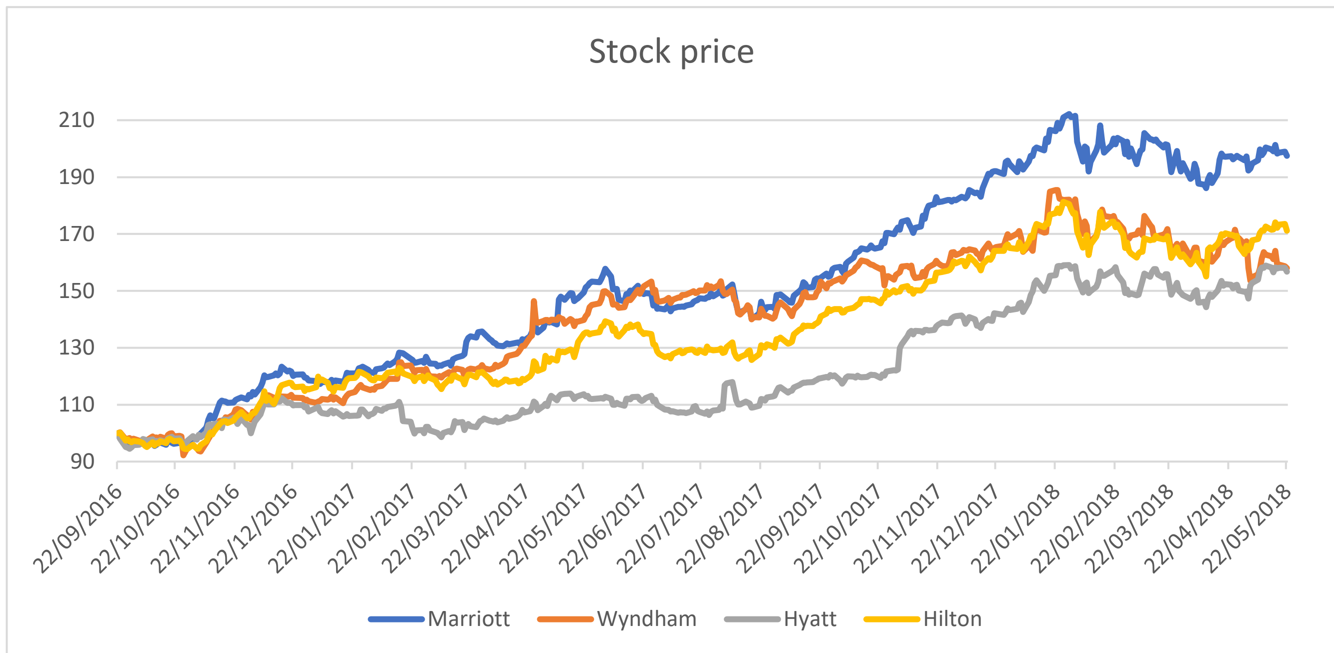

Figure 4.10: Marriott stock price after the acquisition

Source: Yahoo Finance

Since the closure of the deal, Marriott leaded the rally in lodging industry's stocks, with its valuation nearly doubled in one and a half years. Analysis of the stock per se is incomplete, because of the many factors contributing to the movement of the market, from general mood of investors to macroeconomic trends: indeed, all selected competitors' stocks performed well in the period under analysis, but Marriott returns have been consistently superior. One and a half years after the conclusion of the deal which brought Starwood under its control, investors' trust in the company was rocketing, and its valuation consequently doubled, making it one of the best performing stock in the industry. Part of the reason of this success, as will be shown, may be attributed to the firm ability to integrate its operations with Starwood and to exploit its hefty scale to improve financial results.

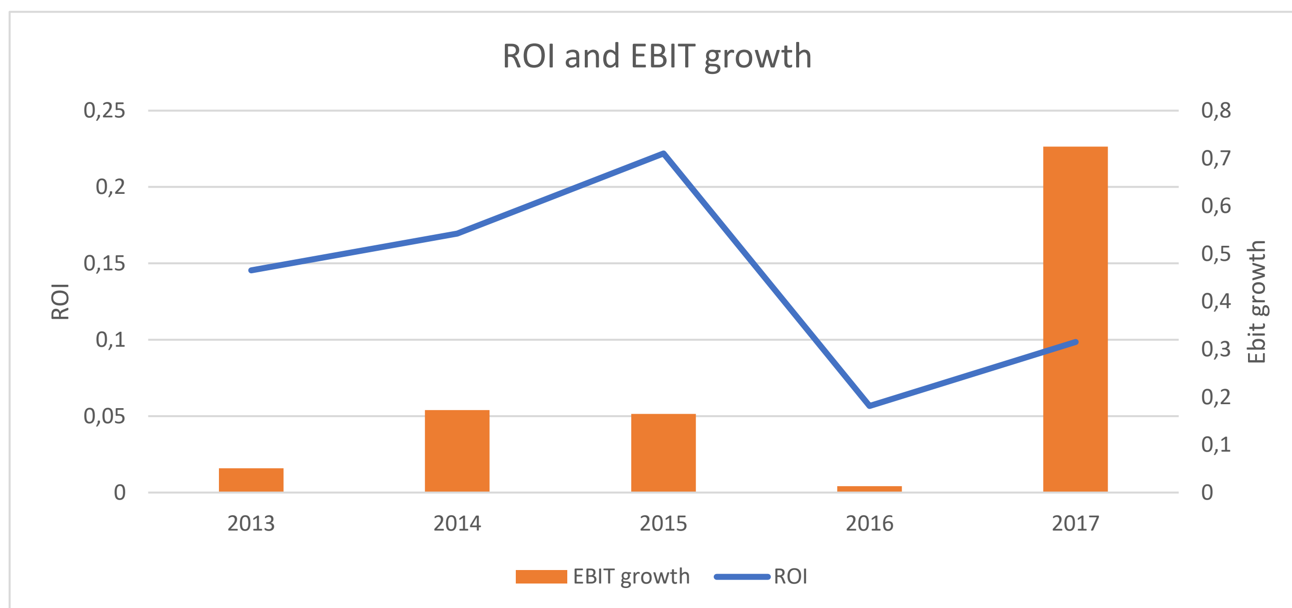

Figure 4.11: Marriott's operating performances

Source: Elaborated from Marriott's annual reports 2013-2017

In this case it is difficult to apply both basic indicators of profitability, ROI and ROE, for the considered period, as the equity of Marriott was negative for consecutive years from 2013 to 2016. Negative equity is obviously a bad sign, and it makes more difficult to apply widespread measures of indebtment and value. For This reason, ROE will be disregarded, even if computable in 2016 and 2017, since the interest of this investigation is the relative change attributable to the acquisition. ROI is calculated as the ratio of EBIT on total assets, again for the difficulty of summing different debt categories to a negative equity. The evidences are numbing, as after the deal there is both a clear surge in the absolute value of the operating profit, with a growth of more than 70% in over just one year, and disappointing returns on investments. Though it may seem that additional volumes of EBIT were achieved disregarding the level of inputs, it is probable that relative returns have been weighted down by an abnormal growth in the value of the assets, driven by the return of the equity to a positive, more normal, value. The ROI in the three years before the acquisition may have

been artificially lifted upward by unfair valuation of the assets of the firm, as negative equity dwindled the denominator in the computations.

For these reason, it is better to look at profitability measures based on margins. After the deal, a flection on the margins can be observed in all three selected measures, before a quick rebound that put all indicators above pre-deal levels.

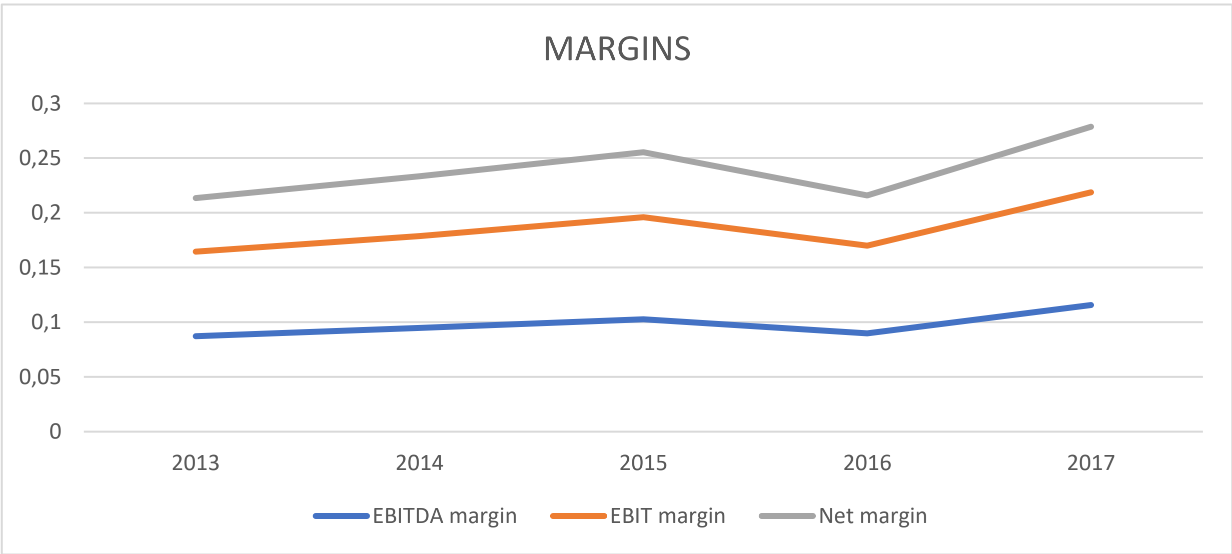

Figure 4.12: Marriott's profit margins

Source: Elaborated from Marriott's annual reports 2013-2017

EBITDA margin and EBIT margin in particular improved consistently, being respectively 12,5% and 10,5% higher than before the operation. This cue to the newly shaped firm's ability to achieve good results in its main business, while the low difference between the two is a result of the business model of the firm, which relies on external licenses for many of its activities. On the other hand, net profit for 2017 was impacted by an unusually high level of taxes, roughly four times higher than the average for the previous four years. This is mainly attributable to the enactment, on December 22, 2017, of the 2017 Tax Act by the U.S. government, which significantly changed how corporation are taxed in the United States. Though the nominal tax rate was dropped by fourteen percentage points to the new level of 21%, effectively alleviating the tax burden for the company, the introduction of the "The

Deemed Repatriation Transition Tax", which affects certain types of earnings from foreign subsidiaries of the company made overseas, weighted on the bottom line. The estimated cost for 2017 alone, since other payments will be diluted in upcoming years, was 745 million dollars, a figure comparable to all tax payed in the previous three years combined. For these motives, it is reasonable to assume 2017's burden on profit as extraordinary and to estimate the net margin to show in the future patterns like those already recorded for operating margins.

LIQUIDITY

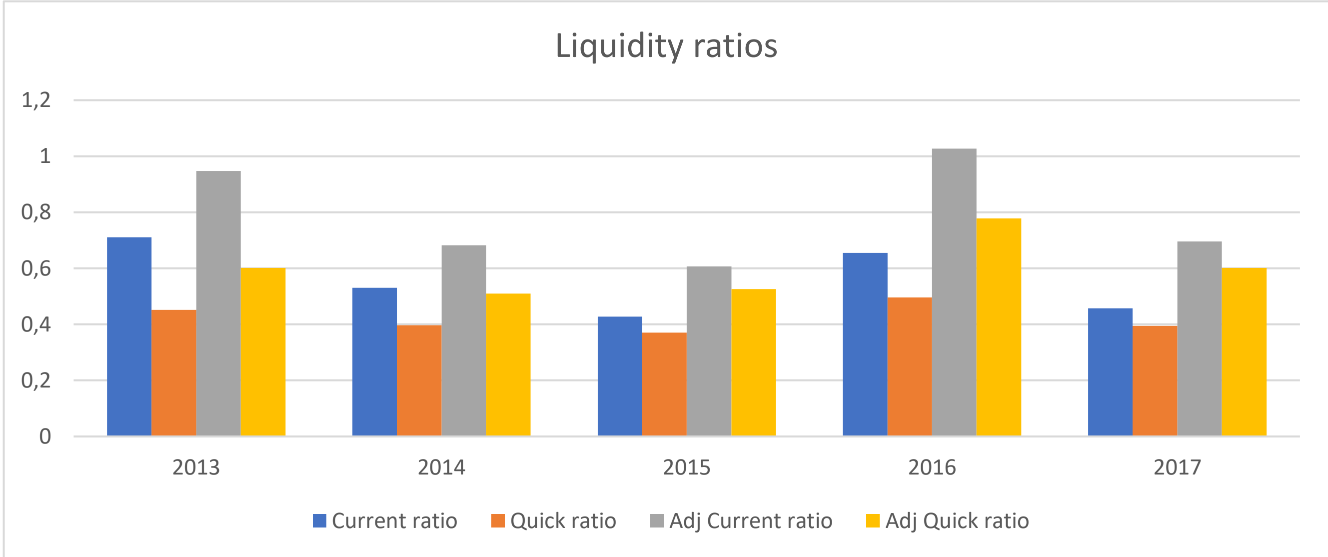

Figure 4.13: Marriott's liquidity ratios

Source: Elaborated from Marriott's annual reports 2013-2017

A possible source of danger for the company comes from its liquidity. Both measures for its capacity to repay short term debt and expenditures are under the threshold of one, generally assumed to be the minimum required value for these indicators. The reason for this underperformance is the hefty volume of current liabilities represented by loyalty programs. Since they are accounted as an effective cost for the firm, but does not represent an immediate danger of illiquidity as they are paid in form of free service and lodgment, it is reasonable to

eliminate them from the computation. These new measures of adjusted Current ratio and adjusted Quick ratio offer a more appropriate view of the liquidity risk faced by the company. From this perspective, the firm is in a more sustainable liquid position to bear the operating expenses of the business, though the improvement is not strong enough to bear the indexes over the threshold of one: indeed, only in 2016 current ratio touched this value, before dropping 30% in the subsequent year. Certainly, once the loyalty program of Starwood will be merged with that of Marriott, possible costs savings will occur, further improving its liquidity capacity.

DEBT ANALYSIS

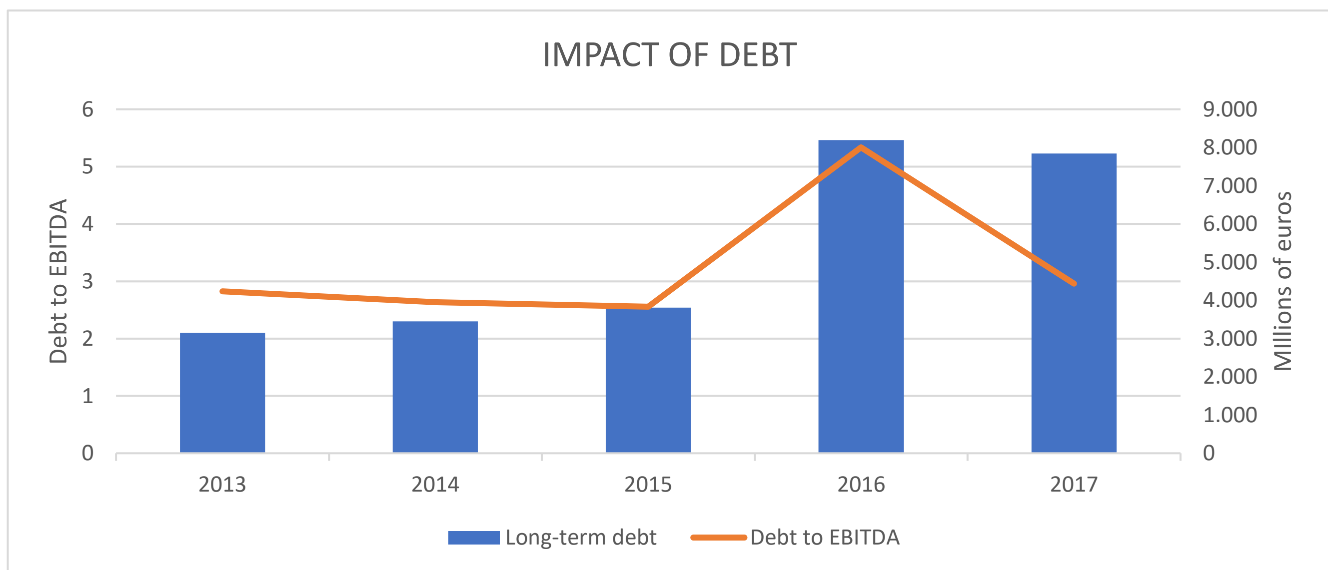

Figure 4.14: Marriott's debt analysis

Source: Elaborated from Marriott's annual reports 2013-2017

As already mentioned, the presence of a negative equity on the balance sheet of Marriott from 2013 to 2016 makes normal measure of leverage meaningless. To overcome this problem, as to evaluate the burden of the debt, the Debt to EBITDA index was computed, and used to understand how many years it would be necessary under current conditions to

pay back debentures. The huge weight of the long-term debt after the acquisition spiked the index, that eventually returned to pre-deal values thanks to swelling operating profit in the first effective year of the merged entity.

In 2016, long-term debt increased by 4.399 million dollars, to 8.506 million dollars at the end of the year: it was primarily reflected by 1.875 million dollars coming from the Starwood combination, by 1.485 million dollars in Series Q and R Notes issuances and by 1.373 million dollars borrowing in commercial papers; the repurchase of part of Starwood's senior notes in the fourth quarter of 2016 partially offset the exposure. In the subsequent year, debt dwindled to 8.238 million dollars, mainly due to the maturity of 293 million dollars' worth of Series I Notes in the second quarter of 2017.

INCOME STATEMENT

(million dollars)	2017	2016	2015	2014	2013
REVENUES					
Base management fees	$ 1.102	$ 806	$ 698	$ 672	$ 621
Franchise fees	1.618	1.169	984	745	666
Incentive management fees	607	425	319	302	256
Owned, leased, and other revenue	1.802	1.126	855	1.022	950
Cost reimbursements	17.765	13.546	11.630	11.055	10.291
	22.894	17.072	14.486	13.796	12.784
OPERATING COSTS AND EXPENSES					
Owned, leased, and other-direct	1.427	900	733	775	729
Reimbursed costs	17.765	13.546	11.630	11.055	10.291
Depreciation, amortization, and other	290	168	139	148	127
General, administrative, and other	894	704	634	659	649
Merger-related costs and charges	159	386	—	—	—
	20.535	15.704	13.136	12.637	11.796
OPERATING INCOME	2.359	1.368	1.350	1.159	988
Gains and other income, net	688	5	27	8	11
Interest expense	-288	-234	-167	-115	-120
Interest income	38	35	29	30	23
Equity in earnings	39	10	16	6	-5
INCOME BEFORE INCOME TAXES	2.836	1.184	1.255	1.088	897
Provision for income taxes	-1.464	-404	-396	-335	-271
NET INCOME	$ 1.372	$ 780	$ 859	$ 753	$ 626

Table 4.2: Marriott's income statement for selected years

Source: Elaborated from Marriott's annual reports 2013-2017

REVENUES

Revenues have been steadily increasing throughout the five years, with a steep surge in in the years after the acquisition of Starwood. In 2016 and 2017 revenues grew respectively 17% and 34%, reflecting new sources of income from the acquisition and higher contractual power with clients. In North America revenues grew by 405 million dollars in 2017, thanks mainly to 305 million dollars of higher base management and franchise fees: indeed, those reflect 297 million dollars coming from higher Legacy Starwood fees and the addition of 398 properties, or 147.623 thousand rooms, from the Starwood Combination.

The biggest source of revenues for the firm comes from management fees and revenues from owned and leased units, which comes from other guest services and are recognized when rooms are occupied and Marriott delivered the service. The greatest accounting voice is Cost Reimbursement, an artificial measure that has no real impact on profits for the firm. Indeed, it consists primarily of cost occurred during the management of properties owned by external entities and comprehends payroll, when Marriott is the employer, and certain operational and administrative costs as stated in the contract with the owners. As Marriott applies no mark-up to these services, their net impact is null.

(Millions of dollars)	2015	2016	2017
North American Full-Service	8.825	10.376	14.300
North America Limited-Service	3.193	3.561	4.002
Asia Pacific	516	761	1.344
Other International	1.684	1.875	2.658
Unallocated corporate	268	499	590
Total consolidated revenues	14.486	17.072	22.894

Table 4.3: Marriott's revenues segmented for geographic provenience

Source: Elaborated from Marriott's annual reports 2015-2017

Marriott's revenues, as analyzed per geographic distribution, appear to be disproportionally concentrated in North America, tough a small decrease in the proportion coming from this country, which was 82,96% of the total in 2015 and 79,94% in 2017, can be observed. More generally, after the first year of universal consolidation of Starwood, which in 2016 was only partially accounted on the acquirer's book, revenues increased in all regions in which the Marriott operates. The benefits were significantly high in Asia Pacific, as revenues from this region almost trebled in the triennial, and in international markets, where sales increased for roughly 1 billion dollars in three years. In the same time, the value of revenues from corporate services swelled for 120,15%, reaching in 2017 the value of 590 million dollars.

COSTS

Cost Reimbursement still represents the highest voice of cost in the Income Statement and still has no real impact on firm profitability, being just an accounting measure of anticipated expenses. Despite this, the value surged for nearly 7 billion dollars in the five years considered, as a consequence of the increase in the number of managed entities: indeed, the expansion hastened by the consolidation of Starwood, which accounted for 60% of the increase in 2017, was part of a long-term trend continuing from 2013-2015's triennial, when the surge was worth 3 billion dollars.

In 2017, Depreciation, Amortization and Other Expenses increased by 122 million dollars, basically driven by depreciation of Starwood assets plus further 6 million dollars in write-offs of deferred contract's acquisition costs.

Due to Starwood integration, Administrative Costs increased by 190 million dollars, compounded by 14 million dollars in higher than expected litigation costs, 13 million dollars from development expenses and 10 million dollars from compensation expenses.

Moreover, the effect of the Starwood combination weighted on Interest expenses, which increased by 54 million dollars in 2017, despite the maturity of 18 million dollars' worth of Series H and I Notes.

THE TRANSACTION IN DETAIL

(Millions of dollars)	September 23, 2016 (as finalized)
Working capital	-236
Property and equipment, including assets held for sale	1.706
Identified intangible assets	7.238
Equity and cost method investments	537
Other noncurrent assets	200
Deferred income taxes, net	-1.464
Guest loyalty program	-1.638
Debt	-1.877
Other noncurrent liabilities	-977
Net assets acquired	3.489
Goodwill	8.192
Total transaction value	11.681

Table 4.4: Starwood consolidation in detail

Source: Elaborated from Marriott's annual report 2016

The above table displays the fair value, as estimated by the firm, of the assets purchased in the transaction which put Starwood under the control of Marriott.

As can be seen, of the final price payed to Starwood's shareholders, a huge part was constituted by goodwill: indeed, it accounted for more than 70% of the transaction. This shows how much of the value recognized by Marriott, and for which it payed, was represented by intangible items. A particularly tricky task was the valuation of Starwood's brand; intangibles like brands and trademarks are usually not eligible for appearance in the accounting book, lest they be acquired from an external entity at a fair value. Starwood' brand value was estimated using relief-from-royalty method, which applies an estimated royalty rate to forecasted future cash flow, after been discounted to present value. The final

estimation was of 5.664 million dollars, a huge figure contributing to the inflation of Marriott's asset base.

On the other hand, some of the acquired liabilities weighted negatively on the net asset value of the purchase. Deferred tax from Starwood account, together with its considerable debt exposure and liabilities deriving from its guest loyalty program accounted for a burden of nearly 5 billion dollars.

COST OF THE TRANSACTION

Merger-related costs and charges (Millions of dollars)	2017	2016
Transaction costs	17	53
Employee termination costs	11	241
Integration costs	131	92
	159	386
Interest expense	—	22
	159	408

Table 4.5: total cost of Starwood's acquisition

Source: Elaborated from Marriott's annual reports 2016-2017

At the announcement of the deal, Marriot estimated the total entity of the one-time transaction cost that would have to be sustained to reach approximately 140 million dollars.

In the table, transaction costs represent all figures connected to financial and legal advisory, plus any other service required. Employee termination costs reckoned charges for severance, retention and other termination related exposures: indeed, costs related to the reduction of personnel represented the majority for the first year, totaling 241 million dollars and alone exceeding the threshold imposed before the deal. Integration of technology, personnel salary and share-based compensation added in the second year another 131 million dollars to the count. The final bill reckoned 567 million dollars of actual costs, 400% the original budget.

INTERNAL PERFORMANCE MEASURES

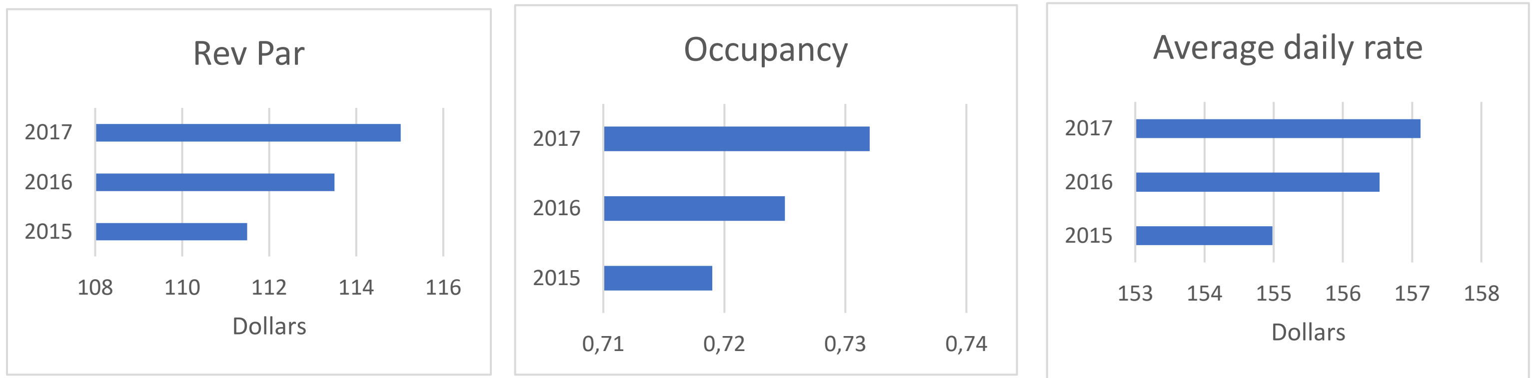

Figure 4.15: Marriott's operating performances

Source: Elaborated from Marriott's annual reports 2015-2017

Revenues per available room (REVPAR) is an accounting measure used in the lodgment industry to evaluate the efficiency of the business. It is computed dividing total revenues from comparable properties over room nights available for the period. Compared to absolute revenues, it has more explanatory power: it shows the ability of a company to exploit all its resources consistently over the considered period.

In 2017 REVPAR increased 3,1% to 115,20 dollars. The growth was driven by strong performances in North America, partially driven by higher demand for temporary leisure business, expansion of metropolitan events, business meetings and in part as a consequence of the devastation bore by September's hurricanes in Florida and Texas; significant growth was observed even in key Asian markets like China, India and Thailand. The underperformance of the Caribbean was prompted in 2016 by concern about a possible epidemy of Zika virus, which offset the increase in revenues fostered by the summer Olympic games hosted in Rio de Janeiro, Brazil; and in 2017 by the forced closure of nine properties, managed or franchised, due to significant damage brought from hurricanes in the region.

