



Master's Thesis

CORPORATE ANALYSIS ON THE CONSEQUENCES DERIVED FROM THE COLLAPSE OF THE GENOA BRIDGE: FOCUS ON HISTORICAL REVIEW

Thesis that,

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Executive Summary

The purpose of this thesis is to perform a case study on the consequences that the collapse of the Polcevera viaduct, on the 14th of August of 2018 has had on Autostrade per l'Italia, the concessionaire of the A10 highway, and its parent company, Atlantia. In addition, the authors sought how such an event impacted the takeover bid of Abertis Infraestructuras by Hochtief, ACS and Atlantia, announced on March 2018. The execution of the transaction was being conducted at the same time when the tragedy occurred.

The research has been centered in three main points:

First, context on the list of events and the chronological order that followed has been conducted.

In a second stage, an analysis of the impacts from those events is presented. Special emphasis has been given in the financial implications that the collapse of the Morandi bridge caused to Atlantia, understanding the market crash on the stock and how it was later recovered. Additionally, the implications that the collapse had on the acquisition of Abertis were determined.

In a third stage, the thesis took advantage of the uniqueness of situation to provide an answer to one of the greatest challenges faced on understanding valuation changes. The study was focused in determining how much the changes in the enterprise value of Atlantia right after the event and, later in the midterm, were explained by changes attributable to lower cash flows of Autostrade and, how much were due to the higher market risk perception reflected on the WACC.

The main conclusions derived are that the market crash was mainly provoked by the over-reaction that the government of Italy had, as the termination of the concession was seen a very likely outcome. From a valuation perspective, the influence on cash flows has been much higher rather than the influence derived from the WACC, in a c.75%/25% ratio when looking at the market crash. Such a difference has been reduced when moving from the short term to the medium term, and the ratio ended at c.66%/33%. Uncertainty on the final costs that Atlantia will incur have not been released yet and it explains such a trend. Regarding Abertis, the impact of the collapse had been minor if not inexistent in completing the transaction.

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Glossary

6M / 1H	First six months of the year.
9M	First nine months of the year.
A10	Referring to Autostrada A10 or Fiori Autostrade; Italian motorway connecting Genoa with Ventimiglia; part of the European route E80; It has 158.7 kilometers length.
Abertis Holdco	Refers to the special purpose vehicle created for the acquisition of Abertis Infraestructuras S.A.
Abertis Participaciones	Refers to the entity where the 98.7% share capital of Abertis Infraestructuras acquired by Hochtief was transferred upon acquisition.
Abertis/ Abertis Infraestructuras	Refers to Abertis Infraestructuras S.A., Spanish corporation.
ACS	Refers to Actividades de Construcción y Servicios S.A., Spanish corporation.
AENA	Refers to Aena SME, S.A., subsidiary of ENAIRE and state-owned company managing airports and heliports in Spain.
ANAS	Refers to Azienda Nazionale Autonoma delle Strade; Italian state-owned company devoted to the construction and maintenance of the Italian road network.
Atlantia / ATL	Refers to Atlantia SpA, Italian holding company.
ATVD	Aggregate Theoretical Vehicles per Day; equal to number of kilometers travelling/journey length/number of days.
Autostrade / ASPI	Refers to Autostrade per l'Italia SpA, Italian corporation.
b_a	Beta of the assets of a firm.
Base Case	Refers to the valuation of Autostrade per l'Italia based on the business plan pre-collapse of the Morandi bridge.
BBVA	Refers to the Spanish bank Banco Bilbao Vizcaya Argentaria.
b_d	Beta of the long-term debt of a firm.
b_e	Equity beta or exposure of the company group of assets to the market risk.
Benetton Group	Refers to Benetton Group S.r.l.; Italian corporation and well known fashion brand.
bn	Abbreviation used for billion.
BoD / Board	Board of Directors of a company.
BP	Refers to British Petroleum plc, or Business Plan.
bps	Basic points: 1/100 of 1%.
b_{Ts}	Beta of the Tax-shield of a firm.
b_u	Unlevered beta of a firm.
CAGR	Compounded Annual Growth Rate.
CAPEX	Capital Expenditures.
CAPM	Capital Asset Pricing Model.
CAS	Consorzio per le Autostrade Siciliane.
CC	Cost of Capital or return required by investors in a given group of assets.

Cellnex	Refers to Cellnex Telecom; Spanish corporation.
CEO	Chief Executive Officer.
CFO	Chief Financial Officer.
CIF	Refers to Código de Identificación Fiscal; number used for identification of enterprises in Spain.
Citi	Refers to the US bank entity CitiGroup.
CNMV	Comisión Nacional del Mercado de Valores.
Connect	Refers to the subsidiary of the holding Edizione; Italian corporation.
CPI	Consumer Price Index.
Criteria	Refers to Criteria CaixaHolding; Spanish corporation.
CSR	Corporate Social Responsibility.
D	Market value of long-term debt.
D&A	Depreciation and Amortization.
DCF	Discounted Cash Flow valuation method.
E / EqV	Market value of equity.
EBIT	Earnings Before Interest and Tax.
EBITDA	Earnings Before Interest Tax Depreciation and Amortization.
EBITDA margin	EBITDA over Gross Sales.
ECB	European Central Bank; central banking system of the European Union.
Edizione	Refers to the financial holding of the Benetton family.
EMEA	Europe Middle East and Africa.
Empa	Refers to the Swiss Federal Laboratories for Materials Science and Technology.
EMTN	Euro Medium Term Notes.
ENAI	Refers to the Spanish public enterprise responsible for air navigation management in Spain, attached to the Ministry of Public Works.
EU	European Union.
EURIBOR	Basic rate of interest used in lending between banks on the European Union interbank market, also used as a reference for setting the interest rate on other loans.
Euro/€	Currency type: Euro.
EV	Enterprise Value, understood as market value of equity plus net debt.
FCF	Operating Free Cash Flows to the firm available to all investors, before interest payment and after reinvestment needs.
FED	Federal Reserve System; central banking system of the United States of America.
FFO	Adjusted Funds from Operations.
Fitch	Refers to the credit rating agency Fitch Group, Inc.
Five Star Movement/M5S	Refers to the Italian political party: Movimento 5 Stelle.
FX	Refers to Forex or the market in which currencies are traded.
FY	Refers to Financial Year.
g	projected constant growth rate of the cash flows of a firm to infinity.
G&A costs	General and Administrative expenditures.
GDP	Gross Domestic Product.
Genoa Bypass /Bypass/ Gronda di Genova	Genoa Bypass project which includes 72 kilometers of a new motorway connecting the junctions bordering the city area of Genoa; See: https://www.grondadigenova.it/ .

GIC	Refers to the Singapore Investment Corporation.
GBP/£	Currency type: Great Britain Pound (United Kingdom).
Hisdesat	Refers to the public enterprise Hisdesat Servicios Estratégicos S.A.; Spanish entity.
Hispasat	Refers to Hispasat; the Spanish satellite communications operator.
Hochtief	Refers to Hochtief Aktiengesellschaft , German limited company.
Ibex 35	Índice Bursátil Español; Benchmark stock market index of Spain.
IMF	International Monetary Fund.
IRR	Internal Rate of Return.
km	Kilometer.
LTM	Refers to: Last Twelve Months.
m	Abbreviation used for million.
M&A	Refers to: Mergers and Acquisitions.
Medium-term Case	It refers to the valuation of Autostrade per l'Italia based on the business plan 6 months after the collapse of the Morandi bridge.
MM	Modigliani and Miller.
Moody's	Refers to the credit rating agency Moody's CreditView.
NPV	Net Present Value.
OECD	Organization for Economic Co-operation and Development.
OPEX	Operational Expenditures.
PE ratio	Price to Earnings ratio.
Pillar 9	Refers to the pillar of the Morandi bridge that collapsed on the 14th of August 2018.
PP	Refers to the Spanish political party: Partido Popular.
PPPs	Refers to Public-Private Partnerships; type of contract involved in infrastructure provision.
PSOE	Refers to the Spanish political party: Partido Socialista Obrero Español.
r_d	Pre-tax market expected yield to maturity of long-term debt.
r_e	Market value of expected return on equity.
REE	Refers to Red Eléctrica de España; Spanish corporation.
r_f	Risk free rate.
$r_m - r_f$	Market risk premium.
S&P	Refers to the credit rating agency Standard & Poor's.
Short-term Case	It refers to the valuation of Autostrade per l'Italia based on the business plan two days after the collapse of the Morandi bridge.
SPV	Special Purpose Vehicle.
t_c	corporate marginal tax rate.
The League	Refers to the Italian political party: Lega Nord per l'Indipendenza della Padania.
TV	Terminal Value.
V_U	Value of an unlevered firm.
WACC	Weighted Average Cost of Capital used as a Cost of Capital attributable to a corporation.
WC	Working Capital.
y-o-y	Year on Year.
σ_m	Variance of the market returns representing volatility of the market.

Chapter 1. Introduction

The largest M&A deal on the management of infrastructure business took place on May 2018, when Abertis was acquired by a consortium formed by ACS, Atlantia and Hochtief for an enterprise value of €32.1bn.

The deal took two years before completion due to the competing bids of the buyers and the strategic character of Abertis' assets for the Spanish Government, among other issues.

Briefly, Atlantia announced its intention to buy Abertis in May 2017 but a competing bid by ACS emerged some months later, locking the two companies in a bid war. An agreement sealed one year later between both companies created the basis for a joint bid.

The process ended with a 20.1% premium pre-rumor price paid to Abertis shareholders fully in cash, for a total equity value of €16,519.6m, equivalent to 18.36 €/share. As a result, the new consortium created a special purpose vehicle in October 2018, named Abertis Holdco, which was registered into the Mercantile Registry of Madrid, to control the new entity.

The rationale of the deal was to develop a new project in the long-term view, based on the experience that Hochtief and ACS have on the construction sector together with the expertise of Atlantia as a global operator of transportation infrastructure. Such strength, to be merged with the attractive and extensive assets that Abertis held, would allow to gain competitiveness of the businesses to all of them.

The new Abertis Holdco was funded with an equity contribution, totaling €6,909.3m and a debt contribution, primarily constituted of several bank loans, of €9,823.9m. The split of ownership agreed corresponded to 50% + 1 share for Atlantia, 30% for ACS, and 20% - 1 share for Hochtief. As a result, Atlantia is from year ended 2018 integrating Abertis on its consolidated accounts.

The disbursement effort that ACS, Atlantia and Hochtief committed was of considerable importance and, in 2019, refinancing operations to allocate it on the capital structure of each, to benefit as much as possible from the synergies derived had become a strategic priority for the corporates.

The resulting group, has linked two of the main construction entities in a global scale (ACS and Hochtief) with one of the major transportation infrastructure management portfolio of assets worldwide (Atlantia and Abertis), which will allow to diversify its risk, enhancing its global exposure and being able to compete for larger projects in consolidated and emerging markets where Public Private Partnerships to fund new infrastructure are gaining importance.

Apart from the challenges that the integration of Abertis would suppose for the entities, another event of significance took place on the 14th of August 2018.

That day, a section of the Polcevera road bridge, on the A10 Genoa-Ventimiglia motorway, collapsed under a heavy rain, leaving behind 43 deaths and more than 80 injured people which were travelling across the bridge in the city of Genoa.

The A10 motorway, is part of the infrastructure network managed by the concessionaire Autostrade per l'Italia, which since its privatization in 1999, is controlled by Atlantia. The concession is constituted of 3,020km of highways in Italy, almost half of the network of the country. Additionally, Autostrade represented for Atlantia c.65% of the EBITDA of the group, being then, one of its major assets.

Due to the collapse of the bridge, society was in shock, and the Italian government immediate reactions were to threaten with the revocation of the concession of Autostrade to Atlantia in a very short time. Consequently, the stock price of Atlantia suffered a great crash, and the group lost c.30% of its market capitalization in 2 days.

Six months after the event, investigations behind the collapse are being conducted by the government. The initial tempers have calmed down and a judiciary process has begun trying to determine who was the main responsible and how much should he pay for it. Further, the Italian government showed its predisposition in revising the current contractual agreements under all the concessions held and will decide whether they need to be modified or even revoked, which would suppose the nationalization of the assets.

On the other hand, Atlantia has shown its commitment with a collaborative spirit. The company assumed the costs related to the demolition and reconstruction of the new bridge, as well as the compensations payable to all the people which was directly affected by the collapse and estimated that it will be c.€509m. Also, they are convinced that there is no culpability from their side, as they complied with all the requirements established by contract, and thus, did not assume any prejudicing liability to be derived from the case in the future.

After the collapse, the threat of punishments to Atlantia raised the concerns, not only for the company itself, but for the implications that it could have on the acquisition of Abertis, limiting the viability of the refinancing needed and endangering the agreement reached among the parties. Emphasis was given on the lowering of the credit rating that the agencies did on Atlantia and Autostrade post-event. In particular, the investment community tried to assess how much would

be the added cost for the group to be supported, in a context where a high increase on leverage would take place upon consolidating Abertis debt.

Fortunately, Abertis was acquired as planned, and today, is seen as an asset of even more strategic importance for Atlantia, enabling the diversification of its business not only regionally but also in reputational terms.

The refinancing of Abertis acquisition was completed, and the effects for all involved entities from the Abertis contribution, as well as the collapse of the bridge are coming to light.

Finally, to mention that, for a more detailed view on the presented entities above, in the Appendix 1 a description of each entity and its main activities can be found.

1.1 Description and goals of the Thesis

Under the exceptional situation that the presented corporates are facing as a result of the sequence of events that took place in the last 2 years, being of major importance, the collapse of the bridge soon after announcement of the acquisition of Abertis, the authors will focus on the following points:

1- *What has been the impact of this event on the acquisition of Abertis for all the involved parties?*

The fact that the event took place soon after one of the most complex M&A transactions in the recent history (the biggest one in the management of infrastructure business) was finally accomplished a few months before, allows us to study how such an accident has impacted the materialization of the transaction and its involved entities as of today.

The operation, which involved the creation of a new shared SPV to gain control of Abertis, as well as the high leverage provided by banks to pay for the operation, are an area of interest to understand the mechanics of M&A financing.

In particular, the changes on corporate governance, shareholding structure, debt rating perceptions and acquisition finance conditions for Abertis will be analyzed for each of the participants.

2- *How was the market reaction post-collapse and its evolution in time?*

More specifically, it will be looked in detail the impact on the valuation of Atlantia since that day.

In order to do that, we will link the market information available at the time just right after the stock of Atlantia collapsed, to build a DCF. This new model will consider the potential losses of Autostrade's cash flows that the removal of the concession would bring to Atlantia and also the changes on WACC. The WACC, being the risk perception that the market had immediately post-collapse, and estimated by means of consensus of the market as well.

In a second stage, the impact of time is presented. A new model, considering the information available 6 months post event is built and the outcome is compared with the value right after the event.

Finally, the authors will seek to provide an analysis of the results and set up some empirical evidence and pragmatic relationships to assess the impacts of shocks in the enterprise value of firms. Emphasis will be put on the relationships between cash flows and WACC, and its evolution on time.

1.2 Structure of the Thesis

The thesis is structured in a way such that the answers to the 2 questions presented above are given, ensuring the reader gathers gradually the necessary context to understand the content presented.

The content has been split between 5 chapters plus additional information found in 7 Appendixes. For ease of clarity, a Glossary of Terms has also been provided and all the References used were listed.

Additionally, for having a comprehensive view of the work done, the thesis is accompanied with the valuation of Autostrade per l'Italia. The models developed were done in Microsoft Excel and have been a key element to conduct the analysis. Therefore, it is recommended for the reader to validate the outputs himself following the guidance given on the Appendixes 6 and 7.

In order to provide to the reader with a guide on what to expect on the following pages, as well as the possibility to filter the topics that could be of interest to him, in the following paragraphs the content on each chapter is explained.

Chapter 1 is the Introduction. The purpose of it is to present to the reader the list of events that justify the interest and uniqueness of this case study. Primarily, a summary of the events for the Abertis takeover, starting on April 2017, and the posterior collapse of the Morandi bridge, which took place on August 2018, are given. Some primary insights on the market shock following the disaster are stated and the situation as of 6 months post-collapse is outlined. Secondly, the financial and corporate valuation aspects of interest that aroused the curiosity of the authors, as well as the intentions that they pursue on this investigation, are explained, separated mainly in 2 questions, which are:

1. *What has been the impact of this event on the acquisition of Abertis for all the involved parties?*
2. *How was the market reaction post-collapse and its evolution in time?*

Chapter 2, the Historical Review of the Main Events, has the objective to provide to the reader a complete view on all what happened between April 2017 and end of February 2019. How such events affected the main corporates as well as all its stakeholders. The stakeholders include the main corporations, the respective governments of Spain and Italy and ultimately, the society. The chapter took the form of a journalistic reportage, and, for keeping the logic, it has been split in two parts:

1. In the first part, there is the review on how the acquisition of Abertis was conducted. Also, details about the conflicts of interests derived and the involvement on the Spanish government are given.

2. In the second part, the collapse of the bridge in Genoa is described. From the day that occurred, insight is given on the immediate reactions and on the social impact that it had. The evolution of the situation is presented. The reader can understand how the transition from the primary strong threats of the Italian government, claiming termination of the concession would occur immediately, towards the current status, with on-going investigations expected to last until Q3 2019, took place.

Chapter 3 main content and objectives are well summarized by the title “Analysis of the consequences of the collapse of the Polcevera viaduct”. It has been divided in 2 main sub-chapters:

1. The first one is centered on the impacts that the collapse had for the owners of the concessionaire of the A10, Autostrade per l'Italia, and its parent company, Atlantia. To provide an answer to question 2 above, three main fields are studied on these corporates. Primarily, to observe what corporate governance changes took place. Secondly, how did shareholders react on the event and during the subsequent months. Finally, a detailed review on the financial impacts that the event supposed for the corporates and its shareholders is given. Emphasis is put at the beginning with the market crash, two days after the collapse. Next, credit rating agencies lowered the profile of the corporates on the view of probable future attributable costs in several forms of punishments. It is worth to mention that a detailed description of the implications of termination of the concession for all parties is detailed. Remember that, government reactions were the main fears that investors had at that time and the outcomes are still not clear, which increased the risk perception of the market towards the company's assets.
2. The second half aimed to determine which financial impacts were derived from the collapse towards the proper completion of the Abertis acquisition, and thus, to provide an answer to question 1. The primary financing terms and conditions that Hochtief agreed with the bank guarantors are presented. In a second stage, such conditions are benchmarked with the new refinancing packages used for the new Abertis Holdco. Note that, due to the delisting of Abertis from the Spanish stocks market upon acquisition, not all detailed information has been released. Therefore, the authors were limited to use public press releases from the corporates and the media at that time, which, in our opinion, were enough to conduct a proper study. Similarly, as in the first part, the impact on the shareholders for ACS and Hochtief was studied in detail. Finally, a review of the contribution that Abertis brought to ACS, Hochtief and Atlantia as of end of 2018 is given, extracted from the financial results presented by the entities at that time.

Chapter 4 is the most analytical part of the thesis. It is based on the results from the model build to value Autostrade and its purposes were mainly two. The first one, to conduct an independent assessment by means of the outputs of a DCF model on the valuation changes suffered by Atlantia due to the risks of losing Autostrade concession rights. The second one, was to study the market shock reaction from a technical point of view.

The chapter has been divided into 6 sub-chapters detailed below:

1. In the first part there is a review on valuation topics of interests and corporate valuation theory. This seeks to provide to the reader with the basics on how the DCF model was built. In addition, the main problem the authors aim to solve for valuation practitioners is presented. In short, the question to be answered is how under such an event, the valuation changes are explained by changes in cash flows vs changes in WACC.
2. The second presents the logic followed to conduct the study. Three different valuations of Autostrade were done. One before the collapse, which is known as the Base Case. A second one just right after the collapse, which considers the views that created the shock. Finally, a third one, as of 6 months from the event, considering the information available by end of February 2019.
3. Sub-chapters 3, 4 and 5 present the results obtained from the valuations. Business plans of Autostrade in each case were updated according to the information available, which modified the cash flows of Autostrade. The WACC attributable to Autostrade was computed proportionally to the Equity Value that the interest in Autostrade represented in Atlantia's market capitalization, according to the consensus from the Broker Reports.
4. The last point studies the outputs found from the analysis, with emphasis on cash flows and WACC changes in time. An indication of a new metric, $\frac{\Delta FCF(\%)}{\Delta WACC}$ is presented. The authors propose it as a way to assess, from a pragmatic point of view for practitioners, changes in enterprise value derived from events of similar nature.

Finally, Chapter 5 outlines the main conclusions derived from the case study. The authors also present additional research of interest that could be conducted on the topic and that fell outside the scope of the presented work.

Chapter 2. Historical review of the main events

This chapter has the purpose to provide to the reader a full vision of the list of events that took place from the time when Atlantia shown its interest in acquiring Abertis, in April 2017, up to 6 months after the collapse of the Morandi Bridge, March 2019.

The information is presented following strict chronological order, to provide to the reader a good context an understanding of the situation at each point in time, which is determinant to understand the analysis that comes posteriori.

The chapter is divided in 2 parts. In the first part, the authors present the takeover bid of Abertis and all the conflicts and difficulties faced, which extended the materialization of the deal by more than 1 year. In the second part, a review on the collapse of the Morandi bridge in Genoa is given. Further, the reactions from all stakeholders at each point in time is detailed and some emphasis on the impacts to society is put in place.

2.1 Abertis Infraestructuras takeover bid

2.1.1 Timeline and events of the transaction

On April 19th 2017, the first rumors about the potential interest of Atlantia to present a takeover bid to acquire the entirety of the share capital of Abertis was announced in several media, without concreting any details on the transaction yet, Abertis share price rose by 6% that day, before Madrid Stock Exchange (Bolsa de Madrid) decided to suspend the Abertis share for around 24h.

On May 15th 2017, Atlantia announced formally the voluntary takeover bid and on June 11th 2017, presented the documentation to the CNMV (Comisión Nacional del Mercado de Valores), entity in charge of regulating the securities markets in Spain, independent, which falls under the Ministry of Economy.

The offer of Atlantia, valued Abertis at €16,431m at a price of 16.50 €/share, slightly above the price that it closed on the day before, at 16.35 €/share. The offer was to be paid in a mix between cash and shares at a 77%/23% ratio, to easily convince Criteria CaixaHolding (Criteria), the major shareholder of Abertis at that time, which owned 22.2% of the share capital of Abertis. In that way, Criteria would have a significant stake on Atlantia's capital entering in the Board.

The integrated group, would create one of the largest infrastructure concession entities worldwide, being present in 19 countries and with around 14,100km of toll roads under management, apart from other assets such as airports or the satellite Spanish firm Hispasat, which was controlled by Abertis, owning a 57% stake.

Finally, the 9th of October 2017, CNMV authorized the formal bid and left with 30 days for Abertis shareholders to approve it.

Nevertheless, on 18th of October of 2017, Hochtief, entity hold and controlled 74% by ACS, one of the main construction groups in Spain, submitted a competing bid to the previous bid made by Atlantia, at a time when more than half of Abertis shareholders already provided support to Atlantia's offer, which was waiting for the positioning of Criteria.

The new offer was valuing Abertis at a price of 18.76 €/share, which represented an EV of €18,500m. The offer was also intended to be a mixed in cash and shares, keeping the same proportion as in Atlantia's proposal. J.P Morgan was presented as a guarantor of an initial loan valued at €14,963m to be paid in cash.

Abertis claimed that around €6,000m to €8,000m in synergies could be derived from the merged entity, due to its higher capacity of partnering together in PPP's from USA, Canada, Australia and Europe. Additionally, Hochtief, committed to increase its dividend payout ratio to 90% if the investment grade of Abertis ("BBB" by S&P) could be kept after the deal.

Because of the new submittal, the time that Abertis shareholders had to accept Atlantia's offer was postponed until the CNMV would pronounce about the acceptance of the counter bid presented by Hochtief, which finally took place the 12th of March 2018.

Before the acceptance from CNMV, Atlantia opted to wait to present any improvement of the first offer. However, they asked the approval of several changes in a general shareholders meeting held the 21st of February 2018 to be ready to react quickly. Talks about a dividend increase of 16% upon deal completion, as well as prices around 20€/share for the new offer were leaked to the press, turning the bid in a sort of a "war" by which the share price of Abertis kept increasing and reached maximum values as of 19.64€/share, not seen since the pre-crisis levels. Consequently, the shareholders structure of Abertis began to change, as some funds removed its stake, happy with the 35% increase seen since discussions about the deal started on April 2017.

It was the 8th of March 2018 when ACS and Atlantia made a public announcement telling that management teams were in talks to establish an agreement for the joint acquisition of Abertis, avoiding in that way the need to keep with the war and its negative impacts. Immediately, the market reacted, and the stock price of Abertis dropped towards the original price offered by ACS.

After approval from the CNMV, Abertis remained neutral on the negotiation process carried by ACS and Atlantia. The Board approved a distribution of 0.4 €/share in a form of a dividend, which lowered the price to be paid by the same amount to 18.36 €/share, as stated on the offer.

The rumors about the agreement finally materialized the 14th of March 2018, when Hochtief announced an amendment of the original bid because of reaching a principle of agreement with Atlantia and ACS.

The main features of the agreement, formally signed the 23rd of March 2018 and immediately presented to the CNMV, were the intention of Hochtief to be committed to amend the original bid according the new terms approved, the subsequent withdraw of Atlantia's bid, and the incorporation by Hochtief, Atlantia and ACS on a special purchase vehicle (SPV) which would acquire from Hochtief the Abertis shares acquired in the bid.

More specifically, the bidder (Hochtief) was offering Abertis shareholders a voluntary cash consideration of 18.36 €/share. The consideration would be finally financed entirely by bank debt, by which Hochtief signed two syndicated financing contracts with 26 banks for a total amount of €18,215m.

The priced offered by Hochtief included a share premium of 33% over the average price of Abertis shares in the six months period preceding 12th of April 2018, date when the CNMV approved the amended bid presented. From Abertis Board of Directors side, they considered that the price was fair, after asking to AZ Capital, Citi and Morgan Stanley fairness opinions on the deal.

As soon as the bid would be completed, Atlantia, ACS and Hochtief would create an SPV that would acquire from Hochtief the full shares in Abertis. The new entity would rise €7,000m in capital which would be distributed among the 3 companies as follows: 1) Atlantia would subscribe 50% + 1 share 2) ACS would subscribe 30%; and Hochtief would keep the remaining 20% - 1 share, allowing Atlantia the control and accounting consolidations of the SPV and Abertis.

To form the new entity, Hochtief approved for a capital increase and a sale of shares from ACS to Atlantia so that Atlantia would become the holder of 24.14% of the share capital of Hochtief and ACS's stake would be reduced to 50.15%. The debt of the new SPV, named Abertis Holdco, would finally be around €10,000m, and both entities expected to lower it further to €3,000m by means of the sale of non-core Abertis assets (Hispatat and Cellnex), as well as by the issuance of new corporate bonds by the help of the initially financing entities.

On the other hand, the new Abertis would pay 90% of its profits as dividends if the credit rating was to be kept at least "BBB" from S&P to the 3 entities, in a contract with a legal framework to last for 10 years. All parties also agreed that it would not be allowed to sell shares of Abertis in the next 5 years without previous consent of the other partners and considered the possibility to list publicly again the new company in 8 years, by 2026.

From its side, Atlantia notified the CNMV of its withdrawal on its bid the 12th of April 2018, just before CNMV authorized the amendment.

The market reacted positively on ACS (+20% since showing initial involvement) and negatively on Atlantia (-7%), due to the higher leverage that Abertis would suppose. ACS, on the other

hand, could benefit from keeping the investment grade, key at the time to issue the new bonds that would be used to refinance the acquisition as mentioned above.

The 17th of April, Abertis presented to the CNMV the report by the Board of Directors on the takeover bid by Hochtief where they accepted the offer document and highlighted the fact that, it was for each shareholder, based on their interest, to decide whether to accept the bid. However, the Board also recommended to sell its stake. Furthermore, Criteria announced its intention to support the transaction and to sell all its shares at the offered price.

The 15th of May 2018 Hochtief bought 78.79% of Abertis. Considering the treasury shares, the stake was up to 85.6%. Because they did not reach the minimum required to enforce the squeeze-out provision from minority shareholders, it took more time for the new group to gain the full control. However, the company was excluded from the Ibex 35 that same day by the CNMV.

Immediately after the acquisition, changes on the board of Abertis were implemented. Salvador Alemany, President of the Board, was substituted by Marcelino Fernandez Verdes, former CEO of Hochtief and member of the board in ACS. Later, Atlantia would have the right to appoint the new CEO and CFO of the entity.

The 25th of July 2018, the new Abertis controlled by Hochtief hold a general shareholders meeting where they approved the exclusion from the Spanish stocks market to be done as soon as possible. They also approved the amortization to the 78.8m treasury shares that Abertis hold on its balance sheet.

The next step, after the acquisition of 30.3m of Abertis shares by Hochtief at the limited price offered, was the closure of permits for trading the stock. It took place the 27th of July, when Hochtief controlled 97.75% of the share capital of the group. Finally, the 6th of August 2018, Abertis was excluded from the Spanish stocks market.

The new Abertis Holdco was formally constituted following the above-mentioned structure the 29th of October 2018. The entity committed €6,909.3m in capital and signed a syndicated loan for a value of €9,823.9m. The same date, ACS sold to Atlantia a total sum of 16,852,995 shares in Hochtief at a price of 143.04 €/share and received in exchanged €2.41bn in cash. Simultaneously, ACS subscribed a capital increase in Hochtief worth 6,346,707 shares at the same price which supposed to make a full disbursement of €908m. After those transactions, ACS's stake in Hochtief stands at 50.4% and Atlantia reaches 23.9%.

To comment also that the first impact on the consolidation of Abertis for ACS where made public the 9th of January 2018, when ACS stated on its 9-month 2018 quarterly report that Abertis brought €128m in the form of a dividend, with a net income totaling €691m (+14.6% y-o-y).

Differences on the final values previously stated can be explained by several factors the most significant one, refers to the sale of the stake on Cellnex that Abertis had done before the transaction.

Cellnex is the largest independent operator of wireless telecommunications infrastructure, with a total portfolio of over 28,000 sites, with a market capitalization c.€5,590m. By the time of the acquisition, Abertis hold 34% of the share capital of Cellnex, and by the changes on the takeover bids regulating laws approved from the Spanish government, in case ACS would buy Abertis,

they would also have been obliged to present a formal bid for 100% of the share capital of Cellnex, which ACS was not willing to consider.

For this reason, an exit option for this stake was negotiated with Atlantia and its main shareholder, the Benetton family. At the end, the 5th of June of 2018 it was formally announced that Edizione, enterprise controlled by the Benetton family, bought 29.9% of Cellnex at a price of 22.45 €/share, at a 0.7% discount on the market price by that time. Atlantia kept the right to buy 6% of Cellnex in the future and had a preference in case Edizione would decide to dispose part of it.

The 12th of July 2018, Edizione sold Cellnex to ConneCT, subsidiary of the holding and controlled by the Benetton family for a price of 21.5 €/share. Overall, the impact for Cellnex equity value during 2017 was a +56% increase on its share price.

In another step, the 10th of October 2018, 20% stake of ConneCT was sold to Government of Singapore Investment Corporation (GIC), the sobering wealth fund of Singapore, also at the price of 21.5 €/share, in a movement by which Edizione controls now 60% of ConneCT.

The aim of the new shareholders is for Cellnex to inject further €1,500m in the form of capital increases in order to give to the company enough financial strength to keep growing without compromising its leverage, which was of around 5.2x EBITDA by the end of 2018.

The last movements had a positive influence on Cellnex and were well received by the investment community, as its stock, still listed on the Spanish stocks market, trading at c.24 €/share.

Regarding Hispasat, the 13th of February 2019, it was made public that Abertis sold its 89.68% of the company for a value of €949m to Red Eléctrica de España (REE). The price was at a discount from what ACS was valuing the company at an initial stage, which was at €1,254m. The fact that it was already assumed the sale would take place because of the strategic importance for the Spanish government in the companies' assets, and the needs for the new Abertis Holdco to refinance the debt provided to make the acquisition, explained the acceptance of such a discount.

2.1.2 Conflicts derived from the acquisition of Abertis Infraestructuras

Just after the formal announcement made on 15th of May 2017, the Spanish Government, using the voice of the Ministry of Development, at that time leaded by Iñigo de la Serna, raised its concern about the legality of the acquisition.

The government claimed that the change of ownership of Abertis should be approved by the government because Abertis hold Spanish assets that belonged to all citizens, as well as strategic assets for the country.

More specifically, for the government, it was of interest to keep under Spanish scrutiny 60% of the main toll road concessions from Spain, which fallen under the Ministry of Development.

Further, Abertis hold and controlled 57% of Hispasat, company considered of strategic importance for Spain, because it was managing Hispasat-1, the satellite which provided service

for military and governmental use in Spain. Hispasat controlled Hisdesat, public entity which responsibility was under the Ministry of Energy, at that time leaded by Álvaro Nadal.

The two ministries presented a formal complain to the Solicitor General of the State, in charge of providing legal advice in the matters that could affect the State Legal Service or its organization.

The ministries requested the right to sue the CNMV to move independently from the government with regards to the acceptance of the takeover bid formalized at that time. Also, they aimed to have a formal request from the bidder with regards to the change of ownership of the assets.

On it, the ministries were expecting the bidder to detail the business plans for the new assets that would control as well as to present further details on the financial viability of the new entity.

Soon after the announcement, on the 19th of July of 2017, AENA, the public listed entity in charge of controlling the main Airports of Spain, which was controlled with a 51% by the government entity ENAIRE (in charge for the supply of air traffic services of the country), announced they had been studying the possibility to present a counter bid offer of Atlantia. However, the rumors vanished quickly, after ENAIRE rejected this possibility, as it was not seen viable due to the large price to be paid and the high level of leverage required.

Next to AENA's rumors, on the 21st of July, it was ACS, one of the major construction groups of Spain, which talked about the potential counter offer for the bid presented by Atlantia. The deal would not be an easy step for ACS, because of the high leverage that would represent for them as well. However, the possibility to do it through its German subsidiary Hochtief, 72% controlled by ACS, would allow not having to consolidate Abertis debt on the balance sheet of ACS and let it to keep its just recent investment grade awarded by S&P on May 2017.

In fact, ACS already had had a stake in Abertis in the past of around 25%, which was sold in 2012. Also, back in 2006, ACS participated in the first attempt of integration of Abertis and Atlantia (at that time called Autostrade) in 2006. Florentino Pérez, president of ACS, would have resulted the vice-president of the resulting entity. However, the Italian government blocked the deal by that time.

Back in 2017, it would have been rare that the Spanish government would not have tried to keep its assets as well, however, the market regulations and the further developed concept of EU made it more difficult to justify blocking it, as it was totally against the free market principles which in principle were only involving private corporates.

Therefore, the exposed list of events should be seen as the primary attempts from Spain to avoid the loss of Spanish assets in hands of an Italian group, which, by means of the entrance of ACS, looked like it would be solved. Particularly, it is of interest to notice that just after ACS announcement, it was when the minister of economy Luis de Guindos declared that, for the government: "the nationality of shareholders of a company does not matter".

Another interesting point to mention is that the Management of AENA was, by that time, left alone pushing for the deal to move forward, after the rejection of ENAIRE. However, the authors opinion is that, they were primary pushed by the government to move towards the counter bid offer, which was later discarded as soon as ACS stepped in. Proof of that is the fact

that by end of September of 2017, the president of AENA at that time, José Manuel Vargas, exited the company after being successful on listing it and transforming it in a profitable business, still claiming that for him the deal would have had sense and mentioning personal reasons. Vargas was probably upset by the role the government made him to play with regards to Abertis acquisition, which made him to look for an exit or, maybe, ask for a compensation. Soon after, in November 2018, Vargas joined Rhone Groupe, the US PE fund, as a new member of the Board.

Regarding the movements being carried by the ministries to oblige the bidders to present a formal request for the acquisition of Abertis assets, the Solicitor General of the State did not formally position itself until December 2017, giving for valid the ministries claims and thus, making it necessary for ACS and Atlantia to formally present its intentions to acquire Abertis.

On the meantime, all other entities which had a voice in allowing the transaction approved the takeover bids. Among them, it was found the European Commission and the Chilean and Brazilian governments.

Also, the CNMV gave its opinion and reiterated that the offer of Atlantia was valid because “the fact that the government would need to give permission is an exception on the principal of free transmissibility of shares in listed corporates”.

ACS, decided to proactively ask permission to the government on early December, while Atlantia opted to avoid it in first instance. Atlantia, primarily aimed Abertis to present such a formal request to Spain, afraid of getting rejection from the ministries, as, in a precedent deal, it was the target who did such a move. In that way, neutrality from the Spanish government would have been kept, without mixing the nationality of the future owners of the assets.

On 22nd of December 2017, after the favorable positioning from the Solicitor General of the State, Atlantia presented formally the request. At the same time, they announced the intentions they had of being fully aligned with the Spanish government, showing respect to the institutions and looking to establish a friendlier relationship.

The government, simultaneously started to raise the voice with the possibility to sue the CNMV for having accepted the offer of Atlantia without its previous consent, which finally did not happen as it would have been interpreted as an attempt to block the acquisition going against the free market rules.

In parallel to the presented events, Red Electrica de España (REE) announced the 23 of November 2017 that would be interested in the potential acquisition of Hispasat. The deal would require the previous transfer of the 33,7% stake that Eutelsat had on the company to Abertis, so that the transaction could be guaranteed from a single shareholder.

REE is partly state-owned (24%) which operates the national electricity grid in Spain, and on the 1st of November 2017, claimed that its intentions to buy Hispasat were not being imposed by the government, making even more suspicious its real involvement, as they were not in the business of satellites and would have taken considerable integration efforts.

On the meantime, ACS and Atlantia showed both its predisposition on selling Hispasat after the acquisition. Abertis, proactively also tried to reach an agreement with REE before the deal would be done. In fact, Abertis shareholders approved the 10th of February 2018 to buy the 33% stake

that Eutelsat had on Hispasat and reached a preliminary agreement with REE to sell it to them, valuing the firm at €1,149m.

Tensions relaxed after 9th of March, when rumors about the agreement to be reached among both parties, ACS and Atlantia, were spread, and when the deal and creation of the new Abertis Holdco was finally confirmed by the end of the month.

However, the Spanish government insisted that the previous agreement reached with regards to the change of control of assets was void after the new deal. Therefore, ACS and Atlantia presented again a formal request to the government the 8th of May 2018 which, was finally approved on the 28th of December of 2018.

With regards to Hispasat, the negotiations with REE were that time not fructiferous. In part, there was an issue of differences in valuation about the company that the new group assigned. Specifically, they were aiming to sell it for €1,300m, which breached the deal reached by Abertis a few months ago. Furthermore, the 10th of October 2018, REE formally announced that its priority would be to invest €7,000m to adapt to the energetic transition, and discarded the possibility of funding the acquisition. However, Hispasat was finally sold on 12th of February 2019 to REE at a discount, valuing the company at €1,057m, taking advantage of the strong momentum that REE had at the beginning of the year on its stock performance and for the needs to raise cash for the new Abertis Holdco in order to repay part of the bridge loan. The Government of Spain, which by that time changed and its new head was the left-wing head of PSOE Pedro Sánchez, pushed for the deal to be completed, afraid that the opposition could criticize further the inaction and loose of control of something that belonged to all Spanish citizens and in which they worked so strongly to keep.

Overall, the 10-year contract signed between ACS, Atlantia and Hochtief seems to have calmed down Spanish government concerns. Abertis remains as a Spanish entity, without any impact to its employees nor main governance policies. The loss of control on the sharing of the assets with Atlantia is limited. On the other hand, the resulting group is by far one of the largest construction enterprises at a global scale, holding a significant amount of the total transportation infrastructure assets worldwide and aiming to develop and expand new business opportunities in greenfield and brownfield toll road projects, expected to bring strong benefits to all stakeholders involved.

2.2 The collapse of the Polcevera Viaduct

2.2.1 History, technicalities and collapse of the Polcevera Viaduct

Polcevera Viaduct, most commonly known as Ponte Morandi, given by the name of its designer, Riccardo Morandi, is a road viaduct on the A10 motorway, currently managed by Autostrade per l'Italia, in Genoa (Italy).



Figure 2.1 Polcevera Viaduct location. Source: Media.

The bridge served as a connection of one of the major links from Italy to France and runs over Sampierdarena and Cornigliano districts of Genoa. It was constructed between 1963 and 1967, with a total cost of 3.8bn of Italian liras and was opened to traffic the 4th of September of 1967. The original name comes from the Polcevera river, which the bridge crosses almost in the middle of the length.

Morandi's bridges were famous for being mainly cable-stayed. These bridges are characterized for having a prestressed concrete structure of the piers, deck and pylons, with very few stays/wire ropes which run directly from the tower to the deck, forming a fan-like pattern.

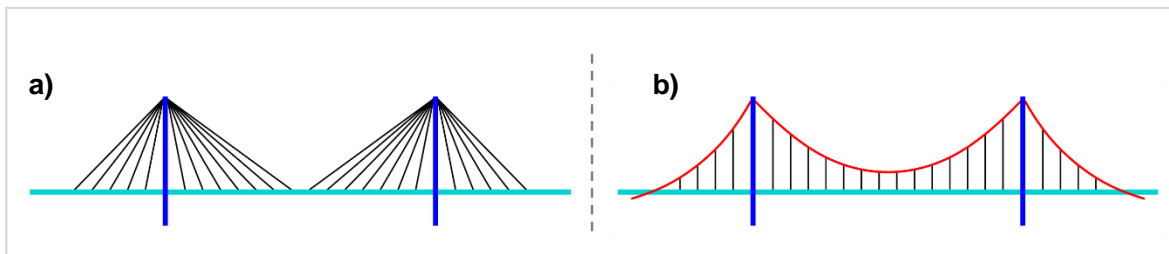


Figure 2.2 a) Cable-stayed bridge with fan design; b) Suspension bridge. Source: Media.

The bridge had a length of 1,182 meters, a height of 45 meters at deck level and 3 reinforced concrete pylons reaching 90 meters in height. The maximum span was 210 meters.

Since the beginning, continual restoration works have taken place due to an incorrect assessment of the effects of creep of the concrete. This provoked an excessive deferred movement of the vehicle deck, undulating it in the three dimensions. Only after several works, the deck was considered acceptable by the mid-1980s.

In the 1990s, the bridge shown signs of weaknesses. One of its pillars was inspected internally and it was found that some of the prestressed wires were being corroded. By that time, the wires were strengthened by flanking them with external steel cables, under concern of a potential failure, as the one suffered from another bridge of Morandi in Venezuela in the 1980s.

The main difference of Morandi bridges versus the cable-stayed bridges as of today is found in the number of steel cables used to sustain the deck, as shown in the figures below:

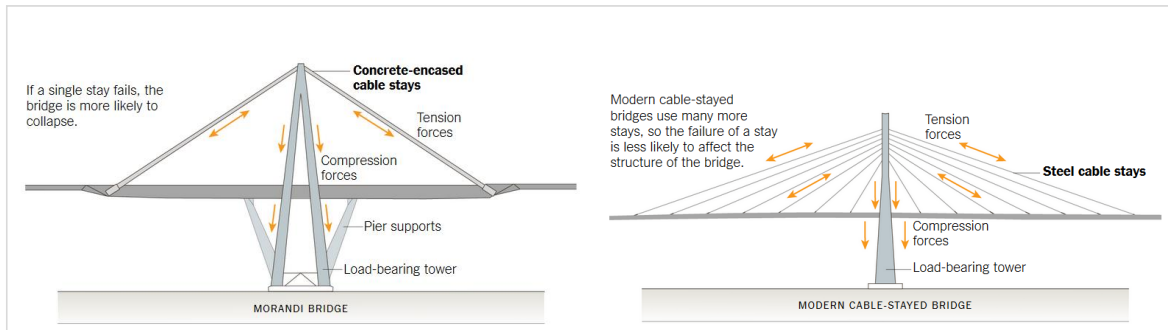


Figure 2.3 Comparison of Morandi Bridges with Modern Cable-Stayed Bridges. Source: Media.

Furthermore, the stays at that time were constructed believing that concrete would provide enough protection to avoid corrosion of the cables inside, which did not occur due to cracking, and the steel started to corrode immediately after the bridge was opened to traffic.

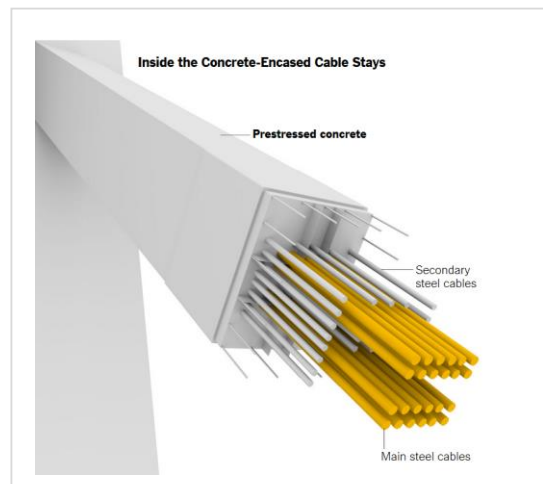


Figure 2.4 Concrete-Encased Cable Stays. Source: Media.

Before Morandi died, there was time to review the conditions and the problem was noticed. For this reason, in the 1990s, three towers of the bridge were reinforced, replacing the cables with new ones which had a protective sheath without concrete. However, it is not known why the public entity Autostrade, which managed the bridge since 1999, did not perform the same operations with the remaining 2 towers.

Later in 2013, once Autostrade was already privatized, fears were again expressed about the structural condition of the bridge, although it was finally reported as a “fairy tale”. However, in 2017, Autostrade asked Genoa university and Polytechnic University of Milan to conduct a study

of the bridge status. They reported that in pillar number 9, the one that collapsed, there were disparities on the behavior of the stays. Further, Carmelo Gentile and Antonello Ruccolo, from the Polytechnic University of Milan, studied the modal frequencies and deformations of the stays and identified that 2 of those modes were not compliant with the Eurocode safety rules, affecting negatively the pre-stressing effect of the concrete beams sustaining the deck, which could represent sever damage.

The universities advised to keep close and permanent monitoring of the bridge, as it was not possible to determine with precision how severe was the damage of the internal cables without destroying them, but Autostrade did not contact them back and took no immediate action.

Because of all the maintenance problems reported, and the increase in traffic in the A10 route through Genoa, Autostrade proposed in 2009 to create a new interchange system named “Gronda di Genova” located in the north of the city, to alleviate the situation. Additionally, this investment opened the doors to a potential extension of the concession up to 2042. The concessionaire reported by that time that the bridge carried 25.5 million of vehicles a year, 4 times more than at the beginning. Also, queues at peak hours produced an intense degradation of the bridge structure, and continuous maintenance resulted very expensive for the concessionaire.

To gain the approvals for the new “Gronda di Genova” took a lot of time. Opposition from political parties delayed the beginning of the works. Finally, on September 2017, the final design was approved, and the detailed designs for all the 10 lots forming the project were submitted to the Ministry of Infrastructure and Transport between February and August 2018. Autostrade is prepared to commit the works, still pending final approval from the government and undergoing negotiations with the conditions applicable on the concession extension.

On the meantime, Autostrade presented in February 2018 to the Ministry of Transport a study indicating that there was a reduction of about 10%-20% of the effective cross-sectional area of the tendons composing the stays. As a result, on May 2018, under the government approval, Autostrade announced a call for tenders for a structural upgrade of the viaduct for a value of c.€20.1m with a deadline in the 11th of June in the same year. The works were expected to reinforce pillar 9 and the ones next to it, aimed to be finished in 5 years.

The 1st of August 2018, a crack on the deck appeared near one of the stays of pillar 9, indicating that most probably the stay had stretched. By then, no action was taken, and traffic restrictions were not enforced. Finally, on 14th of August 2018, at around 11:36 AM in local time, during a strong torrential rainstorm, the 210 m spanned section of the bridge collapsed, centered on the westernmost pillar crossing the Polcevera river, referenced as pillar 9. By that time, workers were installing new heavy concrete jersey barriers, which reduced the already low compressive pre-stress of the concrete of the stays and increased the loads.

The figures below show in a sequence how it is supposed that the bridge collapsed that day:

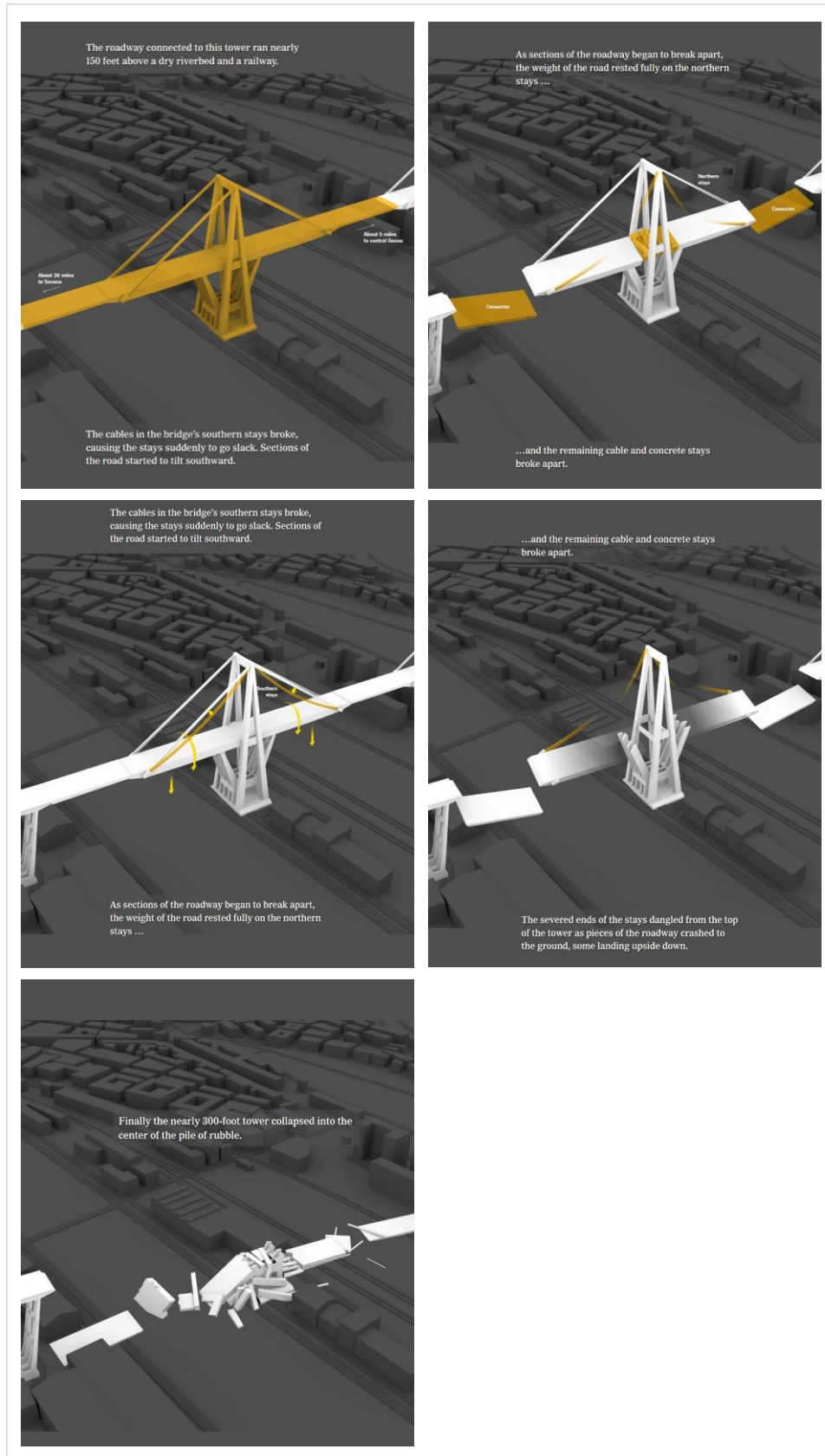


Figure 2.5 Most probable sequence of the Morandi Bridge collapse. Source: Media.

2.2.2 Immediate consequences and reactions post-collapse

The accident is remembered according to the word of witnesses as a great tragedy. Most of them could not believe to see how, under the heavy rain, the bridge collapsed coming down like sand, seeing several cars falling from 50m above. Some of them, were fully crushed by heavy concrete blocks, some others, were luckier, and a few drivers were able to exit the car on their own, covered in blood and shocked.

In total, there were forty-three fatalities and sixteen more injured. The dead were twenty-nine Italians, four French, three from Chile, two Albanians and other nationalities from South America and Eastern Europe. Survivors, with the immediate help of the firefighters, were transported to nearby hospitals.

The area under the bridge, was damaged as well, including several homes, which implied the evacuation of 600 people which by today, have not had the chance to come back at their original places. The works were kept for long time, looking for twelve people known to be still missing by 2:00 AM of the following day. Rescue efforts continued using techniques deployed after earthquakes.

After the fall, immediate reactions with regards the culpability of the incident were announced, and, as it was expected, a lot of criticism came from the government to Autostrade, and ultimately, to Atlantia.

It is important to put in context the fact that Italian government recently changed on May 2018. The role of Prime Minister was given to Giuseppe Conte, a professor of private law, in agreement of a coalition between the Five Star Movement (the left-wing populist party founded in 2009 by Beppe Grillo) and the League (Defensor's of libertarianism and social liberalism, with a more socially conservative approach, and to be regarded as the right-wing populist equivalent). Overall, The New York Times and la Repubblica named it as the first populist government in modern Western Europe.

Giuseppe Conte, prime minister said immediately that the government would start the process to revoke Autostrade's concession, without waiting for an investigation to be conducted. Even earlier, Luigi Di Maio, deputy prime minister and leader of the Five Star Movement, mentioned that Autostrade was the responsible, and that would prosecute individuals with "name and surname" as it was not acceptable that "one of the main contracting companies in Europe told us that the bridge was safe". Matteo Salvini, leader of the League, was more cautious, and reiterated that the responsibility of the government would be to conduct investigations and identify who were the culprits of the disaster. In addition, he questioned if the EU budget rules post-crisis had prevented investment in infrastructure, defending its view against the European Union. The same idea was transmitted by the finance minister, Giovanni Tria, adding that a large public infrastructure investment plan was a main priority for the government without budget constraints. Finally, Italian Transport Minister, Danilo Toninelli, also of Five Star, said that his ministry would join legal action if judges decided to open an investigation, and gave 15 days (until the 1st of September 2018) to Autostrade to demonstrate that they met its maintenance and safety contractual obligations. On another post in Facebook, he also mentioned that the procedures would be started for a possible revocation of Autostrade's concession and fines against the company.

Autostrade, from its side, responded to be confident on demonstrating that they always correctly fulfilled the obligations as a concessionaire. Claiming that in the past years they invested more than €1bn in safety and maintenance of its network. That they, the stock price of Atlantia fell by 5.4%, from 24.88 €/share to 23.54 €/share.

All those statements were done before it was made visible to the public that the government was aware of the troubles that the bridge presented, and that the Ministry of Transport approved in February 2018 the reparation works being conducted by Autostrade. Consequently, upon such information was made public, society reacted against the government, and criticism regards the responsibility that Italian policy could have had on the incident to occur began to appear.

The day of the incident, it was already published the time line evolution of expenditure in infrastructure and road maintenance from the OECD, which is shown below:

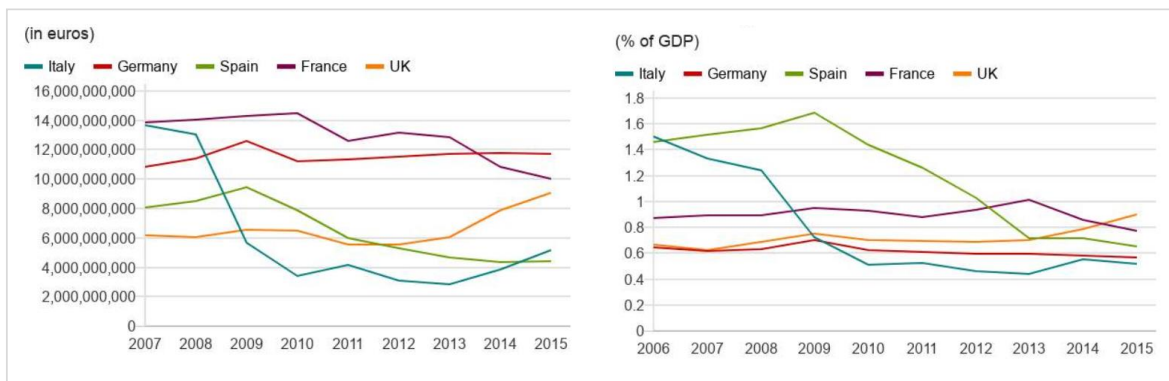


Figure 2.6 Road expenditure of some western European countries. Source: OECD Data.

The sharp drop in expenditure from pre-crisis levels that the country had, from 1.6% of GDP to 0.4%, when compared to its peers, raised the concerns of many citizens in Italy. Furthermore, the alarm sounded in other EU countries, which wondered whether it would be necessary to check the safety of a significant number of bridges that could need renovation or replacement.