Performances from the Middle East were affected by political instability in the region, fostered by low oil prices and economic sanctions imposed on Qatar, which culminated in June 2017 with the cut of diplomatic ties with many countries of the region.
REVPAR form European countries swelled in the triennial across the continent, led by Russia, Portugal and Spain, while small contraction due to weaker lodging demand was recorded in France, Belgium, and Turkey, din part as the consequence terrorist attacks.
Occupancy rate measure the utilization rate of the properties of the company, so it's a measure of efficiency. It is part of REVPAR's calculation and then followed a similar trend.
Average daily ratio (ADR) is computed as the ratio of revenues from sold rooms over number of rooms sold: it is different from REVPAR because it considers only rooms effectively sold rather than total room available. It is used to evaluate and understand movement in the price of the rooms. Though the average level of prices inflated in the past three years, the integration of Starwood into the business dragged down the level of prices in Asian markets: Greater China average price dwindled almost 9% in three years, to 127,47 dollars in 2017.
Overall, all measures of operating performances improved in the triennial centered on the year of Starwood acquisition. The trend of growth was strong even before the deal, as can be deducted by steep growth of 2016, year for which the consolidation of the target company was completed only in part. The deal in effect fostered this rate of improvement, producing gains in particular for occupancy, which augmented for a percentage point. Instead, even if average daily rate increased the year following the acquisition, it is difficult to definitely state the percentage of prices' inflation attributable to Starwood, since the trend was so strongly manifested even in the previous year.

Rev Par

	2015	2016	2017
North America	113,8514	2,30%	0,94%
Greater China	89,1517	0,20%	1,16%
Rest of Asia Pacific	109,6827	4,00%	3,76%
Asia Pacific	97,54902	2,00%	2,78%
Caribbean & Latin America	117,4498	-0,40%	-11,01%
Europe	113,0375	1,40%	7,69%
Middle East & Africa	105,7927	-3,50%	-0,11%
International - All	105,6504	0,70%	2,25%
Worldwide	111,4931	1,80%	1,34%

Average daily rate

	2015	2016	2017
North America	153,9216	2,00%	0,67%
Greater China	140,0632	-5,10%	-4,10%
Rest of Asia Pacific	152,284	0,70%	3,17%
Asia Pacific	145,4564	-2,50%	-0,62%
Caribbean & Latin America	184,8445	-0,30%	-12,14%
Europe	160,2567	1,30%	5,78%
Middle East & Africa	165,9228	-4,10%	-2,02%
International - All	157,6751	-1,50%	-0,39%
Worldwide	154,9802	1,00%	0,38%

Table 4.6: Marriott's operative data

Source: Elaborated from Marriott's annual reports 2015-2017

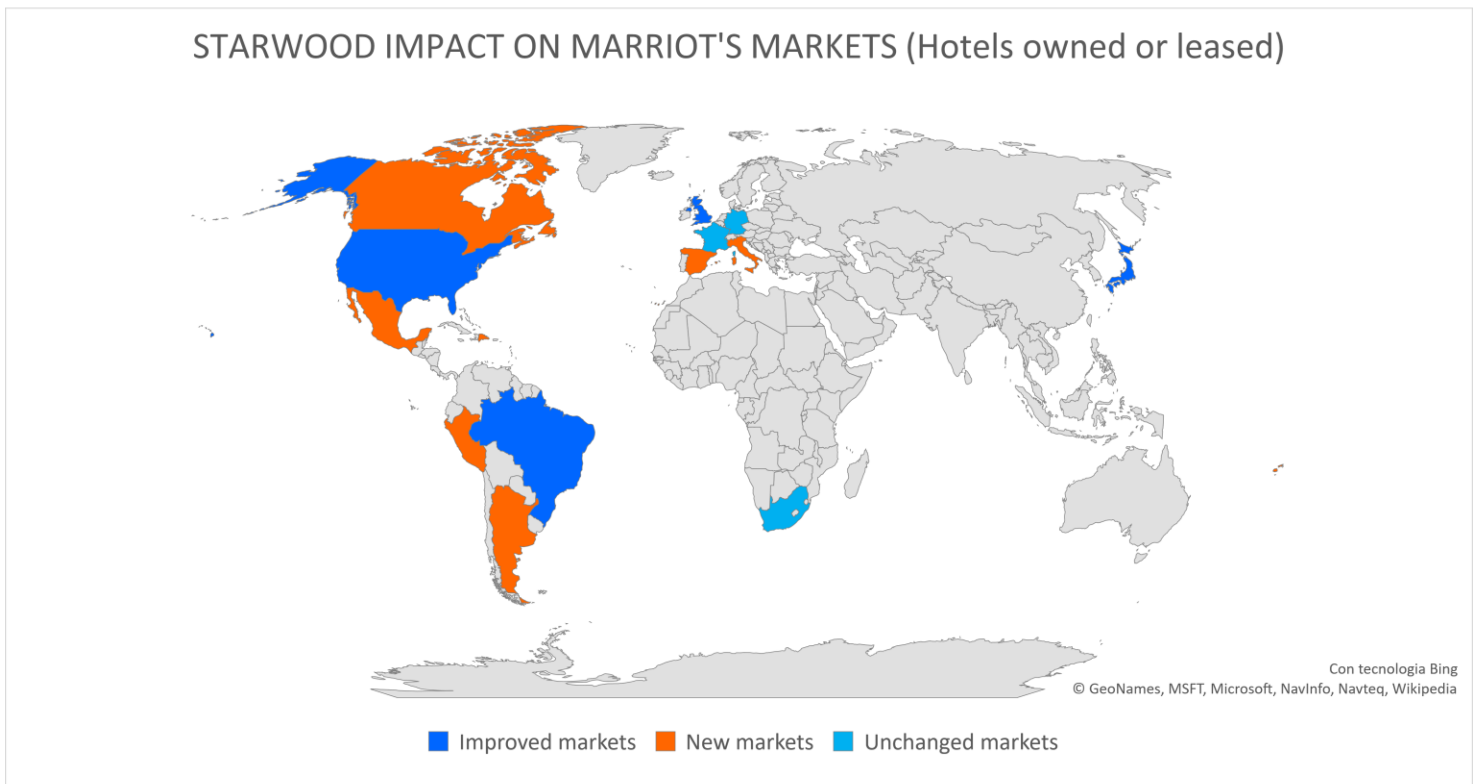

Figure 4.16: Marriott's owned hotels in the world after Starwood integration

Source: Elaborated from Marriott's annual report 2017

The acquisition of Starwood had significant impacts on the number of hotels directly owned or leased from third parties. Before the deal, Marriott was excluded from the ownership in many key markets across the globe, a gap difficult to fill given the cumbersomeness of bureaucracy and legislation in emergent and developed countries, which makes organic growth, through the construction from zero of new buildings, complex to achieve. Among the regions of the world interested by the integration, Latin America was the one with the greatest relative increase in the number of owned rooms, with a growth of 375,71%, equivalent to 2.645 new added rooms. Asia witnessed a strong growth too, although starting from a lower base: the combined entity controlled 703 more rooms, corresponding to a

281,2% growth. Marriott managed in a single deal to penetrate Argentina, where it added 921 rooms, becoming the second most important market after Brazil in Latin America; Perú, with 431 rooms; Mexico, with 755 rooms; Spain, with 760 rooms; Domenic Republic, with 300 rooms; Italy, where it added just 105 rooms only in the city of Milan; Canada, which passed from absence of owned entities to be the second country, after US, for number of owned rooms; all places in which the company was present only with franchised properties and in which now had a stable presence.

Moreover, Marriott strengthened its presence in other important markets: it added 1.955 rooms in the US, taking to 6.942 the number of owned rooms; more than doubled its presence in Brazil, where just before the 2016's summer Olympic games it added 538 rooms, all located in Rio de Janeiro; almost doubled the number of rooms owned in Japan, broadening its presence from the sole Tokyo to Osaka.

After the conclusion of the deal, Marriot decided to sell part of the hotels acquired in the Starwood combination, which were not taken into consideration in the analysis and comprehended:

- the Sheraton Centre Toronto Hotel, a North American Full-Service property that was owned on a long-term ground lease and was sold in the fourth quarter of 2007 for 268 million dollars, paid in cash.
- the Westin Maui, a North American Full-Service property that was owned on a long-term ground lease, and from which Marriott received 306 million dollars cash in the first quarter of 2017.
- The St. Regis San Francisco, a North American Full-Service property, sold for 165 million dollars in the fourth quarter of 2016, all paid in cash.
- the Charlotte Marriott City Center, a North American Full-Service property, which was sold for 169 million dollars in the second quarter of 2017, paid in cash. Due to the transaction, the value of 24 million dollars was recorded as gain in the income statements of the year.

A keener glance on the detail of US's cities impacted by the merge reveals some compelling insights about the strategic factors at play in the acquisition: the combination was in part motivated by the willingness of Marriott to expand its presence in big American cities, to

achieve important competitive advantages given by scale. Some of these cities are living an explosion in the number of hosted conferences, business meetings and convention of any topic, from scientific to entertainment. As these events become bigger in size, they tend to move where there is an organizational structure sufficient to welcome, host and transport a large number of people. If this number increases enough, the list of cities capable to offer such infrastructures dwindles, so the remaining ones increase their strategic importance for lodging chains. Having a sufficient number of structures in these cities, where many events succeed one another, impact disproportionally on the results, because big chains fill their hotels while distributing their clientele, and organizing it when there is a big customer like a business company representing many people, without losing it if they are too big. Among the purchased entities, many were in some big cities, further strengthening Marriott possibility to exploit this trend: indeed, New York increased the number of rooms to 1.064, as did Buenos Aires and Nadi in the Fiji, all places where the traffic for big events is high.

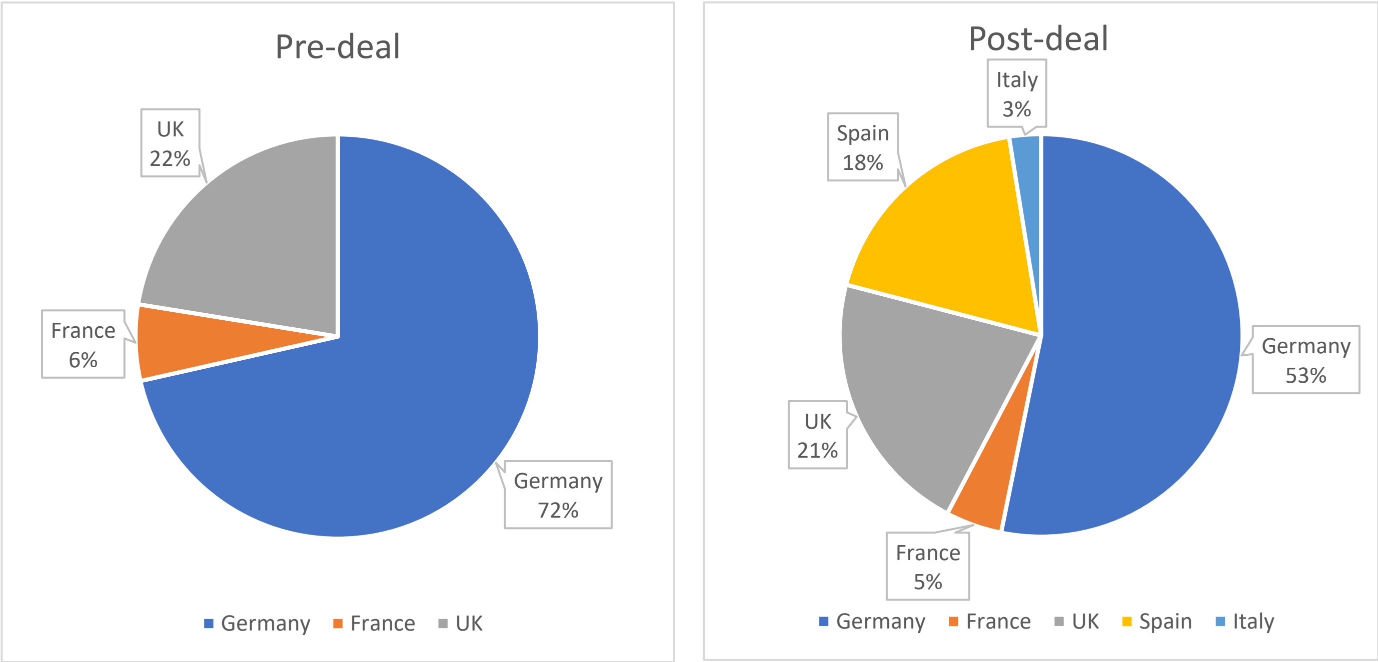

Figure 4.17: Marriott's European change in owned hotels

Source: Elaborated from Marriott's annual reports 2015-2017

The impact of Starwood ownership of hotels was particularly consequential in Europe, where before the acquisition Marriott owned only three hotels located outside Germany, two in United Kingdom and one in France. The outlook post-merge is much more diversified, with Marriott still retaining seven hotels in the Germany and one in France, but increasing its presence in UK, with the addition of W London – Leicester Square, and entering Spain and Italy for the ownership business. The spread of entities across the continent gives Marriott more leverage to expand in each of the markets, thanks to the direct access to the territory's resources and services.

CASE STUDY 5: INTERCONTINENTAL HOTELS GROUP ACQUIRES KIMPTON HOTEL & RESTAURANT GROUP INC.

THE COMPANY

InterContinental Hotels Group is a British hospitality company based in Denham, Buckinghamshire, where it has its headquarter. IHG owns several brands and all in all possesses 776’982 guest rooms distributed in more than 5’409 hotels across something like 100 countries. Established in 1946 when the founder of Pan American Airways decided to diversify his reserves of surplus cash in something still inherent to the sector of tourism to maintain the advantage given by the competences accumulated. Nine hotel brands operate under IHG mainly in the upper scale segment, providing luxury accommodation in America where the chain has 62% of the rooms, in Europe with 14% of the rooms, in Greater China with 13% of the rooms, and in AMEA with the remaining 11%. After the arrangement of may 2018, where IHG launched in agreement with Convivio the upscale brand VOCO Hotels opening 12 high-quality hotels in the UK and one pipeline hotel, IHG became the UK’s leading luxury hotel operator. Principal location of the business in the headquarter are London, Manchester (where the first hotel branded Kimpton will be opened in 2019), Edinburgh and Glasgow. The group registered US$1’784 million revenue in 2017 growing 4,0% from the previous year, this results in an operating profit before exceptional items of US$759 million coming for 57% from America.

THE TARGET

Kimpton Hotel & Restaurant Group Inc. is based in San Francisco, California, where it established its first boutique in 1981. Kimpton is a fully asset-light business managing 62 hotels without any ownership loading the Balance Sheet. In 2011 the group was the largest chain of boutique hotels in the United States operating with 65 accommodations, all but the

Kimpton Seafire Resort + Spa inGrand Cayman, Cayman Islands and the Kimpton De Witt in Amsterdam located in the United States. Here comes the newly desire of the company to go global matching the experience accumulated in the boutique business model with the customers' needs all around the world. The company has all its boutique under its brand name except for Hotel Palomar and Hotel Monaco, two sub-brands launched in 2005 after the proposal of a project strengthening the position of the brand in the major cities in the US as Baltimore, Washington, Philadelphia, Los Angeles, San Diego. Its peculiar characteristic resides in its reputation as a pet-friendly place, as it is one of the only luxury brands in the field willing to host domestic animals. According to Fortune, Kimpton Hotel was listed as the #11 best company to work for in 2015, employing 7,725 individuals in the United States.

THE DEAL

In 2015 IHG acquired Kimpton Hotels & Restaurants creating the world's largest boutique hotel business. The acquisition was made for US$430 million entirely paid in cash. With the transaction IHG enters in the fastest growing segment of hospitality: the boutique business. This is a very complementary business comparing to what was IHG's model opening new opportunities for the company. Kimpton is expected to accelerate after the deal, with the more optimistic predictions seeing a duplicated EBITDA for the end of 2018. The relief associated with the amortization coming from the asset sale of the transaction reduced the taxation of the same year by US$160 million.

Starting in early 2018 Kimpton Karma Rewards is becoming part of IHG Rewards Club meaning that members of both clubs will have access to a single reward point system. "With the increased portfolio of hotels – 80 times more hotels than what we've been able to offer – our members can now travel all around the world earning and redeeming points, including new international Kimpton destinations," says Kathleen Reidenbach, chief commercial officer for Kimpton.

PERFORMANCES

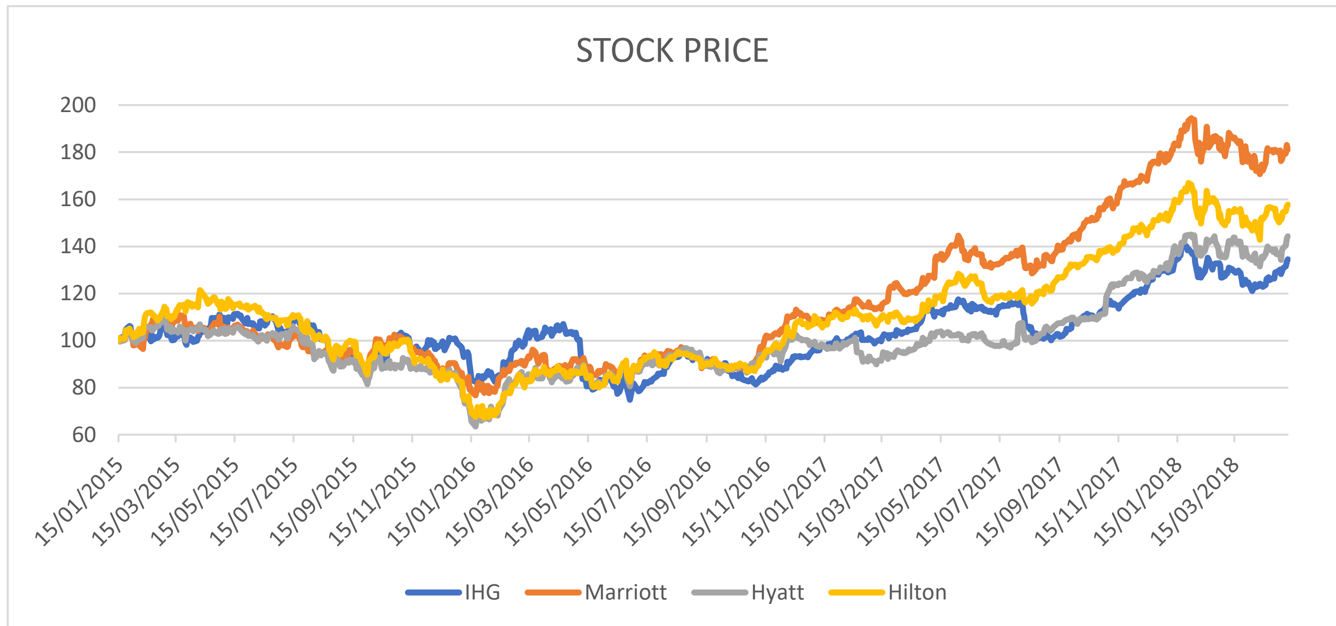

Figure 4.17: IHG' stock price after the acquisition

Source: Yahoo Finance

After the closure of the deal, IHG' stock price seemed not to be affected by the operation. Throughout 2015, it maintained its value without deviating much from the trend of the sector, which was mostly flat. Although the company can claim that its value improved to this date, as it has been growing nearly 40% since the acquisition, the comparison with its main competitors is disheartening: even excluding the excellent performance of Marriott in the last months, IHG was not able to fully exploit the bulling spirits of hospitality sector in the market. In terms of growth, it tails its core competitors, perhaps as a result of the hesitant strains to diversify its portfolio of brands and to untie its offer from the North American market. Investors may have awarded other firms capacity to use merger and acquisition to expand in new, growing, markets in the East, rather than just adding up rooms to the balance sheet.

(Millions of dollars)	2017	2016	2015	2014	2013
Revenue	1.784	1.715	1.803	1.858	1.903
Cost of sales	-608	-580	-640	-741	-784
Administrative expenses	-379	-352	-420	-483	-541
Share of gains/(losses) of associates and joint ventures	3	-2	-3	-	6
Other operating income and expenses	84	9	891	146	172
EBITDA	884	790	1.631	776	758
Depreciation and amortization	-103	-96	-96	-96	-85
Impairment charges	-18	-16	-36	–	–
Operating profit	763	678	1.499	680	673
Financial income	4	6	5	3	5
Financial expenses	-89	-93	-92	-83	-78
Profit before tax	678	591	1.412	600	600
Tax	-85	-174	-188	-208	-226
Profit for the year from continuing operations	593	417	1.224	392	374

Table 4.7: IHG's income statement for selected years

Source: Elaborated from IHG's annual reports 2013-2017

After peaking in 2013, revenues for the group have been in steady decline, with a small inversion in the trend in 2017, were they resumed moving upwards; at 1.784 million dollars, they were still down 6,25% from the high of five years before. During the year ended 31 December 2016, revenue decreased by 88 million dollars, or 4.9%, to 1.715 million dollars, primarily as a result of the sale of InterContinental Paris and Le Grand and InterContinental Hong Kong, while 2015 revenues decreased by 55 million dollars, that's 3.0%, to 1.803 million dollars, primarily because of the disposal of owned hotels in the optic of an asset-light strategy. Indeed, these sales reflect the decision of the company in 2015 to steer away from owned properties to follow a path of asset reduction, in order to cut costs and risks related to the ownership of lodging entities and raise margins. As a consequence of the firm's concentration in the not-proprietary business, much of the revenues in either year came in the form of fees from managed or franchised entities, which in 2017 amounted to 619 and 833 million dollars respectively, while central revenues and revenues from owned or leased properties were just over 300 million dollars. These proportions increased suddenly in 2016, when fees passed from an average of 61% of the total in the latest two years to 82% an 85% respectively in subsequent years, as a consequence of the asset-light strategy.

Revenues analysis for segment provides compelling outcomes: in the last three years of the period considered, at least 50% of revenues came from US: the proportion in 2013 was 36%. The acquisition of Kimpton in January 2015 did not ameliorate the situation in this optic, since the majority of the added properties were in North America. This lack of diversification may be a source of risk in the long term, since a downturn in the world biggest economy can blow a huge worsening in the company performances; moreover, because of this focus, some of the opportunities of developing countries and emerging economies may be left for competitors to catch.

On the other hand, exposition to the US market translated in huge benefits in 2017, when significant US tax reform that was enacted on 22 December 2017 translated in a drop in the impact of tax on profits worth 108 million dollars. This includes a current tax charge of 32 million dollars, relating predominantly to the company's estimated 'transition tax' liability on

previously undistributed earnings of foreign subsidiaries of US entities, and a deferred tax credit of 140 million dollars, being principally the impact of the US federal tax rate reduction from 35% to 21% (effective on January 1, 2018) on the firm′s deferred tax liabilities, as well as the release of liabilities related to undistributed post-acquisition earnings of subsidiaries that are no longer required under current laws. In addition, a deferred tax credit of 10 million dollars arises on the release of a contingency, previously charged as an exceptional item, which is no longer required due to statute of limitations expiry.

Other operating incomes and expenses refers principally to the disposal of hotels: the sale of Intercontinental′ hotels in Paris and Hong Kong for nearly 1,3 billion dollars produced an extraordinary income of 891 million dollars. To avoid distortion in the analysis, further ratios and margins calculation will neglect this operation, in order to focus the attention on trend and behavior of normalized results.

Before continuing in the analysis of profitability, some of the complication arising from balance sheet of the company must be addressed. Shareholder′s equity was negative in four out of the five latest years. This complicates the analysis as normal measures of profitability, like ROE, and of indebtedness, like leverage ratio, lose their normal meaning, and in some cases become simply not significant. Negative value is the result of a process of reorganization unraveled throughout the 2004-2006′s triennial. Purchases and cancellations of shares under the 250 million English sterling share repurchase program, announced in September 2004, continued during 2005, during which a total of 30.600.010 shares were repurchased and cancelled at an average price of 672 pence per share; the operation was completed on April 11, 2006. The reason for the share repurchase was probably the recognition by executives of lower cost of debt compared with higher cost of capital and an undervaluation of the shares on the market, reasons that justified the choice to payback shareholders and widen sources of leveraged finance. However, since the nominal value of the shares was reduced from 625 to 10 pence, the revaluation created a disparity in balance sheet between assets and total liabilities, with the former valued at a lower price. From an accounting perspective, this disparity was accounted as revaluation reserve, included under the voice "other reserves", and amounted at 2.990 million dollars for the last fifteen years of

operations. Since this figure remained almost unchanged, in every year the amount, and even the sign, of shareholders' equity depended, for most part, from the firm capacity to create and retain profits.

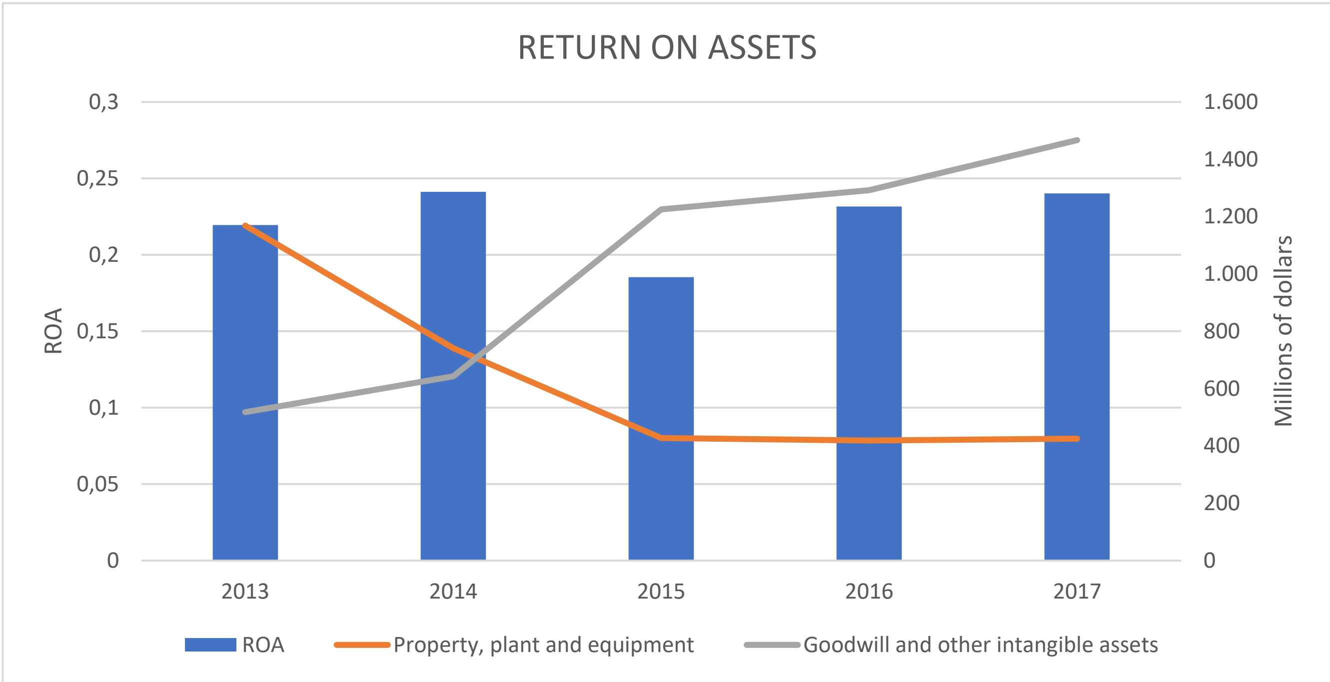

Figure 4.18: IHG' ROA decomposed

Source: Elaborated from IHG's annual reports 2013-2017

Return on asset, calculated as the ratio of operating profit over total assets, had a small overall increase to 24% in 2017 from the 21% of five years before, with no significant wobbles excluding a substantial plunge in 2015. Operating profit was stable for the period, with an amount not varying much from an average 700 million dollars. The analysis of the denominator provides more interesting insights: indeed, due to the discipline imposed by an asset-light strategy, the share of asset coming from owned properties dwindled constantly over the period, from a value of 1.169 million dollars in 2013 to 425 million dollars in 2017. This reduction, which should have levitated the ratio, was counterbalanced by the increase in the value of goodwill on the accounting book, driven by the wave of deals prompted by the

acquisition of Kimpton. This explains the important drop in the value in 2015, when the reduction in properties worth 300 million dollars was outweighed by additional goodwill for 600 million dollars.