2.2.3 Government reactions post-collapse

In the following 72 hours, the Government opted to react fast, as it was the first major disaster that they faced. Despite both parties on the coalition transferred the blame to Autostrade, a lack of coordination on the transmission of messages from the main leaders of the coalition (Di Maio and Salvini) was reported, showing the differences among them and putting under doubt the stability of the pact.

For an ease of context, Five Star Movement has been against any large infrastructure projects to be done in Italy, while the League is in favor of it, which caused many of the discrepancies that followed those days.

During the week preceding the event, Di Maio repeatedly called for the re-nationalization of the motorways, but Mr. Salvini was more hesitant. He remembered that, despite Autostrade could be blamed or not from not meeting its maintenance obligations, cancelling the license would cost the government around €15-20bn as a compensation for the profits forgone, from an

agreement signed in 2007, by which the company was guaranteeing its rights to exploit the network until 2038. Furthermore, it would be the first time of such an event to occur, and a long legal procedure to be derived.

The coalition partners still shared their hostility to the EU, and both intend to use the accident to push for more flexibility in the maximum levels of deficit allowed. On the other hand, they also announced €33m to be used immediately to cover the initial expenses derived from the accident.

By the end of the week, on Friday 19th of August, after it was revealed that the government knew about the weaknesses in the bridge, an investigation was open from the Ministry of Transportation. The problem came when it was known that, Mr. Roberto Ferrazza, same person who assessed the project proposed by Autostrade to carry out the repair works on the bridge in February, had been appointed as the head of the investigation. Despite a first attempt from Mr. Ferrazza to keep its position, finally Danilo Toninelli removed him for “reasons of opportunity in relation to all the institutions involved in the affair”.

By the end of August 2018, Toninelli made another public appearance to summarize the actions that the government had done since the date of the accident.

The most relevant fact was the announcement that the government would revise the concessionaire system of the road network in the country to assess if it would not be more convenient to nationalize it back again, all to guarantee the best wellbeing of society.

He also stated that from September, the government would request to review in detail the prospective maintenance interventions of all the concessionaires currently in place.

Finally, he reiterated his view on the benefits of nationalization, remembering that in 2016 the managers of the main toll roads had collected €7,000m in revenues, out of which only €841m were re-invested in the state. Furthermore, investments done by the managers of toll roads lowered by more than 20% respecting the ones done in 2015, and maintenance expenditures were also reduced by 7%. Additionally, he mentioned that other European countries had better systems in place, setting as an example Spain, with more than 15,000km of highways and only 3,400km being under the form of private concessions.

To understand the positioning of the populist government, it is necessary to go back to the 1990s, when Italy began to dismantle the large state-owned industrial complex built up after the war. By that time, almost 20% of the people was employed by the state, and it ranged from chemicals to oil and aviation.

When in the late 90's the government looked for a potential acquirer of Autostrade, which was already managing the network, only the Benetton group seemed to be qualified to compete in a bid where the other main competitor, Macquarie Bank, failed to find enough financial support and applied only for a 10% stake.

The unpopularity of selling to foreign companies, made the Benetton Group the ultimate owner. By that time, Benetton was only on the textile and fashion business, and the movement of the family into infrastructure as a way to diversify clearly paid off. Today, only 5% of Benetton's family Edizione's investment vehicle, which amounts to €12.5bn portfolio, comes from this sector, while 50% is on the infrastructure side.

Soon after, criticism from the left-wing appeared promptly, as it was seen that the richest part of the country at that time was given to the richest families. Further, since then, political and economic forces have been exchanging favors, interests and money reiteratively, benefiting an oligarchy of families and friends and leaving apart the rest of the community.

When reviewing the contracts to run the motorways, it appears that it is highly advantageous to the private sector, as Autostrade's owners inherited a monopoly until 2038, with the possibility of raising tariffs annually in exchange of maintenance and building of new roads.

In fact, between 1999 and 2017, Autostrade increased the tariffs by 73% on average, which doubles the cumulative inflation of the period.

However, figures show that the motorways in Italy are now safer. Deaths dropped from 420 in 1999 to 119 in 2017. Also, Italy's state-run network is in worse condition than the motorways, and have considerably less investment per km.

Despite the willingness to nationalize back, the Ministry of Transport was conscious about the economic implications behind it. The cost for the country would be high and added on top of the level of public debt already faced. This is one of the main arguments used by the pro-business League opposed to nationalization, source of the discrepancies.

Considering all reported above, it is clear that it can be difficult for the government to move from this propaganda to decisive action, but still, as there is no final outcome, doubts about the potential partially or gradual nationalization of parts of the network is there, and Atlantia's shares payed the consequences.

2.2.4 First response from Atlantia and Autostrade per l'Italia

The 16th of August, once the markets opened again after the public holiday held on the preceding day, the stock price of Atlantia fell by 22.2%, as a response from the immediate fears about the possibility of removing the concession of Autostrade per l'Italia, on the 3.000km of toll roads that the company was managing (i.e. c.50% of the full network of the country). Overall, within two trading days, Atlantia lost €4,327m in market capitalization, and the shares reached minimums in four years.

Also, after it was known that the company would have until the 4th of September to present proof of its lack of culpability, Giovanni Castellucci, CEO of Atlantia, offered to the government €500m in compensation to cover the initial costs for structural work as well as to pay for all the victims, which was immediately rejected by the Government claiming that it was not enough, and that could easily be multiplied by a factor of 5.

The 21st and 22nd of August, the board of directors of Autostrade and Atlantia respectively gathered in Rome to discuss about the actions to be taken with regards the accident.

From it, they aimed to provide support to more than 200 families affected by the tragedy, prepared alternative arrangement for traffic in Genoa and exempted from toll payment the A10. Also, they agreed on fully taking over of the demolition and reconstruction of the bridge.

With reference to the claims from the Ministry of Transport, the board confirmed that using its technical units would present proof of fulfillment of the concession obligations. The results reported, showed that the company invested €2.9bn in road maintenance between 2006 and 2017, a 2.8% per cent more than what was stipulated by contract.

Regarding the possibility of expropriation from the government, Giovanni Castellucci aimed to calm down the investor community in an interview published the 29th of August by the Italian newspaper La Repubblica. He showed full commitment from Atlantia to cooperate with the state to address the situation, and he claimed he was not seeing as a possibility the removal of the concession that the government announced. The main justification was the fact that this would be a step backwards, going against the new trends on the management of infrastructure that developed economies were experiencing. Once again, he defended that since the privatization of Autostrade in 1999, the company has improved from all aspects: quality of service, safety and efficiency.

On September, the first results reported by the ministry inspection committee presented accused Autostrade from a lack of maintenance and safety works before the collapse, as the measures taken were inappropriate considering the seriousness of the problem known in advance.

As a response, Autostrade claimed that the findings had not taken into considerations the company's own findings, and that the conclusions from the government were still only hypotheses not fully verified. From its side, Autostrade started to conduct investigations on the real state of the cables at the day of the collapse, to determine the main causes which made the bridge to fall.

The 20th of December 2018, Autostrade announced in a press release that the Ministry gave 120 days to provide further explanations and information regarding the bridge question, particularly, in relation to the suitability of the control systems used, the state of the bridge, and the precautionary measures adopted in relation to the works being carried out the day of the accident. The Ministry also asked the company's own assessment of the potential causes of the collapse.

As a first response, the company reported the 18th of December that preliminary results on studies conducted by a leading expert on failure of wire cables, tested by the Empa laboratory in Zurich, showed that in average, there was 50% of corrosion in the cables, but still, there would be wide margin of capacity for resistance, moving away the possibility for the failure of the cables, as initially thought, to be the primary cause of the collapse of the bridge.

2.2.5 Social impact and views from the Italian community

The discontentment from Italians on the political system and their ruling classes was reflected in March 2018, when the anti-establishment forces won clearly the elections and the populists took over control of the parliament in May.

The change was interpreted as an emotional response from Italians of perceived inequality and corporate cronyism in decades, accompanied by a decline on the standard of living.

Therefore, this incident was the first serious problem that the new government was facing, and high expectations were created around its response from the community of new voters which were against the old political parties.

The government, feeling the pressure, reacted strongly blaming Autostrade and the EU. However, the lack of transparency from the beginning, neglecting the fact that they were aware of the bridge conditions, as well as the contradictions within the Five Star movement of not supporting strong infrastructure development, did not help to earn trust, either from the friendly supporters or from the opposite parties.

In the city of Genoa, its citizens were devastated, and let to the world know what they felt after the disaster. When asking to the families of those killed, for them, Italy's state was culpable of the incidents, and saw the involvement of the political community as an unwelcome intrusion.

One of the mothers of the victims said that "the catwalk of politicians" visiting the city on August 18th, when a state funeral was held inside the Fiera di Genova arena, had been "shameful". Reiterating that "The state caused the tragedy. They should not be allowed to sow themselves in public". Declarations done to La Stampa. The anger was reflected on the decision of some families not to take part in the state funeral and decided to hold private ceremonies.

For most of the victims, the reactions that the Government had by that time were sterile and devoid of any conscience about what has happened. Testimonies mentioned that it was as if the Government just used a phrasebook of things to use in similar situations to be sheltered against criticism. On the other hand, it would be the city and its inhabitants which would need to push for recovering from the event, and who really know what it means to suffer the consequences.

On the other hand, a lot of frustration was felt, as the city had been discussing for years the possibility of replacing the bridge. In 2009, an engineering report brought to light that there were concerns of a potential collapse and suggested to demolish it. Later, in 2013, the Five Star leader Beppe Grillo opposed plans to build a new motorway that would alleviate the pressure on the Morandi Bridge, which explains the delay on the construction of the new Gronda di Genova that is advancing slowly and will suppose an investment of €4,300m from Autostrade.

Therefore, contradiction feelings within the new government arose, from those that saw that maybe now, despite no corruption would affect public expenditure, the capabilities for fixing the damages incurred by the past decisions were also not guaranteed.

Studies published after the accident showed that around 70% of c.15,000 Italian motorway bridges and tunnels were more than 40 years old. Many being built during the post-war boom by mafia-run building companies that most probably used poor quality concrete and materials to increase profits, which could contribute to disasters as the one observed.

Experts and current workers in the assessment of public infrastructure agreed that the problem was not to identify what structures could be in risk, indicating that it was already well known, but to have enough funding as to provide appropriate repair and maintenance.

As of today, the population is split among hope and resignation. Some, expecting an appropriate infrastructure plan to be launched and a change of mind and procedures with regards not only infrastructure policy, but of all general public matters. Others assume that change will not be possible in the short term, particularly disappointed with the news of the opposition from Five

Starts of the high-speed rail link between Turin and Lyon for which the French have been starting to work already. Italian government is doubtful to move it forward and waiting to evaluate the cost benefit analysis to be released.

In conclusion, the collapse of the bridge was caused by weather, physics, but also for decades of mistakes and oversights from the people which had the power to take decisions. It is not an orphan failure, responsible are in all sides of the equation, and society is aware. People does not claim for a punishment, people claims for common sense and responsibility. Time will tell whether from this event there will be any learnings preventing future mistakes to be repeated.

2.2.6 Overview 6 months post-collapse (March 2019)

The 20th of December the Ministry of Transportation requested Autostrade to provide further information on the conditions in which they were managing and monitoring the repair works being conducted in the bridge, giving until the 19th of April to submit the results.

The company showed strong collaboration with the government and has initiated its own investigations conducted by several universities to fulfill its obligations.

Further, they have provisioned on its accounts on year end 2018 €509m of expenses to cover for all the damages, assuming no further liability or judiciary processes could be started with regards to the incident.

On the meantime, the Ministry of Transport is investigating the involvement of 40 direct people responsible from the bridge, trying to determine its degree of culpability.

The ongoing investigations by the Government indicate that they have not been able to identify and immediate trigger for a concession termination of Autostrade. However, all indicates that termination of the concession is an objective that they will prosecute, particularly if any material proving the non-performance in respect of the company's obligations under the concession could be found.

Due to the severity of the incident, Atlantia remains susceptible to suffer from stronger regulatory and political pressures. As an example, it was announced that they were forced to freeze the toll fees in 2019 on all its network.

All this exposes the group to more confrontational stance from its concessions and expected litigations from claims could bring further legal costs, falling beyond the modest protection levels from insurance.

On the other hand, Atlantia could also decide or be required to provide extra payments beyond the contractual liabilities under the terms of the concessions, and for sure, will remain under pressure to contribute to the costs linked to the consequences of the incident.

Finally, it is also expected to see an increase on maintenance costs and expenditures for the network as a result of either any new law or regulatory pressures.

All those risks were reflected on the lowering of the ratings awarded by Moody's, Fitch and S&P which are shown in the table below, for Autostrade and for Atlantia:

Agency	Past Rating	Current Rating	Current Outlook
Standard & Poor's	BBB	BBB-	Negative
Moody's	Baa2	Baa3	Negative
Fitch Ratings	BBB+	BBB	Negative

Table 2.1 Atlantia EMTN¹ programme (€10bn). Source: ATL press releases and credit rating agency reports.

Agency	Past Rating	Current Rating	Current Outlook
Standard & Poor's	BBB+	BBB	Negative
Moody's	Baa1	Baa2	Negative
Fitch Ratings	A-	BBB+	Negative

Table 2.2 Autostrade per l'Italia EMTN programme (€7bn). Source: ASPI press releases and credit rating agency reports.

In consensus, credit rating agencies agreed that it was too early to determine with precision the financial impacts to be derived from the accident on the Genoa bridge, seeing that, in any case, compensation would occur because of the concession contracts and that long time would be necessary due to judicial procedures to be resolved before a final decision taken.

The agencies all highlighted the fact that the recent acquisition of Abertis, and consolidation on its accounts, would put under risk Atlantia's future cash flows. The €9,800m in debt to be refinanced in 2019, brought the leverage profile above 5x for the group.

Also, the life of its concession portfolio, despite being more geographically diversified, was shortened from 20 to 16 years in average. On the other hand, despite the original financing for Abertis was free of covenants, concerns about a potential downgrade on the credit rating of Abertis and the complex nature of the SPV conjointly formed with ACS and Hochtief casted doubts on the access from Atlantia to Abertis cash flows.

Regarding the market and trading of Atlantia stock, there has been some recovery after the fall. It took some time, and the stock reached minimums of 17.20 €/share on 5th of September 2018. Recovery took place in January 2019 and in mid-February 2019 it was trading at c.21 €/share, which represents a drop of 15.6% versus what was trading at the date before the collapse of the bridge.

Finally, with respect to the integration and constitution of Abertis, all steps were conducted as expected and in accordance with the agreement reached earlier on March. Nor positive either negative announcements were released respect to the process of integration and foundation of the new SPV, which now aims to bring stability to the group.

In Genoa, the city is still healing the wounds:

¹ EMTN: Euro Medium Term Note. Debt note that usually matures in 5-10 years, despite now we see longer periods. Issued at fixed or floating rate with no payment of principal until the end. Issued with a fixed maturity date or issued with embedded call or put options and triggers to be redeemed under certain parameters. They are used as a form of senior, unsecured debt for investment grade entities because provide more flexibility to the issuer and to the investor both, in terms of structure and documentation.

Mauriccia: *"It's all empty." There are not many shops here. There aren't many people around. We can all feel how sad this Christmas is going to be when you think about the people who are not here anymore."*

Fabrizio: *"In a month's time it's going to be all over for us here. Myself and the rest of the employees will stop working. Nobody comes here anymore due to the collapse of the bridge. We have to close our company."*

The demolition works started in early February 2019, and reconstruction started in March and it will take between 12 and 15 months. The companies in charge of the project are the biggest builder in Italy, Salini Impregilo, the shipbuilder Fincantieri and the transportation company Intalferr. The project has a budget of around €200m and will be overseen by the Genoan architect Renzo Piano, who has designed a new steel bridge for free, and will include 43 lamps, to honor the lives of the victims.

Chapter 3. Analysis and consequences of the collapse of the Polcevera Viaduct

This chapter presents an analysis of the impacts that the collapse of the Morandi Bridge had, and the ones that could be derived from it, to all stakeholders affected by the tragedy. The reach of the analysis is extensive and conducts the reader from the corporate entities directly controlling the concession of the bridge, to the shareholders of ACS and Hochtief. The objective is to provide an insight on the market shock itself, and to study how such a shock impacted the dynamics of a large and complex M&A transaction.

The chapter is divided in 2 parts. Primarily, the effects on Atlantia and Autostrade are reviewed. Corporate governance changes and shareholder structure pre and post event are studied. Then, an emphasis on the financial impacts for the corporates, as well as to its shareholders is provided. In the second part, the impact that it had for the acquisition and constitution of Abertis is given. Emphasis is on the refinancing operations of the acquisition and how, as of 6 months post event, it has impacted the shareholders of the new Abertis Holdco.

3.1 Atlantia and Autostrade per l'Italia

3.1.1 Review of academic research in Corporate Governance

Because of the lack of analysis from experts on the appropriateness of the changes conducted in this case, the authors looked at the academics to find a base were to support the assessment of the actions taken by Autostrade and to provide a critical review.

In the academic literature, it is of importance to mention the investigations led by Pr. William M. Klepper, from Columbia Business School. They were gathered by BBVA and published on 2015 in a book named “Reinventing the Company in the Digital Age”, by Turner Editions.

Pr. Klepper has conducted various case studies of companies which were confronted with a downturn or unexpected accidents and how they managed changes to move forward.

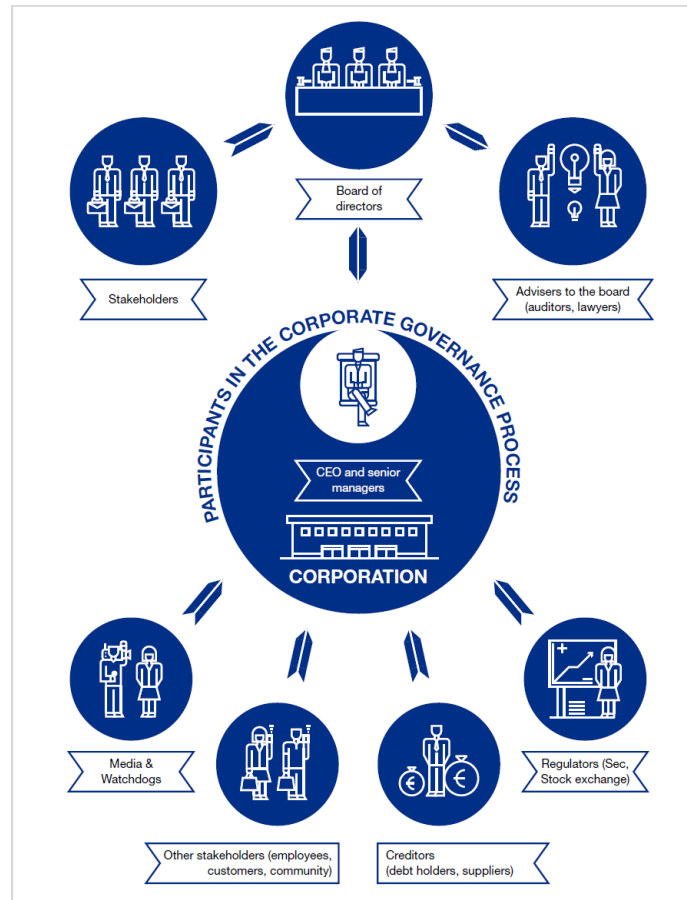


Figure 3.1 What is Corporate Governance. Source: Keehner and Randall, Introduction to Corporate Governance, IBS Curriculum

One of them, which can be clearly linked with what happened in Autostrade, is the case of BP:

In 2010, in the Gulf of Mexico, the semi-submersible exploratory offshore drilling rig Deepwater Horizon exploded after a blowout, killing 11 people and leaving behind an oil slick which covered at least 6,500km, threatening the costs of Louisiana, Mississippi, Alabama, Texas and Florida. This accident was not the first that confronted by BP. Previously, in March 2005, one of its refineries, in Texas exploded, causing 15 deaths and injuring 180 people.

Several changes took place after the Texas accident, but still, it was not done in the appropriate way. The Board of BP had known that something was wrong with safety, and that corporate culture of “saving over safety” pervaded, noticing that information transfer to the board had been dysfunctional.

Finally, by the end of 2010, with the help of external consultants, BP's Board identified an existing executive director, Bob Dudley, for the position of the new CEO. Dudley had strong industry, operational and geopolitical experience. Further, he grew up in Mississippi and spend summers fishing on the Gulf, which made him to feel closely identified with the place.

Overall, a strong partnership between the CEO and the company's directors was established at that time, that managing the crisis was essential. Altogether, were able to define the instrumental values to which they all collectively subscribed for the good of the company in the future.

The conclusions from the case are the importance for Boards to constantly evaluate their leadership and strategy and assess at every stage the CEO's style.

CEO's must be able to be matched within the values, commitment to stakeholders, risk management and transparency of the business required in a given context.

Among its recommendations, Pr. Klepper proposes the following steps to be evaluated by the Board when it's time to lead changes and move forward after an event:

- 1- Know your CEO leadership and behavioral style.
- 2- Identify the needs for your organization (strategy and gaps).
- 3- Match those needs with the leadership that is required.
- 4- Consider first your CEO and then the senior team to find the correct match and;
- 5- If you do not find the correct match, then, look elsewhere.

3.1.2 Corporate Governance changes in Autostrade per l'Italia

After a few months, the 18th of January 2019 it was announced by Atlantia and Autostrade that there would be a call to a General Meeting of shareholders on the 30th of January 2019 to propose the appointment of new Directors to replace the Chairman at the time of the incident, Fabio Cerchiai, and the former CEO, Giovanni Castellucci.

At the given date, the General Meeting elected Giuliano Mari as new Chairman of the Board of Directors. Further, the number of members of the Board of Directors was increased from 9 to 11 and, in total, 3 new directors were appointed. Its names were Michelangelo Damasco, Amedeo Gagliardi and Giancarlo Guenzi.

Michelangelo Damasco would be now in charge of regulatory and legal affairs. On the other hand, Giancarlo Guenzi would oversee financial matters.

Right after, the new Board of Directors' appointed Roberto Tomasi as the new company's CEO.

Mr. Mari, new Chairman of the board for Autostrade held previously the position as a Chairman of the Control, Risk and Corporate Governance Committee and Chairman and member of the Committee of Independent Directors with responsibility for Related Party Transactions in Atlantia since 2009.

On the other hand, the new CEO, Roberto Tomasi, was the General Manager of Autostrade before the promotion date.

All those changes took place only 5 months after the disaster and clearly respond to a strategy to show and bring confidence to the investment community towards the management capabilities of the company.

Note that, a detailed description of the Board of Directors and Management of Autostrade per l'Italia is found in Appendix 2.

3.1.3 Evaluation and assessment of Autostrade per l'Italia Corporate Governance changes

Autostrade similarities with the BP case are clear and after careful consideration, it is inferred that most probably, with the push from the Board and the Benetton family, they were inspired by BP's actions when implementing the changes presented above.

Autostrade was at the time of the bridge collapse, being investigated for a previous accident that took place in 2013, when 40 people died on an accident in one of the company's motorways after a bus fell off a viaduct near the town of Avellino.

From this accident, the company entered in legal proceedings brought by state prosecutors which accused Autostrade and the managers involved of poor maintenance of motorway barriers.

Prosecutors sought jail sentences for eleven current and former managers of the company, being Giovanni Castellucci among them.

The sentence of the judge came to light on Friday 11th of January 2019. From the twelve imputed, five were acquitted, being Castellucci among them. The other six, were condemned to jail sentences of between five and six years.

Autostrade, by means of its lawyer, Giorgio Perrone, said that would appeal against the conviction of those ones which were found culpable, claiming that they "were unfairly condemned".

As of today, Castellucci is again under investigation for multiple manslaughter from the collapse of the Genoa bridge and has resigned as a CEO of the group.

The formal announcement of the resignation was done on November 28th of 2018. Castellucci, however, claimed that it was already on its plans to do so, to be able to focus on its role as a CEO of Atlantia, in a moment of key importance for the integration of Abertis. However, he also stated that would postpone it as needed, working now on managing the crisis from the bridge, which was of primary importance.

Within the framework of Pr. Klepper, the authors believe that the accident on the Genoa bridge was the triggering event that lead to the resignation of Mr. Castellucci and the changes that took place on the Board, mainly controlled by Atlantia.

When we look at the profile of the new Chairman, Giuliano Mari, we notice the position he held previously within Atlantia since 2009, as a responsible of risk control and corporate governance. Despite the expertise that Mr. Mari may have within risk management (he holds a degree in chemical engineering from Sapienza University) just the previous "role name" is a clear signal sent to all stakeholders telling that from now, the company will be much more focused on one of its week points, already spotted in the 2013 accident.

Regarding Mr. Castellucci resignation and appointment of Roberto Tomasi as a new CEO, the same can be concluded. Mr. Tomasi, being an insider of the group since 2015, will be able to dedicate more time that Castellucci, who was probably mainly focused with managing Atlantia and kept him away from the more daily real problems that Autostrade was presenting.

The profile of Mr. Tomasi aligns well with the propositions of Pr. Klepper research. The new Autostrade's CEO studied a degree in Mechanical Engineering and completed a couple of Executive Programs within Harvard and INSEAD. Also, he holds a master's in finance and project control from Bocconi SDA. As a professional, his experience was developed on the Operations and Project Management fields in several companies, such as Fiat Group, and Enel Group. When he landed Autostrade, he did it as a Chief Operating Officer for Construction and Infrastructure Development, and in September 2018, was appointed as a General Manager, before its more recent promotion to CEO.

In conclusion, Autostrade has conducted the appropriate actions regarding its corporate governance to be prepared for the future outcomes and implement the necessary changes to redress the situation. However, the authors believe and criticize the fact that the company reacted too late.

Pre-emptive measures from the Board should have been taken in advance, particularly after the incident from 2013, when, the case suffered by BP should have served as a reference to trigger a quicker reaction.

From the case, the authors note that corporates tend to be conservative before taking changes on its top directors and management boards. It is believed that it is not because they cannot learn from past events, but because of the personal interests of its members and willingness to keep its positions, which is part of human nature and going against the interest of the company and all its stakeholders.

Corporate Social Responsibility practices seems not to work at this level yet. When thinking about a potential explanation, and looking at the market and investor community, one can realize that investors do not consider such a reactive approach as something either positive or negative. Notice that the stock price of Atlantia after the announcement of Mr. Castellucci resignation on the 28th of November, dropped only by a 2%. On the other hand, after the announcement of the new formal changes to be implemented formally, on 18th of January 2019, Atlantia stock increased by 1%. Such slightly movements cannot be related directly with the announcements itself.

Overall, the authors believe that a finance behavioral inconsistency from markets can be perceived from this, as reactive measures due to conflicts of interest indicate deficiencies on the management board, not working aligned within the best interests of the corporate.

3.1.4 Evaluation and assessment of Atlantia Corporate Governance changes

The first significant change that took place after the incident of the Genoa bridge in Atlantia's Board of Directors took place the 19th of November 2018. At that date, Lynda Tyler-Cagni, a non-executive and independent Director, resigned from her role as a Chairwomen of the Human Resources and Remuneration Committee and as a member of the Related Party Transactions Committee.

In an interview with the newspaper “The Times”, she mentioned that the resignation came after the company refused to suspend staff bonuses of €1.3m for the year distributed among 60 employees, including Atlantia’s CEO and Chairman. According to Ms. Tyler-Cagni, *“The company needs to be seen as an ethical and responsible company and I do not think paying out bonuses big and small at this time would really be appropriate”*.

The 14th of December 2018, Atlantia’s board announced the replacement of Ms Tyler-Cagni on the Board Committees of which she was a member electing Prof. Carla Angela to serve as a member of the Human Resources and Remuneration Committee and Massimo Lapucci as a member of the Committee of Independent Directors with responsibility for Related Party Transactions.

At the beginning of the year 2019, the company announced that on its next Annual General Meeting of Shareholders, to be held the 18th of April 2019, the re-election of the Board of Directors for the three-year period 2019-2021 would take place.

In preparation for such an event, a Nominations Committee was elected, consisting of 5 Directors, the majority of whom were independent. Their names were Gianni Coda (independent) as a Chairperson, Carla Angela and Bernardo Bertoldi (independent), Marco Patuano (non-executive) and Giovanni Castellucci, current CEO. Furthermore, the board approved a revised version of the Company’s Corporate Governance Code, and they emphasized that new aspects relating to diversity and sustainability were added.

In January 2019, after the resignation of Giuliano Mari as a Chairman and as a member of the Committee of Independent Directors with responsibility for Related Party Transactions, in order to take up his new role at Autostrade per l’Italia, the Board elected Lucy P.Marcus as a member of the Committee in substitution.

Following such a decision, and in view of the incoming re-elections, the 18th of February 2019 the Board approved and made public a document addressed to shareholders and prepared from the Nominations Committee called *“Guidance for shareholders on the re-election of the Board of Directors for the three-year period 2019/2021”*. The objective and content of such a document, was to serve as a guide regarding the qualitative and quantitative composition of the new Board of Directors to be elected.