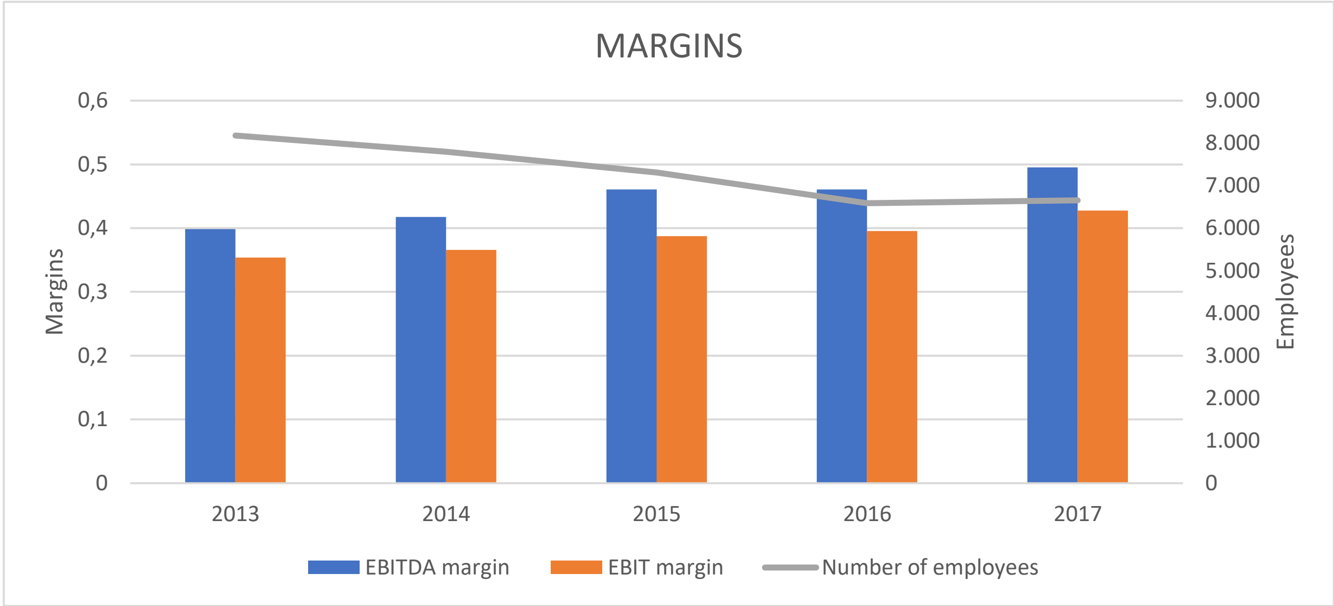

Figure 4.19: IHG's margins and number of employees

Source: Elaborated from IHG's annual reports 2013-2017

In the period considered, EBITDA margin and EBIT margin followed similar paths, as the difference between the two remained almost constant at an average 6%, reflecting the low amount of D&A and impairment losses, consequences of light-asset strategy shift. EBITDA margin improved over the years, passing from 39,8% of revenues in 2013 to 49,55% in 2017. This was mainly imputable to the reduction of administrative costs and cost of sales, which both declined at a faster pace in respect to, also contracting, revenues. Administrative costs dwindled thanks to the reduction in personnel expenses: IHG's employees were 6.658 thousand in 2017, 1.527 thousand less than five years before. Still, the number of employees augmented marginally in almost all countries in which the IHG operates, with the big exception of China, where in the 2014-2016's triennial more than two thirds of the original 1.092 thousand workers were laid off.

LIQUIDITY

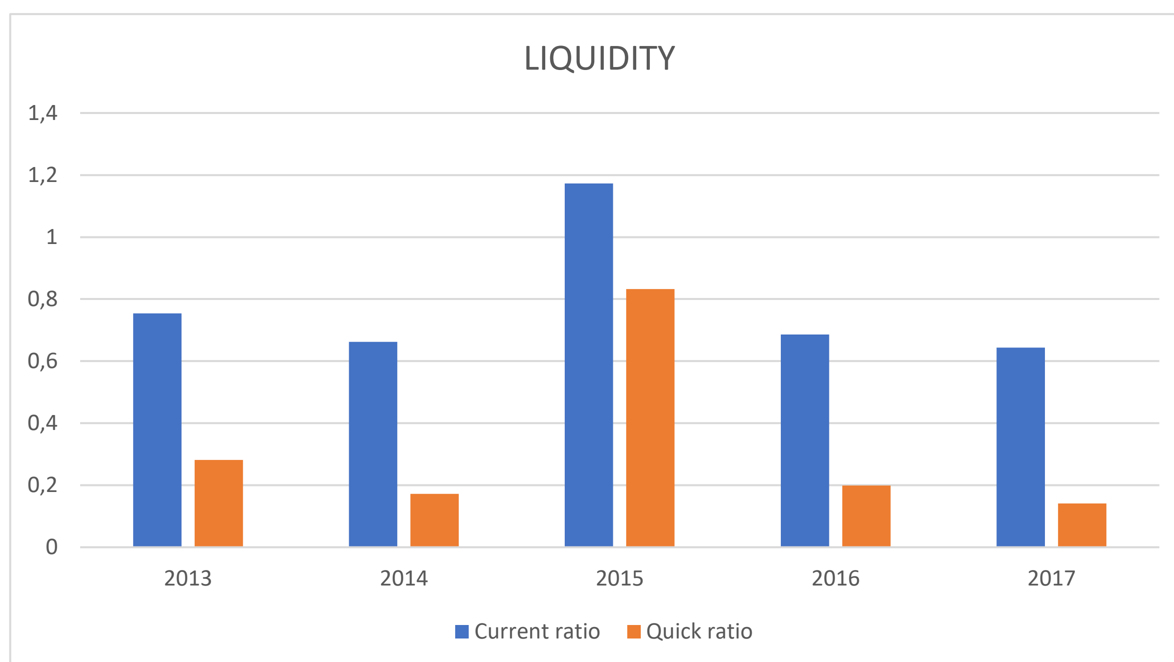

Figure 4.20: IHG's liquidity ratios

Source: Elaborated from IHG's annual reports 2013-2017

Liquidity represents an important risk for the company, since its capability to sustain short-term obligations is bleak. Current ratio is higher than one in just one year, besides biased by huge cash inflows from divestments, while it is under the threshold of 80% for most of the period. The situation appears to be even worse looking at the quick ratio, which considers only high-quality liquid items, like cash and short term financial assets. Since most of the company's current assets are represented by trade receivable, quick ratio is an alarming 32,5% of current liabilities on average in five years and has been lower than 20% for three out of five years: this low level of short-term finances exposed the firm to liquidity shocks, though the risk is partly mitigated by low level of current debt compared with sector benchmarks and wide possibility to raise debt, since it had an average interest coverage ratio as high as 9,79 in last five years. Moreover, to cover for the risk of low liquidity, IHG signed short and long term credit facilities with banks, from which it can withdraw in one year up

to 1.420 million dollars to cover current financial needs. This sum is divided in committed terms, worth 1.350 million dollars, and uncommitted, accounting for 70 million dollars.

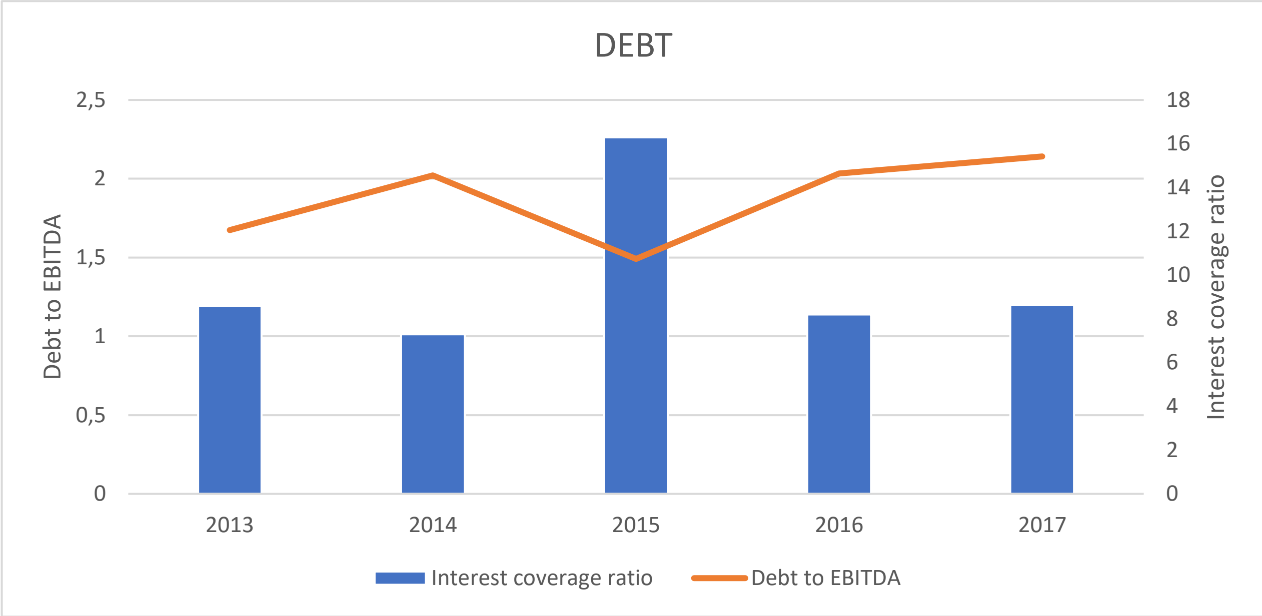

Figure 4.21: IHG's debt coverage ratios

Source: Elaborated from IHG's annual reports 2013-2017

Since leverage is not significant in most of the years, Debt to equity ratio was adopted to understand the level of indebtment of the company. IHG has a manageable debt, which increased in recent years as a source of financing for acquisition, reaching in 2017 the amount of 2.019 million dollars. In case of a shock, IHG would be able to repay its debt, in general terms, in roughly two years on average, resembling a strong financial position and a low credit risk outlook. On the other hand, the lowest value for the interest coverage ratio is the 7,29 computed in 2014 due to low margins, while it was more than 8 in any other year of the examination. The maturity in 2015 of bonds with high interest rate caused the surge in the measure, which reached a 16,3 peak: when new bonds were issued the following year, the ratio regressed to the mean, but still improved compared to 2014 thanks to higher margins. Much of the debt is detained in English sterling, although much of the revenues are collected

in dollars and other foreign currencies, exposing the company to significant currency risk if the Sterling was to strongly rebound and appreciate in coming years.

STRUCTURE OF THE DEBT

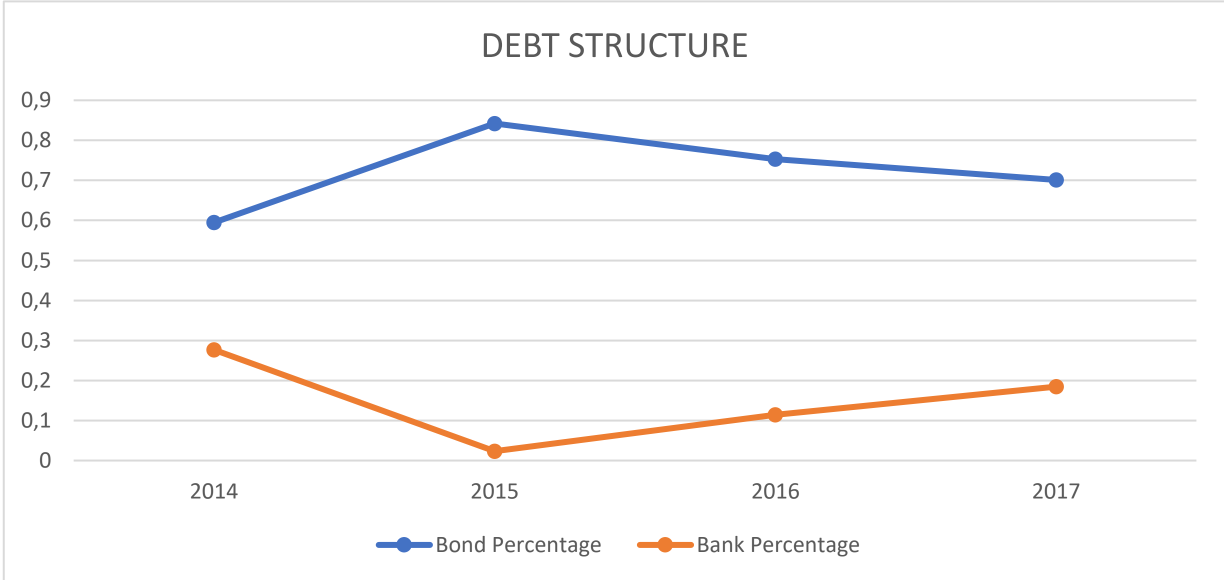

Figure 4.22: IHG's debt structure

Source: Elaborated from IHG's annual reports 2013-2017

The structure of debt didn't change much in the quadrennial concerning the acquisition, with a net wobble in 2015 followed by a small adjustment and a flat trend in the two years after. The portion of debt held in bonds represented the 59,47% of total debt in 2014 and increased even more in the three following year, reaching 70,13% in 2017. The space for the increase was freed by bank loans, both secured and unsecured, which dwindled to almost nothing in 2015, before rebounding to 372 million dollars in 2017, 110 million dollars of which constituted by bank overdrafts. the percentage of loans from financial institutions accounted for 18,42% of total debt in 2017. Beside these two categories, the remaining part of the leverage was represented by financial leasing, worth 218 and 231 million dollars in 2014 and 2017 respectively. These financial obligations referred disproportionally to the 99-year lease on the InterContinental Boston hotel, which will expire in 2105. Interests are paid at

periodical intervals of the lease and correspond to a 9,7% interest rate. IHG retains two options to extend this lease for additional 20 years and, assuming it will not exercise them, will pay a total of 3.317 million dollars over the century, which translates to 231 million dollars at present value.

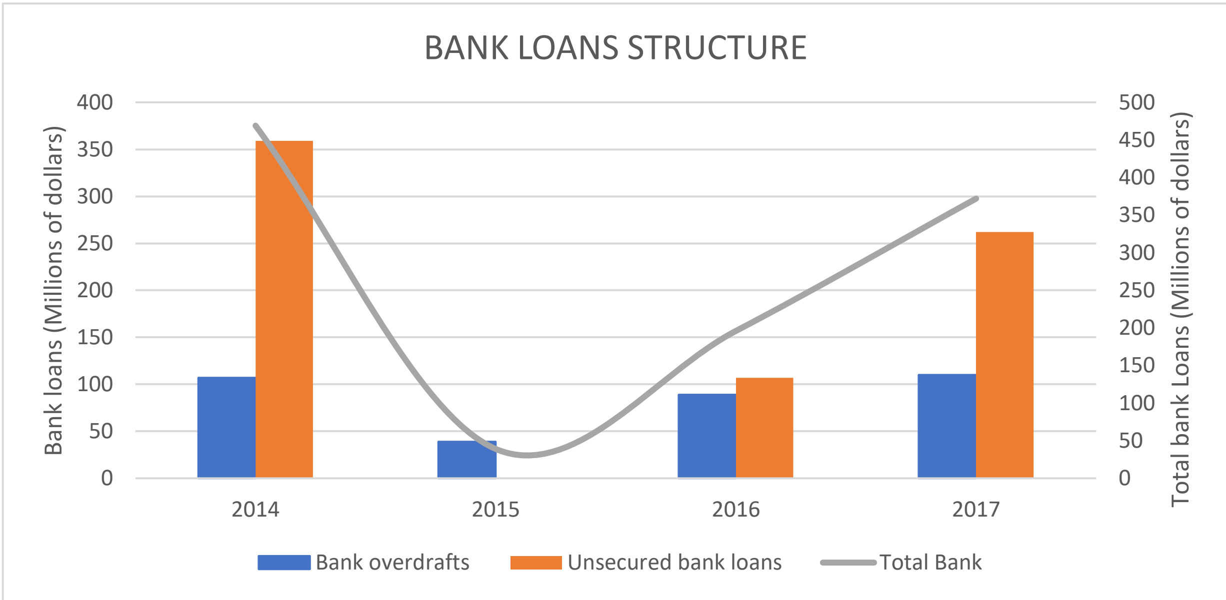

Figure 4.23: IHG's bank loans structure

Source: Elaborated from IHG's annual reports 2014-2017

IHG had just one secured loan in the period, which was erased in 2015. The secured bank loan referred to a mortgage signed on a New Zeeland hotel, so detained in New Zeeland dollars, that was repayable at periodical instalments; the investment in the hotel was disposed of in 2015.

Unsecured bank loans refer to credits acquired under syndicated and bilateral arrangements implemented for IHG on a bespoken service. In 2015, IHG successfully replaced a five-year revolving facility maturing in November 2016, worth 1,07 billion dollars, with a syndicated facility maturing in March 2020. This credit line reckoned for a 1.275 million dollars coverage, with two options for one-year extension at maturity; the net effect of the operation was a reduction on the interest rate payable. On the other hand, the bilateral facility is

constituted by a 75 million dollars revolving credit facility which will mature in March 2022, two years after the initial deadline, since two one-year extension option were exercised in 2016 and 2017. The term and covenants applied are the same for the two facilities: IHG pays a floating interest rate on drawn amounts of both credit lines, which was 2.15% at yearend 2017; both facilities remained unused in 2015 and 2016.

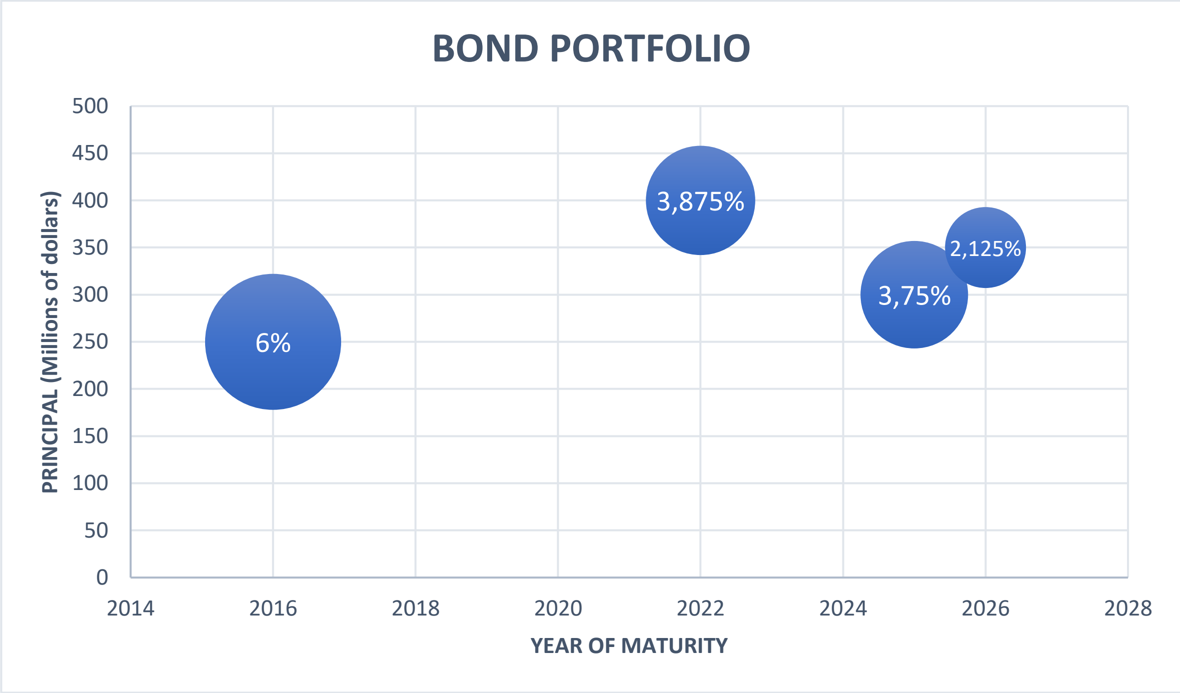

Figure 4.24: IHG's bonds structure

Source: Elaborated from IHG's annual report 2017

The structure of IHG's bonds portfolio was rearranged in 2016 to a more efficient deployment, after the maturity of a tranche on which it paid an high interest rate. The portfolio was constituted in 2014 by the following obligations:

- 250 million pounds bonds maturing in 2016 at 6% interest rate, issued in 2009 at 99,465% of face value and with coupon payable once a year on December 9. The issue was unsecured.

- 400 million pounds bonds maturing in 2022 at 3,875% interest rate, issued in 2012 at 98,787% of face value and with coupon payable annually on November 28. The issue was unsecured.
- 300 million pounds bonds maturing in 2025 at 3,75% interest rate, issued in 2015 at 99,014% of face value and with coupon payable annually on August 14. The issue was unsecured.
- 350 million pounds bonds maturing 2026 at 2,125% interest rate, issued in 2016 at 99,45% of face value and with coupon payable annually on August 24. The issue was unsecured.

At the maturity of the oldest bonds in 2016, IHG managed to substitute them with a 350 million pounds issue at an interest of 2,215%, which was 3,875% lower than the previous one, resulting in important savings for the firm. The difference was mainly due to the opposite financial environment on the back of the issues, with the former placed in a period of financial mistrust and borrowing restrictions, while the last was still in the middle of the financial easing regime from the ECB and the Bank of England, which kept interest rates low to foster lending and investments.

CURRENCY RISK

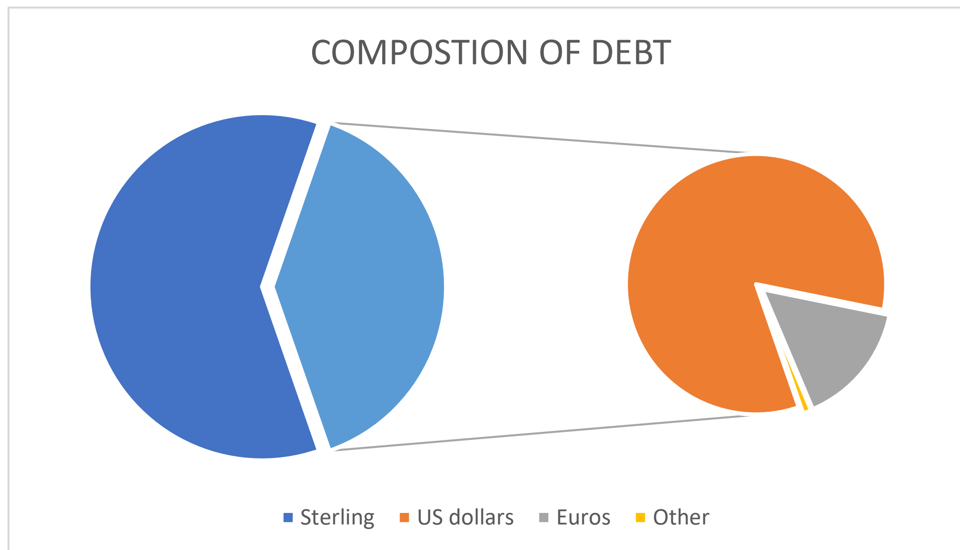

Figure 4.25: IHG's debt divided by currency denomination

Source: Elaborated from IHG's annual report 2017

Most of the debt of IHG is denominated in its domestic currency, the English sterling, while most of its revenues are collected in US and then recorded in US dollars. This unbalance is a source of uncertainty on company's profits, because it finances its operations and investments in a currency different from the one used to run the business. The share of bonds denominated in US dollars was 25,5% on average in the 2014-2015's quadrennial, with much space left for exchange rate to create troubles. Indeed, exchange rates are proverbially harsh to forecast, given the endemic uncertainty surrounding the relative purchase power of different nations. If the pound were to appreciate or the dollar to plumb for any given reason, the company would see its debt surge in real terms, weighing on profits and credit reputation.

However, IHG is hardly the first company with major part of its operations in foreign countries: what is most surprising is not the amount of the unbalance in currency borrowings, but its lack of a hedging strategy to cover the risk and fix incomes.

The issue of 250 million pounds in 2009 was the only one accompanied by currency swaps, transacted to transfer the proceeds and interest rates into US dollars, but they were terminated in 2014, two years before the maturity of connected bonds, and never replaced.

IHG claims to cover itself from spot exchange rate risk by hedging a portion of foreign currency income with forward exchange contracts, but in the 2015-2017′s triennial no such contract, or any derivative equivalent, was in place. The purchase of Kimpton further compounded this situation, since all acquired hotels were in the US and so billed customers in US dollars for their services.

TRANSACTION

Transaction total value (all amount in million dollars)	
Brands	193
Management contracts	71
Software	2
Property, plant and equipment	3
Other financial assets	10
Trade and other receivables	29
Cash and cash equivalents	3
Trade and other payables	-27
Non-current liabilities	-10
Net identifiable assets acquired	274
Goodwill	167
Total purchase consideration	441

Table 4.8: Kimpton consolidation in detail

Source: Elaborated from IHG's annual report 2015

IHG acquired Kimpton Hotel and Restaurant Group, LLC on January 16, 2015 and recognized the identifiable assets and liabilities acquired at fair value, with the difference between the fair value of net assets acquired and price paid accounted as goodwill. The most significant assets acquired were intangible assets, so the company, assisted by an independent valuation specialist, began their identification and valuation. As a result of the valuation exercise, management contract assets worth 71 million dollars, brand assets worth 193 million dollars and goodwill worth 167 million dollars were documented. The management contracts were valued using an excess earnings approach and the brands using the relief-from-royalty method; brands were deemed to have an indefinite life.

On 13 January 2015, to finance the acquisition of Kimpton, the Company signed a 400 million dollars loan facility agreement with Bank of America Merrill Lynch International Limited as arranger, facility agent and lender. The loan had a term of six months plus two six-month extension periods, one of which was exercised in June 2015. The interest margin payable on borrowings was LIBOR + 0.6%, increasing to LIBOR + 0.8% and LIBOR +1.0% for the first and second six-month extension periods respectively. The facility was terminated in August 2015.

OPERATING PERFORMANCE INDICATORS

	Occupancy		Average Daily Rate		RevPar	
	2017	2016	2017	2016	2017	2016
America	76,88%	75,89%	$ 173,43	$ 169,76	$ 136,13	$ 131,08
Europe	75,56%	73,16%	$ 143,50	$ 147,13	$ 107,92	$ 107,18
AMEA	74,33%	74,34%	$ 114,17	$ 111,75	$ 85,22	$ 82,78
Greater China	70,44%	72,17%	$ 152,58	$ 143,67	$ 112,29	$ 105,83

Table 4.9: IHG's operating performances for selected years

Source: Elaborated from IHG's annual reports 2016-2017

Data shown are aggregated for line of business (managed, franchised and owned properties), then averaged: segmentation for geographic areas was maintained. During the last couple of years, all key performance indicators improved in every region except for China. Occupancy of rooms had a slight increase from 73,89% to 74,3% on average in 2016-2017's biennial, fostered by good improvements in Europe and despite being hindered by slowdowns in Greater China. Overall, average occupancy rate in 2017 was its highest level ever recorded, topping the peak set in 2015. Average Daily Rate was down 6,47% in 2017, a drop attributable to a plunge in level of prices for hotel rooms in China and a small dwindle in Europe, not counterbalanced by marginal improvements in Americas and AMEA.