One day later, another resignation was released. That time, Monica Mondardini, a non-executive and independent director resigned from her role as a member of the Human Resources and Remuneration Committee. The reasons to justify the decision were like the ones reported by Lynda Tyler-Cagni, ensuring that she was not able to keep providing a collaborative contribution within the group.

It can be extracted from those changes that the collapse of the bridge affected largely the Board stability of Atlantia. From the 2 resignations, it is seen that internal conflicts were derived, and the solidity of the Board was broken.

As it happened with Autostrade corporate governance changes, such decisions did not have a significant impact for the value of Atlantia. Analysts opinion is that the news to have resignations of people like Ms Mondardini and Ms Tyler-Cagni, with professional trajectories highly

successful and recognized within the corporate world are not good. However, they do not see this as serious danger in terms of future performance of the company.

In this case, an explanation to this under-reaction can be attributed to the fact that a new Board will be appointed by mid-April 2019. However, the resignations, most probably indicate that changes on the corporate policies to be derived from the new elected board will not materialize, despite efforts from the company in updating its Corporate Governance Code in January 2019 and aiming to transmit an image of concern about the challenges in front.

Once more, conflicts of interest and personal ambitions play a strong role, and even in the case of a tragedy of the magnitude of the bridge fall, changes in corporate policy at the end look like will not be significant.

The composition of the Board of Directors and Management of Atlantia is found in Appendix 3.

3.1.5 Changes in the Shareholders structure of Atlantia 6 months post-collapse

The main shareholders of Atlantia as of end of February 2019 are shown in the Table below:

Name	Type	% Ownership
Edizione, S.r.l.	Holding Company	30.254%
GIC Private Limited	Sovereign Wealth Fund	8.136%
Fondazione Cassa di Risparmio di Torino	Corporation	5.062%
HSBC Global Asset Management (UK) Limited	Investment Advisor/Hedge Fund	5.005%
BlackRock Investment Management (UK) Ltd.	Investment Advisor/Hedge Fund	4.910%
Lazard Asset Management, L.L.C.	Investment Advisor/Hedge Fund	2.633%
The Vanguard Group, Inc.	Investment Advisor/Hedge Fund	1.728%
Thornburg Investment Management, Inc.	Investment Advisor	1.419%
BlackRock Institutional Trust Company, N.A.	Investment Advisor	1.336%
Norges Bank Investment Management (NBIM)	Sovereign Wealth Fund	1.117%
Colonial First State GAM Global Listed Infrastructure	Investment Advisor	0.557%
Fidelity International	Investment Advisor	0.500%
Pictet Asset Management Ltd.	Investment Advisor/Hedge Fund	0.490%
RARE Infrastructure Limited	Investment Advisor	0.466%
Nordea Funds Oy	Investment Advisor	0.438%

Table 3.1 Atlantia main shareholders as of 28/02/2019. Source: Eikon Thomson Reuters.

Edizione is the financial holding company controlled by the Benetton family, to whom Autostrade per l'Italia concessions were transferred at the time of its privatization in 1999. They hold several companies on its portfolio in a diverse pool of industries. They are present in the textiles and clothing businesses, catering and retail, real estate, agriculture, financial institutions and the most significant one, Infrastructure and Services.

Apart from the 30.25% stake on Atlantia, among its portfolio of infrastructure services they also own 50% + 1 of Abertis, 88.1% of Autostrade per l'Italia, 99.4% of Aeroporti di Roma, 40% of the Nice Côte d'Azur Airport, 15.49% of Getlink Eurotunnel, 24% of Hochtief, 100% of ConneCT and 29.9% of Cellnex.

The second largest shareholder, with an 8.14% stake, is the Sovereign Wealth Fund of Singapore, established in 1981, with the objective to manage Singapore's foreign reserves. They have c.\$390bn of assets under management and invest across a full spectrum of assets, from sovereign debt to infrastructure. Also, they manage around 80% of its portfolio in-house.

The third one, with a 5.060% stake, is a private non-profit Italian organization focused on the launch of new projects in arts, culture, education, research and environment in Italy. It was launched in 1991 by the spin off the bank activities Cassa di Risparmio di Torino.

The following ones are large players on the asset management space, with names such as BlackRock, The Vanguard Group or Fidelity International, which all together own c.21% of Atlantia's shares. In the chart below, it is shown how the position of each of those players evolved pre and post collapse of the Morandi bridge. Values are expressed as a % change on the original position (i.e. % stake) that they had on July 2018:

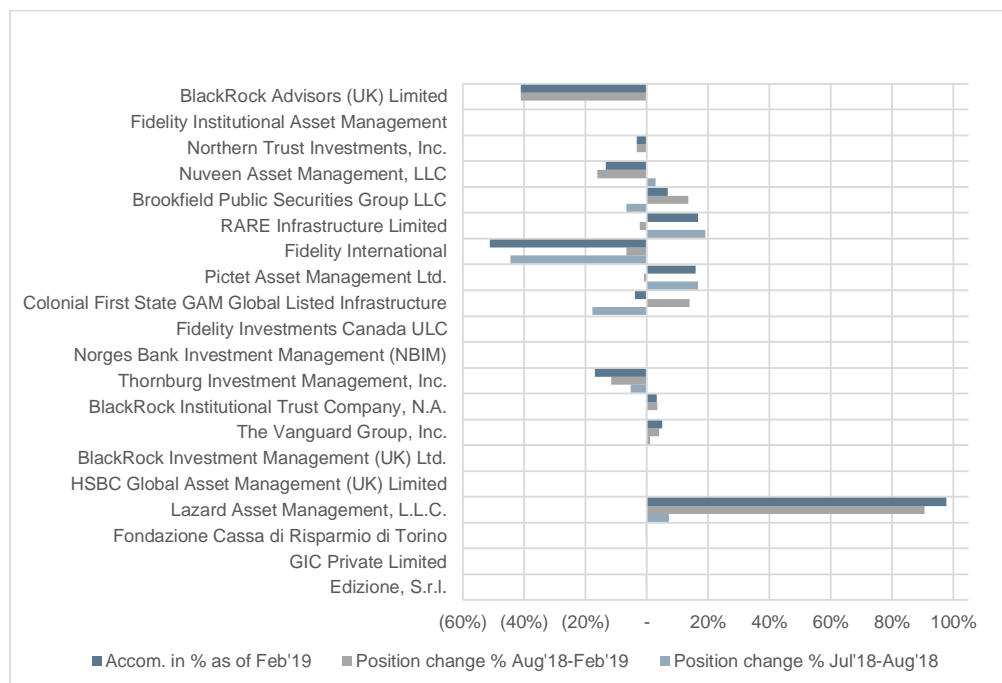


Figure 3.2 Main Atlantia shareholder changes on stake position pre and post event. Source: Eikon Thomson Reuters.

The following can be concluded:

- 1- The first three major shareholders did not change its position despite of the collapse of the Morandi bridge.
- 2- The reaction on the month of the event was significant. Particularly, when comparing it with the change in positioning that took place from August 2018 to February 2019. It is

seen that in one month, from July 2018 to August 2018, the changes were, in many cases, larger than the cumulative changes that took place in the 5 months following it.

- 3- There is no consensus in the strategy among the main funds. Some increased its position, some others reduced the position, and the overall effect 6 months after was neutral.

Apart from the main shareholders, which represent c.66% of the market capitalization, it is of interest to check positioning changes among all the main investors in the stock.

In the chart below, it is shown the number of investors which changed its positioning in a form of histogram during the month before and after the event took place. It also reflects the cash flow impact of those changes, in a cumulative way, which supposed a total capital outflow of c.€26m.

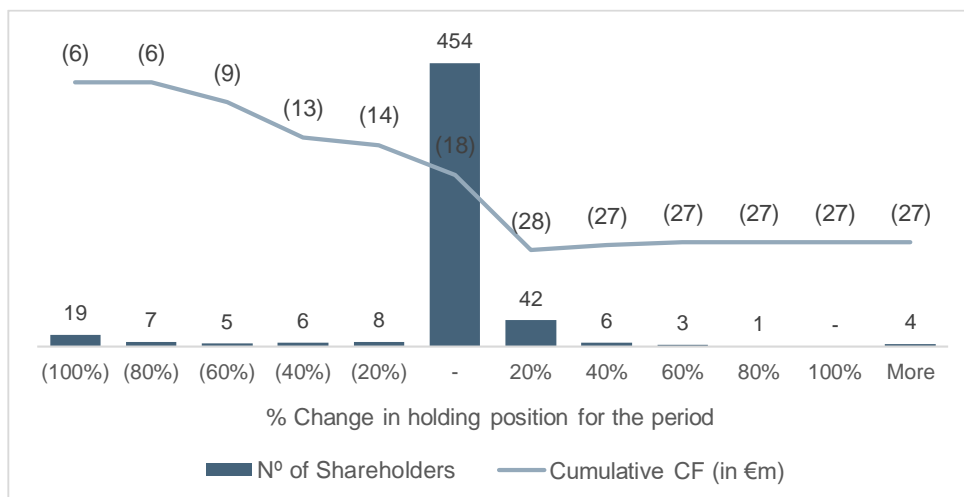


Figure 3.3 Histogram of Shareholders positioning changes during the event (July-August 2018). Source: Eikon Thomson Reuters.

To track the evolution of such changes, the same is represented for the 5 months after the event. In that case, the total cash impact had been a positive inflow of c.€6m.

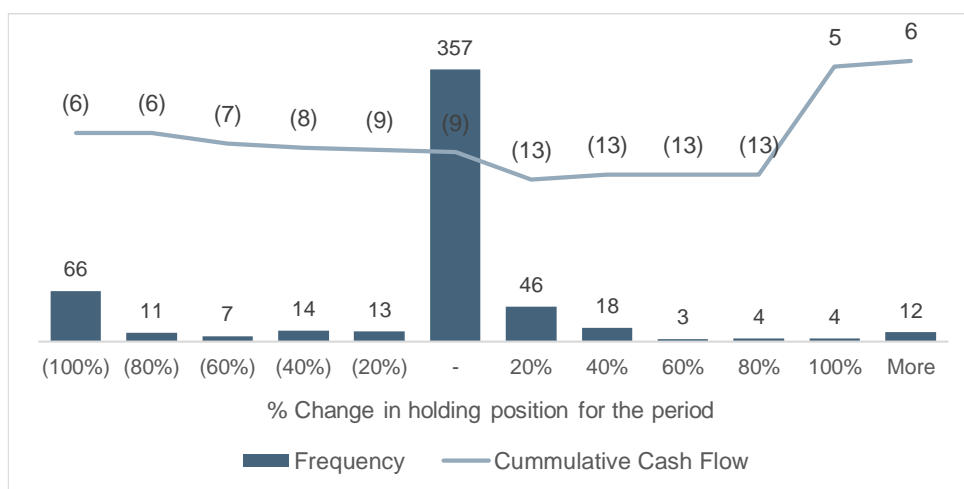


Figure 3.4 Histogram of Shareholders positioning changes after the event (August 2018-February 2019). Source: Eikon Thomson Reuters.

Finally, a table summarizing the results above is presented:

Shareholder Movements	Jul'18-Aug'18	Aug'18-Feb'19	Total Impact
Total N° of Buy outs	45.0	111.0	156.0
Total N° of Buy in	56.0	88.0	144.0
Cash Balance (€m)	(26.6)	6.1	(20.5)

Table 3.2 Shareholder position changes. Summary in Atlantia pre/post event. Source: Eikon Thomson Reuters.

From such an analysis, the following points can be concluded:

- 1- In the month when the event took place the impact was strong in the sense that c.20% of shareholders moved its % stake in ranges above +/-20%.
- 2- The event clearly had a negative impact (€20.5m cumulative cash out-flow) with a lot more of buy-outs than buy-ins.
- 3- The market reacted quickly, when comparing the figures of movements in 1-month (45 buy outs) vs the movements in the following 5 months (111 buy outs). These figures show that the event doubled the amount of normal position changes that usually take place among investors in 1-month period.
- 4- Despite the event, c.70% of investors did not move its positioning by more than +/-20%. In fact, there were a larger change in the 5 months preceding the event than at the immediate date. Such an issue reflects that most investors acted in a prudential manner and preferred to wait before deciding to do large changes.

Further details on movements in the shareholder structure of Atlantia can be found in Appendix 5.

3.1.6 Financial impacts for Atlantia and Autostrade per l'Italia

3.1.6.1 Tangible costs incurred 6 months post-collapse attributable to the corporates

As of today, Atlantia has included on its accounts for the year ended 2018 a total impact of €509m attributable to the incident of the collapse of the Morandi Bridge.

Such amount is split in c.€20m of loss of toll revenues on a full year basis, €45m of cash expenses already incurred for indemnifications, repairs and other costs, and the remaining €444m in a form of a provision.

The provision regards the cost of demolition and reconstruction of the road bridge, and all related costs of compensation payable to people, businesses and firms directly affected. Also, it included compensation payable to victim's families and to the injured.

In the notes, Atlantia mentioned that such a provision has been done under the consideration that they have complied with all its concession obligations while waiting for the outcome of the ongoing investigations. Thus, the company, is not considering any further liability to be derived in case that any source of culpability could be attributed to them.

This cost is directly derived from the incident itself. However, the company is under pressure from the Government, which feels the discontentment of society previously commented, which brought further indirect costs.

The most tangible one is the sharing initiative proposed on 31st of December 2018 with the Ministry of Transport and Infrastructure to keep the toll tariff level on the network of Autostrade for the first 6 months of 2019. Autostrade is selling it as a way of support to the growth and competitiveness of the country, when, after the incident, many became aware of the increases above inflation that toll prices had on the past years and the strong profitability that the group had from the management of the large highway network.

Concessionaires	% of issued capital	km of network	Concession expiry
Autostrade per l'Italia	100.0%	2,855	2038/2042
Società Italiana per il Traforo del Monte Bianco	51.0%	6	2050
Autostrada Tirrenica	100.0%	55	2038
Tangenziale di Napoli	100.0%	20	2037
Raccordo Autostradale Valle d'Aosta	24.5%	32	2032
Autostrade Meridionali	59.0%	52	2012
Total		3,020	

Table 3.3 Concessions held by the ASPI Group by end 2017. Source: ASPI's Annual Report 2017.

3.1.6.2 Probable future costs attributable to the corporates

The determination of future costs is largely dependent on the outcome of the criminal investigation and any legal proceedings that the company may face on ongoing investigations from the government.

In fact, there are 4 possible scenarios that could be contemplated, and which summary is presented on the table below:

Scenarios	Implications for government	Implications for Atlantia	Risks	Probability
End of concession without compensation	Political consensus expected to be favourable	Very Negative	Capital flight from the country, long legal battle	Very low
End of concession with compensation	High cash-out cost; Political consensus may be difficult	Neutral	Long legal process	Low
Revision of the concession contract	Political consensus expected to be favourable	Negative, depending on the final negotiations	Long negotiation process	High
Entrance of the government into the shareholding of Autostrade	Need to pay for the stake; Positive golden power	Negative	None	Medium / High

Table 3.4 Contemplated scenarios for Autostrade per l'Italia. Source: Kepler Cheuvreux Research.

It is of interest to remember that there is no consensus as of today within the Italian government about what would be the best alternative. The Five Star Movement, with the highest number of representatives on the parliament, has a radical position in favor of the nationalization, while the League party would take a more cautious approach, and media reported that would prefer to limit the nationalization on the A10 stretch only.

These divergences make the scenarios which contemplate revocation of the concession very unlikely and, because of its complexity, they are dealt in more detail on the following chapter.

Regarding the more probable scenarios, final costs will depend on the decisions of the government, which has expressed its commitment in reviewing the infrastructure concession system in Italy on a case-by-case basis to determine whether to renegotiate some contracts currently in place or to nationalize the highways.

Based on the previously, there are 6 future costs which will probably impact Atlantia's normal operations, which details are explained below:

1- Fines and penalties

The final amount to pay is closely linked with whether it is possible or not to demonstrate that Autostrade was not meeting its obligations specified on the Concession Contract entered by Autostrade Italia and ANAS, as Concession Grantor on 12 October 2007 in accordance with Law 286/06.

The most significant obligations under investigation are the ones listed below:

- Financing, maintaining, upgrading and building the relevant sections of the highways under concession, including the collection of tolls.
- Keeping transparency on accounts as specified by the granting authority (ANAS).
- Report to ANAS all the relevant information needed to assess the development of the concession, in compliance with the provision of the concession contract.
- Provide to users with all relevant information and assistance services on the highway.

Depending on the degree or seriousness of the problem, the penalties could vary from €10,000m to €2m and punctual sanctions range from €25,000m to €5m.

Conditions for the quantification of such sanctions are given below:

- The highest fine imposed would be in connection with a failure to obtain prior authorization by the Concession Grantor of any extraordinary transaction.
- The maximum aggregate annual amount of such sanctions will not exceed 10% of total annual revenue of Autostrade per l'Italia.
- In any case, sanctions may not exceed €150m per year.
- In the event that such amount is exceeded for two consecutive years, the Concession Grantor (ANAS) may propose the termination of the concession to the relevant Ministries.

2- Lower returns on capital expenditures

The formula to calculate the toll price paid by users used as of today is dependent on the real inflation plus an extra return on the 2002 and 2007 agreed capex investment plans to be conducted on the network.

As of today, extra remuneration that Autostrade per l'Italia is awarded with, is represented on the table below:

Plan	Residual capex	Remuneration	Traffic risk	Cost overruns	Interest rate risk
1997	>€3bn	70% of CPI	Borne by ASPI	Borne by ASPI	Borne by ASPI
2002	c. €5bn	7.2% real-post tax IRR	Borne by ASPI	No	Borne by ASPI
2007	c. €5bn	5.4% nom. post-tax WACC	No	No	Borne by ASPI

Table 3.5 Investment remuneration based on capex plans in place. Source: Kepler Cheuvreux Research.

When comparing the last WACC return guaranteed for investments of Autostrade per l'Italia for the 2007 plan, with the ones in other utilities (i.e. gas, electricity and water), analysts reported that it was above the average, which stood at 5%.

In line with the previous observation, it would be plausible for the government to aim to modify the contracts on the concession and put pressure on Autostrade to lower its tariff levels.

Despite it has not been empirically confirmed, research conducted by brokers estimated that, every reduction of -1% in the 7.2% IRR from the 2002 investment plan, would suppose a decrease in -4% on the target stock price of Atlantia. On the other hand, in the 2007 investment plan, a reduction of -1% in the WACC, would translate in a -2% on the target stock price.

3- *Increase of maintenance costs*

Autostrade spent c.€5.1bn in maintenance over the 2000-2017 period and c.€2.8bn from 2008-2017, both above the obligations agreed on the contracts with the government forecasted.

This represents an average expenditure of c.€280m per year on maintenance, or €108,000 per km per year of infrastructure. Those figures are 3x higher than the average of main concessionaires' expenditures hold in Spain and France, and 5x more than what ANAS spends on the network.

However, due to the accident, the government could consider this as insufficient and require higher expenditures, which, by that time are difficult to assess. First estimates conducted by banking analysts talk about around €90-150m euros per year to be added, or +30%-50% above current level. Also, it is forecasted that for every +10% increase in maintenance cost, EBITDA margin would be reduced by -1% and the target stock price by -1.5%.

4- *Loss of traffic due to reputation*

Another indirect cost would be associated with the loss of traffic due to reputation issues and any boycott campaigns initiated either by the society or government entities. Despite being low probable, traffic growth projections of the group are flat for 2018-2019, so, any small decrease,

which is plausible due to alternative of transportation means available, would have an impact on the bottom line.

5- *Non extension of the concession*

In April 2018 it was approved by the European Commission the original plans of Italy to extend the concession of Autostrade per l'Italia up to 2042.

As of today, the procedures required for the effective implementation of the extension are still pending, and it is plausible that the Italian government may want to stop it.

Despite it has no impact on the current contract signed, ending 2038, the value of those future cash flows is something that otherwise would have been earned by the group.

It is of interest to mention that the extension was subject to completing the investments in the Genova Bypass as well as other improvements on the network with the works to start in 2020 and that had a total value of €7.9bn. Further, there was a potential cap on toll increases at the inflation rate +0.5% under negotiation.

6- *Increase in financing costs*

The downgrades seen from the three main credit rating agencies will also have an impact on the future financing conditions for both, Autostrade and Atlantia.

The uncertainties about any sanctions in the near term could force Atlantia to increase some cushion of cash at higher levels than the ones seen as of today. S&P clearly states that to keep its current BBB rating, which was actualized in November 2018, the adjusted funds from operations (FFO) to debt should be kept above 12%.

Atlantia was able to sign a new credit revolving facility on 30th of November 2018, post Genoa bridge incident, for a value of €2bn euros. The credit line has 18 months maturity, extendible to 36 months at its discretion, provided by mainly Italian banks.

Such an event proves that the company has enough accessible resources to address its refinancing needs of about €1.8bn of bonds due by the 30 of June 2019. Looking forward, Autostrade will face recurrent maturities of about €700m on average from 2019 to 2020, that, in case of necessity, Atlantia and or Autostrade could reduce its dividends or capex projected to meet its obligations.

In the worst case, which corresponds to a downgrade in the rating below investment grade, certain covenants on loans issued by Cassa Depositi e Pesti and the European Investment Bank would be breached. At that point, €2.3bn would need to be immediately redeemed, which could bring a liquidity problem to the company to keep operating under normal conditions.

In the Tables below, a summary of the Debt for both companies is presented:

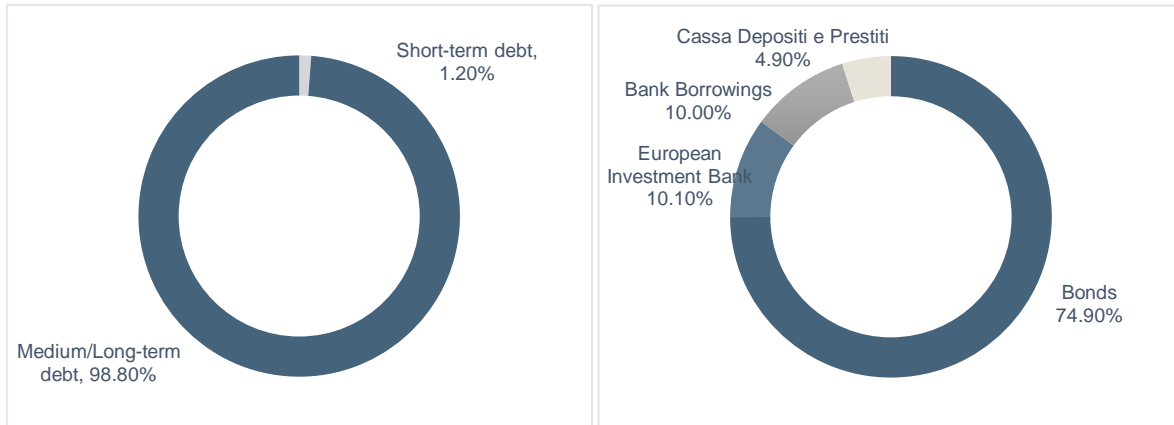


Figure 3.5 Structure of Atlantia’s debt at December 31st, 2017. Source: Annual Report Atlantia 2017.

Type	Number	Amount Issued (€m)	Amount Outstanding (€m)
Bonds	47	20,986	19,620
Loans	17	11,447	-
Total	64	32,433	19,620

Table 3.6 Debt summary of Atlantia as of February 10th, 2018 (excluding Abertis). Source: Eikon Thomson Reuters.

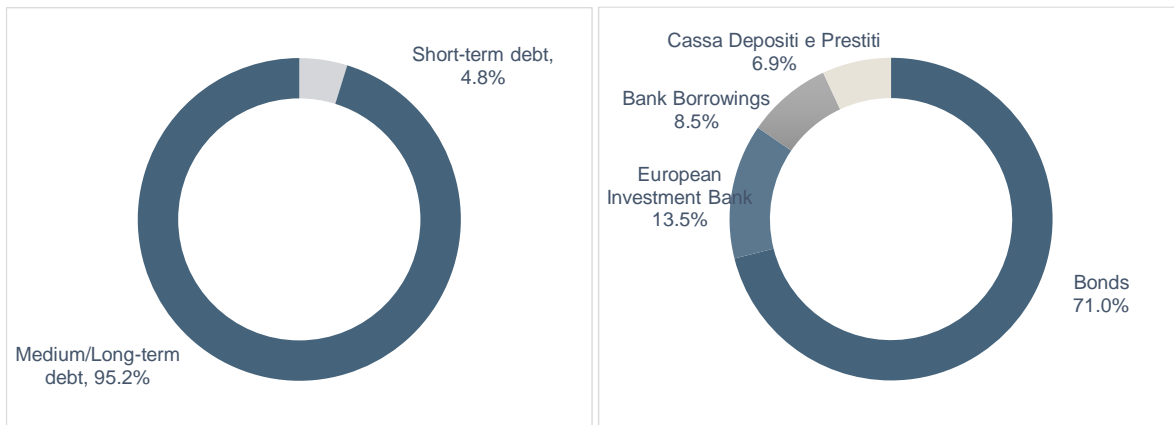


Figure 3.6 Structure of Autostrade per l'Italia debt as of December 31st 2017. Source: Annual Report Atlantia 2017.

ISIN	Issue Date	Maturity Date	Outstanding (€m)	Issued (€m)	Coupon	Market of Issue	Currency	Price at 10/02/2019
XS0828749761	14/09/2012	16/03/2020	501.730	750.000	0.044	Eurobond	Euro	104.174
XS0986174851	29/10/2013	26/02/2021	594.570	750.000	0.029	Eurobond	Euro	103.691
XS1316567343	04/11/2015	04/11/2021	480.360	650.000	0.011	Eurobond	Euro	99.754
XS0193942124	09/06/2004	09/06/2022	571.460	571.460	0.063	Eurobond	GB Pound	108.703
IT0005108490	12/06/2015	12/06/2023	750.000	750.000	0.016	Italy	Euro	98.568
XS0193945655	09/06/2004	09/06/2024	1000.000	1000.000	0.059	Eurobond	Euro	117.132
N/A	01/12/2003	30/12/2024	0.000	0.000	0.055	Chile	Chilean Peso	-
N/A	01/12/2003	30/12/2024	0.000	0.000	0.055	Chile	Chilean Peso	-
XS0542534192	16/09/2010	16/09/2025	500.000	500.000	0.044	Eurobond	Euro	110.044
XS1316569638	04/11/2015	04/11/2025	500.000	500.000	0.019	Eurobond	Euro	95.194
XS1327504087	30/11/2015	26/06/2026	750.000	750.000	0.018	Eurobond	Euro	93.574
XS1528093799	01/12/2016	01/02/2027	600.000	600.000	0.018	Eurobond	Euro	91.861
N/A	15/12/2004	15/12/2028	0.000	-	0.045	Chile	Chilean Peso	-
N/A	15/12/2004	15/12/2028	0.000	-	0.045	Chile	Chilean Peso	113.550
XS1688199949	26/09/2017	26/09/2029	700.000	700.000	0.019	Eurobond	Euro	89.545
XS0761524205	02/04/2012	02/04/2032	135.000	135.000	--	Eurobond	Euro	-
XS0789521480	11/06/2012	09/06/2032	35.000	35.000	0.048	Eurobond	Euro	113.737
XS0928529899	17/05/2013	09/06/2033	75.000	75.000	0.038	Eurobond	Euro	-
XS1075052024	10/06/2014	10/06/2034	125.000	125.000	0.032	Eurobond	Euro	-
XS1024746353	03/03/2014	09/06/2038	75.000	75.000	0.036	Eurobond	Euro	-
XS0468468854	10/12/2009	10/12/2038	160.910	160.910	0.027	Eurobond	Yen	122.236
Total			7,554.0	8,127.0				

Table 3.7 Debt details of Autostrade per l'Italia as of February 10th, 2019. Source: Eikon Thomson Reuters.

3.1.6.3 Assessment of termination of the process of the concession agreement of Autostrade per l'Italia

The possibility of expropriation of the current concessions held by Autostrade per l'Italia from Atlantia creates a framework of financial impacts that should be assessed separately.

After an initial strong reaction from the government pointing to this possibility, as of today, the consensus of research analysts is that the termination of the concession agreement in the near term is very unlikely to occur.

First, the potential termination by means of a new law enforcing nationalization of the assets, without payment of any compensation, contemplated in scenario 1 mentioned on Table 3.4, would be seen by the investment community as something very negative. Such an action could impair the future of foreign investments in Italy if the laws and resolution of disputes become unpredictable, which the country could not stand.

When contemplating the second scenario, expropriation of all the network including the payment of compensation to Atlantia, the main reason for the government to move back, regardless of the final degree of culpability that could be attributed to the company upon concluding the investigations, are found on the Concession contractual terms currently in place.

As reported, in case the government would decide to end the concessions held by Autostrade before its date, Autostrade would be entitled to receive a cash payment based on the NPV (discounted at the market rate) of the revenues from operations until the end of the concession.

Such NPV, would be net of projected costs, liabilities, investments and projected taxes, including those taxes incurred by Atlantia as a result of the payment. Once this value would be determined, the following deductions would be additionally subtracted:

- 1- The value of all outstanding financial debt assumed by the government at the date of transfer.
- 2- The projected cash flows to be realized in the time between the transfer takes place.
- 3- In case that it could be proved that Autostrade did not meet its obligations, there would be a reduction of 10% plus any damages incurred in the compensation paid based on the previously stated NPV.

However, several aspects may difficult to predict exactly how much would be the amount to be paid, as well as the debt that the government would assume upon termination of the current contract.

In case the government would find a breach of contract and decide to commence proceedings to terminate the concession, it would be forced to give notice to Autostrade and allow the company to present its defenses. More specifically, the government would be forced to provide a minimum of 90 days to Autostrade to fix the bridge and or to present objections. By the end of the period, if the government rejects Autostrade`s objections and or rectifications, and decides to proceed, it must allow 60 more days to Autostrade to try to cure the breach again. Finally, if Autostrade does not cure the breach in those days, the grantor (ANAS) will be entitled, jointly with the Ministry of Economy and Finance, to issue a decree declaring the termination of the concession, specifying a date by which the transmission of all assets and liabilities from Autostrade would be done.

Nevertheless, at that point Autostrade could still appeal to the Regional Administrative Court and then, to the Council of State at an Italian level. Finally, they could also appeal to the European Court of Justice at a European Level.

Although the duration in court cases in Italy have been reduced considerably, still the process is very long. Considering the average timelines in each of the abovementioned tribunals, a summary of the expected date for the final approval of concession termination forecasted is presented in the table below:

Steps for the expropriation	Forecasted Date
ASPI's response to be presented after last request from Government on 20th of December 2018	120 days (19th April 2019)
Government's technical commission investigation conclusion	30 days (19th May 2019)
Period for the concessionaire to formulate its counterarguments if expropriation is triggered	90 days (17th August 2019)
Further period for the concessionaire in the event its counterarguments are rejected	60 days (16th February 2019)
Withdrawal Decree	By March 2019
Publication in official journal	Few days after the promulgation of the decree
ASPI appeal to Regional Administrative Court (TAR)	60 days from the publication on official journal (by-May 2019)
Average disposition time of TAR	1,000 days (by Q1 2022)
ASPI potential appeal to State Council	60 days from TAR's decision (by Q2 2022)
Average disposition time of State Council	1,245 days (by Q2 2025)
ASPI potential appeal to European Court of Justice	180 days from State Council's decision (by Q4 2025)
Average disposition time of European Court of Justice	480 days (by Q1 2027)

Table 3.8 Expected timing for concession expropriation of Autostrade per l'Italia. Source: European Commission Justice Scoreboard and Kepler Cheuvreux Research.

As reported, the process could extend up to 8 years from today, which is not very realistic because by that time, memory on the event will almost be extinct.

In case that the process could be speeded, and the termination of the concession would be confirmed early, the put option on early redemption from the €8.5bn of Eurobonds that Autostrade has outstanding could be triggered by its holders. We note that, such notes are granted by the parent company, Atlantia.

Therefore, in case that Atlantia would have enough cash to finance such an early redemption, the net financial debt of Autostrade that would be transferred to ANAS would be strongly reduced at the date of effective termination. Thus, the government would have to pay fully the NPV of future cash flows derived from future operations.

On the other hand, if Atlantia would not have enough cash and/or could compromise its liquidity, it could be forced to issue new debt. Such a debt issuance would probably be in worst conditions than the current ones, because it would be added on top of the already high leverage that the acquisition of Abertis supposes for the group and for the uncertainty surrounding the final value of the compensation that the government would pay. Nevertheless, at the time of transfer, such a cost would be carried by the grantor, either because it would have to pay for the lower liabilities that would inherit, or because it would take the liabilities with him, which would compute on the Italian government public debt accounts.

Note that, the details regarding the put option on the notes mentioned above can be found in Appendix 4.

As of today, analysts project the value of the concession of Autostrade Italia, at an average of c.€20-25bn, which, despite the 10% reduction, would be able to cover the entire amount of gross financial debt of the group, which totaled €10.7bn as of 30th of June 2018. The disparity among values observed is attributable to the fact that some brokers are including on its projections the concession extension until 2042, while others, more conservative, do not take into account this, subject to approval.

Italian state is already highly indebted, at 131.8% of its GDP by end of 2018, being the second in the world just behind Japan. Furthermore, the new government expenditure is closely scrutinized by the EU, and its cost of financing is clearly above the average, with a risk premium around 300bps. Consequently, such a large bill for the government could prompt another clash or downgrade on the rating, which would be difficult to justify in front of the full community. Particularly, because the risk to fall below investment grade would be very high, and therefore, many funds would not have access to purchase Italian bonds. Note that, as of March 2019, S&P and Fitch rated Italy with the same grade than Atlantia, but Moody's has already lowered it one notch, which means that is only one step above the "junk bond" line.

In addition, the government would need to take care of all future investments on most part of the Italian motorways. This, considered the Autostrade capex plan agreed, would suppose an extra €14bn to be carried until the end of the concession. Also, the Italian National Research Council reported that around 15,000 viaducts out of 60,000 in the network will need to be rebuilt in the coming years due to the fact that have more than 50 years and are potentially unsafe. The estimated value of such a repair amounts to €40bn according to the Italy's Civil Department. Such expenditures would need to be added on top of the current government plans on granting basic income for the poor, easing pension rules and perform tax cuts, which would not allow to meet the budget goals agreed with Brussels in 2019.

Finally, to comment that on 2007 the Italian Government aimed to revoke a concession due to breaches of obligation to properly maintain the A18 and A20 motorway stretches, held that time by Consorzio per le Autostrade Siciliane (CAS). By today, the process is still unresolved, and CAS keeps managing the network, implementing, with governmental approval, a repaving of the A20 stretch and improvement of barriers on the A18.

In conclusion, at this stage, for Atlantia, the benefits associated with the possibility of keeping Autostrade under their consolidated accounts, are not that clear. If conditions from the government regarding maintenance expenditures and/or changes on concession terms were very strong, they could be better off with the expropriation and to receive the compensation straight away. What is clear, though, is that the government and the Italian state would bear the largest part of the cost of redemption, and considering its positioning, it is not plausible today.

Further details on the concession agreement of interest for the case are presented in Appendix 4.

3.1.6.4 Tangible and probable future costs after the event attributable to investors of Atlantia

For shareholders of Atlantia, the largest impact was seen soon after the event, once the threats of expropriation of Autostrade were released by the government.

In the Table below there is a summary of the stock price evolution post event in significant dates:

Date	Stock Price (€/share)	% Change vs 13/08/2018	Comment
05/09/2018	28.400	14.1%	Maximum in the LTM
13/8/2018	24.880	-	Reference date
14/8/2018	23.540	(5.4%)	Bridge collapses
16/8/2018	18.300	(26.4%)	News on Expropriation are released
09/05/2018	17.210	(30.8%)	Minimum in the LTM
01/01/2019	18.070	(27.4%)	New year 2019
14/2/2019	20.780	(16.5%)	6 months after the event

Table 3.9 Atlantia stock price summary. Source: Eikon Thomson Reuters.

In the chart below, the last year stock performance from 28th of February 2018 to 28th of February 2019 is shown.



Figure 3.7 Atlantia stock price & volume for the period 01/01/2018 – 28/02/2019. Source: ASPI.

It can be seen from the data that at the date of the event, the 14th of August, the reaction of the market was not significant. Most probably, uncertainty and confusion kept investors just waiting of what could be the consequences. It was in the 16th of August, (note that the 15th of August is a public holiday in Italy) when the largest drop took place, and a 22.2% decrease was seen. Atlantia lost €4.3bn of market capitalization in one day, being the largest crash on its history.

Post event, the stock reached minimums of 17.20 €/share, a drop of 30.8% compared with the price pre-event. Nevertheless, since 2019, the stock recovered in line with the market and 6 months post event, it was trading at 20.78 €/share, still a 16.5% loss in value from the date of the event.

For bondholders, the evolution post event follows a similar trend. However, the impact on valuation is lower, and the dates at which the minimums are reached also differ, reflecting the nature of such securities which are closely linked to interest rate policies.

As a reference, 2 bonds have been selected, one belonging to Atlantia and another one to Autostrade. The summary of those results is presented in the Table below:

Date	Atlantia Bond XS1645722262	% Change vs 13/02/18	ASPI EMTN XS1688199949	% Change vs 13/02/18	Comment
03/05/2018	100.6%	3.7%	100.9%	4.0%	Maximum in the LTM
13/08/2018	97.0%	-	97.3%	0.3%	Reference date
14/08/2018	96.8%	(0.2%)	96.9%	(0.1%)	Bridge collapses
16/08/2018	90.5%	(6.7%)	86.0%	(11.4%)	Expropriation news released
18/12/2018	83.5%	(14.0%)	80.0%	(17.5%)	Minimum in the LTM
01/01/2019	83.2%	(14.2%)	80.3%	(17.2%)	New year
14/02/2019	91.0%	(6.2%)	87.7%	(9.7%)	6 months after the event

Table 3.10 Atlantia and Autostrade reference bond performance summary. Source: Eikon Thomson Reuters.

In the following chart, the evolution of the referenced bond prices in the last year is presented:



Figure 3.8 Reference bond prices for the period 28/02/2018 – 28/02/2019. Source: Markets Insider.

On the date of the event, the impact for the bonds were negligible, however, on the 16th of August both reacted to the possibility of expropriation of the concession. Nevertheless, the impact for the bond of Autostrade was almost doubling the one from its parent, Atlantia, which is notable considering the fact that they are closely related.

Six months after the event, the price for the Atlantia bond has dropped by 6.2%, while the one from Autostrade trades at a 9.7% discount versus the reference date before the collapse. This shows that the difference on price between both, compared with the 16th of August, has reduced by 25.5%, which is in line with the fact that Autostrade's debt safety is ultimately dependent on the parent's Atlantia performance as well.

When we look at the minimums reached, it is of importance to remember that by the end of the year 2018, threats on increase of interest rates globally were negatively affecting bond performance overall. Furthermore, the stock markets were experiencing a correction, which also affected the bond prices. Finally, at the beginning of 2019, the negative future macroeconomic

indications that were released worldwide made the FED and the ECB to retrocede on its initial plans, promulgating a recovery on prices.

The differences when comparing the losses in value between the bonds and the stock 6 months after the incident show that shareholders have lost double compared with bondholders. Such a difference can be explained by the higher hierarchy on debt that bondholders have in case of bankruptcy or concession termination could occur. Additionally, they benefit from the safety that the concession contract provides. Remember that the government would ultimately take care of Autostrade's debt in case of expropriation, either paying the compensation or acquiring Autostrade's liabilities outstanding.

On the other hand, there is a potential future cost to be considered, that would impact negatively the shareholders of Autostrade. This is the possibility that the government would decide to change the company governance and gain control over it.

There are 3 ways in which such a plan could be conducted:

- 1- Entry forcing a capital increase by means of the state sponsored infrastructure fund F2i or through the state-owned bank Cassa Depositi e Prestiti.
- 2- Listing of Autostrade per l'Italia at the Milan Stock exchange.
- 3- Distribution of Autostrade per l'Italia shares to Atlantia shareholders, reducing its participation on the overall cake.

Such a movement would allow the government not to have to pay for the removal of the concession, but would require some investment as well, to be able to have enough power to appoint the new chairman of the company.

For the current shareholders of Autostrade, this movement would bring dilution, and they would oppose to it. Note that, besides Atlantia, which owns 88.1% of the Autostrade, other minority shareholders are Appia Investments, with a 6.9% stake, and Silk Road Fund, with a 5% stake.

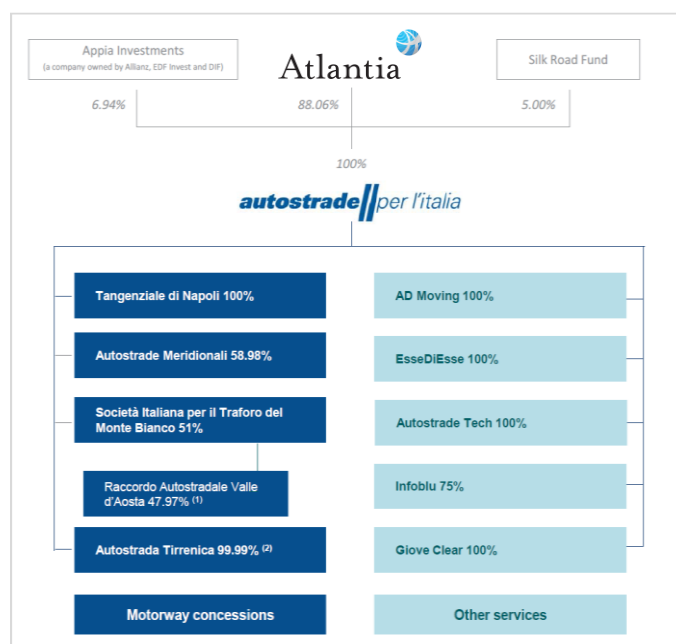


Figure 3.9 Autostrade per l'Italia group structure. Source: ASPI Annual Report 2017.

3.2 Collapse impacts on Abertis Infraestructuras and its main Shareholders

3.2.1 Review of the original financing conditions for the acquisition of Abertis Infraestructuras

Hochtief was responsible to present to the CNMV the bank guarantees that would allow to pay for the acquisition of Abertis. In total, the guarantees presented amounted to €18,215m and they were subscribed by means of 2 contracts. It is also of interest to note that all conditions from such contracts were attributable exclusively to Hochtief.

- Bank guarantee dating from the 18th of October 2017 for a value of up to €14,963m.

Initially, there was a sole guarantor on the operation, which was J.P Morgan Securities plc. The 20th of November 2017, the primary guarantee was substituted by a new one which considered the participation of 17 banks, which can be found in the table below:

Financial Entity	Tranche A	Tranche B	Tranche C	Tranche D1	Tranche D2	Total (€m)
JPMorgan Chase Bank,N.A.	103.7	236.8	551.4	70.2	87.7	1,049.8
Commerzbank Aktiengesellsch aft, FilialeLuxemburg	103.7	236.8	551.4	70.2	87.7	1,049.8
HSBC Bank,plc	103.7	236.8	551.4	70.2	87.7	1,049.8
Mizuho Bank,Ltd	103.7	236.8	551.4	70.2	87.7	1,049.8
Société Générale Sucursal enEspaña	103.7	236.8	551.4	70.2	87.7	1,049.8
Banco Bilbao VizcayaArgentaria, S.A.	80.0	182.6	425.2	54.1	67.6	809.5
Bankia, S.A.	80.0	182.6	425.2	54.1	67.6	809.5
Barclays BankPLC	80.0	182.6	425.2	54.1	67.6	809.5
Crédit Agricole Corporate and Investment BankDeutschland	80.0	182.6	425.2	54.1	67.6	809.5
Industrial and Commercial Bank of ChinaLimited	80.0	182.6	425.2	54.1	67.6	809.5
ING Bank, a Branch of ING- DiBa AG	80.0	182.6	425.2	54.1	67.6	809.5
Landesbank Baden-Württemberg	80.0	182.6	425.2	54.1	67.6	809.5
NationalWestminster Bank plc	80.0	182.6	425.2	54.1	67.6	809.5
Natixis S.A., Sucursal enEspaña	80.0	182.6	425.2	54.1	67.6	809.5
RBC EuropeLimited	-	-	-	-	50.0	50.0
Royal Bank ofCanada	80.0	182.6	425.2	54.1	17.6	759.5
Sumitomo Mitsui Banking CorporationEurope Limited	80.0	182.6	425.2	54.1	67.6	809.5
The Bank of Tokyo- Mitsubishi UFJ, Ltd., Dusseldorf Branch	80.0	182.6	425.2	54.1	67.6	809.5
Total	1,478.6	3,374.5	7,859.9	1,000.0	1,250.0	14,963.0

Table 3.11 Syndicated Bank Guarantee participants on the 1st contract. Source: CNMV

The main terms and conditions applicable to this guarantee are described below:

1- Purpose

The amounts guaranteed presented were intended to be used exclusively to pay in cash for the acquisition of Abertis shares, as well as to finance the costs attributable to the operation and financing of this transaction as well as any other extra-charge attributable to modifications at the time of the transfer.

2- Interest rates

The guarantee would have an interest rate attached to the EURIOBOR corresponding to the period (capped at 0%) plus a margin amount applicable to each tranche which will keep increasing on time as described in the table below:

Months following the dates: (i) April 18th, 2018; or (ii) date of the first disposition (2n contract)	Margin applicable to tranches A&C	Margin applicable to tranche B	Margin applicable to tranche D1	Margin applicable to tranche D2
0 – 3	0.40%	0.50%		
4 – 6	0.55%	0.50%	0.60%	0.85%
7 – 9	0.70%	0.70%		
10 – 12	0.90%	0.70%		

Table 3.12 Annual margin rates above EURIBOR. Source: CNMV.

The margins would be modified in case that the credit rating of Hochtief could change at the time of the contract, either positively or negatively, as specified in the table below:

Long-term debt Credit Rating		Margin changes
Moody's	S&P/Fitch	
Baa1 or above	BBB+ or above	(0.10%)
Baa2	BBB	+/- 0,00%
Baa3	BBB-	0.20%
Ba1 or inferior	BB+ o inferior	0.40%

Table 3.13 Margin changes according to credit rating. Source: CNMV.

3- Expiration Date

The original duration of each tranche is specified below:

Tranche	Value (€m)	Expiration date
Tranche A	1,478.6	12 months (option + 1 year extension)
Tranche B	3,374.5	12 months (option + 1 year extension)
Tranche C	7,859.9	12 months (option + 1 year extension)
Tranche D1	1,000.0	3 years
Tranche D2	1,250.0	5 years

Table 3.14 Duration of the Guarantees. Source: CNMV.

It is stated that the amortization of the principal in each tranche will be paid at date of expiration (bullet type).

Regarding the interest payments due, they had to be paid the last day of each interest period, which was initially accorded to be done quarterly, unless any changes applicable in amendments to be agreed that could change it, either extending or shortening the accrual.

4- Other relevant considerations

- Hochtief would determine at each time the best combination of resources, either to be used to front the payments due, which could be either its own or from foreign entities.

- Hochtief aimed to complete as quickly as possible the transaction, excluding Abertis from the Spanish stock exchange and consolidating its assets and liabilities in the resulting new company Abertis Holdco.
- The contract did not impose Hochtief the obligation to sell any assets, either limited the distribution of dividends from Hochtief or ACS and allowed for the restructuring of the resulting combined group in order to optimize the resulting synergies.
- There were certain obligations and restrictions for Hochtief and all its affiliates to be accomplished that could trigger the early redemption of the contract. The most significant ones were limitations on additional financial leverage, limitation on disposal of assets and the granting of additional guarantees.
- The contract did not represent any contractual obligation for Abertis, which was free to keep operating under normal conditions despite of the outcome of the takeover bid.
- Bank guarantee dating from the 27th of March 2018 for a value of up to €3,221m.

The purpose of this second bank guarantee, presented post-agreement with ACS and Atlantia, was intended to substitute for the initial payment in shares contemplated in the primary offer.

The list of the new banks participating on the syndicated loans, as well as its corresponding commitments are given in the Table below:

Financial Entity	Tranche E (€m)	Tranche F (€m)	Total (€m)
Banco Santander S.A.	355.8	186.2	542.0
BNP Paribas, Italian Branch	524.9	274.6	799.5
Intesa Sanpaolo S.p.A.	355.8	186.2	542.0
Mediobanca - Banca di Credito Finanziario S.p.A.	523.6	273.9	797.5
UniCredit S.p.A.	374.9	196.1	571.0
Total	2,135.0	1,117.0	3,252.0

Table 3.15 Syndicated Bank Guarantee participants on the 2nd contract. Source: CNMV.

The 2nd contract was signed without any differences in the conditions as reported above for the 1st contract. Regarding the interest rates and expiration dates applicable to tranches E and F, the conditions were the same ones as for tranches A and C from the 1st contract already stated.

A full description of the details regarding the guarantees can be found in the document called “*Suplemento al Folleto Explicativo de la Oferta Pública Voluntaria de Adquisición de Acciones de Abertis Infraestructuras, S.A.*” presented to the CNMV the 10th of April 2018.

3.2.2 Constitution of Abertis Holdco and refinancing operations

The 14th of May 2018, the CNMV confirmed that the voluntary takeover bid for Abertis had been accepted by a total of 78.79% of the share capital.

The remaining of the shares, were subsequently purchased on the open market, at a maximum of the offer price. The credit facility was progressively drawn upon between May and October 2018 in order to finance the 98.7% total acquired shareholding in Abertis, including the account treasury shares retired by Abertis as well as the formal delisting, that took place the 6th of August 2018.

Finally, the 29th of October 2018, the closing of the operation was accomplished:

- Primarily, the SPV Abertis Holdco was created with an equity contribution totaling €6,909m where, ACS has 30% share, Hochtief has 20% - 1 share and Atlantia owns 50% + 1 share.
- Abertis Holdco also raised new bank debt amounting to €9,824m which refinancing scheme will be described further below.
- Simultaneously, a second company was established, Abertis Participaciones The entity was fully controlled by Abertis Holdco (100% stake) and it was used by Hochtief to transfer its whole stake from Abertis's share capital worth €16,520m.
- In return, Abertis Holdco, paid back to Hochtief the amount of €16.5bn drawings on the €18.2bn syndicated credit facility, which was cleared in full. Hochtief, consequently, no longer has any financial liabilities under the acquisition facility as of the reporting date, which means that the operation was accomplished as expected.

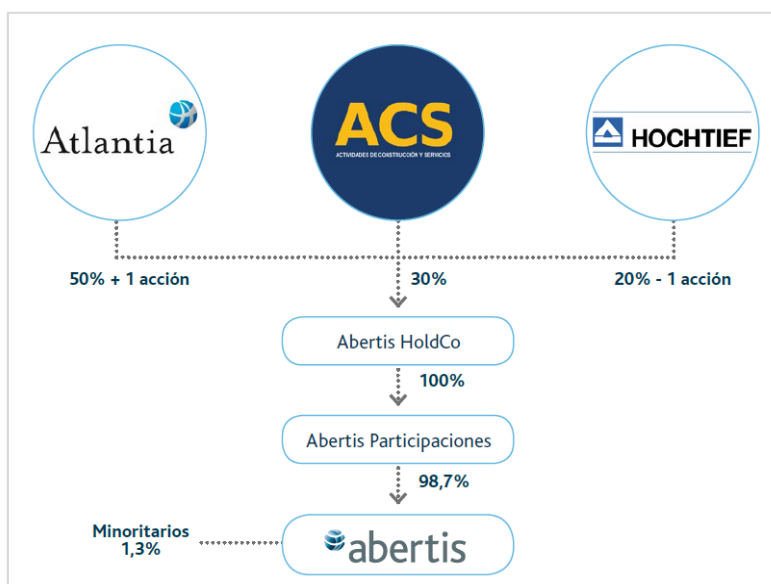


Figure 3.10 Shareholder structure of the new Abertis Holdco. Source: Abertis Annual Report 2018.

In a final step, the 8th of February 2019, an extraordinary general shareholders meeting was held in Madrid and it was approved that Abertis Participaciones would be absorbed by Abertis Infraestructuras. The purpose of such a transaction was to simplify the corporate structure, facilitating the allocation of resources, enhancing the efficiency in transfer of financial flows and achieving costs reductions. Such an integration followed the legal scheme of a reverse merger, in which the subsidiary absorbed the head company.

The share exchange ratio was decided in accordance to the asset value of the companies involved and there was no additional compensation in cash. Abertis Holdco ended receiving 899,757,113 shares of the absorbing company, Abertis Infraestructuras, in exchange for the 33,353,330 shares of the absorbed company, which were later redeemed.

A simplification chart of the transaction is shown below:

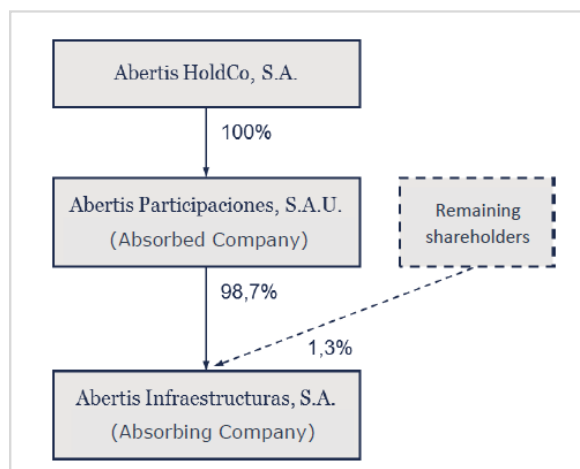


Figure 3.11 Shareholding structure of participating companies in the simplification movements from the new Abertis. Source: Abertis and CNMV.

The next steps for the new Abertis Holdco was the refinancing of the debt issued amounting to €9,824m in October 2018.

Because the new issuance was done when Abertis was delisted and controlled by the new entities, the term sheets prepared on the new debt conditions were not made available to the public.

In fact, the new entity, Abertis Holdco, which is registered in the “Registro Mercantil” in Madrid with the identification number CIF: A88196217 has, as of end of March 2019, not presented yet any results. Therefore, it was not possible to get all the details to conduct an analysis on the capital structure of the new entity.

Nevertheless, the companies revealed the key terms surrounding the structure of the new debt raised and the objectives that they pursue to accomplish.

Note that the agreements on the new debt took place in October 2018, when the collapse of the Genoa bridge already occurred.

According to public press releases from the media and Atlantia, the debt financing package issued is composed of:

Facility	Size (€m)	Repayment	Maturity	Margin	Type
Term Loan	3,000.0	Amortizing	01/10/2023	70 bps	Fixed
Bridge To Bond	4,750.0	Bullet	01/05/2020	64 bps	EURIBOOR LSM
Bridge To Disposal	2,070.0	Bullet	01/05/2020	64 bps	EURIBOOR LSM
Total	9,820.0				

Table 3.16 Original acquisition financing debt of Abertis Holdco. Source: Atlantia, 2018.

- A €3bn amortizing term loan with maturities of 5 years.

This facility is aimed to remain in form of long-term debt and to be repaid fully from the dividends received from Abertis operations.

When benchmarking the fixed rate on the term loan obtained with the one previously accorded on the guarantees originally provided by Hochtief, we observe that the cost is on the line. Apparently, the banks did not punish in the form of higher interest rates the potential risks attributable to the collapse of the Morandi Bridge. Nevertheless, the clauses surrounding the terms and conditions of this debt could have been endured, and there is no public information about it available.

- A €2.1bn bridge-to-disposal facility.

Out of which €1.7bn will be funded with the proceeds from the sale of Cellnex 34% stake conducted in May 2018, which supposed a capital gain impact of €605m. The remaining €400m will come from the recently agreed sale of Hispasat. Therefore, such a facility has been already fully funded.

- A €4.75bn bridge-to-bond facility with 18.5 months of maturity.

This facility is the one that urged to be refinanced as soon as possible because of the clause that increases the interest rate to be paid every six months.

In the FY Results 2018 presentation of Atlantia, it was mentioned that €2.1bn have already been refinanced by new medium-term bank debt.

This debt is composed of a €970m 5-years bank facility to be hold at Abertis Holdco and an additional bilateral bank commitment at Abertis Infraestructuras, amounting to €1,065m, with tenors of 5 to 7 years.

Additionally, there will be €505m remaining from the €949m sell of Hispasat which the group intends to use to repay part of this debt as well.

Overall, the short-term acquisition debt was reduced considerably, from €6.8bn to €2.1bn to be funded in the form of new bond issuance.

Abertis entered into a new European Term Notes program (EMTN), approved by the Central Bank of Ireland on the 6th of March 2019. The program will allow the company to place notes for up to €7bn within a period of 12 months.

J.P Morgan, BNP Paribas, Natixis and UniCredit, being the arrangers of such a transaction, conducted a road show of Abertis among potential institutional investors in London, Paris, Amsterdam, Munich, and Frankfurt from the 10th to the 15th of March 2019, with a primary objective to rise up to €3bn. Analysts forecasted that such an amount was reachable, and in fact, talked about the possibility to target up to €5bn, which would allow Abertis to refinance part of the amortizations on its pre-acquisition debt.

For Abertis, this has been the largest fixed income issuance conducted as of today.