IHG's comparable RevPar in the Americas increased by 3,86%, driven by 2.16% average daily rate growth. The region is predominantly represented by the US, where comparable RevPar increased by 4,12%, with 5,63% growth in the fourth quarter led by demand in hurricane impacted areas. IHG's regional RevPar in Europe had a minor gain of 0,69%, prompted by high level of occupancy and small average daily rate growth. In AMEA overall IHG regional RevPar increased by 2,95%, driven by Average Daily Rate growth. Performances outside the Middle East was strong with 4.4% RevPar growth overall, led by strong sales in the mature markets of Australia, where RevPar increased by 4.5%, ahead of the industry average of 2,8%, and in Japan, where RevPar increased by 2.7%. The Middle East RevPar was down 4.1%, impacted by low oil prices and industry wide supply growth: Egypt was the only exception, with a strong increase in RevPar equal to 3,4%.

Considering the general trend for the lodging industry, RevPar in Greater China increased by 5.2%, thanks to strong demand gains and the first average daily rate increase in over a decade. RevPAR declined from 2010 to 2016, while demand has been robust, but performances had been held back by falling average daily rate and increasing supply. Supply gains in 2017 (3.5%) were the smallest of the past 18 years. IHG's regional comparable RevPar in Greater China increased by 6.0% in 2017, slightly better than the industry 's average. The company's RevPar was driven by higher occupancy, which increased by 5.5%, whilst average daily rate grew by 0.4%. Mainland China RevPAR increased by 6.6%, led by growth of 6.9% in some of the biggest cities, due to strong transient and corporate's meeting demand.

	2017			2016		
	Average	excl. Kimpton	Impact	Average	excl. Kimpton	
Occupancy	80,86%	80,71%	0,18%	80,39%	80,05%	0,42%
Average daily rate	$ 178,27	$ 170,68	4,45%	$ 164,90	$ 153,40	7,50%
RevPAR	$ 145,77	$ 139,53	4,47%	$ 133,03	$ 123,06	8,10%

Table 4.10: Kimpton's impact on IHG's operating performances

Source: Elaborated from IHG's annual report 2016.-2017

HOTELS AND ROOMS

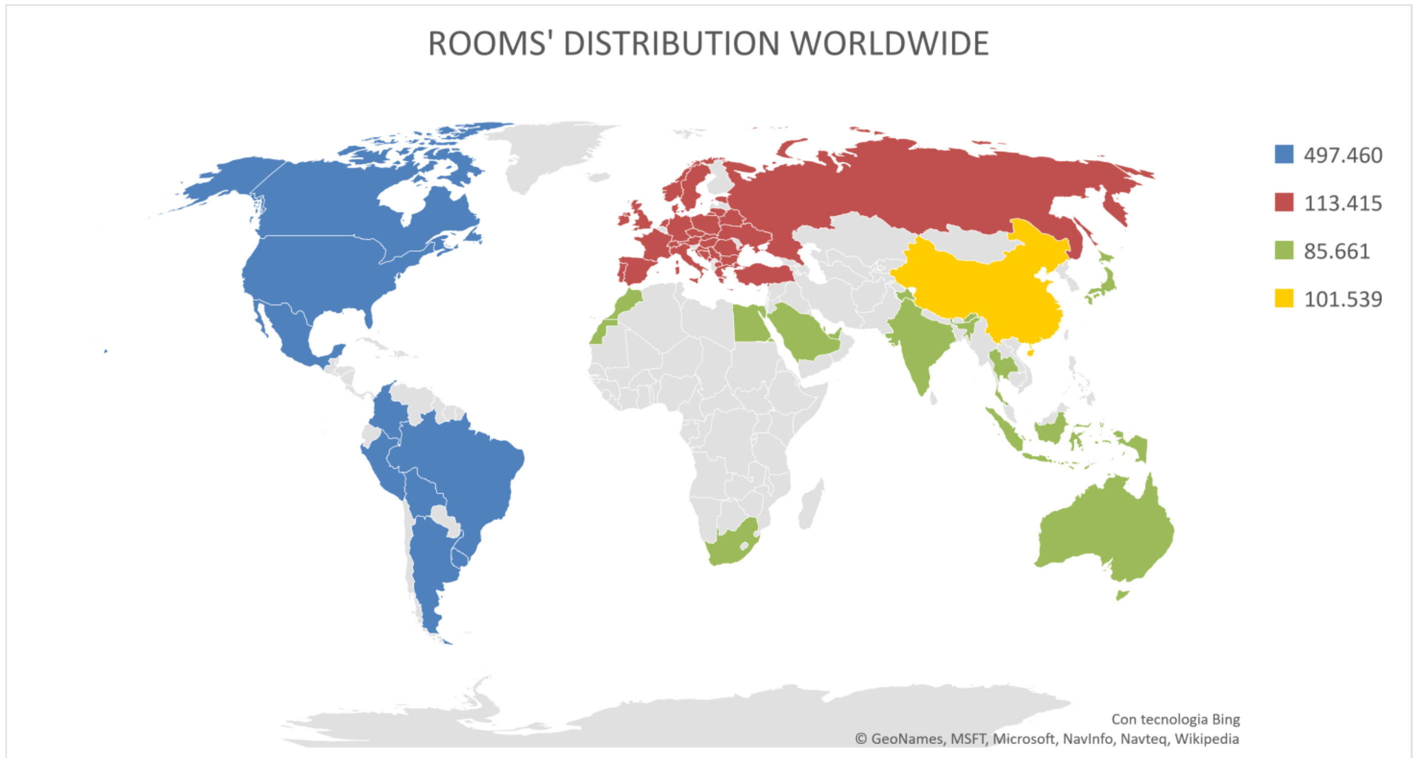

Figure 4.26: IHG's hotels and rooms worldwide

Source: Elaborated from IHG's annual report 2017

In 2017 IHG managed 5.348 different hotels worldwide, for a total of 798.075 rooms included in its offer: indeed, these data correspond to a growth of 10,5% and 12,36% respectively from pre-deal levels. The majority of the properties were located in the Americas, which accounted for 62,33% of the total controlled rooms, after the addition of Kimpton chain, which reckoned 61 hotels at the moment of the acquisition and opened seven new hotels in the subsequent triennial. Operating profit from this area accounted for 74% of the group's total, and the key markets were US, Canada, Mexico and the Caribbean. The second region for number of rooms was Europe, which accounted for 14% of the company's rooms and 10% of the operating profit. The key markets for this region were UK, Germany and continental Europe. China represents a particular case. Tough being in constant

expansion during the years, with hotel′s number passing from 241 in 2014 to 328 three years after, its revenues followed an inverse trend: indeed, revenues almost halved in the same period of rooms′ expansion. The conundrum is in part explained by the aggressive growth strategy implemented by IHG to compel tourists and businesses to shun the concurrency and chose its offer. On the other hand, the sale of part of the hotels located in some of the most profitable cities, illustrative is the case of Hong Kong, eroded on margins as well as on the average price charged, since most of the new openings were placed in tier 2 and tier 3 cities, classified as such for the lower level of development and GDP per person if compared to tier 1 cities like Beijing and Shanghai. The region′ share of the group operating profit was 6% in 2017, while it was 9% three years before.

An opposite example is AMEA, which despite having 15.878 lower rooms rather than China, accounted in 2017 for 10% of the IHG′s operating profit, thanks to higher margins in the luxury segment in Middle East′s countries like Qatar and United Emirates, and to overweighed expansion in Thailand and Indonesia.

IMPACT OF KIMPTON

The integration in IHG portfolio of Kimpton′s 67 hotels and 12.516 rooms, which accounted for 1,23% and 1,57% on the group′s total, had disproportional consequences on its performances. Kimpton′s portfolio was almost totally constituted by properties in the premium or luxury segment of the market, which is off course characterized by higher prices. This is the reason Kimpton, despite representing such a small share of the companies′ offer, reckoned for 4,47% of its consolidated revenues. Indeed, Kimpton′ sales were flat at 1,1 billion dollars in the three years after the acquisition, not altered by the opening of new hotels. So Kimpton represents still today only a small part of IHG′s catalogue, but it has an important role as cash generator. If for number of rooms it represents the lowest value of IHG′s brands, it is the fourth in terms of absolute revenues.

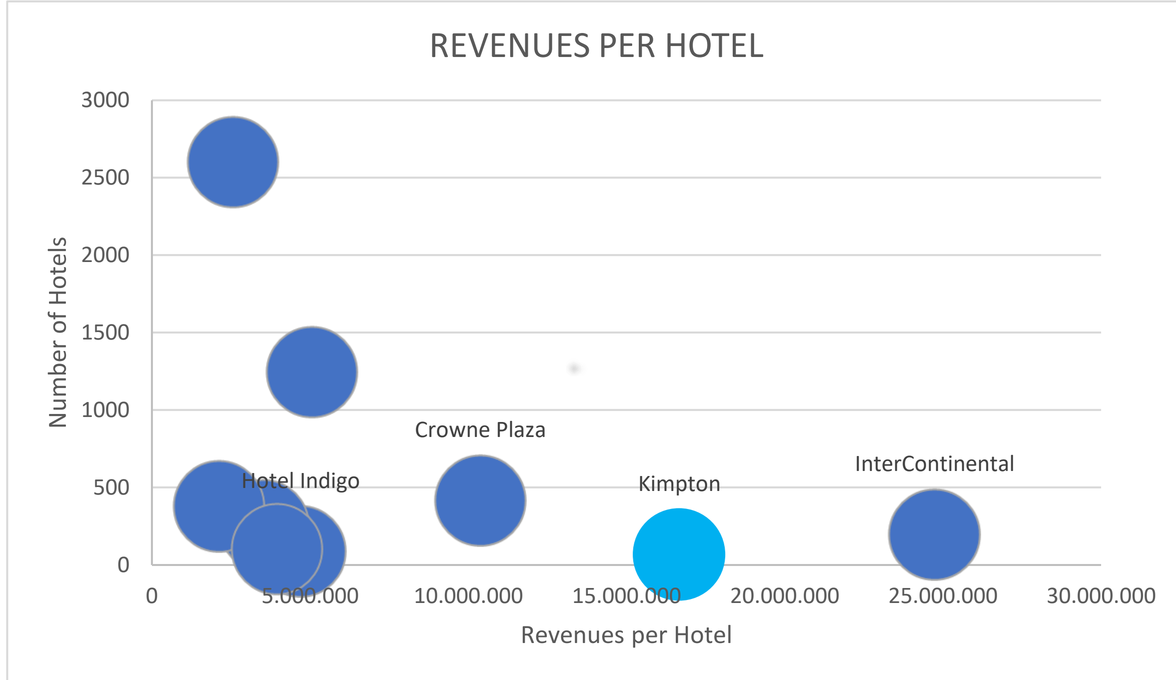

Figure 4.27: IHG's hotels and revenues

Source: Elaborated from IHG's annual report 2017

What's more, if revenues are divided for the number of hotels, the only brand more priced is Intercontinental itself. This feature can be of great importance, because it is an acknowledgement by the market of the superiority of the company' service, for which customers recognize, and pay, a price premium. This could represent an advantage if IHG will be able to link its other hotels in the luxury segment to the newly acquired chain, maybe distributing its demand in period of peaks or hotels unavailability. Indeed, if it succeeds in changing the perception of the market toward its most appreciated services, this way creating a homogeneous view of its offer, it could adjust upwards its prices to meet the new level of acceptance from the market.

Case study 6: AccorHotels acquires FRHI group

THE COMPANY

Accor S.A. is a French multinational company operating in the hospitality industry, the largest in Europe and one of the most important in the world. It owns, manages and franchises hotels, resorts, and vacation properties in 95 countries, and controls a portfolio of 25 brands ranged from the economy to the luxury segment: Sofitel, Rixos and Angsana among the others. In 2017 it controlled 4.000 hotels, employing more than 250.000 people, it amassed revenues for 1,93 billion euros and achieved a net income of 481 million euros, from an asset base of 12 billion euros.

THE TARGET

Fairmont Hotels & Resorts is lodging company with headquarter in Toronto, Canada. It was the result of the merge between Canadian Pacific Hotels and Fairmont Hotels, concluded between 1999 and 2001. Fairmont operates 75 properties in 24 countries, with a strong presence in the United States, Canada and, after major investments in 2000s, in the Asian market, especially in Greater China. The firm has an ample portfolio of brands, particularly in the luxury segment, and owns more than 70 hotels worldwide, including some of the most iconic: The Plaza in New York, The Savoy in London, Fairmont Peace Hotel in Shanghai and Fairmont Le Château Frontenac in Québec City. Among the others, the company includes in its portfolio Raffles and Swissôtel brands.

THE DEAL

The acquisition of Fairmont Raffles Hotels International (FRHI) by Accor S.A. was finalized on July 12, 2016. The acquirer paid a total of 2,7 billion euros to Fairmont's shareholder, consisting in a payment of 840 million euros in cash plus 46,7 million shares of Accor. The deal was firstly announced in December 2015 and is part of a major strategy put in place by

Accor to expand in presence in key markets in Asia, say China, and North America, say US and Canada. When the deal was first announced in December, Accor identified approximately 72 million dollars in additional benefits from the integration, mainly coming from new revenues, cost savings, job cuts and supplementary synergies developed between the two groups.

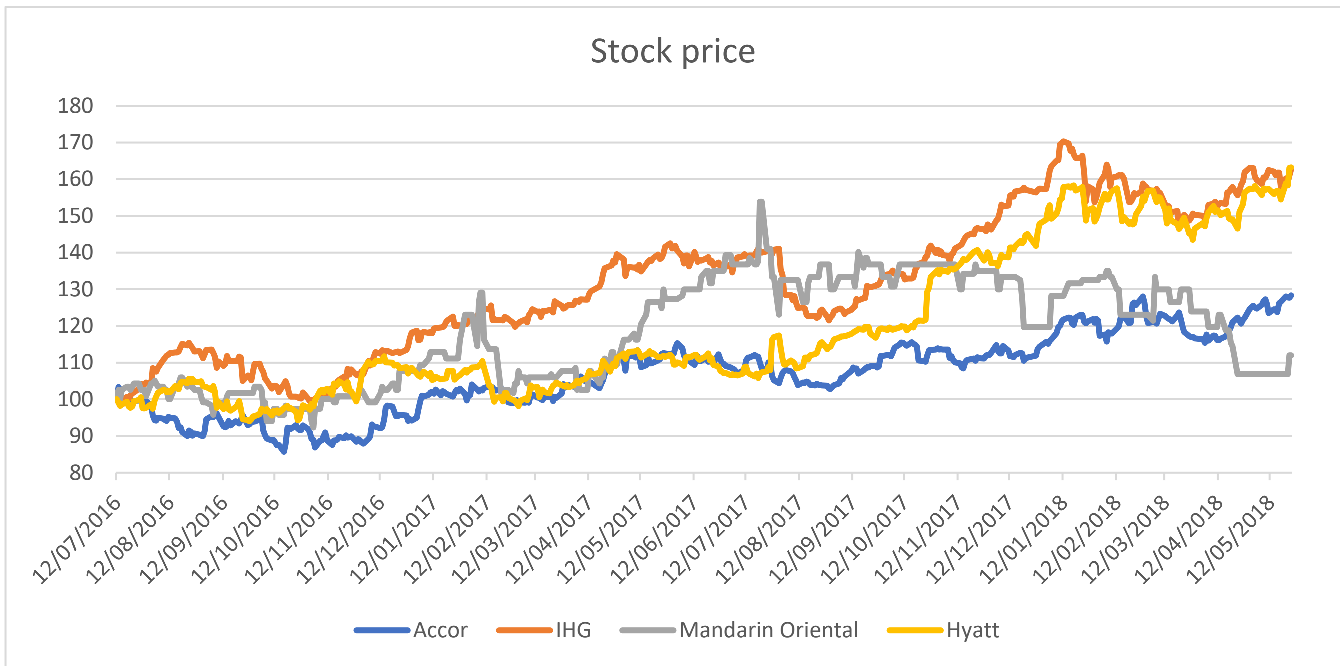

Figure 4.28: AccorHotels stock price after the acquisition

Source: Yahoo Finance

Looking at the movements of Accor's stock price after the closure of the deal, the cue is that the operation was not positively received from the market, though it is difficult to make definitive assessments since hypothesis on the degree of efficiency of the markets would have to be made in order to understand how much of the downgrade was discounted at the announcement of the deal, rather than at its conclusion. Indeed, the share lost part of its value in the successive five months of trading, with lows as deep as 10%. Things changed in the following year and a half for which data are currently available, where a sustained growth bore the value of the company to 20% more than pre-deal levels. More in general, and comparing it to its competitors, Accor seems to have missed the opportunities of a roaring market, which sustained the surge in value for many actors in the sector. As will be shown in the afterward analysis, this lack of brilliance in the market is not reflected by the results of the acquisition: once again, evaluating the performances of a single operation through a

comprehensive parameter is hazardous and risk of distortion in any finding is high. What's more, FRHI's acquisition happened in the middle of a broader wave of merges, which makes it even harsher to tether one operation to overall results.

HOTELS AND ROOMS WORLDWIDE

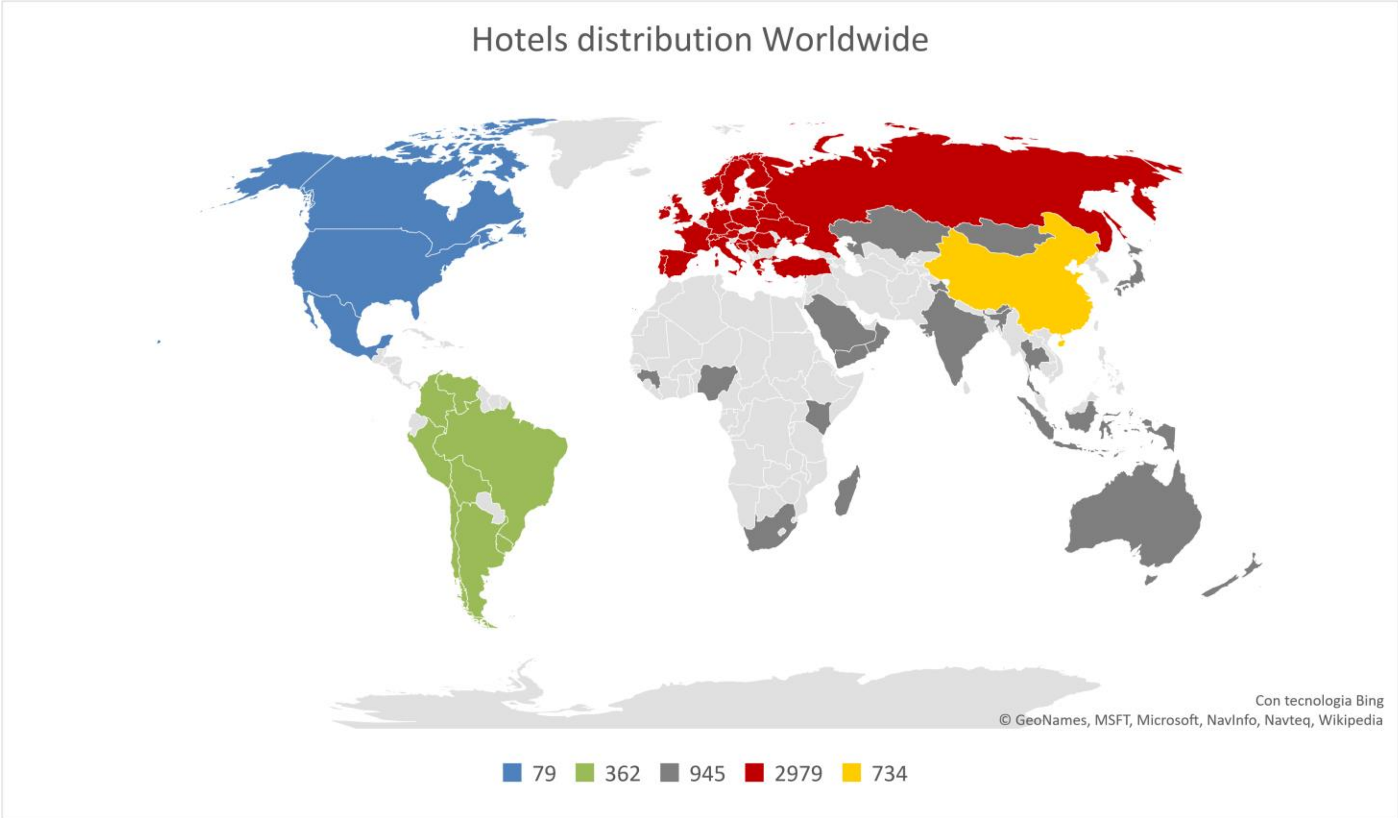

Figure 4.29: AccorHotels' hotels and rooms worldwide
Source: Elaborated from AccorHotels' annual report 2017

Accor's properties span across the world, with 5.099 hotels controlled through direct ownership or leasing in 2017. Europe is the region in which the company has the most important presence, with 2.979 managed entities in 26 countries. Revenues from the region were 819 million euros in 2017, slightly more than 50% of the group's total, as French alone accounted for 389 million euros. The region importance increased in recent years, as

expansion was driven by the construction of new buildings of already controlled chains and integration of external entities. Indeed, Accor added a 86 new hotels as part of the 715 million euros deal for the purchase of Moor Park in Germany and Netherlands; 11 hotels were united in a 176 million euros deal with Axa Real Estate, and the properties were mostly located in Switzerland; 13 new hotels related to the integration of Tritax in the United Kingdom for 89 million euros; one Sofitel property in Budapest, acquired for 43 million euros.

The AMEA region reckoned for 945 of Accor's properties in 2017, with 80% of buildings located in Asia. The region is also the second in the amount of revenues, with 576 million euros collected.

China is a strategic market for Accor, which began investing as early as in 1988, constantly expanding its presence in the region to reach 734 controlled hotels at the end of 2017. The partnership with Huazhu and the equity investments in 25Hours Hotels and Rixos hotels can be evaluated in the same optic, since all of them have a significant part of their operation in China. Indeed, the case of Huazhu is illustrative, as Accor worked with the company, which is listed on Nasdaq as China lodging, to achieve rates of growth in its portfolio superior to competitors: this strategy seemed to be effective at the moment, as in 2016 Accor signed contracts for 70 new hotels in China, nearly three times more than what it achieved two years before.

Accor's operations in Sud America included 362 hotels in 2017, number that has been increasing during the 2015-2017's triennial thanks to the aggressive growth strategy in key markets like Brazil, where Accor acquired Santa Teresa in 2016 for 23 million dollars and in the following year paid 57 million euros for 26 management contracts from BHG (Brazilian Hospitality Group). Revenues from the regions are subdued, as they represent the lowest value from any geographic segmentation, despite the fact Accor has more properties here than in North America.

This last region is truly the smallest one in terms of possession, as only a small portion of Accor's activities are situated in this location, which accounts for 79 of the company's controlled entities worldwide, corresponding to 1,55% of the total. This fact notwithstanding,

revenues from the region in 2017 were higher than Middle East and Africa combined, despite the lower number of activities, and reached 159 million euros. Triennial growth to 2017 in this area was low, but not absent, and certainly was tactically aimed. More than hotels, Accor is investing in the region in new services that could reshape the hospitality industry, or at least give it a shiver, though the strengthening of complementary services like concierge and provision of food and beverage. Accor is also trying to build a platform for all kind of services, from the lodging to the travel and the experience of the place, to include more customers in its portfolio and grew a network of activities. In this perspective, it is telling the investment in the 30% investment in Oasis, a Miami based platform for the home-meets-hotel kind of lodging.

(Millions of euros except for hotel count)	Hotels	Revenues	EBITDA	EBIT	EBIT/Hotel
Europe	2.979	819	281	272	91
AMEA	1.679	576	182	160	95
North America	79	159	96	86	1.089
Sud America	362	71	13	12	33
Worldwide	5.099	1.625	656	576	113

Table 4.11: AccorHotels' geographic results

Source: Elaborated from AccorHotels' annual report 2017

The identification of Accor's key markets changes completely if the various regions where it operates are considered from the perspective of profitability. Though Europe is the region with the highest presence of Accor's hotels, and it is where the majority of the company's profits are recorded, in terms of profitability it is not better than AMEA, since it has comparable values of operating profit per working unit. The tale of the list is represented, unsurprisingly, by Sud America, which is then the region with the lowest level of revenues and income, whether considering absolute or relative performances. On the contrary, North

America emerges as one of the chief markets for Accor, since although having the lowest number of properties, it reckons as the most profitable, reaching a resounding result of 1.089 million euros of EBIT for every hotel managed. This result is nearly ten times the Accor′s average around the world, underlines the steep growth of the US market in recent years, and signals the importance of American operations in the company′s strategic and financial profile. Performances′ improvement in the region was mainly achieved through the consolidation of FRHI group, a leading luxury chain with strong footprint in the US: indeed, EBIT for 2015 in North America amounted for less than 20 million euros, while after the deal it surged to reach 86 million euros in 2017. However, the deal provided Accor worldwide benefits, since as luxury brand FRHI′s portfolio include hotels located in the world′s biggest metropolis and resort destinations across 34 countries, with 42 properties in North America, two in South America, 26 in Europe, 19 in Africa/Middle East/India and 26 in Asia-Pacific in the year end 2016. As a focal point, Swissôtel and Raffles have most of their managed properties in Asia-Pacific and in the Middle East, whilst Fairmont is deeply rooted in North America for historic reasons, having more than half of its hotels located across Canada, the US, Mexico and the Caribbean.

(Millions of euros)	2017	2016	2015
Revenue	1.937	1.646	1.368
Operating expense	-1.311	-1.139	-805
EBITDA	**626**	**506**	**450**
Depreciation, amortization and provision expense	-134	-109	-80
EBIT	**492**	**397**	**370**
Share of net profit of associates and joint-ventures	28	6	8
EBIT including profit of associates and joint-ventures	520	403	378
Other income and expenses	-107	-96	-93
Operating profit	413	307	285
Net financial expense	-54	-117	-70
Income tax	51	2	-59
Profit from continuing operations	411	193	155
Profit from discontinued operations	71	106	116
Net profit of the year	**481**	**299**	**271**

Table 4.12: AccorHotels' income statement for selected years

Source: Elaborated from AccorHotels' annual reports 2015-2017

Revenues for the consolidated entity grew over the triennial to reach a maximum of 1.937 million euros in 2017, a value 41,6% higher than 2015, fostered by an extraordinary growth of 26% year on year in North America and the Caribbean. Fees from managed hotels and direct hotel revenues, respectively 754 and 616 million euros in 2017, constitutes most of this value, while revenues from hotels′ franchising and support services for IT systems, marketing and distribution summed up to 30% of total revenues, proportion that remained flat across the three years. The group′s revenues are derived from a very large number of transactions, less than 10% of which involve a single external customer. A consistent part of the revenues for AccorHotels was eliminated in the consolidation procedure, since it derives from AccorInvest, a company′s subsidiary currently in the process of being sold; once the operation will be over, AccorInvest will become the group′s largest customer.

The costs of the company in every year are mostly composed of employees′ benefits expenses, which at 810 million euros constituted almost two thirds of total operating expenses in 2017. Rental expenses, 104 million euros in 2017, concerns the firm′s headquarters and the country headquarters. Other operating expenses consist mainly of marketing, advertising, promotion, sales and IT systems related costs. Net financial expenses dwindled in 2017 after the surge of the preceding year. The 62 million euros positive variation, given a comparable level of expenses, is the result of:

- 31 million euros related to a positive fair value adjustment on an interest rate derivative put in place to secure a financial leasing for the company′s real estate investment for its headquarter. The gain is a consequence of raising interest rates.
- 13 million euros expense connected to the hedging derivatives transacted at the moment of FRHI Hotels & Resorts Group′s acquisition.
- Gains in the conversion of foreign currencies in euros, with benefits from exchange rate leading to 6 million euros reckoned on 2017′s books, compared to the 15 million euros lost in the latter part of the year before, when the Egyptian pound weakened abruptly.