The largest one, was done in 2016, when the company issued a bond of €1,150m with maturity of 10 years at a coupon of 1.375% and covenant free. The issue registered an oversubscription

that doubled the offer. 95% of buyers were from outside Spain. Also, it was the lowest cost of debt ever issued by the company, taking advantage of favorable market conditions by that time, and enabled to reduce the cost of debt for 2016 to 3.2%.

Coming back to the bond issuance on March 2019, the first placement was an important test, were the real impact of the uncertainties experienced by Atlantia for the consequences of the collapse of the Morandi bridge in Genoa were observed.

The first reports on the media stated the potential difficulties and changes from the last bond issued that would face the new company. The main reason was fears on the capacity to earn the trust of the investment community.

To bring clarity, the fears and derived implications of the new issuance, expected during the road show were:

- *Investor Concerns.*
 - 1- Final cost for Atlantia regarding the disaster in Genoa was not clear and Atlantia already reported that it could take several months before investigations were finalized.
 - 2- Abertis Holdco had a very concentrated shareholder structure, with almost no minorities. The three main entities control 98.7% of the company and promised to pay 90% of benefits in the form of dividends if the group keeps its credit rating at “BBB”. Investors were afraid that ACS and Atlantia decided to prioritize their compensation over the payment to bondholders.
 - 3- Potential influence on managing the company that Atlantia may have over Abertis. Investors wanted to be sure that Abertis was an independent entity, acting outside the situation of its main shareholders.

- *Expected impact on the bond clauses.*
 - 1- The bond coupon rates were expected to be higher than the ones offered from peers with the same credit rating.
 - 2- The new bonds would require the inclusion of covenants, as a request from bondholders to be protected against the above-mentioned risks which will include:
 - a. An early redemption clause to be triggered in case of change of control from Abertis.
 - b. An early redemption clause to be triggered in case of a disposal of assets which supposes $\geq 30\%$ of the EBITDA for the group.
 - c. An early redemption clause to be triggered in case of a lower of the rating below investment grade “BBB-“by S&P.

The outcome of the placement was finally a great success. The 18th of March 2019, both, Abertis and Atlantia announced that Abertis was able to successfully raise €3,066m in 4 different tranches, presented on the table below:

ISIN	Issue Date	Maturity Date	Issued (€m)	Coupon	Open spread over midswap (bps)	Final spread over midswap (bps)	Market of Issue	Currency	Price at 27/03/2019
XS1967635621	27/03/2019	27/03/2024	600.0	1.500%	175.0	140.0	Eurobond	Euro	99.911
XS1967635977	27/03/2019	27/08/2027	1000.0	2.375%	225.0	198.0	Eurobond	Euro	99.675
XS1967636199	27/03/2019	27/02/2029	1000.0	3.000%	260.0	233.0	Eurobond	Euro	99.277
XS1967636272	27/03/2019	27/07/2026	400.0	3.375%	260.0	243.0	Eurobond	GB Pound	99.398

Table 3.17 New notes placed by Abertis on 18/03/2019. Source: Abertis, 2019.

The placement was oversubscribed, and the demand reached c.€14bn for the 3 Euro currency tranches and c.£1.5bn for the GPB tranche. Such strong demand allowed the company to be aggressive on the prices without fears on the exit of investors.

In fact, the prices achieved are below the mean of the market for companies rated “BBB”, and the media told that it would have been possible to capture even larger commitments. However, Abertis had clear its objective of refinancing the acquisition part and decided not to move forward at that stage.

As a result of all the refinancing operations explained above, the average maturity of Abertis acquisition debt has been extended to 6.4 years, and the projected program of debt repayments has changed.

From the fears commented above, point one is no longer valid. In fact, lower yields on the coupons were obtained when benchmarking with the market. Regarding point 2, no public information on the term sheets was published at the date of presentation of the thesis, and thus, could not be verified.

As mentioned above, the yields on the coupons are lower with the cost of debt on bonds of the entity, which, as of end of 2018, stood at 3.50%. According to Atlantia, with this new issuance, the cost of debt of Abertis will be reduced from 3.73% in 2018 to 1.84% by 2022.

Commenting on the issue, the CEO of Atlantia, Giovanni Castellucci mentioned the following:

“We are pleased with the level of interest and commitment made by the financial markets towards today's new issue. We see this as another endorsement of the Abertis acquisition and a confirmation that our group growth strategy is understood and valued by investors. Today's close marks the completion of the Abertis transaction and allowed to finalize the refinancing at better condition than those expected in March 2018 at the kick-off of the transaction. In the coming months, we will articulate and implement the post-acquisition strategy to build out our global networks. This strategy will leverage the increased scale, efficiencies and expertise as the world's largest toll-road operator.”

The last step will be the transmission of the acquisition debt from Abertis Holdco to Abertis Infraestructuras.

This will be done in a form of an extraordinary dividend, amounting to €9,963m, that Abertis Infraestructuras will provide to Abertis Holdco. Instead of making the payment directly in cash, Abertis Infraestructuras will take the corresponding obligations of Abertis Holdco, becoming the new debtor of the abovementioned principal.

This transaction, subject to approval on the Annual Shareholders meeting to be held in March 2019, will leave Abertis Infraestructuras with a total debt of c.€25bn on its accounts.

3.2.3 Tangible impact of the transaction 6 months post-collapse

In this chapter, the tangible impacts that the collapse of the Morandi Bridge have had on Abertis Infraestructuras and its stakeholders are presented.

1. *Market reaction and impacts for ACS, Hochtief and Abertis.*

In the Table and Chart below there is a summary of the stock price evolution for ACS in the LTM, considering the key dates when the event took place:

Date	Stock Price (€/share)	% Change vs 13/08/2018	Comment
21/09/2018	37.48	4.3%	Maximum in the LTM
13/08/2018	35.93	-	Reference date
14/08/2018	35.96	0.1%	Bridge collapses
16/08/2018	34.43	(4.2%)	Expropriation news released
03/06/2018	26.18	(27.1%)	Minimum in the LTM
01/01/2019	33.51	(6.7%)	New year 2019
14/02/2019	36.85	2.6%	6 months after the event

Table 3.18 ACS stock price summary. Source: Eikon Thomson Reuters.

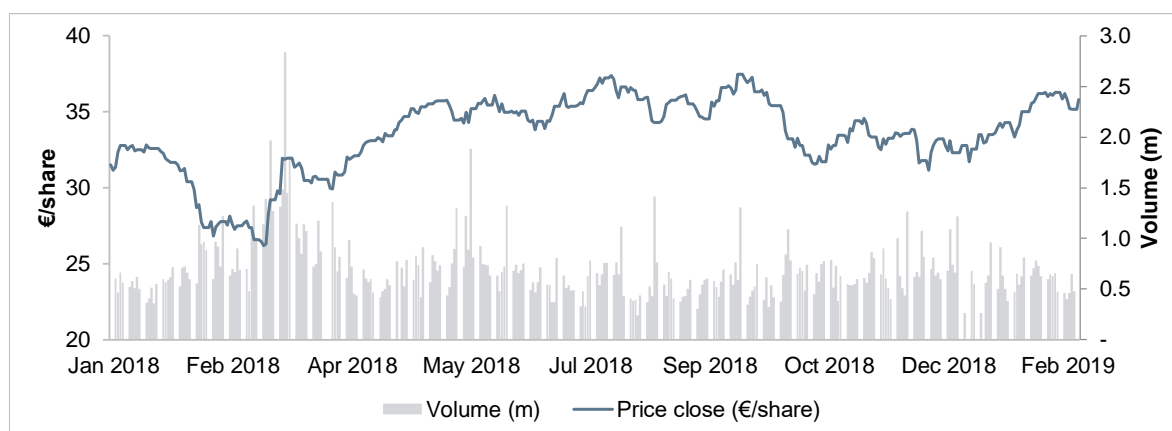


Figure 3.12 ACS stock price summary. Source: Eikon Thomson Reuters.

The same information regarding Hochtief is given in the following Table and Chart:

Date	Stock Price (€/share)	% Change vs 13/08/2018	Comment
14/6/2018	160.20	6.6%	Maximum in the LTM
13/8/2018	150.30	-	Reference date
14/8/2018	151.00	0.5%	Bridge collapses
16/8/2018	141.10	(6.1%)	Expropriation news released
20/12/2018	112.90	(24.9%)	Minimum in the LTM
01/01/2019	117.70	(21.7%)	New year 2019
14/2/2019	132.10	(12.1%)	6 months after the event

Table 3.19 Hochtief stock price summary. Source: Eikon Thomson Reuters.

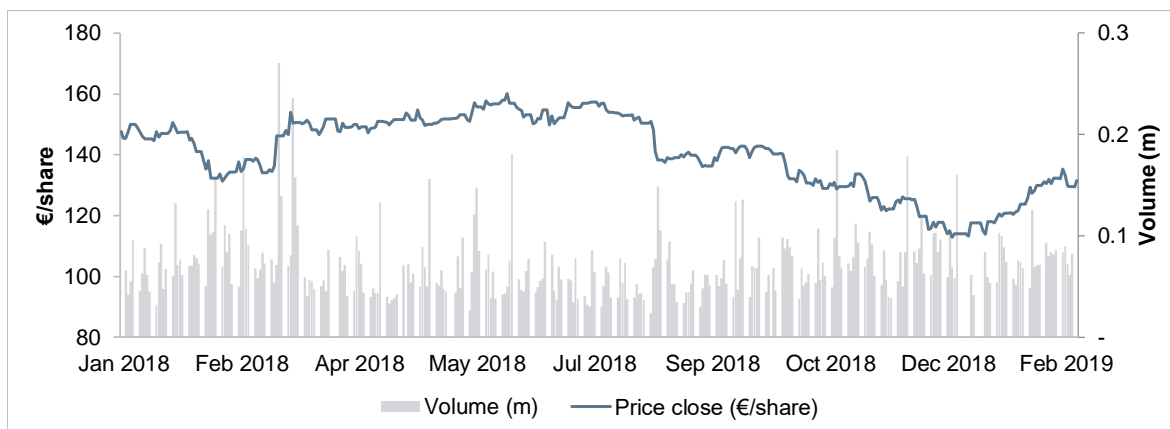


Figure 3.13 Hochtief stock price summary. Source: Eikon Thomson Reuters.

Both companies have reacted negatively to the news of possible expropriation of Autostrade from Atlantia on the 16th of August 2018. However, comparing with the affections that it supposed for Atlantia, the impact was much lower, as the stock price impact for ACS and Hochtief that week was a drop of c.5%-7%. For Abertis, the market impact was not recorded as the company had been delisted on the 6th of August 2018.

The remaining of the year, ACS and Hochtief were closely correlated regarding the trends on their stock performance. Also, it is of interest to note that Atlantia did not follow the same path, most probably because the crash was much bigger in first instance and a stabilization trend was reached once it was becoming clearer that the expropriation would not be materialized in the short term.

Six months post event, ACS stock was trading above the reference day and Hochtief below, and at a price even lower than the one reported on the 16th of August 2018. Such facts reflect that the impact of the fall of the bridge on the market for the ACS and Hochtief was not felt immediately after the event.

Regarding the impact on Abertis Infraestructuras, the company was delisted already, and it makes sense to perform an analysis on the debt side.

The new updates done by the rating agencies S&P and Fitch were done post event and once the transaction and constitution of the new Abertis Holdco was already established.

The agencies kept the rating to “BBB” and even improved the outlook, which brought a positive sign to the investor community.

Abertis, in the Annual Report of 2018 for Abertis Infraestructuras (which does not include the c.€10bn debt issued by Abertis Holdco), reported the following regarding its debt:

Debt Type in €mm	31/12/2018			31/12/2017		
	Non Current	Current	Total	Non Current	Current	Total
Bank Loans	4,740.4	242.2	4,982.7	5,454.8	643.9	6,098.7
Bonds and other loans	10,162.9	866.6	11,029.4	10,762.3	963.7	11,725.9
	14,903.3	1,108.8	16,012.1	16,217.1	1,607.6	17,824.6
Debt with subsidiary entities registered	8.4	2.1	10.5	8.4	1.6	10.1
Interests on loans and bonds	-	181.6	181.6	-	199.6	199.6
Other liabilities with financial entities	508.6	-	508.6	490.9	-	490.9
Financial Debt	15,420.3	1,292.5	16,712.8	16,716.5	1,808.9	18,525.2

Table 3.20 Abertis Infraestructuras debt as of December 31st, 2018. Source: Abertis AR 2018.

- Abertis was able to reduce its Net Debt by €2,091.46m in 2018 and currently stands at €13,275.1m.
- Several refinancing operations performed supposed an increase of €1,279.2m in new resources available, to be used mainly for debt amortizations due in 2018.
- The group refinanced a total of €2,878.5m of debt to improve the liquidity position, which included the issuance of new bank credit facilities amounting to €815m expiring in 2024 and 2025.
- The mean interest rate charged in 2018 for the new debt issued was 3.73% vs 4.04% in the previous year. The debt corresponding to new bank loans had an interest rate of 4.33% vs 3.74% in 2017. On the other hand, the interest on bonds and other obligations was reduced from 3.78% in 2017 to 3.50% in 2018.

Therefore, as of end of year 2018, the company did not see any negative impact on its financing conditions for the debt it had before the acquisition.

2. Corporate governance changes.

No changes attributable to the Morandi bridge incident, either disputes regarding the acquisition and constitution of the new Abertis were reported. All companies kept its governance structure and the new Abertis management and Board appointments was established as it was agreed by contract initially.

3.2.4 Contribution of Abertis Infraestructuras as of December 31st, 2018

3.2.4.1 Contribution for Hochtief and Actividades de Contrucción y Servicios

In the last audited financial statements concerning the year ended 31st December 2018 the impacts attributable to the acquisition of Abertis for Hochtief and ACS Group were reported and considered since 30th of June 2018.

Both entities showed very strong operational performance in 2018 and were able to meet most of its strategic targets for the year, being the most significant the ones listed below:

- For Hochtief:
 - 1- Net profit increase by 29% y-o-y to €541m (including Abertis contribution).

- 2- Operational net profit increase 15% y-o-y to €521m.
 - 3- Sales increased by 6% y-o-y in nominal terms and Profit Before taxes was 4.1% vs 3.8% in 2017.
 - 4- €28.1bn in new orders received, representing 110% times the Group's level work done.
 - 5- Net cash position of €1.6bn (+€300m vs 2017).
 - 6- Dividend for 2018 or 4.98 €/share (+47% y-o-y).
- For ACS:
 - 1- Net profit growth of +14% y-o-y.
 - 2- Total production average growth c.10% y-o-y excluding FX.
 - 3- Reduction of Net Debt from €153m in 2017 to a Net Cash of €3m.

Regarding the impacts directly attributable to Abertis, the main effects to both entities (recorded using the Equity Method), were:

- For Hochtief:
 - 1- Total investment of €1.38bn to take a 20% stake which was funded with a capital increase of €907.8m (equivalent to 6.35 million of new shares at a price of 143.04€/share) and with the issuance of a new corporate bond done the 3rd of July 2018 with a value of €500m with a fixed coupon of 1.75% maturing in July 2025.
 - 2- Total net profit received from Abertis for the 20% stake of €84m, which represents 15.5% of the total net profit of the group.
 - 3- Targeting of a sustainable Dividend Payout ratio for all shareholders of 65% from 2018 onwards, vs the previous one, which stood at 50%. Such an increase is attributable to the improved cash flow generation and visibility derived from Abertis share.
 - 4- In May and July 2018, S&P, based on the joint acquisition announcement confirmed the BBB investment grade rating and upgraded the outlook to “stable”.
- For ACS:
 - 1- Total investment of €3.49bn to take a 50% of shares -1 of the capital of the new Abertis Holdco Part of the investment was financed by the sale of 16.85 million shares of Hochtief at a price of 143.04 €/share to Atlantia, which now owns 23.86% of Hochtief share capital. ACS Group remains having the control on Hochtief, holding 50.4% of the share capital.
 - 2- Since June 2018 up to end of the year, Abertis contribution was €116m for ACS and €59m for Hochtief, which represents a total of €175m for ACS Group, excluding minority interest. Such amount is equivalent to a 19.12% of overall profit for the year, which stood at €915m (+14.1% y-o-y).
 - 3- The 8th of May 2018, S&P assigned BBB in the long-term debt to ACS Group, considering the new investment in Abertis. The agency also upgraded the view to “stable”, reflection on the beliefs of the capacity that ACS Group has shown in the past to reduce the debt through noncore asset disposals and group streamlining. Also highlighted the improved performance observed in 2015 and 2016. The agency trusted on the capacity to keep the trend, focusing on cash flow generation and disciplined capital management.

Finally, both entities mention what are the expected future benefits to be derived from the acquisition of Abertis. The most significant ones, listed below:

- 1- A more balanced business profile in terms of capital intensity, margins and cash flow visibility.
- 2- Growth for the group to be derived from the possibility to participate in further PPP projects already identified in markets where the model is expanding and the combined entities will be present (North America, Australia and EU), which are estimated at €230bn.
- 3- Benefit from the increase in cash flows from the Operations and Maintenance of the brownfield projects acquired.
- 4- Optimize the financial structure due to higher cash flow visibility and lower risk profile.
- 5- Margin improvements derived from the new business model.
- 6- Conservation of the investment grade rating in the long term.

Overall, the NPV of expected synergies to be derived range between €6bn to €8bn, done in accordance with a progressive line of adoption of new projects and considering the benefits derived from the optimization of costs and economies of scale.

3.2.4.2 Contribution for Atlantia

The total equity investment that Atlantia performed on the acquisition of Abertis amounted to €5.9bn euros. Those were split between the stake taken on Hochtief, totaling €2.4bn, and the remaining €3.5bn were for the 50%+1 share of Abertis Holdco.

In order to finance these payments, Atlantia used, apart from its own cash reserves, several debt resources, which are listed on the Table below:

Facility	Size (€m)	Repayment	Maturity	Margin abov. EURIBOR 6 months
Term Loan	1,500.0	Amortizing	30/10/2023	77.5 bps
New Term Loan	1,750.0	Bullet	30/09/2023	102.5 bps
Revolving Credit Facility	675.0	Bullet	30/07/2023	90 bps
Total	3,925.0			

Table 3.21 Original Abertis acquisition funds used by Atlantia. Source: Atlantia, 2018.

On the other hand, the impact in Net Debt for the group that Abertis brought on Atlantia consolidated accounts was large.

As at 31st December 2018, Net Debt totaled €37,931m (€9,496m as at 31st December 2017), an increase of €28,435m.

From this increase, the impact of the acquisition and consolidation of Abertis was €25,847m and the acquisition of an interest in Hochtief totaled €2,411m. Overall, Net Debt /EBITDA ratio went from 2.6x in 2017 to 5.1x in 2018, including already the sale on Hispasat.

The other main costs attributable for the acquisition were reflected in Net other financial expenses, totaling €793m, up €247m compared with 2017 (€546m).

The increase was primary due to the following considerations:

- 1- Abertis Group's financial expenses of €148m were added in to interest expense.
- 2- The accrued share of ancillary costs for the period recognized by Abertis Holdco in relation to the financing obtained to finance the acquisition of control of Abertis was €176m (transaction costs of €27m).
- 3- There was an increase of €44m in financial expenses for the financing obtained to finance the acquisition of Abertis, presented above.

After those transactions, and once Abertis Holdco debt refinancing explained was completed, the available resources and financing needs up to 2022 for the Atlantia Group will be as follows:

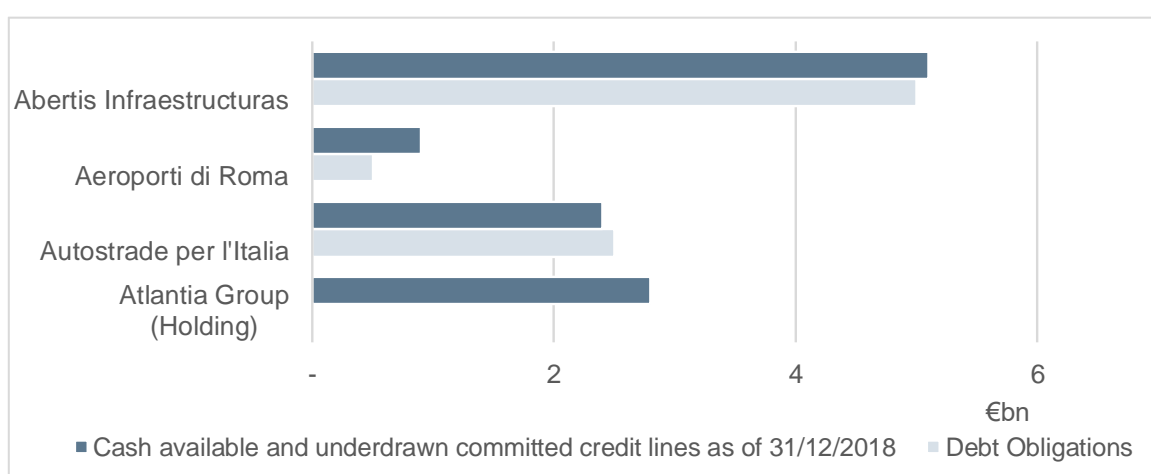


Figure 3.14 Debt maturities of Atlantia up to 2022. Source: Atlantia, 2018.

In the table below, a summary of the debt conditions for the group is given:

	Atlantia	Autostrade per l'Italia	Aeroporti di Roma	Abertis Infraestructuras
Avg. Cost of Debt	1.8%	3.6%	2.7%	3.76% to 1.84%*
% fixed rates / hedged	83.7%	100.0%	100.0%	82.0%
Avg. Maturity	5.4 years	6.3 years	5.5 years	5 to 6.4 years*

* After €3bn Notes placement on 19/03/2019

Table 3.22 Main debt features of Atlantia up to 2022. Source: Atlantia, 2019.

From the income side, Atlantia reported that the Abertis contribution to Atlantia's Group EBITDA in the last two months of 2018 was of €550m. On the other hand, pro-forma figures of 12 months consolidated results would be €5,255m in additional Revenues, €3,549m in EBITDA, €2,251m in free cash flow from operations, and expected €605m of capital expenditures.

Regarding the dividend policy, as mentioned before, Atlantia expects Abertis to pay 90% of its profits in the form of dividend to Abertis Holdco. This should bring to the holding c.€2.7bn of

extra cash from 2018 to 2020, equivalent to c.€875m per year, which represents an increase of 26% compared with what was paid in the triennium precedent 2015-2017.

In contrast, in 2018, as a result of Abertis cost of acquisition as well as the negative impact derived from the Morandi bridge, Atlantia's management has proposed to reduce its dividend payout by a 26% y-o-y, from 1.22 €/share in 2017 to 0.90 €/share in 2018, which will be distributed the 21st of May 2019. This modification is currently subject to approval for the Annual General Meeting that will be held on the 18th of April 2019.

Regarding the strategy for Abertis, Atlantia is aligned with the already stated plans from ACS and Hochtief. The difference is that for the group, after the event on the Morandi Bridge, Abertis may bring the necessary fresh air to keep the company being successful in the future.

Currently, the weight of Autostrade on Atlantia's operating cash flow stands at 64%, but with the new Abertis contribution, this would be reduced to 40%. Thus, Abertis would diversify away from Italy the main source of revenues for the group, lowering its risk profile.

EBITDA contribution of the group in Italy is expected to be reduced from 82% as of today to 45% in the pro-forma basis. Additionally, it would allow to growth in emerging regions such as Brazil or Chile, and be present in countries such as Australia, Canada and the US.

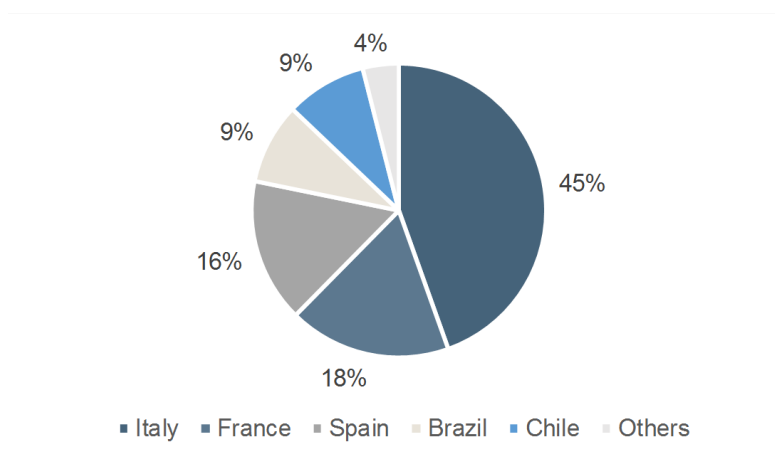


Figure 3.15 Forecasted combination of Atlantia and Abertis EBITDA by region. Source: Atlantia, 2018.

Additionally, the company expects to improve its capital structure, reducing its average cost of debt from 4% to 3% post-acquisition financing, as well as to generate synergies from the expansion of digital payments and in G&A costs.

Chapter 4. Conclusions and further research

This thesis presented a case study on the valuation changes and implications derived from the collapse of the Morandi bridge in Genoa that took place on the 14th of August 2018. Additionally, it provided a review on the takeover bid of Abertis led by Hochtief, ACS and Atlantia, and how the disaster impacted the M&A transaction which was not finalized by that time.

The authors have worked to provide an answer to two questions and the main conclusions extracted from the research for each of them are presented below:

1- What has been the impact of this event on the acquisition of Abertis for all the involved parties?

The authors conclude that the impact on the M&A transaction that the collapse of the Morandi bridge has had as of end of March 2019 are very limited or even inexistent.

The main points which supports this statement are outlined below:

1. Abertis was acquired as it was primarily intended, the new Abertis Holdco was able to get appropriate financing, which took place in October 2018, post-collapse.
2. The information facilitated by credit agencies, keeping the “BBB” level and improving the outlook, and the results reported by Atlantia, ACS and Hochtief, all indicate that the endurance of the conditions in debt terms from bank loans established to constitute the new Abertis Holdco was minor.
3. Despite the crash that the accident supposed for Atlantia, the market reaction for ACS and Hochtief was not very strong. Moreover, stocks performed differently from Atlantia post-collapse. This indicates that there is a low correlation between the entities and that Abertis is seen as independent entity by the investor community.
4. The refinancing operations conducted during the years 2018 and 2019 in Abertis Infraestructuras and in Abertis Holdco, considering the c.€3bn in notes placed in March 2019, improved the cost of debt profile of Abertis and its owners, despite having a higher leverage and commitments upfront.

Nevertheless, time will tell if the outcomes of the investigations, and potential punishments in Atlantia, will change the conditions for getting future financing, despite the efforts made in presenting Abertis as an independent entity that have worked successfully to complete the transaction.

2- *How was the market reaction post-collapse and its evolution in time?*

The main conclusions extracted from the analysis on valuation changes of Atlantia's market crash derived from the collapse of the Morandi bridge are:

1. The market over-reacted immediately after the shock. Investors were afraid of the removal of the concession of Autostrade that the government strongly reiterated in the first days, which explains the 30% stock price drop that occur immediately after the event.
2. The government of Italy was the main driver of the over-reaction. Its statements were done without enough information regarding the viability of terminating the concession of Autostrade. Either legally, nor the economic impacts for the country were considered when the leaders of the political parties primarily commented on the issue, in an aim to calm down society. A good proof of that is how the situation has evolved as of March 2019. On-going investigations to determine the degree of real culpability attributable to all parties, as well as the best way to proceed in order to minimize the costs derived for all are being studied.
3. The stock price of Atlantia is still depressed, with additional risk attributed to it due to no visibility on what the final consequences will represent for them. Costs incurred as of end of March 2019 have been limited and provisioned by the company at c.€500m. Atlantia and Autostrade, both performed changes on its management structure aiming to bring confidence to the investment community and to its shareholders. Shareholders that reacted in an accordion mode, divesting at the time of the event and coming back to its original position 6 months later.
4. The impact on enterprise value changes seen in Atlantia just right after the event (short-term) was mainly attributable to the cash flows endangered from Autostrade. Cash flows explained 76% of the drop in the attributable share price of Atlantia, being traffic and penalties the two main contributors. WACC and risk perception, according to Broker consensus, represented 24% of the drop in the share price. When looking at the numbers, the FCF decreased by +25% and the WACC increased from 5.9% to 6.6%, which is a +11.9% in percentage terms.
5. The impact on enterprise value seen in Atlantia 6-months post event (medium-term) is still mainly explained by the potential decrease on cash flows attributable to Autostrade. However, there has been a reduction on the weights. Cash flows explained the change in valuation by 67% while WACC has a weight of 33%. The WACC has been reduced slightly, from 6.6% to 6.3%. This proves that, in the medium term, uncertainty on the outcome is valued more by the market as cash flow visibility impacts have improved considerably and are more tangible.
6. A new multiple establishing the relationship between cash flows and WACC has been determined for the event in 2 sequences of time. The multiple is expressed as: $\frac{\Delta FCF(\%)}{\Delta WACC}$. The authors propose this multiple as a source to predict future disasters of similar nature.

To finalize, the authors would like to propose further research from the study that would be of interest for the academics and later directly applicable on the day to day of practitioners.

From a corporate finance and valuation perspective, the authors suggest conducting empirical validation of the presented ratios $\frac{\Delta FCF(\%)}{\Delta WACC}$. Primarily, using data on similar events that occurred in the past, and filtering according to the industry.

It is of logic to believe that the particularities of the concession terms governing Autostrade make cash flow projections rather straight forward while, in some other cases, risk perception could be higher and thus, the ratios applicability could be limited.

In a second phase, it would be useful to determine in which specific areas practitioners could find such ratios an interesting tool to incorporate on its sensitivity analysis. The authors thoughts go towards project finance, for the infrastructure, energy and mining sectors.

On the other hand, a benchmark on the financial implications observed in the thesis, versus the loss of welfare to society that the collapse of the Morandi bridge had could also be conducted.

More specifically, the degree of fairness of the financial and reputational costs payed by Atlantia and the Italian political class, with the real impact that it had for society in an event which involved multiple deaths and damage to property and businesses from the city of Genoa should be determined.

Also, this is linked with the complexities behind PPPs. The authors propose to put emphasis on the responsibility sharing clauses from the contracts established to determine certain recommendations on improving its effectiveness as a tool to finance infrastructure. This is of high importance in a moment where PPPs popularity is increasing in a global scale.

Appendix 1. Presentation of the main corporates

A1.1 Abertis Infraestructuras

Abertis Infraestructuras, S.A. (Abertis) is a Spanish Company, registered in Madrid. The 98.7% of company shares are held by Abertis Holdco, entity constituted the 29th of October 2018 on purpose and in a conjoint agreement for the voluntary takeover bid presented by Hochtief that took place in May 15th 2018. Their main shareholders are Atlantia (50% + 1 share), ACS (30%) and Hochtief (20% - 1 share), which reached an agreement on the control of the company in April 2018, ending with a complicated transaction which commenced in May 2017.

Abertis main activity is in the toll road concession business. They build, maintain and operate highways in Europe, America and Asia, managing 8,648 km of roads with various concessions. They also provide electronic tolling, free-flow tolling and smart motility solutions from its subsidiaries, Emovis and Eurotoll.

A1.2 Actividades de Construcción y Servicios

Actividades de Construcción y Servicios S.A. (ACS) is a Spanish limited entity. It is listed on the Spanish Stock Exchange, being part of the Ibex 35 index, and registered in Madrid. Its main shareholder is the Chairman of the group, Mr. Florentino Pérez Rodríguez, whose ownership amounts to 12.7%.

The company offers a diversified amount of services within the infrastructure space, which can be divided in 3 segments. Primary, they carry infrastructure development and residential construction works, building of new projects and construction of new mines. Secondly, they provide engineering, installation and maintenance services for industrial infrastructure in energy plants and communication installations. Finally, on the transportation side, the company offers traffic management services, concession services and management of public facilities. They operate in EMEA, Asia Pacific and America.

A1.3 Atlantia

Atlantia SpA (Atlantia) is an Italian holding company headquartered in Roma. Its shares trade publicly in the Milan stock exchange (MTA) under the name of ATL and are part of the FTSE MIB Index. Atlantia main shareholders are the Benetton family, with around 30% stake.

Atlantia is a provider of infrastructure and construction services for motorways and airports with operations worldwide. The business can be segmented in 5 as follows:

- 1- Italian motorways, focused on the construction and management of motorways operated under PPP in Italy, being its main subsidiary Autostrade per l'Italia SpA.
- 2- International motorways, holding concessions in India, Poland, Brazil and Chile.
- 3- Italian Airports, responsible of managing the two main airports of the country, Rome Fiumicino and Rome Ciampino.

- 4- International Airports, operating some other airport facilities such as Aeroports de la Cote d'Azur, in Nice (France).
- 5- Other engineering, construction and traffic management solutions and services within the civil infrastructure field.

A1.4 Autostrade per l'Italia

Autostrade per l'Italia SpA (ASPI or Autostrade) is an Italian Company, with its operational headquarters registered in Roma. The company is managed and coordinated by Atlantia (88.06% ownership) and was established in 2003.

The company main activities are the construction and management of toll highways in Italy, with a network of around 3,020 km across the country and 217 Service Areas. The main concessionaries of the group are Autostrade per l'Italia, Società Italiana per Azioni for the Mont Blanc Tunnel, Raccordo Autostradale Valle d'Aosta, Tangenziale di Napoli, Società Autostrade Meridionali and Autostrada Tiberina SpA.

Additionally, the group has some other entities offering additional services to the core business. Those include the management of service areas, payroll and general services for toll billing and cleaning services in outdoor areas and green areas. Overall, it is the main private investor of the country, providing service to 15 regions and connecting 60 provinces. Under its investment scheme, there are 1,066 km of highways to develop and improve until the end of its concessions.

A1.5 Hochtief Aktiengesellschaft

Hochtief Aktiengesellschaft (Hochtief) is a German limited company registered in the commercial register of the local court of Essen. Its corporate headquarters are in Germany.

Currently, it is a subsidiary of ACS, which owns 50.15% (reduced from 71.72% after the acquisition of Abertis in October 2018).

Hochtief is a building and infrastructure construction company involved in infrastructure projects, real estate and commercial facilities. They also provide concessions and operation services for infrastructure and renewable energy. The company operates in various countries in EMEA, Asia Pacific and the Americas.

Appendix 2. Board of Directors and Management of Autostrade per l'Italia pre and post collapse

Autostrade per l'Italia corporate governance follows the Italian form and has 3 main corporate bodies:

1- *The Board of Directors*

According to the Articles of Association, the Board of Directors (BoD) will be constituted between 7 and 23 members.

The BoD will be elected by ordinary General Meeting of shareholders for a period of not more than three years. The same meeting, determines the number of members in the board, based on the number of slates presented. Directors can be re-elected on expiry.

Regarding its power, the BoD has all rights in terms of taking decisions for the management of the company. It has all the authority to take the initiatives necessary to implement and achieve the goals. In order to do that, the BoD conducts regular meetings, with a minimum of 10 times per year.

The BoD has the power to delegate authority for ordinary and extraordinary management appointing one or more general managers and establishing their functions and respective powers.

Decisions are taken in the form of resolutions which need to be approved by a majority vote of the Directors in attendance.

Finally, the Chairman and the CEO, jointly have the authority to represent the company.

In the Table below, the members and changes on the BoD pre and post collapse are shown:

Board of Directors of Autostrade per l'Italia for the Financial Years 2017-2018 (pre collapse)		Board of Directors of Autostrade per l'Italia for the Financial Years 2017-2018 (post-collapse)	
Position	Name	Position	Name
Chairman	Fabio Cerchiai	Chairman	Giuliano Mari
Chief Executive Officer	Giovanni Castellucci	Chief Executive Officer	Roberto Tomasi
Director	Giuseppe Angiolini	Director	Giuseppe Angiolini
Director	Massimo Bianchi	Director	Massimo Bianchi
Director	Christoph Holzer	Director	Christoph Holzer
Director	Hongcheng Li	Director	Hongcheng Li
Director	Roberto Pistorelli	Director	Roberto Pistorelli
Director	Roberto Tomasi	Director	Roberto Tomasi
Director	Antonino Turicchi	Director	Antonino Turicchi
Secretary	Amedeo Gagliardi	Secretary	Amedeo Gagliardi
		Executive Director responsible for regulatory and litigation matters	Michelangelo Damasco
		Executive Director responsible for finance matters	Giancarlo Guenzi

Table A2.1 Board of Directors of Autostrade per l'Italia. Source: ASPI, 2017-18.

2- *The Board of Statutory Auditors*

The Board will have between 3 and 5 standing members and 2 alternates, elected by the General Meeting.

This Board aims to comply with the rules established in the Concession Agreement between Autostrade and ANAS.

The duration of Statutory Auditors is for a 3-year period which at expiration the members can be reelected by the General Meeting.

Regarding its finality, Statutory Auditors seek compliance with the laws and Articles of Association, ensuring an appropriate governance, administrative, accounting and organizational structure.

The list of Statutory Auditors for 2017 and changes in 2018 are presented in the Table below:

Board of Auditors for 2015-2017		Board of Auditors for 2018-2020	
Position	Name	Position	Name
Auditor	Alberto de Nigro	Auditor	Giulia de Martino
Auditor	Giandomenico Genta	Auditor	Alberto de Nigro
Auditor	Antonio Parente	Resigning auditor	Antonio Parente
Alternate Auditors	Mario Venezia	Alternate Auditors	Mario Venezia
Alternate Auditors	Francesco Orioli	Alternate Auditors	Francesco Orioli

Table A2.2 Board of Statutory Auditors of Autostrade per l'Italia. Source: ASPI, 2017-18.

3- *The General Meeting of Shareholders*

The General Meetings are meant to provide shareholders the possibility to take part on the decisions of the company in accordance with the law and Articles of Association.

The meetings can be in the form of ordinary or extraordinary. Ordinary is called at least once a year and within 120 days after the end of the previous year.

Under normal conditions, for the General Meeting to pass a rule, they need validly votes for the majority. Nevertheless, in some conditions, it is necessary that the majority includes also the votes of all the minority shareholders which hold at least 5% of the shares.

Finally, in the Table below, the Key Management of Autostrade is presented, retrieved from its corporate website:








Key Management of Autostrade per l'Italia	
<p>Giuliano Mari Chairman</p> 	<p>Chairman of Autostrade per l'Italia since January 2019, Mr. Mari holds an honours degree in chemical engineering from Rome's "La Sapienza" University. He began his career in the Istituto Mobiliare Italiano, where he was appointed Central Director in 1997, in charge of credits to large industrial groups and Corporate Finance. From 1999 to 2002, he was Managing Director of IMI Investimenti S.p.A. and from 2003 to 2005 he was General Director of COFIRI. He was and is still today a member of the Board of Directors of listed companies and various share capital companies. He has been on Atlantia's Board of Directors since 2009, where he held the position of Chairman of the Control, Risk and Corporate Governance Committee, Chairman of the Independent Directors Committee for Operations with Correlated Parties and Director in Charge of the internal control and risk management system.</p>
<p>Roberto Tomasi CEO</p> 	<p>Already Director General of Autostrade per l'Italia as of September 2018, Roberto Tomasi was nominated CEO in January 2019, having joined the company in July 2015 as Chief Operating Officer for Construction and Infrastructure Development. Born in 1967, he holds a degree in Mechanical Engineering from the University of Padua and has completed an Executive Program Master at Harvard Business School; an International Executive Program at INSEAD and a Master in Finance and Project Control at SDA Bocconi. Before joining Autostrade per l'Italia he served as Head of Carbon Generation for the Enel Group where he was previously Head of Engineering and Construction for the development of major traditional power plants, both on a national and international scale. Before this he held several senior positions in the field of Operations and Project Management, Engineering & Construction, Investment Management and Process Optimization, also for companies within the Fiat Group and for GE-Nuovo Pignone. Today he is Coordinator of the Autostrade per l'Italia Group's Italian highway concessionaires for investments and Value Engineering.</p>
<p>Giancarlo Guenzi CFO</p> 	<p>Chief Financial Officer of Atlantia and Autostrade per l'Italia since 2007. He has been the Manager Responsible for Financial Reporting at Atlantia and Autostrade per l'Italia pursuant to art. 154-bis of the Consolidated Finance Act since 2007. He is Chairman of Telepass, a member of the Board and Chief Financial Officer of Autostrade per l'Italia and a director of a number of Group companies. Giancarlo Guenzi was born in 1955 and he graduated in Business Administration from the University of Rome "La Sapienza"; he is a chartered accountant and auditor. He has been working for the Group since 1994 after gaining valuable experience in Italstat Group and KPMG. He was for several years head of Group Planning and Control; from 2003 to 2007 he was appointed CEO and General Manager of Pavimental, the construction and maintenance Company of the Group infrastructure and pavements.</p>
<p>Amadeo Gagliardi Legal Affairs</p> 	<p>Born in 1972, he holds a degree in Law from University of Rome, "La Sapienza". He is a lawyer with previous experience in the field of legal consultancy on issues relating to public works, holding roles of responsibility within consortiums operating in the construction of high speed train lines as well as appointments in top construction firms. Before joining Autostrade per l'Italia in 2007 he was Head of Legal Affairs in Italferr, Ferrovie dello Stato Group. In January 2015 he has been appointed Legal Affairs Executive Vice President. He is Director in some Group subsidiaries.</p>
<p>Gianpiero Giacardi Chief Corporate Officer</p> 	<p>Graduating from the University of Turin with a degree in Law, he joined Autostrade per l'Italia in 2000 as Corporate Development Executive Vice President. He became Human Resources, Organisation and Quality Executive Vice President in 2003 and Chief Corporate Officer of Autostrade per l'Italia in 2008. He is board member of some Group subsidiaries. Previously, he was in 1981 Franchising Manager at Grimaldi and from 1983 covered positions of Human Resources, Organisation and IT Manager and Shared Service Manager at ENI Group, Snam Division. His last role before joining the Group was Human Resources, Organisation and IT Systems Executive Vice President at Italgas.</p>
<p>Luca Ungaro Head of Service Areas</p> 	<p>Born in 1966, he holds a degree in business economics from University LUISS Guido Carli. From 2001 to 2011 he worked at several consulting companies (Roland Berger, Bain and Company) served as Senior Partner and Partner in the field of infrastructure, entertainment and R&D. Previous experience in Booz Allen & Hamilton and Value Partners Management Consulting, and served as senior internal auditor and controller at Ing. C. Olivetti & C. He joined Autostrade per l'Italia S.p.A. in 2012.</p>
<p>Francesco Delzio Marketing & Institutional Affairs</p> 	<p>Head of External Relations, Institutional Affairs and Marketing of Atlantia and Autostrade per l'Italia, he is also Chairman of Ad Moving, the advertising sales agency for the highway sector, and Director of the TV services My Way and Infomoving as well as of the Agorà magazine. He is member of the General Council of Unindustria of Rome and Lazio and of the scientific Council of Symbola. He is also Joint Director of the Masters in Corporate Relations, Lobbying and Corporate Communication at the Luiss Guido Carli University where he teaches "Corporate Communication" and "Politics, Institutions and Lobbying". He is also Scientific Coordinator of the Executive Program on "Management of Consumer Relations". He has written numerous texts on economic and social issues and is editor of <i>Avenire</i>, <i>Prima Comunicazione</i> and <i>InPiù</i>. Born in Bari in 1974, he holds an honours degree in Law from Luiss Guido Carli University. In 1999 he completed a master's degree at RAI, Italy's television service, in broadcast journalism and is a professional journalist. From 2008 to 2011 he was Head of Corporate Affairs and External Relations at the Piaggio Group, Vice President of Confindustria Anoma and member of Finmeccanica's executive. Previously, from 2001 to 2007 he was Director of the Young Entrepreneurs' division of Confindustria (the Confederation of Italian Industry). Before this he was a professional journalist in RAI and analyst at the Luiss University where he coordinated the Lab for Modernisation. He sat on the Board of the Luiss Guido Carli University, of that of EICMA SpA and of the Piaggio Foundation.</p>

Table A2.3 Key Management of Autostrade per l'Italia. Source: ASPI, 2018.

Appendix 3. Board of Directors and Management of Atlantia pre and post collapse

Atlantia follows a Corporate Governance system consistent with the market and regulatory standards attributable to listed companies.

The system aims to control and establish appropriate balance of the powers and roles of corporate bodies, ensuring appropriate stakeholder transparency and dialog for both, internal and external investors in the firm.

The principles also follow the Italian laws and comply with the best standards. Every year, the company issues a Corporate Governance Report, containing information of the corporate bodies, the procedures, powers and members that are part of it.

The company, following Autostrade, also has 3 main bodies, which functions, and responsibility are in alignment with the ones explained for Autostrade in the lines above.

Additionally, Atlantia has, among others, adopted the Procedure for Market Announcements, the Procedure for relations with the Independent Auditors, the Procedure for Reporting to the Board of Statutory Auditors, the Code of Conduct for internal dealing, and the Procedure for Notification of the Ethics Officer, all detailed on its Corporate Governance Report.

1- Board of Directors and Board Committees

In the last General Meeting held on April 2016, it was approved that the BoD would be constituted by 15 members until 2018, based on the slates submitted by the shareholders that date. The minimum number of members was to be 7.

Accordingly, the BoD consisted of at least 1/3 of Independent directors and at least 1/3 of the under-represented sex.

In the following Table, a description of the members of the BoD of Atlantia and its Committees is presented:

Board of Directors for the period 2016-2018		Board of Directors post-collapse before General Meeting 2018	
Position	Name	Position	Name
Chairman	Fabio Cerchiai	Chairman	Fabio Cerchiai
Chief Executive Officer	Giovanni Castellucci	Chief Executive Officer	Giovanni Castellucci
Director	Carla Angela (independent)	Director	Carla Angela (independent)
Director	Gilberto Benetton	Director	Gilberto Benetton
Director	Carlo Bertazzo	Director	Carlo Bertazzo
Director	Bernardo Bertoldi (independent)	Director	Bernardo Bertoldi (independent)
Director	Gianni Coda (independent)	Director	Gianni Coda (independent)
Director	Elisabetta De Bernardi di Valserra	Director	Elisabetta De Bernardi di Valserra
Director	Massimo Lapucci (independent)	Director	Massimo Lapucci (independent)
Director	Giuliano Mari (independent)	Director	Valentina Martinelli
Director	Valentina Martinelli	Director	Marco Patuano
Director	Marco Patuano	Director	Lucy P. Marcus (independent)
Director	Lucy P. Marcus (independent)	Secretary	Stefano Cusmai
Director	Monica Mondardini (independent)		
Director	Lynda Tyler-Cagni (independent)		
Secretary	Stefano Cusmai		
Internal Control, Risk and Corporate Governance Committee		Internal Control, Risk and Corporate Governance Committee	
Position	Name	Position	Name
Chairman	Giuliano Mari (independent)	Chairwomen	Carla Angela (independent)
Members	Carla Angela (independent)	Members	Giuliano Mari (independent)
Members	Bernardo Bertoldi (independent)	Members	Bernardo Bertoldi (independent)
Committee of Independent Directors with responsibility for Related Party Transactions		Committee of Independent Directors with responsibility for Related Party Transactions	
Position	Name	Position	Name
Chairman	Giuliano Mari (independent)	Chairman	Massimo Lapucci (independent)
Members	Bernardo Bertoldi (independent)	Members	Bernardo Bertoldi (independent)
Members	Lynda Tyler-Cagni (independent)	Members	Lucy P. Marcus (independent)
Human Resources and Remunerations Committee		Human Resources and Remunerations Committee	
Position	Name	Position	Name
Chairwoman	Lynda Tyler-Cagni (independent)	Chairman	Gianni Coda (independent)
Members	Carlo Bertazzo	Members	Carla Angela (independent)
Members	Gianni Coda (independent)	Members	Carlo Bertazzo
Members	Massimo Lapucci (independent)	Members	Massimo Lapucci (independent)
Members	Monica Mondardini (independent)		
Nominations Committee			
Position	Name		
Independent Chairman	Gianni Coda (independent)		
CEO	Giovanni Castellucci		
Independent Director	Carla Angela (independent)		
Independent Director	Bernardo Bertoldi (independent)		
Director	Marco Patuano		

Table A3.1 Board of Directors and Board Committees of Atlantia. Source: Atlantia, 2017-18.

Following the death of Director Gilberto Benetton on 22 October 2018, the resignations of the Independent Directors Lynda Tyler Cagni and Monica Mondardini, effective respectively on 16 November 2018 and 19 February 2019, the number of Directors decreased from 15 to 12.

The main purpose of each committee is explained below:

The Internal Control, Risk and Corporate Governance Committee aims to provide support and advice to ensure the correct functioning of the internal control system. They perform periodical reviews on corporate governance guidelines from the Corporate Governance Code of Atlantia.

The Human Resources and Remuneration Committee is responsible to propose the overall compensation of the Chairman, CEO and of certain Directors in key management roles. They also set up the criteria of payment for senior management of the group companies. They examine incentive bonus plans and the composition of management bodies of subsidiaries as well as review the strategy of human resource policy.

The Nominations Committee has the functions of advising the BoD on the size and composition of the board. Recommendation of candidates, positions to be hold, issues relating to the application of the non-competition restrictions for directors, as well as to express its opinion on compliance with the “Guidelines for the nomination of members of the corporate bodies of strategically important companies”, regarding proposed appointments, by the Company’s Chief Executive Officer, of chairpersons, executive directors and external, non-executive Directors and Statutory Auditors. As of 2017, Atlantia did not consider necessary to establish such a committee. The justification was that directors were appointed according to the slate voting procedure and that so far, the process was transparent and enabled shareholders to appoint new directors without difficulties in proposing nomination proposals. It will be in 2018 when the committee will have its main function primarily.

The Committee of Independent Directors with responsibility for Related Party Transactions was created in compliance with the CONSOB requirements contained in the Regulations for Related Party Transactions (Resolution 17221 of March 2010, as amended). They have the function of providing opinions on the Procedure for Related Party Transactions approved by the BoD in 2015. The committee reviews and renews the procedure that governs related party transactions entered into by the company or its subsidiaries. They also indicate the methods on how such transactions must be handled from lesser to greater importance.

2- The Board of Statutory Auditors

In the Table below, the Board of Statutory Auditors of Atlantia pre and post collapse is presented:

Board of Auditors for 2015-2017		Board of Auditors for 2018-2020	
Position	Name	Position	Name
Chairman	Corrado Gatti	Chairman	Corrado Gatti
Auditor	Alberto de Nigro	Auditor	Alberto de Nigro
Auditor	Lelio Fornabaio	Auditor	Sonia Ferrero
Auditor	Silvia Olivotto	Auditor	Lelio Fornabaio
Auditor	Livia Salvini	Resigning auditor	Livia Salvini
Alternate Auditors	Laura Castaldi	Alternate Auditors	Laura Castaldi
Alternate Auditors	Giuseppe Cerati	Alternate Auditors	Michela Zeme

Table A3.2 Board of Statutory Auditors of Atlantia. Source: Atlantia 2017-18.

For more details regarding the Corporate Governance of Atlantia, the Corporate Governance Report 2017 can be retrieved from the following link: [Corporate Governance Report of Atlantia 2017](#)

On January 2019, the company announced that a revised version of the Company's Corporate Governance Code was amended, and it would be published on the company website. As of the date of delivery of this thesis, such a document was not yet made public.

Finally, in the following tables, key management of Atlantia and a short description of its bio, retrieved from the corporate website is presented:







Key Management of Atlantia	
<p>Fabio Cerchiai Chairman</p> 	<p>Chairman of Atlantia since April 2010. Born in Florence in 1944, Cavaliere del Lavoro (Order of Merit for Labor), he holds a degree in Business Administration from University of Rome, "La Sapienza". He began his career in Assicurazioni Generali, then he was appointed CEO and Deputy Chairman. He has held several top management positions at many leading Italian and international insurance companies. He was Chairman of INA Assitalia and of ANIA (the National Association of Insurance Companies). He is Chairman of UnipolSai; of Cerved Information Solutions; of SIAT and of ARCA insurance Group; he is Director of Edizione holding. Since 2011 he has been Professor at the Catholic University of the Sacred Heart of Milan - Faculty of Banking, Financial and Insurance Sciences.</p>
<p>Giovanni Castellucci CEO</p> 	<p>Born in Senigallia (Ancona) in 1959, Giovanni Castellucci graduated in Mechanical Engineering from the University of Florence in 1984 before completing an MBA at SDA Bocconi in Milan. From 1988 to 1999 he worked for the Boston Consulting Group, a leading management consultancy firm, in Paris (until 1991) and then Milan (from 1991), where he became a partner responsible for Italian Customer Service and Pharma Practices. In January 2000 he was appointed Chief Executive Officer of the Barilla Group. In June 2001 he joined the Autostrade Group as General Manager. Since April 2005 until January 2019 he has been Chief Executive Officer of Autostrade per l'Italia, maintaining the position of General Manager of Autostrade, now Atlantia. He has served as Chief Executive Officer of Atlantia since 2006. Since November 2013 he has been appointed director of Aeroporti di Roma.</p>
<p>Giancarlo Guenzi CFO</p> 	<p>Chief Financial Officer of Atlantia and Autostrade per l'Italia since 2007. He has been the Manager Responsible for Financial Reporting at Atlantia and Autostrade per l'Italia pursuant to art. 154-bis of the Consolidated Finance Act since 2007. He is Chairman of Telepass, a member of the Board and Chief Financial Officer of Autostrade per l'Italia and a director of a number of Group companies. Giancarlo Guenzi was born in 1955 and he graduated in Business Administration from the University of Rome "La Sapienza"; he is a chartered accountant and auditor. He has been working for the Group since 1994 after gaining valuable experience in Italstat Group and KPMG. He was for several years head of Group Planning and Control; from 2003 to 2007 he was appointed CEO and General Manager of Pavimental, the construction and maintenance Company of the Group infrastructure and pavements.</p>
<p>Guiglielmo Bove Compliance & Security</p> 	<p>Head of Group Compliance and Security since November 2016, he was born in Naples in 1964. Lawyer, he graduated in Law at Federico II University of Naples. In 1989 he started working as a corporate lawyer in a financial institution. In 1990, he joined Telecom Italia, dealing with corporate affairs for 10 years (holding various positions, including Secretary Office of the Board of Directors, Corporate Operations, and International Corporate Affairs). In this context, he oversaw important extraordinary operations: mergers, spin-off, IPO, acquisitions. Between 2000 and 2016 he worked within the legal affairs department of Telecom Italia, in roles of increasing responsibility, until being appointed head of legal affairs for the industrial and business activities of the Group. Since June 2016, he is also the General Counsel and Secretary of the Board of Directors of Aeroporti di Roma.</p>
<p>Monica Cacciapuoti Chief of HR</p> 	<p>Chief Human Resources Officer and Secretary of the Human Resources and Remuneration Committee of Atlantia. Since September 2015 she has also been appointed Head of Human Resources and Organization of Aeroporti di Roma. Born in 1968, holds a degree in Philosophy. She began her career within the Burgo Group, then she worked for Techint and Spencer Stuart, taking up a variety of increasingly senior management positions in Human Resources and Organization, before moving in 2006 to Autostrade per l'Italia as Head of HR Development and where she has been Head of Human Resources at Autostrade per l'Italia since 2008. She is board member in some Group subsidiaries and Chairman of Remunerations Committee of Grandi Stazioni.</p>
<p>Michelangelo Damasco General Counsel</p> 	<p>General Counsel since January 2015, born in 1963, he graduated in Law from the University of Rome "La Sapienza" before completing an MBA at SDOA Business School. Since September 2015 he has been also appointed Head of Legal & Corporate Affairs of Aeroporti di Roma. Since 2007 he has been Head of Corporate and International Legal Affairs at Autostrade per l'Italia and in 2014 he was appointed Head of Legal Affairs – Executive Vice President of the company. Before working for the Atlantia Group he held several management positions in the Caltagirone Group, Telecom International and Telecom Italia, gaining considerable experience in the international environment. Mr. Damasco is Chairman and a director of a number of the Group's Italian and overseas subsidiaries. He is a member of the board and Head of Regulatory and Legal Affairs at Autostrade per l'Italia.</p>

Table A3.3 Key Management of Atlantia 1/2. Source: Atlantia, 2019.