In the general context of growth, net profit surged in 2017 to 481 million euros, a bounce of 60% on the year before, despite lower revenues from discontinued operations. This surprising result is mainly attributable to the effect of favorable taxation in 2017. As a consequence of the Steria ruling, the company received a right to a 5% deduction on European dividends for the period 2009-2013, which translated in 37 million euros of tax savings. After a French Constitutional Council ruling, an additional tax relief came from the accrual of 26 million euros in income tax receivable for retroactive cancellation of the 3% dividend tax paid. As part of the AccorInvest spin-off, additional 73 million euros in deferred tax benefits were recognized for differences between tax basis and some of the intangible assets on AccorInvest′ book in Germany and Netherlands. The company also profited from the augmented presence in the U.S. after the acquisition: indeed, the change in US Federal tax rate from 35% to 21%, enacted as part of U.S. Tax Cuts and Jobs Act, resulted in 59 million euros benefit from deferred taxes.

Some complication in the comparison of results in the triennial are due to changes in accounting standards happened during the period of the deal. After January 1, 2016, an amendment of IFRS 5, regulating profits from discontinued operations, come into force, to clarify the accounting for a change in a disposal proposal from a plan to sell a division to a plan to spin off a division and distribute a dividend in kind to its shareholders. Accor has been in the process of spinning-off its real estate division, HotelInvest, since 2013, so all its financials from that date had to be properly adjusted. despite the reclassification of HotelInvest business as a discontinued operation in a single line item in the income statement, the revenue earned with HotelInvest hotels continues to be eliminated from the consolidated financial statements in accordance with consolidation principles. As a result, a total of 4.213 million euros in revenues were eliminated in the restatement for 2015, a drop of 75% from the initial figure of 5.581 million euros.

RATIO ANALYSIS

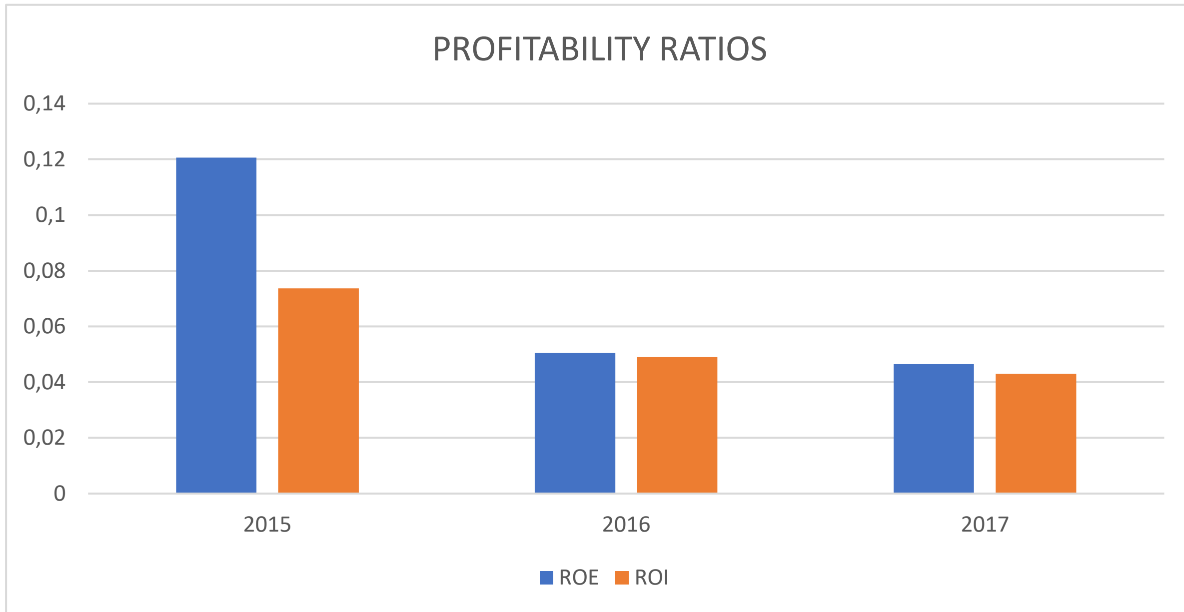

Figure 4.30: AccorHotels' profitability ratios

Source: AccorHotels' annual reports 2015-2016

Return on investment has been computed as the ratio of EBIT for the year over the sum of shareholder's equity and financial debt. It follows a similar path as the ROE indicator, a quick plunge in the first year and flatness for the consequent two years. This jump downwards is the consequence of the company buying spree in the biennial. Anyway, ROI seems to be a more appropriate indicator of the effective performances of Accor; the extraordinary decrease in ROE is a product of contingencies. The acquisition of FRHI group resulted in additional equity for 1.726 million euros, which weighted on the denominator of the ratio, compounding final results: indeed, the push in net profit, up 181 million euros, was not sufficient to counterbalance. What's more, as previously explained, this surge was mainly driven by occasional favorable tax treatments rather than improved skill. Return on investment was less impacted by the acquisition because of no major changes in long term debt to finance the operation.

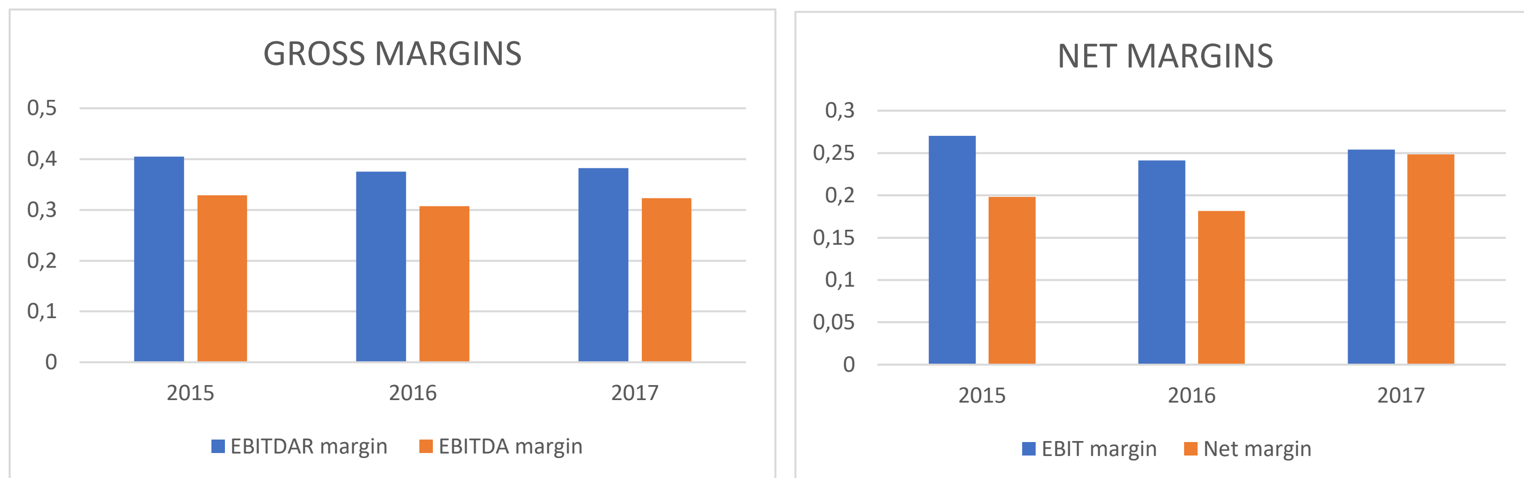

Figure 4.31: AccorHotels' operating margins

Source: Elaborated from AccorHotels' annual reports 2015-2017

Analysis of the margins shows compelling outcomes. Both gross measures of gross margin dwindled in the last three years, reflecting a heavier weight of both operating expenses and rents, driven by the higher volume of business. EBITDAR is a measure of profitability which does not include rent expenses, given the idiosyncratic nature of the contracts underling: specific policies in different countries, like subsidies and one-time exemption may distort the analysis when comparing the firm with competitors and across years. Since these features usually have impact in the near future, but compensate with each other in the long run, they are eliminated to account for the capability of the company to generate income, just referring to the costs of running the business. The ratio had a small decline over the triennial, passing from a margin of 40,5% on the revenues in 2014 to 38,2% two years later. The decrease is more insightful if taken in relation to EBITDA margin, which was mostly flat during the period. Indeed, the different variation of the two ratios is attributable to the diminishing relative weight of rents throughout the years: rents remained mostly flat while revenues and other costs were increasing, so the impact on margins dwindled accordingly. On the other hand, it is interesting to see how the effect from taxation in 2017 distorted margins, resulting in a value of net profit almost equal to EBIT. The decreasing trend in all values is a signal of

the poor capacity of integration of the operations in this initial phase of the process, even if there is the possibility that synergies and cost reductions will be achieved once the company ends this wave of acquisitions and focuses its energies on integration.

LIQUIDITY

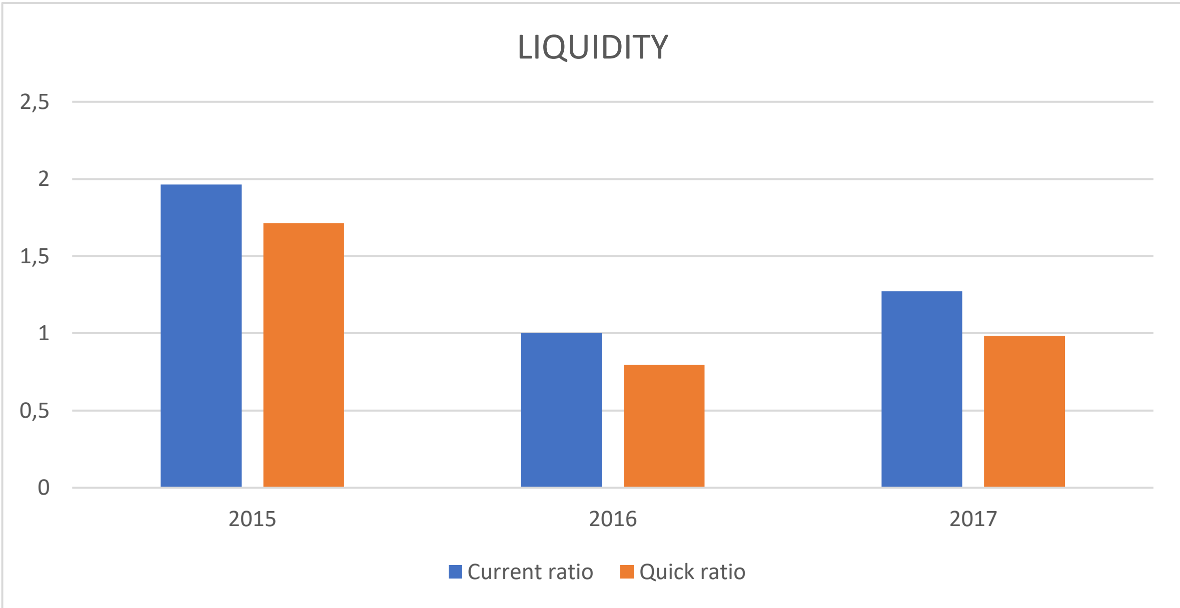

Figure 4.32: AccorHotels' liquidity ratios

Source: Elaborated from AccorHotels' annual reports 2015-2017

The capacity of the company to sustain its current obligations had a wobbling path during the triennial centered on 2016, year of IHFG's acquisition. Both current ratio and quick ratio were at high levels before the deal, thanks mainly to huge stock of cash and short-term high quality liquid financial assets in Accor's book: indeed, current ratio was just shy of two, meaning that it could pay twice as much the level of liabilities due in the near future. The year of the merge, both ratios plunged, halving their value before a small rebound in 2017. The reason for the drop is mainly attributable to the sale of assets which were accounted in 2015 as held for sale, and grouped with liquid financial assets: when these entities were sold

in the subsequent year, the proceeds were reinvested in long term projects, and consequentially excluded from the count. On the other hand, the small recovery in 2017 was led by reducing short-term debt rather than improving liquid assets: current borrowings decreased by 68%, to 237 million euros, while other liabilities were mostly unchanged. The discrepancy in the rebound between the two ratio is mainly due to adjustments in current assets other than cash, with this last one dwindling by 10% year on year while trade receivables and other current assets gaining 42 and 29 million euros respectively.

However, Accor engages in proactive strategies to cover from the unexpected surge of short term financial needs. At the end of 2017 it had two different active credit lines for a combined value of 2.150 million euros. The first one was a long-term coverage contract worth 1.800 million euros with expiration dated in 2019, while the other was a short-term liquidity coverage credit facility underwritten in the very same 2017 and maturing in 2018: it covered up to 350 million euros. Both facilities remained untouched in 2017, and the long-termed had not been withdrawn from since 2014.

DEBT STRUCTURE

(Millions of euros)	2014	2015	2016	2017
Bonds	2.625	2.582	2.635	2.748
Bank borrowings	100	123	67	30
Other financial debts	6	5	172	202
Derivative financial instruments	72	72	34	24
Total debt	2.803	2.782	2.908	3.004

Table 4.13: AccorHotels' debt structure for selected years

Source: Elaborated from AccorHotels' annual reports 2014-2017

The structure of Accor's debt wasn't deeply impacted by the acquisition of FRHI, thanks both to the low level of long term financial liabilities of the FRHI weighed against Accor' financial debt and the low level of debentures contracted to finance the operation. The majority of Accor's debt is detained in bonds, which accounted for an average 92,14% of total indebtment in the 2014-2017's quadrennial, while the remaining part was constituted by bank debt, financial leases and, for a minor part, by other forms of financing. In the period considered debt from banks and financial leases exchanged the role of second most important source of debt capital: the inversion took place after two years, for the length of which banks represented 4% of total debentures, on average, while financial leases amounted to almost nothing.

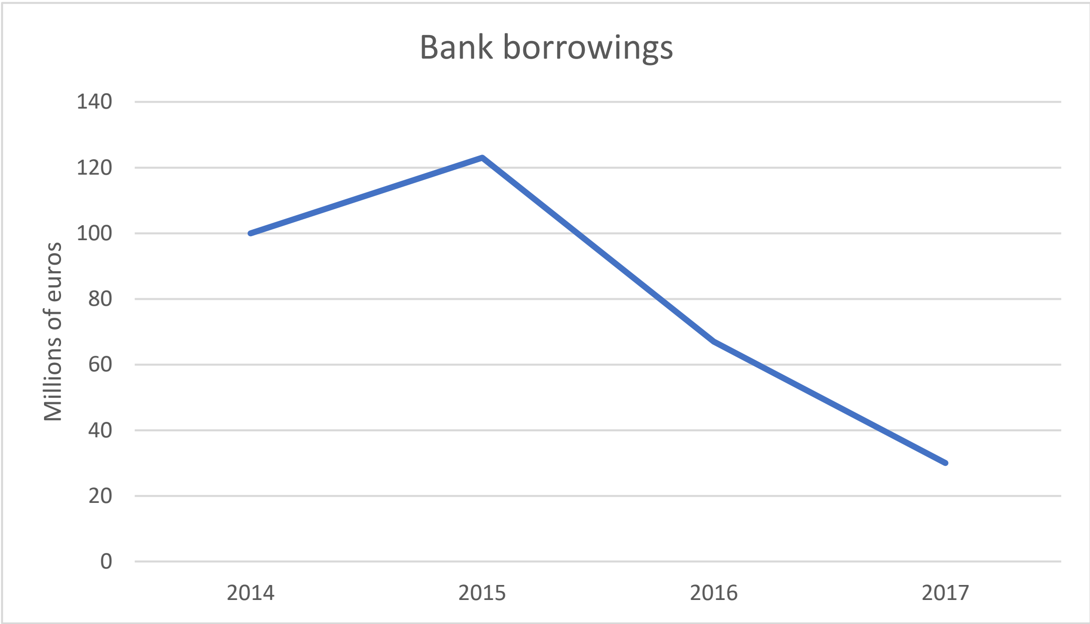

Figure 4.33: AccorHotels' banks borrowings

Source: Elaborated from AccorHotels' annual reports 2014-2017

The last two years were different, as Accor reduced its exposition to banks and increased the volume of its operations financed through leasing, which in 2017 were grown for a stunning 3267% from three years before: the proportion may be misleading, since the starting figure

was so low, and the final sum was just a tiny part of Accor's leveraged financing, roughly 6,72%.

As already observed, even if the total value of the company's financial liabilities increased during the quadrennial, some of its components experienced an inversed trend. Indeed, the portion constituted by debt from banks had a wobbling path: a brief surge in 2015, were it added 23 million euros to the count, followed by a steep fall in the two subsequent years. The final value in 2017 was 70 million euros lower than the original figure, corresponding to an average decrease of 26% per year. The reduction was chiefly due to the maturity of contracts which were signed by the firm to finance its expansion in 2014-2015's biennial, besides the cost of the digitalization strategy, which passed through the acquisition of small, but affirmed, realities in the centralized lodging management. Indeed, On October 30, 2014, AccorHotels announced a five-year 225 million euros investment plan to deploy its new business plan. Part of this money, financed by bank credit facilities, was used for the acquisition of FastBooking in April 2015. This company specialized in providing digital services to hotel operators, and was valued 1,8 million euros: the fair value of assets acquired had a negative value of €2.9 million, causing the recognition of 4,9 million euros as goodwill. Furthermore, in June of the same year, AccorHotels announced the development of its AccorHotels.com aggregation platform for independent hotels, designated based on internal performance criteria, together with customer evaluation.

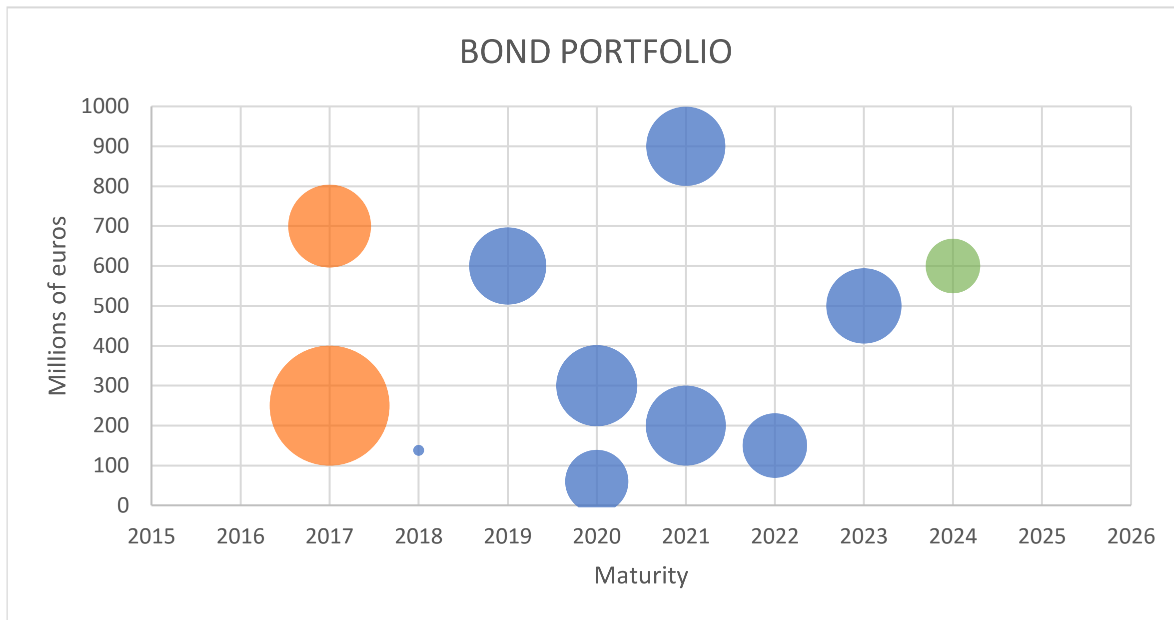

Figure 4.34: AccorHotels' bonds borrowings

Source: Elaborated from AccorHotels' annual report 2017

On the other hand, the value of Accor's bond liabilities, after a small decline in 2015, increased in the two subsequent year to reach the value of 2.748 million euros in 2017, with a growth rate of 4,7% over the period. This margin is the net effect of the following operations during the quadrennial:

- 900 million euros issue in February 2014, with an interest rate of 2,63% and due in February 2021; they were accounted in 2017's book at 904 million euros.
- 60 million euros issue in December 2014, with an interest rate of 1,68% and due in February 2022; they were accounted in 2017's book at 60 million euros.
- 150 million Swiss francs issue in June 2014, with an interest rate of 1,75% and due in June 2022; they were accounted in 2017's book at 128 million euros.
- 900 million euros issue of perpetual subordinated notes in June 2014, with an interest rate of 4,125%, which will be re-set every five years after June 2020, with a 25 basis points step-up after June 2020 and a 275 basis points step-up in June 2040.

- 300 million Polish zloty issue in June 2015, with an interest rate of 2,76% and due in June 2020; they were accounted in 2017's book at 72 million euros.
- 500 million euros issue in September 2015, with an interest rate of 2,38% and due in September 2023; they were accounted in 2017's book at 466 million euros.
- 200 million Polish zloty issue in July 2016, with an interest rate of 2,69% and due in July 2021; they were accounted in 2017's book at 48 million euros.
- 600 million euros issue in January 2017, with an interest rate of 1,25% and due in January 2024; they were accounted in 2017's book at 593 million euros.
- 138 million euros issue in December 2017, with an interest rate of 0,05% and due in December 2018; they were accounted in 2017's book at 138 million euros.
- 333 million euros partial repurchase on bonds maturing in 2017, originally issued with the nominal value of 700 million euros.
- 265 million euros partial repurchase on bonds maturing in 2019, originally issued with the nominal value of 600 million euros.

Taking a picture of the situation at the end of 2017, for what concerns the company's bonds, Accor had 473 million euros of pending obligation due in less than two years, in real terms after the reckoning of partial repurchase which dwindled the value on balance sheet from the notional issue value. This portion represents 17,21% of total obligations, with the other 44,09% due in between two and five years and the remaining 38,7% maturing after more than five years. The majority of debt is then due in the long-term, and short-term debentures should not create particular problems in term of liquidity needs, thanks to the credit facilities currently in force, which total 1.800 million euros in 2017, and the group's capacity, based on historical information, to raise additional debt capital from the market. Illustrative in this perspective is the case of the 138 million euros issue of 2017, due in just one year, which was offered at an interest rate of 0,05%, despite the company's consensus rating of BBB-, not exactly the best in class.

CURRENCY RISK

Since most of Accor revenues come from Europe and are recorded in euros, there is not a huge unbalance between the currency used to finance investments and the one used for running the business. However, even small discrepancies, especially considering the raising volume od operations in swiftly developing markets and in the US, could cause troubles in the future: the main risk is that of euro appreciation towards currencies of countries in which the company operates and that are characterized by unstable monetary policy.

Part of the exchange rate risk emerging form these countries is directly hedged through the issue of debt denominated in foreign currency: indeed, this is the case of the 500 million euros combined nominal value of two issues denominated in Polish zloty, or of the 150 million euros issue of Swiss francs in 2014.

The currency risk from most important foreign exchange remaining is hedged the singing of derivative transactions in the form of interest rate hedges and currency forwards: these instruments allow the company to fix revenues harvested in foreign countries, or to fix financial expenses from foreign denominated debt. Such contracts amounted to 24 million euros at the end of 2017, comprising 12 million euros of interest rate hedges and 11 million euros of currency hedges.

These transactions had consequential effect in 2017′s debt composition. The euro denominated debt amounted to 2.509 million euros before the signing, and it decreased to 2.386 million euros after the hedging, a net reduction of 5%. The 123 million euros difference was mostly converted in English sterling, which denomination of debt passed from nihil to 91 million euros, and in Japanese yen, which yet started from a zero base and then accounted for 32 million euros of debt. A small part, lower than one million euros, was translated in US dollars: indeed, given the raising volumes of the operation in the region, increased further as a consequence of FRHI′s combination, and its impact on company′s profitability, it is surprising to see only a low amount of currency hedging in this region. Since part of Accor′s growth strategy for the future passes through further expansion in the region and investments to widen the offer in terms of both number of units and services′ quality and availability,

Accor would probably need to raise debt directly in dollars in the future, or at least to swell the number of derivates contracts it signs for euro-dollar exchange rate's hedging.

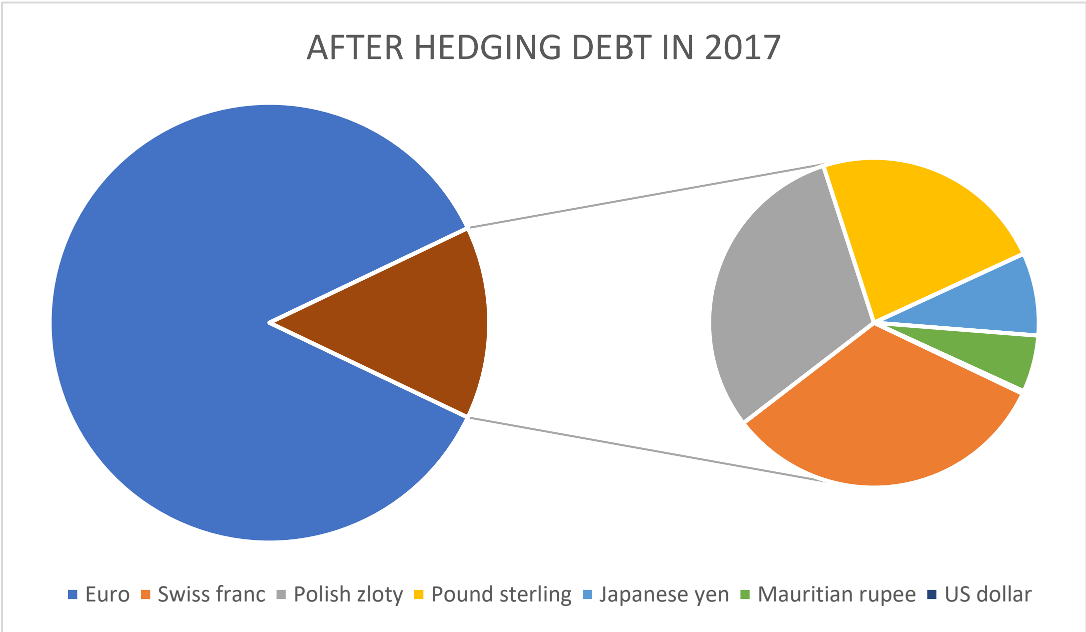

Figure 4.35: AccorHotels' after hedging debt in 2017

Source: Elaborated from AccorHotels' annual report 2017

Considering other currency hedging strategies put in place by Accor during the period, they were in part finalized at exchange coverage in huge investments financed with foreign profits. Among the most important, there is the coverage for the acquisition of Mantra Group in 2018, for a sum of 1,1 billion Australian dollars, fixed at 770 million euros thanks to the purchase of contingency forwards. The transaction was made in advance reflecting the high perceived probability of the deal's closure. All other currency instruments purchased by the company in the triennial were designated and recorded as fair value hedges of intra-group loans.

TRANSACTION

on July 12, 2016, shareholders at the AccorHotels voted in the shareholders' meeting for the acquisition of Fairmont Raffles Hotels International Group ("FRHI") and its three prestigious

luxury hotel brands: Fairmont, Raffles and Swissôtel. The official announce was published the very same day, citing the potential for the newly formed entity to become a leading player in the global luxury hotel market, increasing long term growth and profitability, and further expanding the Group′s footprint in North America, the world′s most influential market for the luxury segment.

The transaction led to an 840 million dollars, or 757 million euros, cash payment and the issuance of 46,7 million AccorHotels shares as consideration for the contributed FRHI shares, which were valued at 1.732 million euros, considering the opening price on July 12, which was 37,09 euros. In early January, the company purchased hedges for the euro-dollar exchange rate for the notional amount of 840 million dollars. These hedges were measured at fair value at July 12, leading to the recording of a 12 million euros loss in the income statement; while 13 million euros were included in the consideration transferred for the acquisition of FRHI.

The transaction gives FRHI's vendors, QIA and KHC, respective stakes of 10.36% and 5.79% in AccorHotels′ share capital (representing 9.38% and 5.25% of voting rights). QIA has now two seats on the Board and KHC has one seat.

The purchase price allocation mainly led to fair value adjustments on acquired brands for 893 million dollars, while the total fair value reckoned 1.589 million dollars; acquired management contracts with hotel owners for an amount of 337 million; deferred tax liabilities for 339 million dollars. The goodwill recognized amounted to 884 million dollars, or 798 million euros, consequential of the important synergies the new entity expects to generate and its ability to further develop the acquired portfolio of management contracts.

The vast portfolio of Fairmont, Raffles and Swissôtel′s hotels and resorts, that at the moment of the merge were 170, of which 46 are under construction, spans through 34 countries and five continents. Entities are operated mostly under long-term management contracts, with an average term of roughly 30 years; six hotels are leased and one hotel is owned. The number of people employed by the acquired entities under its long list of brands was 45.000 at the end of 2015.

Transaction value (Millions of euros)	Accor	FRHI	Impact
Goodwill	697	169	24,25%
Intangible assets	307	866	282,08%
Property plant and equipment	3.024	224	7,41%
Investments in associates and other financial investments	654	174	26,61%
Other non-current assets	73	31	42,47%
Non-current assets	4.756	1.463	30,76%
Current assets	3.990	229	5,74%
Total assets	8.953	1.692	18,90%
Shareholders' equity	3.987	1.221	30,62%
Non-current liabilities	2.916	325	11,15%
Current liabilities	2.031	146	7,19%
Total liabilities and shareholders' equity	8.953	1.692	18,90%

Table 4.14: FRHI's impact on AccorHotels' balance sheet

Source: Elaborated from AccorHotels' annual report 2016

The provisional goodwill of 1.404 million euros corresponds to the acquisition price from which the net assets of FRHI have been deducted. The acquisition price of 2.529 million euros comprises a cash payment of 769 million euros on the year's assets line and a capital increase of 1,761 million euros estimated on the basis of the average Accor share price over the last 30 trading days at March 31, 2016 inclusive, which was 37.70 euros. The net assets acquired total 1.126 million euros. The 635 million euros recorded in shareholders' equity relates to the capital increase for 1.761 million euros and the neutralization of FRHI's net assets acquired, accounting for a decrease of 1.126 million euros in this caption.

	Occupancy				
	2015	2016	2017	Cagr	Abs var
France & Switzerland	65,70%	-2,13%	3,20%	1,05%	2,10%
Europe	73,20%	0,14%	0,55%	0,18%	0,40%
MEA	66,10%	-2,72%	-6,81%	-2,32%	-4,50%
ASPAC	68,10%	0,00%	2,79%	0,92%	1,90%
Americas	63,70%	-4,40%	1,26%	0,42%	0,80%
Total	68,00%	-1,32%	1,12%	0,37%	0,76%
	Average room rate				
	2015	2016	2017	Cagr	Abs var
France & Switzerland	79	1,27%	3,80%	1,25%	3
Europe	81	1,23%	-1,23%	-0,41%	-1
MEA	91	4,40%	29,67%	9,05%	27
ASPAC	80	2,50%	2,50%	0,83%	2
Americas	78	38,46%	75,64%	20,65%	59
Total	81	4,94%	9,88%	3,19%	8
	RevPar				
	2015	2016	2017	Cagr	Abs var
France & Switzerland	52	-1,92%	7,69%	2,50%	4
Europe	59	1,69%	0,00%	0,00%	0
MEA	60	1,67%	20,00%	6,27%	12
ASPAC	54	3,70%	5,56%	1,82%	3
Americas	50	32,00%	92,00%	24,29%	46
Total	55	3,64%	10,91%	3,51%	6
	Occupancy				
	2015	2016	2017	Cagr	Abs var
Luxury & Upscale	66,70%	-1,35%	1,95%	0,65%	1,30%
Midscale	68,60%	-1,90%	1,17%	0,39%	0,80%
Economy	68,20%	-1,17%	0,73%	0,24%	0,50%
Total	68,00%	-1,32%	1,12%	0,37%	0,76%

	Average room rate				
	2015	2016	2017	Cagr	Abs var
Luxury & Upscale	135	9,63%	14,81%	4,71%	20
Midscale	89	-1,12%	-2,25%	-0,75%	-2
Economy	57	0,00%	0,00%	0,00%	0
Total	81	4,94%	9,88%	3,19%	8
	RevPar				
	2015	2016	2017	Cagr	Abs var
Luxury & Upscale	90	-2,22%	17,78%	5,61%	16
Midscale	61	-3,28%	-1,64%	-0,55%	-1
Economy	39	0,00%	0,00%	0,00%	0
Total	55	3,64%	10,91%	3,51%	6

Table 4.15: AccorHotels' operating performances

Source: Elaborated from AccorHotels' annual reports 2015-2017

OPERATING MEASURES

Three measures of the hospitality industry's effectiveness have been chosen to analyze the changes in Accor's internal performances after the acquisition of FRHI: occupancy rate, average room rate and revenues per available room (RevPar). They were selected because they are widespread throughout the market to compare different chains and the same chains across years.

From a geographic perspective, it can be observed that the majority of countries show good, and sometimes optimal, results, leading to an overall increase in Accor's RevPar of 10,91% across the 2015-2017's triennial; occupancy and average room rate swelled for 1,12% and 9,88% respectively. This important bulk of growth was chiefly due to improvements in key markets, driven by the effects, more pronounced in some locations than in others, of FRHI's integration. RevPar gains were particularly significant in Americas, where FRHI's

consolidation lead to the addition of 47 new entities, most of which managed or franchised. Indeed, the average growth rate in the region was 24,29% in the period under examination, which corresponded to a net addition of 46 euros of revenue for every room in the portfolio: more in detail, the increase in RevPar was driven by a 20,6% average growth rate in the revenues per room sold, which can be interpreted as a higher general level of prices; occupancy was still an important, if lower, driver of the progress, with a 0,8% net step-up in the same period.

Middle East and Africa (MEA), where FRHI′ acquisition impacted with 26 new hotels under management, also experienced over par growth after the deal, with RevPar increasing by 12 euros and reaching the value of 72 euros for available room in 2017 year end: the only higher value was in the Americas, which leaded the field with 96 euros for every room under management. The result is more compelling still if considering that it was achieved despite an overall drop in the occupancy rate of hotels: indeed, the average fulness of entities in the MEA region dwindled 4,5% in the period. Yet, the plunge in number of people lodging in Accor′s properties was more than counterbalanced by the increase in the tariff billed for every night, which increased by 29,67% in the same period.

Compelling is even the case of Europe, with the RevPar from the region unchanged through the three analyzed years, regardless of the addition of 25 new hotels in the area from FRHI. The average growth rate of occupancy and average room rate, which were 0,18% and -0,41 dollars respectively, perfectly balanced their impacts to obtain a nihil net effect.

If the scope of the analysis is changed and Accor′s properties are divided, following a business segmentation perspective, in luxury and up-scale, middle-scale and economy entities, two major trends appear. Occupancy rates felt in 2016 in all segments of the business, and then rebounded the year after to reach a level higher than pre-deal. Since the movement is common to all business lines, and the addition of FRHI′s properties impacted almost only on the luxury segment, the blame could be ascribed to macroeconomic and sociopolitical variables, rather than to the merge. On the other hand, the average room rate followed three distinct trends in the different categories of Accor′s offer. Hotels in the

economy category experienced a flat period, with no perceived movement of prices, which were virtually the same for comparable entities at the end and at the beginning of the examined triennial. By contrast, luxury and midscale moved in definitely not neutral directions, with the former achieving a net growth of 14,81% at the end of 2017, while the other saw its medium fee decreasing by a 2,25%, considering the same period of time.

The three distinct paths reverberated in the volume of revenues for available unit, which showed three alternative paces of growth, in the same directions of the average room rate. Indeed, economy's RevPar at the end of the period was unchanged, a 0,73% overall growth notwithstanding. Midscale's RevPar decrease by an average 0,55% on year to reach the value of 60 euros for every room offered in 2017. Finally, luxury and upscale RevPar increased by 16 euros at the end of the period, corresponding to an average growth rate of 5,61% year on year, confirming as the best performing segment and pulling forward the overall trend of improvement.

CHAPTER 5: ANALYSIS OF M&A FACTORS EVIDENCING DEAL SUCCESS

Not all products are created equals. Some of them are easy to manufacture, others need deep advanced technological skills and expertise to see the light. Neither the idealization of their properties is unique: buyers and sellers will always look at the same product as if they evolved their vision system in dissimilar paths. The former will look at potential benefits given by the product usage, weighed against the total cost of ownership, being it the raw price, the risk of holding the item in their homes or properties, or the stress related to the time invested in the learning and training of the tool, which could take up more time than justified by the "investment". On the other hand, the producers or vendors of the item will classify it in term of cost of production, opportunity cost and available gain from its disposal. The interconnection of these two different views on the same object, or service, in a market economy gives way to the economic environment as it has been generally conceived and studied, with its familiar factors of demand and offer counterbalancing to create a transaction. On a pure theoretical framework, if the owner of the product deems the price to be too low and its effort to be undervalued by the acquirer, it could simply forsake the deal, or the whole sectoral market, and start a new business in a more profitable business. Likewise, the customer could simply walk away from the purchase in case of unfulfilled expectations. Even if the paradigm were true, and it is not in the majority of real cases, in which the freedom to negotiate and chose is dampened by the frictions of the market's mechanisms, it would not apply for certain goods considered basic rights. Indeed, these goods normally represent the fundamental necessities for the sustainment of human life, and thus their regulation is highly accepted. Furthermore, the group of goods generally deemed to be necessities swelled in time, following in parallel the evolutionary path of the modern life. If at the beginning the only such goods considered basic rights comprised food and water, this category increased

in the past century to comprise energy, health care and education, among other things: some of the more progressive views even reckon internet access among such priorities. As will be showed, the social impact of M&A transactions, which are the subject of this work, cannot be neglected, as the influence of these operations on society, being the impact on prices or product availability, has not been neglected by society.

ENERGY SECTOR: ANALYSIS OF THE SOCIAL IMPLICATIONS

The objective of the next two paragraphs is to illustrate the influence on M&A activity in the energy sector of the main regulatory frameworks coming from social concerns. The first paragraph tackles antitrust activity, starting from the general case and deepening into the energy sector, to demonstrate the uniqueness of its scope in this strategic sector. The second paragraph focuses instead on a topic almost prerogative of the energy sector: public environmental concerns and the consequent regulatory frameworks. It will be showed that they constitute a source of uncertainty which cannot, and is not, ignored by companies then making strategic decisions on M&As.

ANTITRUST

In almost every part of the world, governments passed antitrust legislation to foster healthy competition and maintain a stable economy. The scope and the power of these agencies varies greatly among countries, but their institution is usually related in some form to consumer protection purposes, like defending from anti-competitive operations which could collapse in oligopolies or monopolies, and anti-competitive market manipulation which could raise the cost for consumers without free-market justification, like in the case of collusion. If companies, instead of competing among themselves, agree to coordinate their efforts and behavior on the market, they rein in the concurrency, dampening consumers and other companies. Antitrust organizations surveil the market to make sure this doesn’t happen, and succeed in so thanks to the power to impose huge fines in the process. The authority intervenes even in the case a firm is abusing its position in the market to impose on consumers

prices too high or closing the access to potential competitors or, though, deploying anti-competition strategies like predatory pricing, in which a product or service is set at a very low price with the intention to drive competitors out of the market. Compelling for the case of this research, when two companies merges the antitrust verifies that the new entity doesn't have an overweighed power of the market and, if so, could ban the deal altogether or impose limitary restriction to counterbalance the effect of the merge: indeed, these measures change from country to country, but usually include the request for the acquiring company to divest from some other strategic assets or to engage in behavior which will protect customers [134].

However, antitrust laws were not intended to punish better firms merely on account of their size or because of their business success, on the contrary they were supposed to enhance and protect rivalry, defined as competitive processes in distinct lines of commerce or relevant markets: only this is their correct objective. Perhaps the greatest misunderstanding comes from centralized-market's scorners, which fears the effects of overwhelm control in the hands of government entities, but antitrust implementations were never intended to be anti-market or anti-business in their underpinning conceiving or in their practical standing. On the contrary, they were introduced to promote market economics and healthy competition in free-market environments and in parallel checking the abuses that sometimes arise in a competitive context. The rationale behind these policies is that in every marketplace there should be vivid competition: if there are enough sellers busy to strain against one another to conclude the sale of a particular type of product or service to a purchasing entity, no seller would be in the position of unfairly exploiting advantages over buyers. Conversely, each vendor would be forced to bid its products on attractive covenants, while being receptive and efficient in the dealing process, lest seeing buyers leave to transact with someone else.

Definitely, strong competition in a free-market environment works as a cure to dishonest sellers, though sometimes less effective than wished. Indeed, this same rivalry for customers' demand forces vendors in a continuous path of product, or service, improvement, which translates in better offers to customers. These last are truly always taking advantage of wider choices, while poorly managed companies are driven out of business, leaving the space empty for better companies to prosper.

As above mentioned, there are multiple situations in which antitrust authorities are given the power to intervene, but all these events usually refer to few archetypical circumstances:

- **Monopolization:** a monopoly is not unlawful per se in most jurisdictions, what constitutes a violation of the law is usually the obtainment, or even the persistence, of monopoly power through anticompetitive means. Specifically, an offender firm could be deemed liable for illicit practice if one of the subsequent matters were proved: first, the case in which the firm retains monopoly power in a market considered relevant from antitrust authorities, provable by the empirical evidence that the company under accusation is in the position to impose non-competitive prices or yet still that it has an overwhelming proportion of the industry sales in its book, protected by strong barriers to entry or enlargement for both new and existing rivals; second, the accused entity engaged in strives aimed at the reduction of its direct or indirect competitors freedom to contest its products, as opposed to the amelioration of its product, which constitutes a fair market practice. If a government agency successfully proves one of these practices, it could levy significant fees in the plaintiff's illicit profits.
- **Restraints of Trade**: this is another case of illicit practice under most of antitrust laws. It consists in the synchronous act, for two or more independent, unaffiliated firms, to deploy business maneuvers which risk dampening competitive processes in a properly identified relevant market. Further in details, there are three categories of unlawful trade restraints:
    - Per Se Offenses: this offence is also sometimes referred to as horizontal price fixing, and it states that it is always inopportune for two or more straight rivsal companies to frame or otherwise shape the prices charged to their final customers. Neither may competitors engage in tentative to fix or organize competitive auction by means of pre-arrange or bid-rigging; nor it is permitted for competitors to divide among themselves parts of a market in any segmentation, may it be by territory, social class, specified contracts or product line; nor it is allowed to coordinate purchases' boycotts, which could

derive in the opposite case of the monopoly, the monopsony, in which one acquirer, or a small number of colluding acquirers, forces seller to weigh down prices; interesting for the purposes of this work, it is not permitted to competing entities to provide a commercially indispensable product or service under the covenant that the buyers also purchase a bundled product or service.

- The Rule of Reason: the condemnation of business participants under this principle is consequent to the demonstration of the following practice: any activity aimed to harm the competition in a properly defined relevant market, not directly classifiable in the above mentioned categories [135].
- Quick-Look Doctrine: business processes could be judged unlawful trade restraints under this reasoning when they represent new, or little known, practices which appear to be evidently opposite to competition, though the relevant market been identified or not [135].

- **Anti-Competitive Mergers**: at the time of the announcement, or even at the conclusion, of an M&A deal, antitrust authorities may intervene if the operation is believed to bear the threat of a restriction in competition mechanisms in z properly defined relevant market. In case of large transaction, the bidder must usually report its intention to the agency before the answer of the target, providing also many details on the possible formation of the new entity. Basically, the agency may then respond in two ways: if no objection is uplift, the company is allowed to proceed with the transaction; if the agency is not satisfied with the current level of information available, it could order for a second round of data on the merger, before making a final decision of granting the permit, blocking altogether the deal or requiring some extraordinary measures form the bidder if it is willing to proceed.

HISTORY OF ANTITRUST

The notion of antitrust laws and their necessity to society was born in modern times in the US, where the US Congress passed several acts to help foster fair competition by outlawing grim methods of trading. The Sherman Act is the nation’s oldest antitrust law. Passed in

1890, it deemed illegal for competing entities to finalize deals with each other that would hinder competition. Among the rules included, there was the prohibition to engage in price fixing activities or to constitute a monopoly through illicit practices: the penalty for transgression at the time included huge fines for executives, who may even end up serving jail time. Fourteen years after this first law, Congress passed the Clayton Act, in 1914. Some of the most important provisions of the Sherman Act resulted in the breaking of business trust, to which company responded by changing their practices. Instead of creating trust entities, they began merging companies with the same intention: indeed, some of the were aimed at price fixing and production control. The Clayton Act was intended to stop just that, managing M&A deals in the US to check their competitive integrity and block those which wouldn't pass the threshold. Furthermore, with the Federal Trade Commission (FTC) Act of 1914, US government created a new federal agency, the Federal Trade Commission, with the authority to investigate and fine unfair business.

ANTITRUST TODAY

As of today in the US, both the Federal Trade Commission and the U.S. Department of Justice (DOJ) Antitrust Division are entitled to implement the federal antitrust laws. In some case their authorities effectively overlap, but in practical situations their power is highly balanced and the two entities complement each other. Through the years in fact, the agencies developed expertise in specific industries or markets. As an illustration, the FTC devotes most of its attention to some of the most sensible segments of the economy, including those where consumer spending is higher: health care, pharmaceuticals, professional services, food, energy, and even some high-tech industries like computer technology and Internet services. The usual practice expects the two organization to coordinate before opening an investigation, to avoid duplicating efforts. In some circumstances, the FTC may decide to head towards federal court directly to fill consumer redress, injunctions or civil penalties. For effective merger enactment, the FTC may fill a preliminary injunction to stop a blooming merger, pending a full examination of the proposed transaction in an administrative proceeding. The FTC also may refer evidence of criminal antitrust violations to the DOJ. Only the DOJ is authorized to impose felony sanctions. The DOJ is also the only entity

allowed to operate and retain antitrust jurisdiction in strategic industries, such as telecommunications, banks, railroads, and airlines. Some mergers also require approval of other regulatory agencies in case of public interest threats.

ANTITRUST ACTIVITY IN 2016-2017

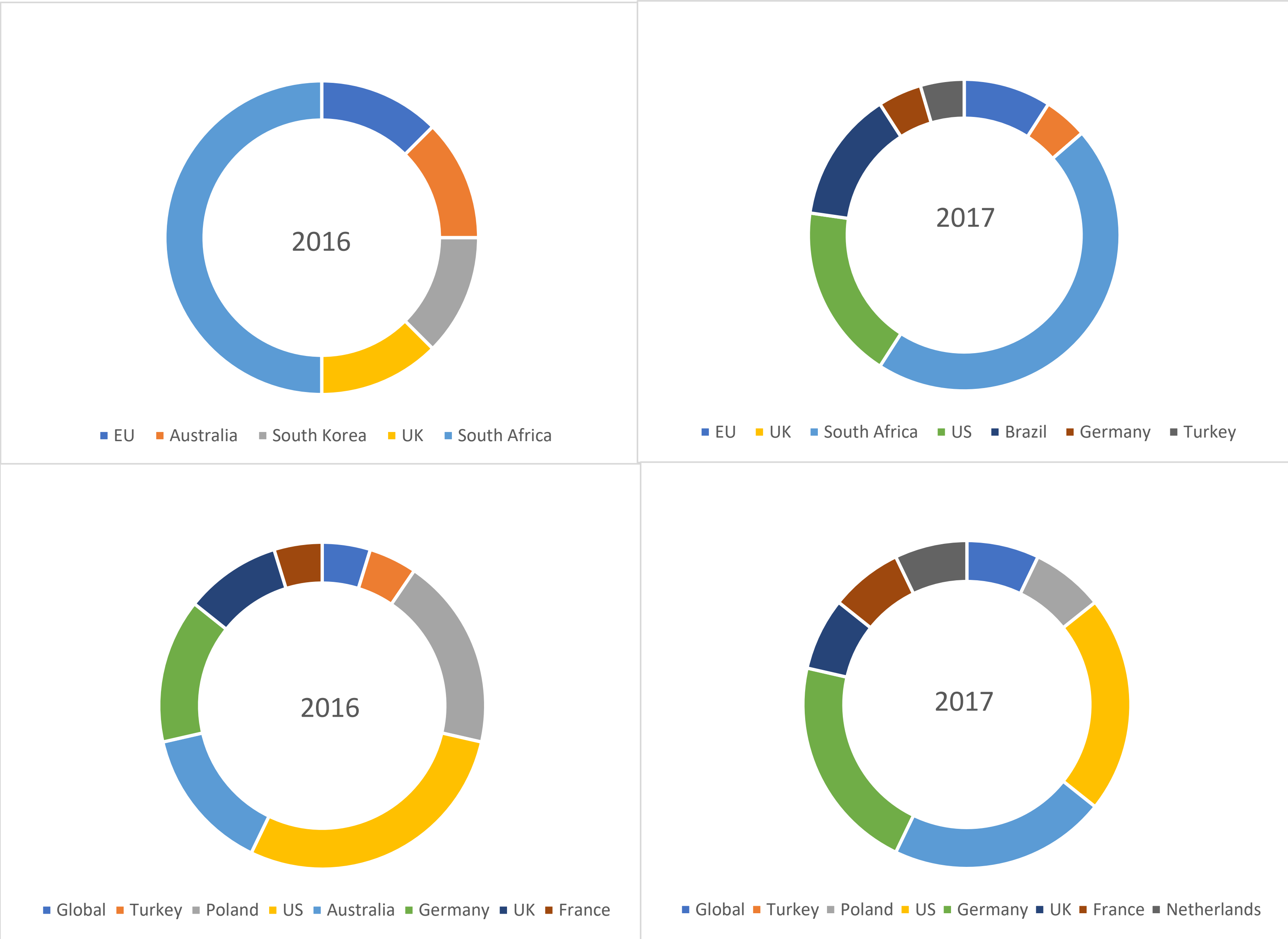

Figure 5.1, 5.2: above M&A deals prohibited in 2016-2017. Beneath, number of deals abandoned in 2016-2017

Source: Elaborated from [136]

In 2017 there was a steep change in the judgement of antitrust authorities to wide, complex merges and significant industry consolidation. More than thirty-eight M&A deals, for a total value of over 130 billion euros, were frustrated in 2017 as a result of antitrust concerns. Of these, twenty-two were formally blocked, and 16 were abandoned after the parties learned of the authority's antitrust concerns, either to avoid a prohibition or because they were not ready to commit to potentially disruptive requests. As easily noticeable, these numbers are more important still if their relative weigh is considered compared to 2016 [136]. The total number of deals frustrated increased by 23%, including a nearly threefold rise in the number of formal prohibitions, which were eight the year before. The value of transactions frustrated surged by 88%, from a value of 69 billion dollars in 2016. When compared to total global M&A in 2017, the value of deals blocked by antitrust only represents around 5%, but this is more than double the 2% observed in either 2015 and 2016. Antitrust, therefore, continues to increase its impact on M&A across the globe, though 71% of the value of investigated deals in 2017 is attributable only to the U.S., where the federal antitrust authorities pursued a strengthening of the hold by challenging mergers in the courts. As a consequence, in two instances the parties decided not to go ahead with the transaction after the agency filed its challenge. A further five cases made it to trial. Four deals were formally blocked following the issuance of a preliminary or permanent injunction, including the two high-profile insurance cases, Aetna/Humana and Anthem/Cigna, and one transaction which the government initially lost in the lower court but won on appeal. In the fifth case, the FTC in December won a preliminary injunction, before the two parties filled an appeal to the courts. In the US, it is worth signaling that there was also more activity from state antitrust. In July, for example, the California Attorney General challenged Valero's proposed acquisition of two Northern California bulk petroleum terminals, despite the FTC declining to act against the deal. The parties abandoned the transaction to avoid the costs and risks related to the challenge in tribunal. The case showed the role of state attorneys general in merger enforcement, particularly in deals raising local concerns.

Considering the EU, after the first formal prohibition under Commissioner Vestager in 2016, two more deals were blocked in 2017. First, the European Commission prohibited the merger

between Deutsche Börse and London Stock Exchange, citing among the reasons the creation of a "de facto monopoly" in the markets for clearing fixed income instruments, rejecting at the last minute a remedy the European Commission was prepared to accept. Second, the proposed takeover of Cemex Croatia by HeidelbergCement and Schwenk was blocked over concerns related to the excessive power of price-setting, which would lead, in the authorities' explanation, to price increases in Croatia [136]. In both transactions the parties offered remedies to try to secure merger clearance, but the European Commission concluded that they were insufficient to fully address the underpinning problematics.

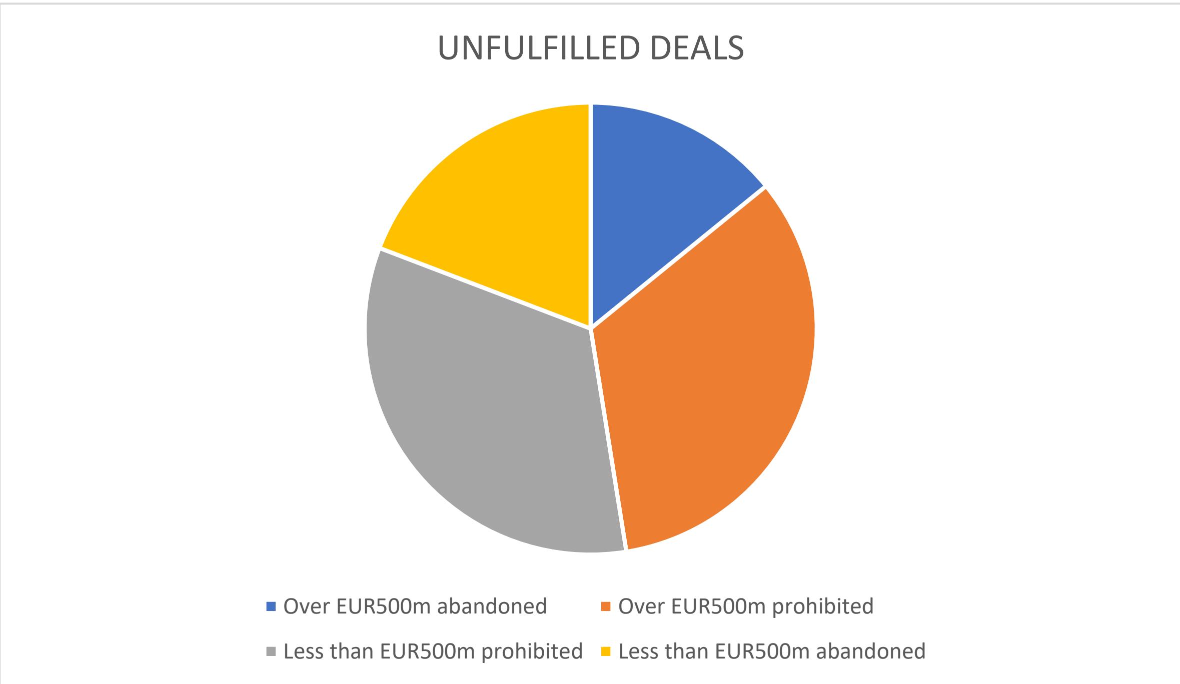

Figure 5.3: M&A deals blocked or abandoned in 2017

Throughout 2017 a multi-directional pressure to antitrust authorities, coming from politicians and parts of academia, requested tougher actions towards consolidation, in particular high value deals involving large global conglomerates. One of the key issues raised was whether the perceived high levels of wealth inequality as well as growing levels of concentration in certain industries were somehow a result of lax enforcement of antitrust rules, including

merger control. Observing the cases investigated in 2017, there seems to be no obvious connection between the total value of a single deal and negative impact on competition in the market. While the overall value of deals unfulfilled, which comprises either blocked and abandoned deals, went up to 130 billion euros in 2017, from 69 billion euros in 2016, many of the deals included in this sum amounted for a smaller value. Of the unfulfilled delas for which the value of the operation was publicly available, 52% had a value of less than 500 million euros.

The deal concerning the cement industry prohibited in the EU is illustrative, as it was worth a mere 230 million euros, surely less than many other deals approved in the same year. And the parties to these unfulfilled deals were not always large conglomerates – many cases, particularly the deals blocked or forsaken in EU and South Africa, involved smaller local or regional companies.

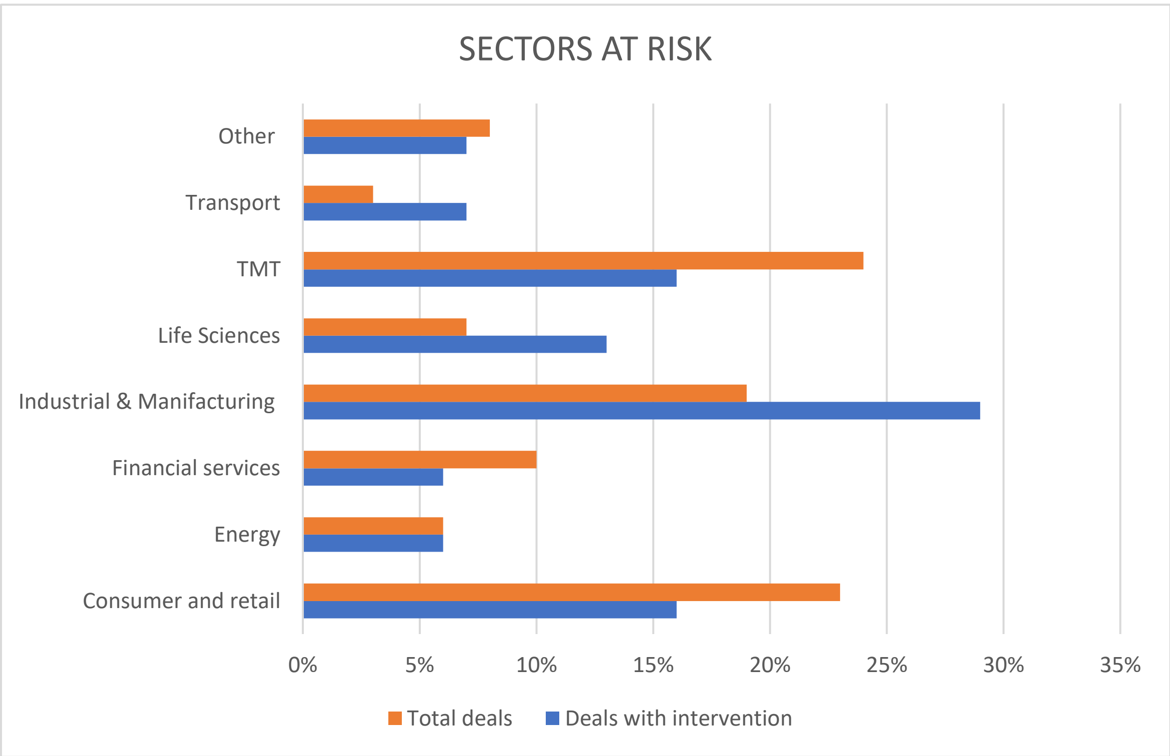

Figure 5.4: M&A deals total number and intervention divided by sector in 2017

Source: elaborated from Bloomberg

If data on M&A activity worldwide are divided per sectorial segmentation, the analysis of the disparity between the number of transaction in each sector and the number of case put under investigation by antitrust authorities is compelling. For a start, telecoms deals represented 5% of total deals impacted by antitrust intervention, while amounting to a mere 1% of global M&A movements. Antitrust intervention in this sector spread across multiple jurisdiction, including in 2017 the US, Canada, India, South Africa and the UK. For the most part, they came under the shape of remedies, with the exception of a English merger concerning pagers, abandoned just after the request by agency of further information. For Transport & Infrastructure the trend was upward, with an increase up to 7% in the number of deal investigated, a proportion that is greater than the 3% of overall M&A activity ascribable to the sector. The majority of cases included primarily shipping cases: indeed, remedies were imposed, by both the EU and China, to Maersk Line after its attempt to merge with Hamburg Süd, while the South African Competition Commission blocked a deal between two Japanese delivery companies.

Life Sciences accounted for only 7% of global M&A deals, but represented 13% of antitrust interventions, with the most concerns raised in the US, where the FTC won a preliminary injunction to block the Advocate Health/NorthShore University deal, which was subsequently forsaken by the parties, and imposed caveats in many pharmaceuticals operations. South Africa was the second most active country for antitrust intervention, since the Competition Commission prohibited several hospital and pharmaceuticals mergers.

However, the most important change in 2017's trend was observed in Industrial and Manufacturing companies, which had historically been a balanced target for agencies: indeed, in both 2015 and 2016 the number of operation investigated corresponded roughly with the proportion of total M&A deals from the sector. This was not the case in 2017, when the sector accounted for 19% of global activity and a disproportionate 29% of antitrust intervention. This may cue to renewed animal spirits in the industry, with more companies willing to risk in aggressive deal proposal to win competitive advantage. An illustrative case is , again, the Heidelberg Cement-Schwenk-Cemex deal, blocked by the European Commission for concerns over the price-fixing power of the resulting entity. Chemical

megamergers, also included in this category, prompted remedies imposture all over the world. The propellant deals were: Dow-DuPont, ChemChina-Syngenta and Agrium-Potash Corp in 2017, while it is worth noticing the probable impact of the Bayer-Monsanto deal, which seems set to take course in 2018. On the other hand, the Technology sector was characterized by a low level of scrutiny , accounting only for 6% of intervention activity, in relation to the level of general interest in the industry, which reckoned for 16% of overall M&A activity in 2017. This mood is probably destined to change in the short term, as rising concerns about the tech giants' power into social and private activities is likely to foster more scrutiny of deals.

Energy sector is quite a unique case, both because the balance between global activity and antitrust intervention was perfectly neutral in 2017, with 6% for each proportion, and because the trend has been flat for the previous three years. Indeed, the energy sector, which in this analysis include everything from extracting companies to distribution and utilities, has a troubled history of antitrust intervention. As it is well-known, the Sherman Act of 1890, generally recognized as the first modern law of competition protection, was prompted by the staggering overpower of the Standard Oil in the US, which was definitely dismembered in 34 distinct societies in 1911. But it is not necessary to go this far in time to find cases of antitrust concerns related to the sector, since many important deal in the recent time witnessed the rule of antitrust law.

- In 2016 the 28 billion dollars fusion of Halliburton and Baker Hughes, historical names of the oil service industry and respectively second and third companies of the sector behind Schlumberger. The merge was a response to the crisis of the oil prices, but antitrust authorities in both the US and the EU blocked the deal despite the announcement of huge divestments, for a value in the 6-7 billion range, from both companies. Indeed, the DOJ resorted to court to stop the merge from happening, denouncing the potential danger to 20 segments of products, fostering a global duopoly, with Schlumberger, in the oil service industry [137].
- In 2017, the deal supposed to bring under unique control Williams Companies and Energy Transfer Equity collapsed after prolonged inquiries by the Securities and

Exchange Commission, which reviewed the proposed operation for several months and had not emitted a final verdict [138]. The failure of the deal, valued at roughly 30 billion dollars, was officially prompted by unsolvable tax issues, but the general consent over the operation is that the amount of divestment necessary for the transaction to proceed was too heavy, this way altering the cost-benefit balance.

- In 1998, when Exxon and Mobil, two separated companies at the time, announced a plan to merge the two oil companies in the well-known colossus of today, with an operation valued at 80,3 billion dollars, the Federal Trade Commission concluded that this deal would violate federal antitrust laws, given the outweigh of the merged entity in the purchasing power and in the consumer price decision. As a result, the combined company was required to divest 2.431 gas stations across the United States, giving space for the largest retail divestiture in the country's history [139].

The above examples are just some of the most important deals that have been influenced by the antitrust committee, whether by reduction in the market power throughout divestments in the merged entity or straight prohibition of the deal. This gloom environment in which most of energy companies have to operate in can't be neglected in a complete analysis of the M&A operations in the sector, as one deal deemed legit in a period may be blocked in the next one, due to wobbling market forces, social sentiment and political interests.

ENVIRONMENT

Another big source of uncertainty for the energy industry is represented by raising awareness and indignation about the human print on the environment. As concerns increase, the part of the culprit is now more than ever assumed by big companies in the energy industry, both from the upstream and downstream segment. Though technical problems related to the reduction of the emission in the air of carbon dioxide strain the engineering department of the greatest company of the sector, with huge impact on R&D budget expenses, in many ways the worst problem is uncertainty in the regulation.

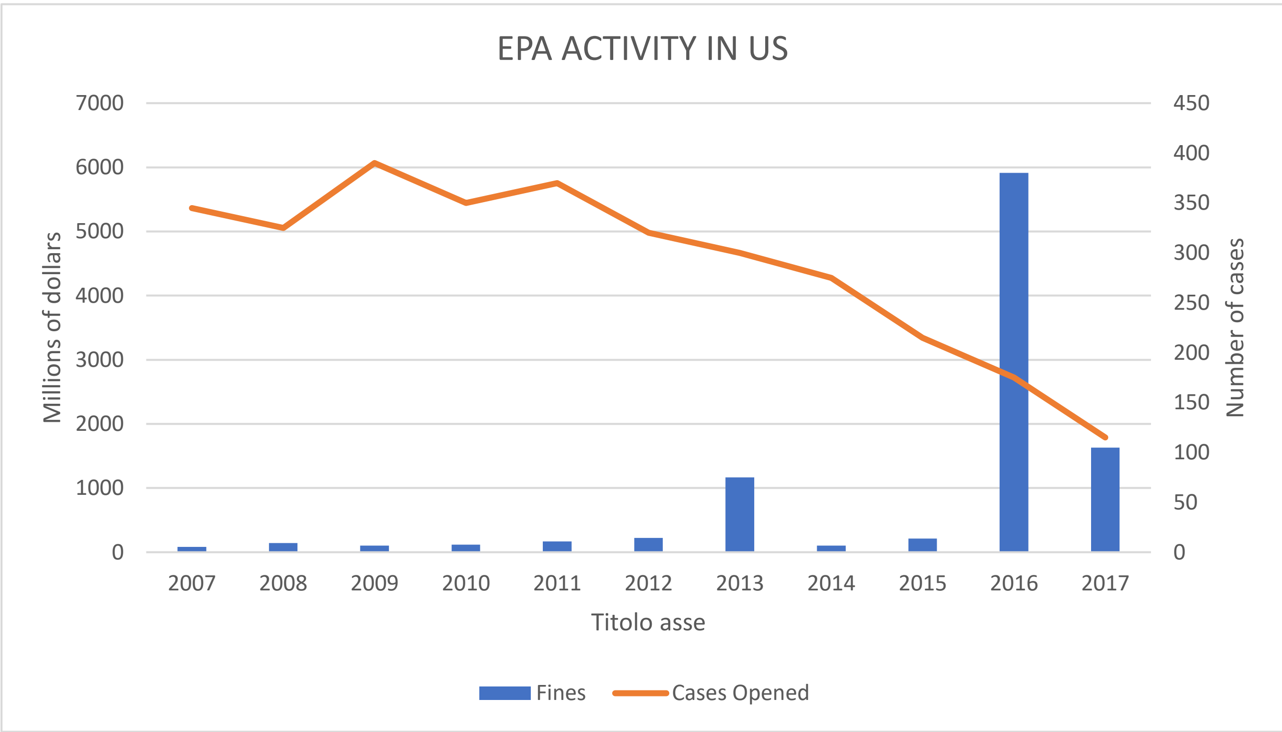

Figure 5.5: Environmental Protection Agency activity in the US in the decade to 2017

Source: Morgan Stanley

The general outrage towards issues of climate protection, even if more widespread than ever, has been historically difficult to funnel in specific policies, both because of political divides, notorious is the case of the US, where one of the biggest party is in 2018 still in denial of human provoked climate change, and for difficulties in the agreement and coordination among different, often competing, countries. The main outcome of these mixture of difficulties is the general sense of uncertainty about the future, with companies left to hypnotize and forecast possible scenarios of policies and adapt to the most probable one, while hedging against the others. Two illustrative examples may be cited to clarify the issue, both concerning the US.

The US President Donald Trump announced on 1 June 2017, that the US would withdraw from the Paris Agreement and immediately cease implementing the deal, including executing the Nationally Determined Contributions (NDCs) and financial contributions [140]. The withdrawal, though somewhat anticipated by the President campaign trail, inverted one of the cornerstone of the previous administration, with huge consequences for domestic industry, which was let free to operate after being adjusting to the deal's provision for nearly two years.

The second example concerns the Clean Power Act, introduced in August 2015 to limit US emission carbon dioxide: according to EPA projections, by 2030, the Clean Power Plan would cut the electric sector's carbon pollution by 32 percent nationally, relative to 2005 levels [141]. In 2030 alone, there would be 870 million fewer tons of carbon pollution. This is like canceling out the annual carbon emissions from 70 percent of the nation's cars or avoiding the pollution from the yearly electricity use of every home in America. Some of the most reliable projections conclude that in 2030 the CPA could save the country 20 billion dollars in climate-related costs and deliver 14 to 34 billion dollars in health benefits [141]. The shift to energy efficiency and cleaner power would also save the average American family 85 dollars on its electricity bills in 2030. Like in the previous case, this plan has been a target of the Trump administration since the President's installation, but the path to abolishment is more tortuous. The plan can't be removed with a single act because it never came into effect in the first place: indeed, since the proposal from the Obama administration

of a definitive form, the act has been challenged in several lawsuits, and has in practice never leaved courts.

The scope of this work is not the evaluation of environmental policies or their adequacy to the current competitive context, but their effect on companies' strategy. As illustrated, the main problem of an firm operating in the energy industry today is not, only, to stay in the parameters set by the political establishment, which could be achieved through research and investments. The real trouble is tethered to the endemic uncertainty surrounding the clauses and caveats of the various regulations in any part of the world: indeed, the task of a good executive in this situation is not just to adapt to the current context, but to forecast and anticipate future regulatory trends. Some of the decisions, taken and subverted, or the laws, promulgated and abolished, by the current political establishment may be turned around another time in the subsequent political wave. Some of the previously exanimated cases may be better evaluated in this optic, as will be illustrated.

STRATEGIC DETERMINANTS IN ENERGY

THE SITUATION

When oil prices collapsed, even the major oil exporters and producers found it hard to face the situation as falling revenues coming from their activities were not sufficient to balance government budgets. Austerity was the first point of the list, following measures such as downsizing, delaying some major projects and all those projects that were not considered of primary urgency, selling the subsidies still located in the old oil business, draining sovereign wealth funds to gain hopes of survival. Traditional oil companies must expand the old philosophy of being a pure oil and gas business towards initiatives involving development of renewables.

ELECTRIC VEHICLES

The forecasts on oil production made by all the big companies have been too optimistic. BP in the Chinese market is a striking example: Asian oil demand was considered likely to increase by 15 million barrels per day during the period 2010 to 2025, which led to overinvestments in the upstream sector further dis-balancing the equilibrium of the market in the medium-long term horizon. Initiatives on-going especially in non-OECD countries to control pollution, regulatory and legislative plans in China and India limiting the quotas of emissions in cities such as Shanghai and Beijing destabilized the plans of the oil giant. Alternative day driving restrictions and regulated license plates are improving average fuel consumption standards driving BP’s plans out of fulfillment. The penetration of electric vehicles has been much more rapid than expectations in China, Indian Supreme Court handed down a series of rules in order to control the pollution in the most urbanized areas. For example in 2015 the sale of luxury diesel cars in New Delhi was prohibited for their “excessive and inadequate” consumption standards, recently an extension of the regulation banned all diesel vehicles older than ten years from the capital. About 72% of the total oil demand comes from the transportation sector and out of this, 80% is associated with road transport. Do oil companies have a new long-term strategy to remain successfully in this business? This is the question that all the chief executives are asking.

ARCTIC DRILLING

The recent collapse in oil prices evolved in a change of the perspective regarding Arctic Oil. Although we are talking about 27 billion barrels of oil and 132 billion cubic feet of gas trapped in the depths of Artic Sea, Royal Dutch Shell gave up the penetration of the land. The strategy was followed by ConocoPhillips and despite the huge investments the two companies are abandoning the wells in construction and exploration rights for a worth of US$2,5 billion each. The divesture from this field was furtherly encouraged by Hilary Clinton, Democratic presidential candidate in 2016, which in the same year declared that "the Arctic is a unique treasure, and we cannot run the risk of exposing it to new drilling”, driving further pressure on the field. The environmental issue was a major problem against Arctic

exploration even under Obama's legislation, who forced colossus as Exxon Mobil, BP and Chevron to abandon some of their Arctic projects because they were not meeting the highest environmental standards.

SHELL'S STRATEGY

Shell outlined the company's strategy in its last report of 2018 declaring it will still sell oil and gas the society needs, but will load its portfolio with lower-carbon energy preparing for an eventual transition. Resources which are currently exclusively dedicated to oil and gas production are under the risk of becoming stranded, producing economic benefits just in the short to medium period. Shell must design its strategies not only to be a world-class investment company, but also to sustain its social licence to operate, constantly triggered by improvements in legislation of each country, and to manage all the risks related to climate change that are threatening operating division of the company to a forced change of course. Shell CEO Ben van Beurden says: "Understanding what climate change means for our company is one of the biggest strategic questions on my mind today. In answering that question, we are determined to work with society and our customers. We will help and inform and encourage progress towards the aims of the Paris Agreement. And we intend to continue to provide strong returns for shareholders well into the future". Shell accesses its portfolio under different scenarios, including low oil price for a medium-long term and urgent energy transition, with a constant revision by the team.

In the "Energy Transition Report" released by the company, Shell outlines three scenario about the possible paths the world will take on the road to energy transition. The three scenarios (called "Mountains", "Oceans" and "Sky") assumes as a variable the economic support coming from the government in the transition towards low-carbon future. Mountains and Oceans are the scenarios where the Paris Agreement on the temperature goal is not yet met, Sky is the scenario assuming the most rapid transition which is "a challenging but technically possible and economically plausible pathway for the world to achieve the temperature goal of the Paris Agreement". For its nature, this last scenario is the one requiring that society and governments to take active actions in order to meet the goals established in Paris. Under Sky, Shell sees oil demand growing one percent every year between 2020 and

2025, peaking in the middle of the decade, and after that constantly falling at the pace of one percent a year until about 2040. In all of the three scenarios oil and gas demand is expected to shrink more slowly that the natural decline in production of the fields actually in activity.

Shell' acquisition of BG has been a forward-looking move for two reasons. First, BG exposed the company to new reserves of liquefied natural gas in Australia and Brazil, permitting the conglomerate to jump on the ship and enrich its balance sheet with a new valuable asset as LNG is. Cash flows initially destined to shareholders are now destined to the development of those wells, ensuring Shell to maintain its market share even in the medium-long run. Second, because BG has a wide pool of expertise operating in the green field and consequently a vast access to investment capital to finance those projects. With the acquisition of BG, Shell is able to reclaim the environment with field restructuring entirely edited by experts already advanced in the technology.

Shell's investment planning must satisfy shareholders giving them a substantial payback, and this task is assumed by oil and gas projects that in the short term are still expected to deliver a satisfactory yield, anyway there is a parallel world of projects that must be forward-looking not to lose the grasp with legislation, government, society and environment. That's why the planning includes:

USAGE	AMOUNT	SCOPE
Deepwater exploration	US$5-6 billion per year	Locking demand with a sufficient production until 2030, when more than 80% of the proved reserves actually possessed by Shell will be used and new source of oil will be need by the upstream.

Short-term payback projects	US$2-3 billion per year until 2022	Investments in shale with quick payback time to reward shareholders, high yields are expected especially in Canada, US, Argentina.
Shell's New Energies division	US$1-2 billion per year	Improve CO2 intensity performance. Reduction of Net Carbon Footprint. This is the more variable quota depending on the speed of change in the energy sector. A consistent buffer is provided for this division to absorb increments up to 300% of the budgeted amount.
Energy transition	US$2 billion per year	Expansion in the power market as it is expected to electrify, giving more and more space to renewable energy to meet changing demand in all the served countries. This includes wind generation especially in Netherland and supply hydrogen refueling and electric car charging in the UK.

EXXONMOBIL'S STRATEGY

ExxonMobil is working for a key to a sustainable future. It is well known by the management that the company is subject to both economic and political cycles, as well as cycles of new capacity tightly linked with the exploration and discovery of new deposits. The high fluctuation around feedstocks does not permit to maintain constant advantages over the rivalry since they change in an unpredictable way. In this environment sustainability becomes the first point of the agenda searching ways always new to reduce the environmental impact even scarifying value-added projects that would produce good performances just in the short to medium term. Benefiting society and delivering the highest return for shareholders in the immediate future are not always on the same plane. The site of Baytown, in the Greater Huston area, required over the past decade over US$1,3 billion to change its conformance making environmental improvements. US$1,3 billion to cut NOx and VOC emission down to 50% of the initial level.

The projects ExxonMobil is investing in are cost cutting or production boosting just in part: The chart provides a geographic representation of the project adding concrete value for the shareholders (in orange), appositely designed to capitalize value from oil and gas inside the company, and projects driven by society (in blue), government or regulation aiming at the compliance with a low, the development of a source of energy previously considered non-core or partnership that are more risk-preventing for the company. While the first type is often in the form of a restructuring of a project or site already in place, consisting in an effort for it to deliver better performances or the employment of a cost-cutting new technology, in the second type we find new creation joint ventures or development of new-concept fields starting from scratch, meaning high uncertainty on the overall result.

ExxonMobil intends to boost its oil production by 2025 by more than 600'000 barrels per day and another 200'000 barrels per day are presumably added from the new discovers, off the coast of Guyana. Still this is not the unique road: in parallel, low carbon future is pursued by ExxonMobil investing more than US$1 billion per year trying to reduce emissions, a break through is coming for Liquefied Natural Gas (LNG), political issues are forcing the company

to control its production in Alaska. In this environment comes the acquisition of XTO, who enriched the portfolio of Exxon with its competencies and huge reserves of LNG. This market is currently in surplus, with global demand in 2017 increased by 700 MMcf/d while the total supply increased by 2,2Bcf/d. Up to here it doesn't look like a smart investment, financing an area with such a huge surplus of offer. In fact, in the current condition, it is not. ExxonMobil boosted its participation to hedge the risk of a shifting in the demand: low – if some – value added, less risk of going out of market in the future. There are some reason why LNG is expected become more and more competitive in the future:

- The price differential is expected to widen as analysts expect oil price to increase, growing the advantages of LNG over the common diesel and other oil derivatives.
- LNG offers much more scalable solutions that permit to closely follow the demand side without extraordinary investments.
- Growing awareness of environmental issues and pressure on atmospheric emission to control the climate change are pushing toward tighter limits. Many ferries, cruise ships as well as road transport are switching to LNG under request of customers before than legislation. Examples include UPS, Ryder, Unilever, Seaspan Ferries, BC Ferries, and Carnival Cruise Line, which has placed an order for four LNG dual-fuel cruise ships.
- Policies supported by the government are assisting the adoption of LNG in many developed countries. The EU parliament set out the Clean Power for Transport Package, US government agencies have implemented tax incentives at regional, federal and state levels to encourage this transition.

The acquisition of XTO will finally lend ExxonMobil in the field of natural gas: this breakthrough is seen as a consolidation of the oil giant in the LNG business imposing its presence on further developments of the industry. We can say that the strategy is precautionary rather than “full earning” since the investment will not be amortized before 5-6 years and is not openly giving, from the beginning, economic advantages to the core business of ExxonMobil.

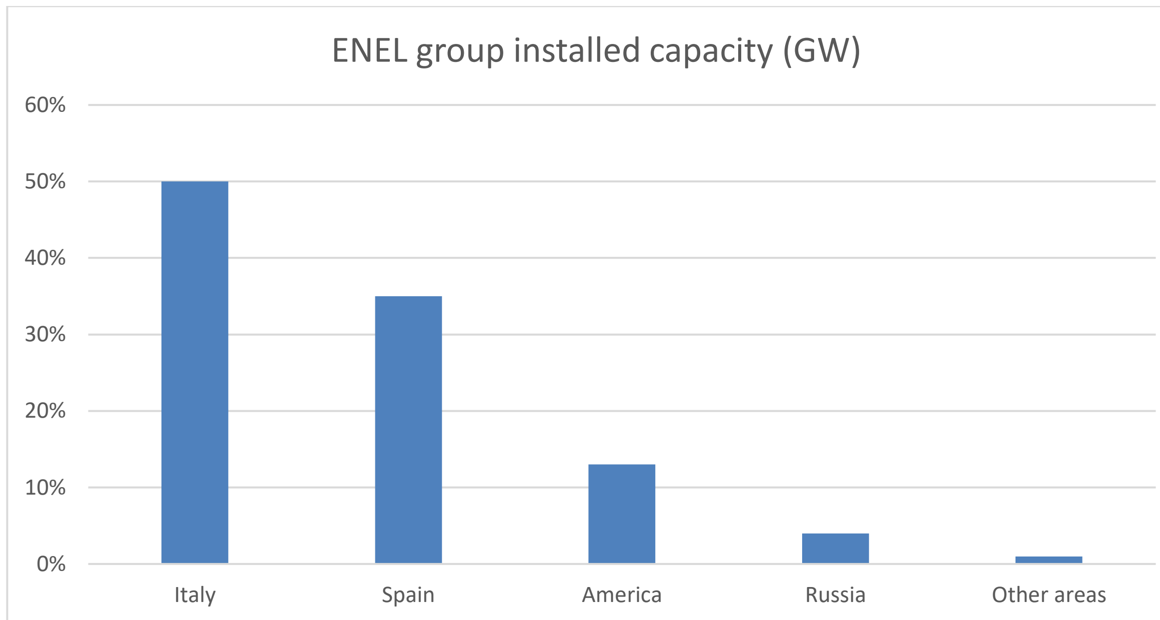

Figure 5.6: ENEL Group installed capacity (GW) as at 2016.

Source: elaborated from ENEL's annual report 2016

ENEL had a little growth potential and needed a big deal to revitalize its position as the electricity monopoly in Italy. With the acquisition of Endesa the big deal ENEL needed was done: new growth potential and development of the market are now driving the company toward the future. The efforts of the company to move in the Eastern market have always been relatively small. For the Western part of Europe is another story. ENEL needed to become a "Big fish", as declared by the CEO Francesco Starace, accelerating substantially international activities gaining sufficient weight to enter the big league of global players. The way through France is more than hostile from 2006, when Suez, the leading water and environmental group in the territory, merged with Gaz de France in a protectionist move against ENEL. As a reaction the Italian company expanded the business in Spain and Portugal Acquiring Endesa internationalizing the company and giving ENEL a global shape. With a single hit ENEL was operating in South America with bases in Chile, Argentina, Brazil, Colombia and Peru. The agreements has cost two years of legal battles against the German rival E.ON, but the diversified character of Endesa, holding a consistent part of the

business in Latin America, permitted the company to finalize the operation. International growth strategy is constantly pursued by ENEL that is now focusing on the upstream segment pushing on the gas sector. The aim is to create an integrated presence all along the value chain. Integrating the activities enables the company to impose a solid presence all over the territory, with no need to rely on other companies to run the business. The company found in internationalization its only way to survive the increasing competition and the contracting margins. The expansion of the business started with the acquisition was followed by a strategy of consolidation of the presence in such gained markets that is still in work. The installed capacity is expected to raise its Latin American, Russian and Iberian Peninsula quota to enrich the portfolio and be less subject to the local cycles. Competing to become a market leader means competing on a larger scale, the presence in both the European and Latin American market is one of the key success factors where the management is investing much of the resources. An increase in the secondary markets' shares without losing the ones in Europe passing them to competitors is what ENEL searches in its future.

STRATEGY IN HOSPITALITY

The constrained environment previously debated, where investments are a duty rather than opportunities, is not equally presented in the hospitality industry, where political, environmental and social issues are much less bundling and in most of the cases occupy a secondary position. In this different industry any deal who is able to overcome antitrust law is not perceived as dangerous by the customer since the overall price is not expected to grow because of the concentration of the industry, too low to exercise an effective market power. The only concern could be about diversification in the offer, but new operations are always followed by a deeper segmentation of the brand capable to grasp the targeted customer base. These factors make M&A operations in Hospitality sectors issues of little matter, not able to move the public opinion nor the government. As a consequence, companies are able to pursue with their activity the unique target of growth and value for the shareholders, focusing their effort on the market share. Every operation consists in investing in the most value-adding project in a context where antitrust has a marginal influence on the business and intervene

once in a while. The advantage lays in hospitality being perceived as a luxury good, miles away from those primary goods requiring a strict regulation.

STRATEGIC BEHAVIORS

The strategy underlying the consolidation of the industry consists in an offering that covers the most segments as possible. Whenever a client tries to book, no matter when, no matte where, he should be available to do it at your platform. This particular kind of consolidation has as most important driver the loyalty of the customer, who is likely to book at the same chain if he enjoyed the experience. Loyalty programs drive in this direction, rewarding constant clients with points and coupons to be spent in the resort. Brand identity is crucial in the industry for a chain that must diversify its offer from the others. The issue here stands in creating a single brand in customers' minds, but still retaining the exclusivity in the segment where the chain is specialized. To this extent are directed most of the efforts of Marriot, that after the acquisition of Starwood wants to amalgamate the service standard all over the offering. The brand of the company is the most important asset and must be preserved all over the segmentation. The consolidation under the same brand before that in balance sheet is the key success factor.

Size is particularly important in this business to gain advantages in marketing and distribution. As of the current situation, the offer of Marriott runs over 30 brands closed under a comprehensive loyalty program to lock the clients in the circuit. Marriott after the move has placed an answer to any possible demand: an available room under the brand Marriott can be found after any research on booking platforms such as Airbnb or Expedia. That is real scale, containing the advantages searched by hotel chains.

Marriott's vast brand portfolio enables the company to command a strong presence in the market of hospitality. The differentiation pursued by Marriott enables the company to offer a range from medium to premium price packages. The whole brand sustains a premium that was certified and accepted year by year in the luxury segment thanks to the unique offering. Still the Marriott management realized that a single brand could not offer adequate catering

to answer any need of different guests all over the world. Here comes the extensive strategy of differentiation obtained creating several hotel brands: Starwood 19 brands are added to the original 32 brands of Marriott. In such a way the company creates a wide customer base stealing market share to the competitors all over the range of offers. Those customers enter the retention cycle thanks to the loyalty programs developed all over the brands of the company. The increased demand expected in the years that will follow will be captured at full capacity by the new entity, that joined represents the biggest operator in the sector, overcoming the rivalry.

A huge opportunity in the hospitality sector is represented by B2B request, which is developing with the higher speed of growth in the industry. Convention spot are developing in strategic cities of each country, and this opportunity is expected to generate a large flow of revenues among the most important chains. Cities such as New York, Washington and Orlando in the US, London and Paris in Europe, Singapore and New Delhi in Asia are growing their importance for international convention and attracting every year a vast demand from the companies. Those conglomerates are where hotel chains strategically develop their presence and shape the offer to meet the particular demand.

Convention center provided by hotels boost both supply and demand. Funding or public and private partnerships are constantly searched to develop convention centers attached to the main structure of the hotel. The approval by the municipality is quite easy to be obtained and the question concentrates on the perfect location to place the meeting space; cities like Oklahoma City and Kansas City are n the root to get necessary approvals and develop the structures while Portland, Chicago an Oregon have such projects underway. The last important convention center hotel opened in Cleveland Downtown on 1 May 2016 under the holding oh Hilton.

Taking Nashville's data as an explanatory example, since the attached convention center hotels opened midyear, the highest supply increases were recorded the same year and the year after the property opened. Marginal supply changes occurred in the market in other years due to external causes such as hotels closing or opening, changing room counts following a conversion of the structure or a renovation of the building.

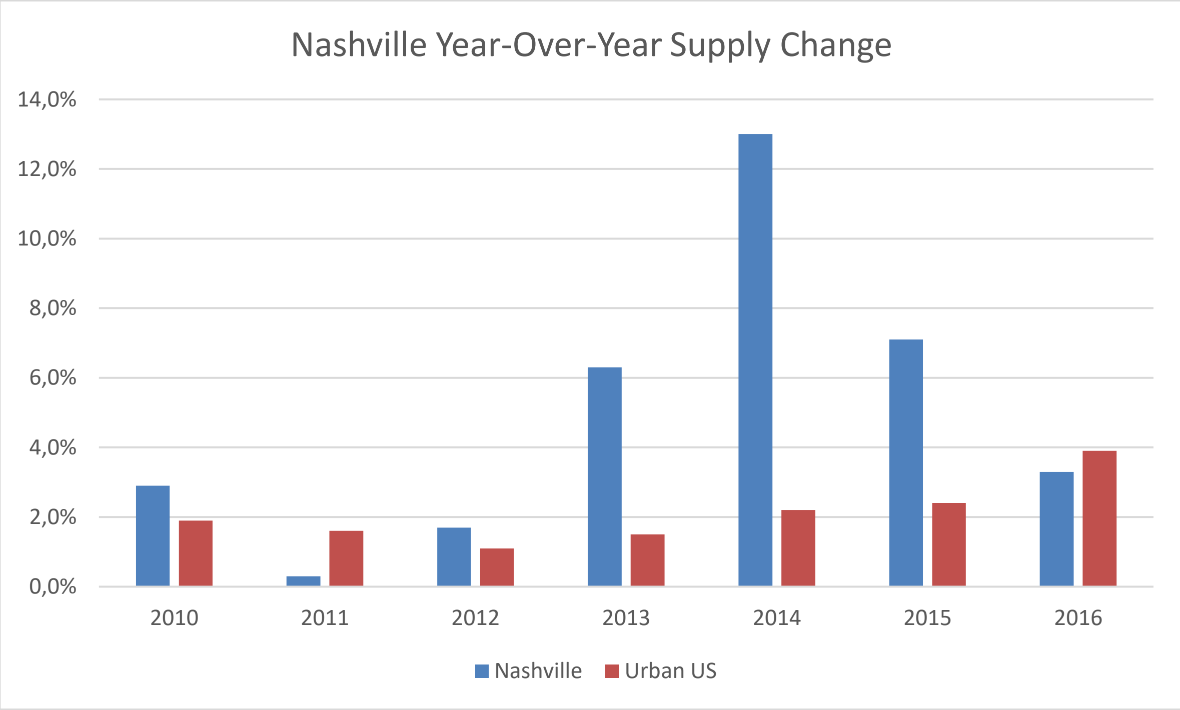

Figure 5.7: yearly growth in the supply of lodges in Nashville for selected years, with evidence on 2013-2014, opening years of Marriott Nashville, to highlight the impact on the overall supply of the city

Source: Morgan Stanley

Attached convention centers seek to attract B2B demand and in particular group demand, rather than boosting existing demand toward new applications. Such structures must be able to absorb demand peak associated with the convention date without going in overbooking: the whole request must be entirely satisfied to prevent the firm to veer towards a more accommodating location. The team searches location still remaining intact: a slit in the organic would imply a disease for the organization. Following with our example, on the demand side Nashville experienced a demand increase the year of and the year following the opening of the convention center hotel.

Many medium and large-scale conventions and conferences select destinations from three to five ears out, it is so of central importance to consider how the groups and chains in this strategy affect demand in the short, medium and long term. From empirical evidence can be seen that initial increase in demand is usually the result of group business booked a few years before the planned permanence in the hotel; on the other hand regional conferences can have a shorter booking window and accommodate demand in a night long period – a night where usually the structure sells out its entire room availability.

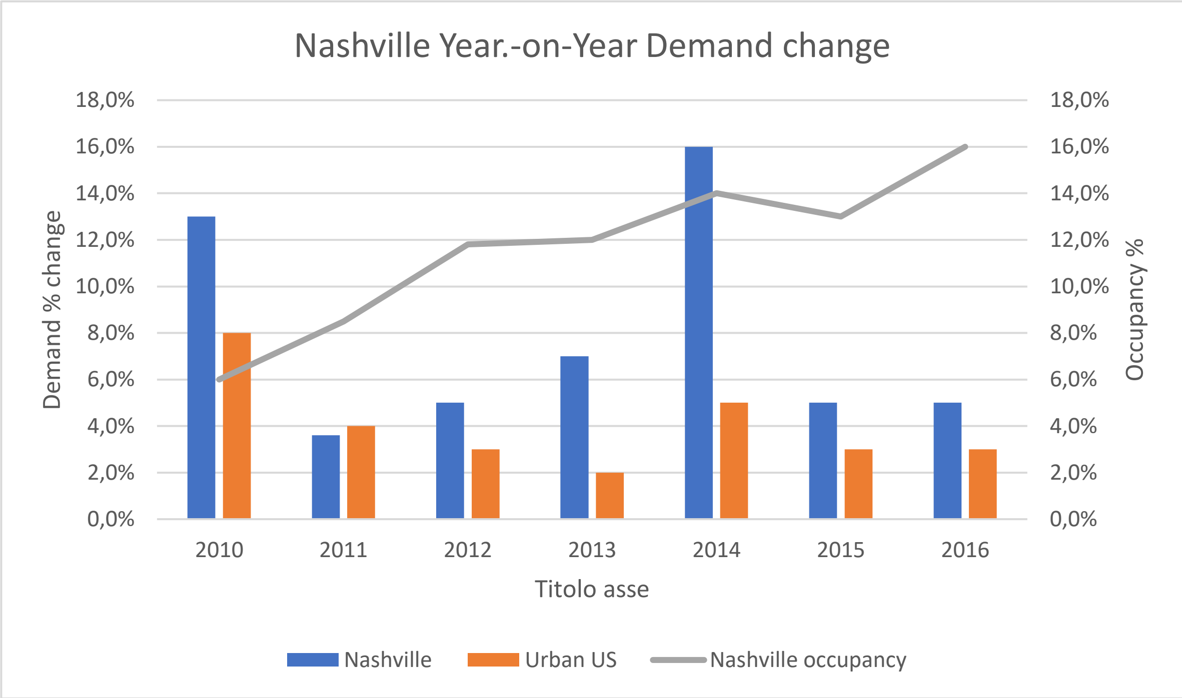

Figure 5.8: Nashville growth in demand for lodges, peaking in the construction of the new Conference Center by Marriott

Source: Morgan Stanley

The strategy of opening new convention center hotels affected both the demand side and the supply side. Despite supply considerably grew with the opening of these structures, demand for rooms also grew certifying the view of the companies as a good strategy. This is particularly relevant in Kimpton the acquisition by InterContinental Hotel Group. Kimpton, being a boutique used to welcome small groups, is not ready to host such a request due to the conventions. With the acquisition IHG can create a tight link between the convention center

and its structures: even in the case that Kimpton puts up a convention in its spaces, the demand in overflow will be amortized by InterContinental, much bigger and capable to satisfy the requests. Before the acquisition the entire unsatisfied demand meant a revenue loss, and the passage to a competitor of an entire slice of the market. The acquisition is strategic because a further segmentation of the demand coming from the convention is made in the same location of the convention by the same chain that host the convention, offering a vast number of available structures and rooms without the necessity to split the demand.

PERFORMANCE MEASUREMENT

The most widespread measure of operating performances in these branch of studies is the pre-tax cash flows [87]. This index allows for the comparison of different companies, with business lines in different countries, operating under various fiscal jurisdictions: indeed, taxes are neglected from the analysis to account for heterogeneous fiscal policies in different countries in which the deal took place, while the interests are excluded to reckon for the difference in the financing method for the acquisition, through equity or debt capital.

A new branch of studies introduced an adjustment in these original measures, with the addition of the net working capital to account for amelioration or worsening in the firm's capability to finance its businesses [93,94]. Since the comparison presented in this thesis comprehended companies from different sectors, characterized by peculiar policies of accounting for payments of supplier, especially significant in the hospitality sector, the choice fell on the general version of performance measure. The main care was to avoid any biases emerging from the use of specific and elaborated parameters, and on the contrary assure the homogeneity of the measurement as a justification of the broad scope of the analysis. Consequently, for both ratios below the EBITDA was computed at the numerator.

The denominator was selected either from total asset base and level of sales: the market value of the assets was discarded for the problems arising with the distortion of the results. The two ratios, chosen for their applicability through contrasting sectors, were:

- $\frac{EBITDA}{TOTAL\ ASSETS}$
- $\frac{EBITDA}{SALES}$

On the other hand, in order to consider the peculiarities of the two sectors in detail, as to reckon for operating improvements, or compounding, beyond the sterile result of the accounting process, one more measure for both the energy and the hospitality sectors was selected. For the first, the remaining years of the reserves, computed as the ratio between total barrels of oil equivalent in proved reserves and average production rate in the current and preceding years, was analyzed with the aim to disentangle the complexities of the strategic management of these essential gears. For the hospitality, the choice fell on RevPAR,

a widespread measure of hotel's capability to generate revenues and balance them among its offer. It was computed as the ratio between revenues in a year and the number of rooms available in the same period.

The model selected to study the operating performance variations is the Change model, which is deemed as the most effective its simplicity notwithstanding. The other option considered was the intercept model, which is more sophisticated in its development but even causes the overvaluation of performances and risk creating biases in the examination process. The aim was to achieve the broadest possible scope for the variations, so the performances before and after the deal were evaluated in absolute terms. The timeframe is different for the two industries, since most of the energy cases happened ten years from the time of this research, while the deals analyzed for hospitality took place in the 2015-2016's biennial. Where possible, the comparison spanned through 8 years, considering the conditions pre-deal as the average between the two years preceding the acquisition and the conditions post-deal as performances of the first complete year after the acquisition, together with two more measurement respectively for three and five years after the acquisition: the year of the conclusion of the deal has been neglected because of difficulties connected to the adjustments of the company's book values, since the process of consolidation at the end of year-zero may create distortion in the findings. Moreover, to reckon for the time needed for intangible gains, like synergies and cultural benefits, to sediment inside the organization, the same measures were computed in a broader time-span, this way trying to consider the long-term effects of the deal.

For the hospitality industry, the long-term approach was not possible at the time of this research, so the parameters at the basis of the evaluation were calculated in the years immediately preceding and subsequent to the M&A operation: indeed, the objective in this case is the evaluation of the immediate effects of the deals, while the long term strategic impact will be subject of a qualitative assessment.

ENERGY PERFORMANCES

Taking a glance to the operating performances of ExxonMobil, Royal Dutch Shell and Enel after the conclusion of the deals exanimated in chapter 3, the first impression is a gloomy perspective. Indeed, measures of economic performances are down in the long-run for the two companies for which data are available. ExxonMobil acquisition of XTO may be indicated in this optic as the worst performer, with EBITDA over total assets ratio down 22,5 percentage points in the five years performance, a drop which more than halved pre-deal value. Indeed, the outcome of the brief term were not promising, with a value of the same ratio dwindling to 22,5% in the first year, before a small recovery in the subsequent biennial. The assessment doesn't change much if the ratio between EBITDA and revenues is considered instead. Even if the decrease in operating performances is more contained in relation to the level of sales than if total asset base is considered, this measure is less than pre-deal values for all selected periods: despite a small rebound in three-years performance, the long-term outcome was still short of 3,4 percentage points in comparison with the standalone company's outcome six years before. Changing the perspective of the analysis, and considering the evolution of the company's operative asset base, the deal appears in a brighter light: indeed, the years of lasting reserves, computed as previously described, swelled in every considered timeframe. The strategic importance of the deal is reflected by this performance, which may well represent the fundamental reason of the combination.

Royal Dutch Shell's acquisition of BG is a more recent operation, thus at the time of this research it is not possible to consider the long term implications of the deal. Contrary to the case of ExxonMobil, in this instance the economic results already show gains in the short term. The ratio of EBITDA to total assets raised for 190 basis points in the first years , while the improvements in EBITDA margin over revenues were even stronger and lead to a one-year performance of plus 4,2%. On the other hand, the analysis of the company's reserves provides different outcomes, as the total number of years of lasting reserves at current production dwindles after the deal, from nearly 11 years of buffer to slightly less than 10 in the triennial evaluated.

Enel finalized the acquisition of Endesa group in early 2009, leaving a broad scope for the time-span analysis of operating performances: the years of reserves were not computed in this instance, since Enel is an electric company. The ratio of EBITDA over total assets dwindled in any selected timeframe, with an overall decrease of 1,2% in the long run: the final value of this measure settled at 9,5% five years after the deal. Changing the subject of the study does not mush to improve the situation, since even the EBITDA margin over revenues decreased in the long run to a value just beneath 21%, after a brief surge in the first year worth 40 basis points.

	EBITDA/TOTAL ASSETS			
	Pre-deal	1-year	3-years	5-years
ExxonMobil	42,3%	22,5%	28,4%	19,8%
Royal Dutch Shell	9,0%	11,9%	N/A	N/A
Enel	10,7%	10,4%	9,8%	9,5%
	EBITDA/SALES			
	Pre-deal	1-year	3-years	5-years
ExxonMobil	20,2%	17,7%	19,8%	16,8%
Royal Dutch Shell	11,3%	15,5%	N/A	N/A
Enel	23,4%	23,8%	19,7%	20,8%
	YEARS OF RESERVES			
	Pre-deal	1-year	3-years	5-years
ExxonMobil	14,75	15,06	16,39	17,44
Royal Dutch Shell	10,89	9,15	N/A	N/A

Table 5.1: economic and operative performances of ExxonMobil, Royal Dutch Shell and Enel before and after the deal

Source: elaborated from annual reports of Enel, ExxonMobil and Royal Dutch Shell

HOSPITALITY PERFORMANCES

Looking at the performances of the three cases of M&A operations described in chapter 4, it is harsh to make a definitive judgement. One of the main hurdle is for sure the brief period of time passed from the finalization of the deal and the moment of the writing of this research, since no more than three years passed for the oldest operation and for the other two just one year of complete post-deal accounting is available. The results are mixed, with an overall upward trend interspersed by occasional faltering. Marriott increased its margins after the deal, with a net gain of 129 basis point of additional gross profit for a every unit of revenue which lead to a gross margin of 11,57%. On the other hand, the evaluation of the deal is compounded by the measurement of the ratio between EBITDA and total assets, which decreased in the immediate term to more than half of the value before the transaction, its final level being a dismal 11,07%. The biggest improvement was decidedly recorded in the amount of revenues per comparable room available, which increased by 5,87 dollars, to the amount of 117,49 dollars of revenues for every room in Marriott's portfolio in average.

AccorHotels is the opposite case, with improvements in EBITDA over total assets balanced by declining margins. The former measure swelled by 15 basis point in the triennial referring to the deal announcement, conclusion and implementation, and the post-deal value reached 5,18%. The second measure compounded after the transaction, from a proportion of 32,89% of gross margin for every dollar of revenues before the operation to just 32,32%. RevPar was the most improved index, with a net addition of 6 dollars to its value after the deal: indeed, post-deal revenues for the company reached 61 dollars on average for every room available.

IHG group operating performances were also wobbling during the transaction, with some results better than others. The ratio of EBITDA over total asset contracted to 27% after the transaction, a net reduction of for 54 basis points. On the other hand, margins swelled for a staggering 429 basis point in the triennial of the acquisition, passing from 0,4177 dollars of gross margin for every dollar of revenues to a proportion of 46,06% after the operation. As for the two preceding cases, even here RevPar was the most improved operating measure, with its value swelling to 133 dollars of average revenues for available room, after an increase of 8 dollars in the aftermath of the Kimpton's consolidation.

	EBITDA/TOTAL ASSETS	
	Pre-deal	Post-deal
Marriott	24,48%	11,07%
Accor	5,03%	5,18%
IHG	27,54%	27%
	EBITDA/SALES	
	Pre-deal	Post-deal
Marriott	10,28%	11,57%
Accor	32,89%	32,32%
IHG	41,77%	46,06%
	REVPAR	
	Pre-deal	Post-deal
Marriott	111,49	117,36
Accor	55	61
IHG	125	133

Table 5.2: economic and operative performances of Marriott, AccorHotels and IHG before and after the deal

Source: elaborated from annual reports of Marriott, AccorHotels and IHG

	PRE-DEAL	1-YEAR	3-YEARS	5-YEARS
ROE	39,88%	20,56%	27,78%	18,57%
ROA	36,86%	17,59%	23,68%	14,85%
CURRENT RATIO	1,47	0,94	1,01	0,82
INTEREST COVERAGE RATIO	143,31	262,46	290,34	242,00
LEVERAGE	5,98%	8,01%	4,62%	6,44%
EQUITY	117.523	152.679	171.660	181.064
DEBT	7.025	12.227	7.928	11.653
ASSET BASE	228.052	302.510	333.795	349.493
EBIT MARGIN	17,61%	13,89%	16,45%	12,60%
NET MARGIN	9,82%	8,19%	9,92%	8,16%
EBITDA	96.449	67.978	94.941	69.213
NET PROFIT	46.867	31.398	47.681	33.615

Table 5.3: summary of ExxonMobil's operating performances before and after the deal

Source: elaborated from ExxonMobil annual reports

	PRE-DEAL	POST-DEAL
ROE	1,34%	6,79%
ROA	1,16%	5,45%
CURRENT RATIO	1,32	1,20
INTEREST COVERAGE RATIO	16,23	11,97
LEVERAGE	3,11	2,68
EQUITY	164.121	197.812
DEBT	5.530	11.795
ASSET BASE	340.157	407.097
EBIT MARGIN	1,45%	7,11%
NET MARGIN	0,81%	4,31%
EBITDA	30.649	48.395
NET PROFIT	2.200	13.435

Table 5.4: summary of Royal Dutch Shell's operating performances before and after the deal

Source: elaborated from Royal Dutch Shell annual reports

	PRE-DEAL	1-YEAR	3-YEARS	5-YEARS
ROE	22,95%	10,59%	3,98%	1,51%
ROA	7,16%	6,70%	4,50%	1,85%
CURRENT RATIO	0,88	1,06	1,04	1,04
INTEREST COVERAGE RATIO	2,47	3,03	3,17	2,84
LEVERAGE	1,94	0,98	1,07	0,95
EQUITY	26.295	53.545	52.078	51.145
DEBT	51.045	52.440	55.733	48.655
ASSET BASE	133.207	168.052	171.831	166.634
EBIT MARGIN	15,59%	15,34%	9,11%	4,07%
NET MARGIN	9,86%	7,73%	2,44%	1,02%
EBITDA	14.318	17.480	16.738	15.757
NET PROFIT	6.034	5.673	2.075	772

Table 5.5: summary of Enel's operating performances before and after the deal

Source: elaborated from Enel annual reports

	PRE-DEAL	POST-DEAL
ROE	N/A	36,95%
ROA	22,20%	9,86%
CURRENT RATIO	0,43	0,46
INTEREST COVERAGE RATIO	8,92	9,20
LEVERAGE	N/A	0,47
EQUITY	-3.590	3.713
DEBT	3.807	7.840
ASSET BASE	6.082	23.930
EBIT MARGIN	90,68%	89,70%
NET MARGIN	5,93%	5,99%
EBITDA	1.489	2.649
NET PROFIT	859	1.372

Table 5.6: summary of Marriott's operating performances before and after the deal

Source: elaborated from Marriott annual reports

	PRE-DEAL	POST-DEAL
ROE	N/A	N/A
ROA	24,13%	23,16%
CURRENT RATIO	0,66	0,69
INTEREST COVERAGE RATIO	9,35	8,49
LEVERAGE	N/A	N/A
EQUITY	-717	-759
DEBT	1.569	1.606
ASSET BASE	2.818	2.927
EBIT MARGIN	36,60%	39,53%
NET MARGIN	21,10%	24,31%
EBITDA	776	790
NET PROFIT	392	417

Table 5.7: summary of IHG's operating performances before and after the deal

Source: elaborated from IHG annual reports

	PRE-DEAL	POST-DEAL
ROE	6,80%	8,26%
ROA	4,13%	4,07%
CURRENT RATIO	1,96	1,27
INTEREST COVERAGE RATIO	6,43	11,59
LEVERAGE	1,48	2,10
EQUITY	3.987	5.826
DEBT	2.692	2.768
ASSET BASE	8.953	12.076
EBIT MARGIN	27,05%	25,40%
NET MARGIN	19,81%	24,83%
EBITDA	450	626
NET PROFIT	271	481

Table 5.8: summary of AccorHotels' operating performances before and after the deal

Source: elaborated from AccorHotels' annual reports

FINAL REMARKS

Energy industry is constantly subject to the pressure of regulators, authorities and governments imposing the players a strict conduct. The size required to operate in order to exploit the full potential contained in the sector is very hard to be achieved for the obstacles put in place from the antitrust, ensuring a fair competition to the detriment of an unconstrained growth of the companies. The search for profit is subordinated to manoeuvres addressed to limit future risks. A change in the environment through clean energy, sudden changes in regulation, policy differing from country to country create an uncertainty so high that the competition in not limited between the companies but is extended much further. Stakeholders such as the society, public opinion, governments, policymakers are active variants to deal with. M&A activity is constrained by those actors that constantly build new boundaries limiting the potential to value creation; such boundaries adsorb a big share of resources to be overcome. Investments in innovation, spin offs in natural gas, disposal of Arctic basins following revoked permissions, suffering assets because of low oil price represent a primary menace mining a healthy outcome of the transactions. A risky move could lead the company in a deep crisis: low margins render a full recovery unlikely and the most probable fate would be the acquisition from a bigger player. In addition public opinion and environmental issues often anchor M&A transactions to strategic acquisitions aiming to diversify the business geographically and typologically. In this environment the logic of survival overcomes the logic of profit.

For this reason the analysis spaced to another sector, where well different logic and mechanisms from the energy sector reign. We identified in the hospitality industry a comparable able to give a new perspective to our findings. In this sector, the logics that drive the M&A activity are much more different than those that characterized the first part of this work. The slight pressure caused by the exogenous stakeholders allows for their actions to pass backwards, concentrating only on the attainment of profits. The value added researched on the acquisition operations is quantified in the achievement of better performances from the company from the point of view of the enterprise and of the loyalty of the client. The result is a full-profit activity where government and anti-trust intervention is reduced to minimal terms in order to mitigate the phenomenon. So, companies are able to exploit their

investment’s full potential, giving outstanding results. By freeing themselves from the pressure of the public opinion, the capital can be invested in full to up-and-running profits that are both geographically and those of the brand.

In conclusion, whereas the M&A processes in the energy industry are usually penalised from external factors that inhibit their potential, the hospitality industry’s management is free to make decisions that maximize the shareholder’s returns, enhancing the quality and dimensions of the business.

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