Key Management of Atlantia	
<p>Francesco Delzio Marketing & Institutional Affairs</p> 	<p>Head of External Relations, Institutional Affairs and Marketing of Atlantia and Autostrade per l'Italia, he is also Chairman of Ad Moving, the advertising sales agency for the highway sector, and Director of the TV services My Way and Infomoving as well as of the Agorà magazine. He is member of the General Council of Unindustria of Rome and Lazio and of the scientific Council of Symbola. He is also Joint Director of the Masters in Corporate Relations, Lobbying and Corporate Communication at the Luiss Guido Carli University where he teaches "Corporate Communication" and "Politics, Institutions and Lobbying". He is also Scientific Coordinator of the Executive Program on "Management of Consumer Relations". He has written numerous texts on economic and social issues and is editor of Avvenire, Prima Comunicazione and InPiù.</p> <p>Born in Bari in 1974, he holds an honours degree in Law from Luiss Guido Carli University. In 1999 he completed a master's degree at RAI, Italy's television service, in broadcast journalism and is a professional journalist. From 2008 to 2011 he was Head of Corporate Affairs and External Relations at the Piaggio Group, Vice President of Confindustria Ancma and member of Finmeccanica's executive. Previously, from 2001 to 2007 he was Director of the Young Entrepreneurs' division of Confindustria (the Confederation of Italian Industry). Before this he was a professional journalist in RAI and analyst at the Luiss University where he coordinated the Lab for Modernisation. He sat on the Board of the Luiss Guido Carli University, of that of EICMA SpA and of the Piaggio Foundation.</p>
<p>Marco Pace Control & Risk Mng.</p> 	<p>Chief Controlling Officer since February 2015, born in 1968, he graduated in Business Administration from the University of Rome "La Sapienza" and is a chartered accountant and auditor.</p> <p>He is board member in some Group subsidiaries.</p> <p>Until January 2015 he was Chief Strategic Planning & Control Officer of the OTB Group.</p> <p>Before that, he held several management positions, gaining international experience in the fields of planning and controlling in various multinational groups: EDS, Siemens, Omnitel/Vodafone.</p> <p>From 2005 to 2008 he was Head of Planning and Controlling of Autostrade per l'Italia.</p>
<p>Concetta Testa Internal Audit</p> 	<p>Head of Internal Audit since January 2015 and member of Supervisory Board (in compliance with Legislative Decree 231/01) of Atlantia and Autostrade per l'Italia.</p> <p>Born in 1973, she graduated in Chemical Engineering. In 2001 she started her career in Autostrade per l'Italia in Planning and Controlling department after gaining experiences at IMI and Mediocredito Centrale. She was Head of Organization in Autostrade per l'Italia and held the position of Group Controller of Atlantia. She was board member of Group subsidiaries.</p>
<p>Gennarino Tozzi Head of Group Infra. Development</p> 	<p>Gennarino Tozzi holds a Civil Engineering degree from the University of Rome and has a broad experience in the field of infrastructures. He has served as General Manager, CEO and Chairman of several construction companies, as Gambogi, Società Condotte d'Acqua e Todini Costruzioni Generali. He joined Autostrade per l'Italia as Head of New Projects in 2003 then he was appointed as Operations Director Infrastructure Development and Joint Chief Operating Infrastructure Development. Since December 2013, He is director in some Group subsidiaries. He holds the position of Head of Infrastructures of the holding company Atlantia.</p>
<p>Massimo Sonogo Head of Corp.Finance & Inv.Relations</p> 	<p>He was born in 1973, has a degree in business economics from Milan's Bocconi University and completed a Program in International Management at Montreal's McGill University. He is board member in foreign Group subsidiaries.</p> <p>Before joining the Atlantia Group in 2002 he worked at Morgan Stanley, Citigroup and Edizione Holding.</p>
<p>Umberto Vallarino Head of Finance & Insurance</p> 	<p>Born in 1963 he is graduated with a degree in economics from the University of Pisa in 1987. Before joining ASPi in 2005, he worked former at Fiat Auto S.p.A. and Fininvest S.p.A. and most recently in Indesit Company as Finance Manager. Since August 2014 he has served as Head of Finance and Insurance of Atlantia and Head of Finance of ASPi. He is also director in certain Group subsidiaries.</p>
<p>Roberto Mengucci Head of Highway Business Coordination</p> 	<p>Born in Rome in 1961, Roberto Mengucci has been Head of the Motorways Business since October 2018.</p> <p>He holds a degree in Mechanical Engineering from Rome's "La Sapienza" University and has worked for the Atlantia Group since 2008, holding the position of Head of International Business Development at Autostrade per l'Italia until 2017, when he was appointed General Manager at the holding company that manages the Group's overseas motorway investments. He gained experience in international business development as Head of M&A at the Finmeccanica group until 2008, Country Manager International Operations and Head of M&A at the Telecom Italia group until 2004 and as International Development Project Manager at Enel until 2001.</p> <p>He is the chairman and a director of a number of the Atlantia Group's overseas subsidiaries and General Manager of the holding company, Autostrade dell'Atlantico.</p>

Table A3.4 Key Management of Atlantia 2/2. Source: Atlantia 2019.

Appendix 4. Autostrade per l'Italia concession legal framework and other information of interest

In the following pages, an extraction of the terms and conditions governing Autostrade per l'Italia SpA concession, which are relevant for the financial impacts of the firm, are given.

This information has been retrieved literally from [the Offering Circular for the EMTN Program of Autostrade](#) entered the 27th of October 2017. The specific pages where the text is found in each section will be given for ease of clarity.

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*“Autostrade Italia holds the Group’s primary concession (the “**Autostrade Italia Concession**”), which is governed by the concession agreement entered into on 12 October 2007 (the “**Single Concession Contract**”).*

The Single Concession Contract replaced a series of earlier agreements and implemented the regulatory provisions set out in Law Decree 262/2006, converted into Law 286/2006.

*The Autostrade Italia Concession and the other concessions for motorways in Italy (each, “**Concession**” and, collectively, the “**Concessions**”) held by subsidiaries of the Group (together with Autostrade Italia, the “**Motorway Companies**”) are granted by the Ministry of Infrastructure and Transport (the “**Concession Grantor**”) as of 1 October 2012 pursuant to Law Decree 98 of 6 July 2011. Such concessions were previously granted by ANAS, a joint stock company owned by the Italian Ministry of Economics and Finance.*

*Each Concession gives the relevant Motorway Company the right to finance, construct, operate and maintain its networks of motorways in Italy (the “**Italian Group Network**”) during the term of the Concessions. The Italian Group Network comprises 3,019 kilometres² of motorways in Italy, of which the Autostrade Italia Concession (the “**Autostrade Italia Network**”) accounts for 2,855 kilometres or 95.0% of the Italian Group Network.*

Although the principal activities of the Group have always remained focused on the operation and maintenance of the Italian Group Network, in recent years the Group has diversified its business operations, both geographically and through expansion into other businesses related to the operation and management of motorways.”

Concessionaires	% of issued capital	km of network	Concession expiry
Autostrade per l'Italia	100.0%	2,855	2038/2042
Società Italiana per il Traforo del Monte Bianco	51.0%	6	2050
Autostrada Tirrenica	100.0%	55	2038
Tangenziale di Napoli	100.0%	20	2037
Raccordo Autostradale Valle d'Aosta	24.5%	32	2032
Autostrade Meridionali	59.0%	52	2012
Total		3,020	

Table A4.1 Concessions held by ASPI’s Group as of December 31, 2017. Source: ASPI, 2017.

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“The Italian motorway sector is governed by a series of laws, ministerial decrees and resolutions by CIPE (Comitato Interministeriale per la Programmazione Economica), which have been issued and amended over time, as well as generally applicable laws and special legislation, such as the road traffic code. Motorway concessionaires must operate pursuant to this regulatory framework, as well as pursuant to the concession agreements entered into by the concessionaires and the Concession Grantor.

The Italian Group Network is operated under five motorway Concessions granted by the MIT. As a result of Law Decree 98 of 6 July 2011, converted with amendments into Law 111/2011, certain policymaking, supervision and oversight functions previously exercised by ANAS, a joint-stock company owned by the Italian Ministry of Economics and Finance, which acted as Concession Grantor for Autostrade Italia until the effective date of such Law Decree n. 98/2011, were supposed to be transferred to a newly-established Roads and Highways Agency within the Ministry of Infrastructure and Transport which would have assumed certain policymaking, supervision and oversight functions previously exercised by ANAS, as well as the role of grantor for existing motorway concessions, and administrator and grantor for any subsequent concessions put to public tender. However, since the required corporate documents were not approved by 30 September 2012, the Roads and Highways Agency was abolished and the responsibilities allocated to it were transferred to the Ministry of Infrastructure and Transport as of 1 October 2012 as Concession Grantor.

ANAS will continue to: (i) build and operate toll public roads and motorways, including those reverted to State control as a result of the expiry or revocation of a relevant concession; (ii) perform upgrades and improvements of public roads and motorways and the road signs system; (iii) acquire, maintain and improve the tangible and intangible assets of the road and motorway network; (iv) provide traffic police services along the motorway network; and (v) approve projects relating to works on the non-toll road and motorway network which are of public interest.

*Law Decree 201/2011 (the so-called **Salva-Italia**, or “**Save Italy**”, legislation), converted, with amendments, into Law 214/2011, has set up the Transport Regulation Authority to oversee conditions of access and prices for rail, airport and port infrastructure and the related urban transport links to stations, airports and ports. This legislation was subsequently amended by article 36 of Law Decree 1/2012 (the so-called **Liberalizzazioni**, or “**Deregulation**”, legislation), extending the scope of the new regulator’s responsibilities to include the motorway sector. The new authority is, among other things, responsible for (i) determining tariff mechanisms based on the “price cap” mechanism for new concessions; (ii) deciding the concession schemes to be included in tenders for management and construction; (iii) defining the arrangements of tenders intended for motorway companies for new concessions; and (iv) determining the ideal management areas of motorway sections in order to promote a plural management of the sections and to enhance competition.*

Law Decree 1/2012, converted into Law 27/2012 (as amended by Law Decree 83/2012 converted into law, with amendments, by Law 134/2012), contains a range of provisions impacting, among other things, on motorway concessions, including (i) article 51, which, from 1 January 2014, has raised the minimum percentage of works to be contracted out to third-party contractors by the providers of construction services under concession to 60%; and (ii) article 17, which has introduced a new regime for the holders of fuel service licences, who may now offer other goods and services for sale at their service stations.

Article 177 of Legislative Decree no. 50 of 18 April 2016, concerning “concessionaire awarding”, has introduced the obligation to award to a third party 80% of the works, services and supply contracts for €150,000 or more, via public and open tender procedure for state or private entities which do not operate in the so called “excluded sectors” and which have been granted concessions as of the entry into force of the aforementioned Legislative Decree,

and which have not been subject to project financing or awarded through a public tender procedure in accordance with the European framework of rules. Furthermore, the above Legislative Decree provides that the remaining part (equal to 20%), in particular for private entities, can be carried out through companies directly or indirectly controlled or connected.

Article 178 of Legislative Decree no. 50 of 18 April 2016, concerning motorway concessions and the interim regime, provides that the grantor of a motorway concession that has expired as of 19 April 2016, shall, within 6 months from the date thereof, call a tender offer to award the concession. However, article 178 also provides that the grantor may operate the motorway in-house. In addition, article 178 (i) prohibits the extension of the term of concessions, (ii) provides that the operational risk set forth in article 3, paragraph.1, lett. z), shall also include the “traffic risk” and (iii) provides that the former concessionaire will be entitled to receive from the new concessionaire an indemnity for investment made and not yet amortized, net of amortizations and certain assets.

The new legislation, which repealed Legislative Decree no. 163 of 2006, entered into force on 20 April 2016 and concessionaries shall implement the new provision within a transitional period (i.e. a period of 24 months from the date of entry into force).

With regard to motorway service areas, the terms and conditions of sub-concession arrangements in force at 31 January 2012 are unaffected, as are the restrictions linked to competitive tenders for motorway areas under concession, conducted in accordance with the format required by the Transport Regulation Authority.”

Business Description of the Group – Important developments in the regulatory history of concessions- pages 69-71

“Motorway concessions were historically granted by the State. In 1992, Law No. 498/92 granted CIPE the authority to issue directives in relation to the revision of existing motorway concessions and toll rates. CIPE, by a resolution dated 21 September 1993, established the criteria for the review and renewal of motorway concessions. Pursuant to such criteria, any bid must:

- (i) contain an investment plan (which provides estimates of the economic and financial performance of the concessionaire and includes the expected works to be performed by the concessionaire during the concession, the estimated cost of such works and expected State subsidies, if any) which is complying with a standard model approved by the Ministry of Infrastructure and Transport and the Ministry of Economics and Finance;
- (ii) set out rules for the allocation of works according to applicable law in force, including EU environmental legislation;
- (iii) broaden the concessionaire’s scope of activity, with the aim of improving its management and diversifying services offered to customers; and
- (iv) eliminate restrictions on the shareholding structure of the concessionaire companies.

Since 1993, CIPE has issued several directives regarding the relationship between ANAS and the individual concessionaires, which form the basis for a standard concession agreement prepared by the Ministry of Infrastructure and Transport (the “**Standard Concession Agreement**”). The Standard Concession Agreement provided the general terms which were expected to govern subsequent concession agreements with the concessionaires.

Regulatory changes were also introduced in the legal framework governing motorway concessions to delineate the roles of the State vis-à-vis the Italian regions. Italy’s regions, of which there are twenty, have administrative, legislative and executive powers at the local level, and can act in matters specifically under their domain or in areas

which are not specifically reserved for the State. Regions are responsible for managing the network of roads and motorways which do not have a national interest and may grant concessions for the construction and management of regional toll motorways.

Law Decree No. 262 of 3 October 2006, which was enacted into law on 24 November 2006 as Law No. 286/2006 (as subsequently amended, "**Law 286/06**") and subsequently amended by Law No. 296/2006 ("**Law 296/06**") and by Law No. 101/2008, established a new regime for motorway concessions primarily through the requirement that concessionaires enter into a comprehensive new concession agreement following specific binding guidelines. All concessionaires are required to enter into such new concession agreement upon the earlier to occur of an update to the relevant concession's financial plan (the "**Concession's Financial Plan**") or revision of the relevant concession agreement following the effectiveness of the new legislation.

Law 286/06 provides, among other things, for:

- (i) the rate to be used in calculating annual tariff adjustments based on traffic and cost trends and the concessionaire's efficiency and service quality;
- (ii) the terms for the allocation of additional profits generated by the commercial use of motorway areas;
- (iii) the terms for the recovery of toll revenues related to commitments under investment plans;
- (iv) the recognition of tariff adjustments in return for investments included in the investment plan only after the related investments have been verified by the grantor of the concession to have been effectively carried out;
- (v) the documentation to be provided to the Concession Grantor; and
- (vi) a system of sanctions and penalties in the event of a breach of the concession.

New concession agreements are subject to the technical review by the Consulting Unit for the implementation and regulation of public utility services (Nucleo di consulenza per l'attuazione delle linee guida sulla regolazione dei servizi di pubblica utilità or "**NARS**") as well as the CIPE, followed by a review by the relevant Parliamentary Commissions. New concession agreements are approved by interministerial decree from the Ministry of Infrastructure and Transport and the Ministry of Economy and Finance, subject to a preliminary review of legitimacy by the Corte dei Conti, the independent institute responsible for supervising public finances, among others.

Law 286/06 and Law Decree 69/13, converted into Law 98/13, made substantial changes in the tariff adjustment procedure. In particular, Law 98/13, amending Law 286/06, provides that the concessionaire notifies the grantor, within 15 October of each year, a proposal containing the variations to the tariffs that it intends to apply, further to the investment item of parameters X and K regarding new additional works.

By 15 December of each year, the Ministry of Infrastructure and Transport, in agreement with the Ministry of Economy and Finance, should enact a decree, approving or rejecting the proposed variations. The decree may concern exclusively the verifications regarding the accuracy of the values inserted in the revisioning formula and related calculations or the occurrence of severe violations of the provisions set forth in the concession and that have already been formally notified to the concessionaire by 30 June.

In accordance with Law 286/06, CIPE issued a new directive in June 2007 ("**Directive 39/07**") that introduced criteria and parameters for determining motorway tariffs. Directive 39/07 is applicable to all new

concessions and existing concessions where the concessionaire requests a re-alignment of the Concession's Financial Plan, as well as to new investments under existing concessions which were not yet approved at 3 October 2006, or which were approved but not included in the investment plan at such date. Directive 39/07 introduced a new tariff formula which provides for a re-alignment of tariffs every five years to reflect traffic and cost trends and investment costs in an effort to provide the concessionaire with an agreed rate of return. Supplementing Directive 39/07, CIPE Directive 27/2013 established criteria and methods for the updating of economic and financial plans at the expiry of the regulatory period.

Law Decree 59/2008, converted into law by Law 101/2008, as amended, approved all concessions entered into with ANAS as of 31 July 2010 and enabled motorway concessionaires to agree to a simplified formula for the annual tariff rate adjustment calculation based, for the entire term of the concession, on a fixed percentage of real inflation, as well as terms for the return of invested capital.

Law Decree 201/2011 (the so-called *Salva-Italia* or "**Save Italy**" legislation) also introduced a simplified approval procedure for amendments to existing concessions, which shall be approved by decree by the Ministry of Infrastructure and Transport, together with the Ministry of Economy and Finance. Updates or amendments to existing concessions which result in amendments to the investment plans or regulatory aspects relating to public finance, shall be reviewed by CIPE, following consultation with NARS which shall provide any comments within 30 days."

Business Description of the Group – The Autostrade Italia Concession- pages 71-76

“Legal Framework

On 6 June 2008 the Italian Parliament passed Law No. 101/2008 which approved all the draft concession agreements with ANAS already executed by motorways concessionaires and, consequently, the Single Concession Contract entered into by Autostrade Italia and ANAS as Concession Grantor on 12 October 2007 in accordance with Law 286/06. The Single Concession Contract replaced the previous agreements between the parties relating to the Autostrade Italia Concession. Prior to the enactment of the Single Concession Contract, the Autostrade Italia Concession was governed by a concession agreement entered into with ANAS in 1997 (as subsequently amended, "**Single Concession Contract**") and a series of supplementary addenda, the most significant of which was entered into in 2002 (the "**2002 Supplementary Agreement**").

The 2002 Supplementary Agreement approved a new investment plan at that time and introduced new criteria for determining some of the elements of the price-cap mechanism previously instituted to regulate tariff increases in order to compensate Autostrade Italia for the additional capital expenditure commitments undertaken at that time.

Key Concession Terms

The Single Concession Contract grants Autostrade Italia the right to continue to operate and manage the motorways and related infrastructure granted under the concession until 31 December 2038.

The Single Concession Contract implemented (i) a new formula for tariff adjustments; (ii) new detailed rules on Autostrade Italia's rights and obligations; and (iii) a revised investment plan. The investment plan and tariff formula are set forth in more detail below.

Autostrade Italia's Obligations

In particular, Autostrade Italia's main obligations include the duty:

- (i) to manage and maintain the motorway infrastructure;*
- (ii) to organise, maintain and promote motorist assistance services;*
- (iii) to design and execute works specified in the Single Concession Contract, such as the construction of additional lanes and motorway sections and junctions;*
- (iv) to keep detailed financial accounts, including traffic data, for each section of motorway;*
- (v) include a clause in the by-laws of Autostrade Italia requiring that its Board of Statutory Auditors include an officer of the Concession Grantor;*
- (vi) to maintain a debt service coverage ratio ("**DSCR**") throughout the period of the applicable concession;*
- (vii) for activities directly connected to the construction and maintenance of highways (not including activities already specified in the Single Concession Contract), to grant works, services and supplies in accordance with existing laws and regulations;*
- (viii) to reserve, on an annual basis, a portion of shareholders' equity in an amount equal to the net benefits it has received from delays in investments that are not compensated through tariffs (such as those under the Single Concession Contract), until such time as the originally planned investment amounts have been made;*
- (ix) to have available irrevocable financing or cash or cash equivalents committed to investment funding in an amount equal to the investment gap (the difference between planned and realised investments) with respect to a particular investment plan;*
- (x) not to provide financing to or guarantees for entities that are controlling, controlled by, otherwise under common control or affiliated with Autostrade Italia pursuant to Article 2359 of the Italian Civil Code, except for subsidiaries of affiliated companies operating in roadway infrastructure or in order to enable larger capital raising at more favourable terms; and*
- (xi) to establish and maintain procedures to prevent conflicts of interests and independence requirements for the members of its board of directors.*

In addition, the entity controlling Autostrade Italia shall be required, for the duration of the Single Concession Contract, to maintain a net worth of at least €10 million for every percentage point of share capital of Autostrade Italia held by it, and shall maintain its registered office in a white-list country and ensure that the offices and management of Autostrade Italia are located in Italy.

The Single Concession Contract sets forth the sanctions and penalties applicable in the event of violations of the obligations set forth above. Penalties vary from €10,000 to €2 million. Sanctions vary from €25,000 to €5 million. The highest fine is imposed in connection with a failure to obtain prior authorisation by the Concession Grantor of extraordinary transaction. The maximum aggregate annual amount of such sanctions may not exceed 10% of total annual revenue of Autostrade Italia, and in any case may not exceed €150 million per year. In the event that such amount is exceeded for two consecutive years, the Concession Grantor may propose the termination of the concession to the relevant Ministries.

Concession Payments

Under the Single Concession Contract, in accordance with Law 296/06, Autostrade Italia is required to pay an annual fee equal to 2.4% of net toll revenue (net of VAT and the Additional Concession Fees) and 5.0% of the revenues derived from any subconcessions or subcontracts, including fees related to the commercial use of the telecommunications networks, which annual fee on subconcessions or subcontracts increases to 20.0% for new services coming into existence after 8 June 2008 or which relate to services in new service areas.

Expiry or Termination of Concession

Upon the expiry of the Single Concession Contract, Autostrade Italia is required to transfer to the Concession Grantor the motorways and related infrastructure without compensation and in a good state of repair.

The Single Concession Contract sets out procedures for early termination of the concession in the event of material and continuing non-performance by Autostrade Italia of the material terms of the concession.

Similarly, the concession is subject to early termination by Autostrade Italia in the event of non-performance by the Concession Grantor or material changes in the legal framework of the concession. In the event of early termination of the Autostrade Italia Concession, the Concession Grantor would step into the shoes of Autostrade Italia, assuming all its obligations and receiving all of its benefits under the Autostrade Italia Concession.

In return, Autostrade Italia is entitled to receive a cash payment based on the net present value, discounted at market rate, of revenues from operation until the end of the term of the concession, net of projected costs, liabilities, investments and projected taxes for such period, plus taxes due payable by the concessionaire following receipt of such indemnification amount by the Concession Grantor, less (i) the outstanding financial debt assumed by the Concession Grantor at the date of transfer from Autostrade Italia, (ii) and projected cash flows from ordinary business until the end of the term of the concession.

In the event that the early termination is due to Autostrade Italia's failure to meet its obligations, such payment is reduced by 10.0% plus any damages. In the event of termination of the Single Concession Contract for reasons other than the failure by Autostrade Italia to fulfil its obligations, such penalty shall not apply.

In the event that the Concession Grantor finds material and continuing non-performance by Autostrade Italia of material terms of the concession, it must issue a notice to Autostrade Italia requiring it to rectify such non-performance within a specified and reasonable timeframe or provide the reasons for the non-performance.

If the reasons provided are not acceptable or the non-performance is not rectified within the specified timeframe, then the Concession Grantor may, following confirmation of the continuing material breach, commence proceedings to terminate the concession. Such proceedings are a preliminary phase in which Autostrade Italia is given notice of the breach and formally requested to cure the breach within a set time period, which cannot be less than 90 days. During this time, Autostrade Italia can present its position and objections. At the end of such time period, if the breach continues or in the event that the Concession Grantor rejects the concessionaire's objections, the Concession Grantor is required to set out another time period of not less than 60 days within which the concessionaire must cure the breach. If Autostrade Italia does not cure the breach within this 60 day period, the Concession Grantor may, jointly with the Ministry of Economy and Finance, issue a decree declaring the termination of the concession. In such an event, the concessionaire is obliged to continue managing the concession until management of the concession is transferred.

Investments and Cost Overruns

For project investments of the other Motorway Companies, the relevant Motorway Subsidiary assumes the obligation to pay cost overruns necessary to complete the committed investments.

Pursuant to Law 286/06 and Directive 39/07, the other Motorway Companies (except for Società Italiana per Azioni per il Traforo del Monte Bianco) have entered into “realignment/rebalancing” concession, which provides for a realignment of tariffs every five years to reflect investment costs. Such Motorway Companies have therefore assumed the obligation to finance cost overruns only in excess of the Approved Investment Amount, with the exception of cost overruns due to force majeure or resulting from acts by third parties.”

Terms and Conditions of the Notes – Redemption, Purchase and Options- page 105-106

“(e) Redemption at the Option of Noteholders on the Occurrence of a Put Event

If, at any time while any of the Notes remains outstanding (as defined in the Trust Deed), a Put Event (as defined below) occurs, then, unless at any time the Issuer shall have given a notice under Condition 6(d) in respect of the Notes, in each case expiring prior to the Put Date (as defined below), each Noteholder will, upon the giving of a Put Event Notice (as defined below), have the option to require the Issuer to redeem any Notes it holds on the Put Date at their principal amount, together with interest accrued up to, but excluding, the Put Date.

For the purposes of this Condition 6(e):

A “**Put Event**” occurs if:

- (i) the Autostrade Italia Concession or the Single Concession Contract is terminated or revoked in accordance with its terms or for public interest reasons; or
- (ii) a ministerial decree has been enacted granting to another person the Autostrade Italia Concession; or
- (iii) it becomes unlawful for Autostrade Italia to perform any of the material terms of the Autostrade Italia Concession; or
- (iv) the Autostrade Italia Concession is declared by the competent authority to cease before the Maturity Date (as defined in the applicable Final Terms); or
- (v) the Autostrade Italia Concession ceases to be held by Autostrade Italia or any successor resulting from a Permitted Reorganisation; or
- (vi) the Autostrade Italia Concession is amended in a way which has a Material Adverse Effect (as defined in Condition 10 below).

Promptly upon becoming aware that a Put Event has occurred, and in any event not later than 21 days after the occurrence of the Put Event, the Issuer shall give notice (a “**Put Event Notice**”) to the Noteholders in accordance with Condition 17, specifying the nature of the Put Event and the procedure for exercising the option contained in this Condition 6(e).

To exercise the option to require the Issuer to redeem a Note under this Condition 6(e), the Noteholder must deliver such Note at the specified office of any Paying Agent, on any day which is a day on which banks are open for business in London and in the place of the specified office falling within the period (the “**Put Period**”) of 45 days after the date on which a Put Event Notice is given, accompanied by a duly signed and completed Exercise Notice in the form available from each office of the Paying Agents (the “**Exercise Notice**”).

The Note must be delivered to the Paying Agent together with all Coupons, if any, appertaining thereto maturing after the date (the “**Put Date**”) being the seventh day after the date of expiry of the Put Period, failing which deduction in respect of such missing unmatured Coupons shall be made in accordance with Condition 7(e). The Paying Agent to which such Note and Exercise Notice are delivered will issue to the Noteholder concerned a non-transferable receipt (a “**Put Option Receipt**”) in respect of the Note so delivered.

Payment by the Issuer in respect of any Note so delivered shall be made, if the holder duly specified in the Exercise Notice a bank account to which payment is to be made, by transfer to that bank account on the Put Date, and in every other case, on or after the Put Date against presentation and surrender of such Put Option Receipt at the specified office of any Paying Agent. An Exercise Notice, once given, shall be irrevocable. For the purposes of these Conditions and the Trust Deed, Put Option Receipts issued pursuant to this Condition 6(e) shall be treated as if they were Notes.

In the event that the Trustee has been notified by the Issuer that no further notes are outstanding under the Euro Medium Term Note Programme of Atlantia S.p.A., this Condition 6(e) shall be deemed to no longer be effective.”

Appendix 5. Additional details on the Shareholder impact post-collapse for Atlantia

In the following tables, it is presented how the stake of major shareholders changed from July up to date.

In the Table below, the shareholder structure of the first 15 main shareholders as of July 2018 is presented:

Main Shareholders of Atlantia as of 31/07/2018		
Name	Type	% Ownership
Edizione, S.r.l.	Holding Company	30.254%
GIC Private Limited	Sovereign Wealth Fund	8.136%
Fondazione Cassa di Risparmio di Torino	Corporation	5.062%
HSBC Global Asset Management (UK) Limited	Investment Advisor/Hedge Fund	5.005%
BlackRock Investment Management (UK) Ltd.	Investment Advisor/Hedge Fund	4.910%
Lazard Asset Management, L.L.C.	Investment Advisor/Hedge Fund	2.457%
The Vanguard Group, Inc.	Investment Advisor/Hedge Fund	1.711%
Thornburg Investment Management, Inc.	Investment Advisor	1.498%
BlackRock Institutional Trust Company, N.A.	Investment Advisor	1.337%
Norges Bank Investment Management (NBIM)	Sovereign Wealth Fund	1.117%
Fidelity International	Investment Advisor	0.901%
Colonial First State GAM Global Listed Infrastructure	Investment Advisor	0.677%
Nordea Funds Oy	Investment Advisor	0.524%
State Street Global Advisors (UK) Ltd.	Investment Advisor/Hedge Fund	0.428%
Pictet Asset Management Ltd.	Investment Advisor/Hedge Fund	0.419%

Table A5.1 Main Shareholders of Atlantia as of July 31, 2018. Source: Eikon Thomson Reuters.

Following, the same picture is given for end of August 2018, post-collapse of the Morandi Bridge:

Main Shareholders of Atlantia as of 31/08/2018		
Name	Type	% Ownership
Edizione, S.r.l.	Holding Company	30.254%
GIC Private Limited	Sovereign Wealth Fund	8.136%
Fondazione Cassa di Risparmio di Torino	Corporation	5.062%
HSBC Global Asset Management (UK) Limited	Investment Advisor/Hedge Fund	5.005%
BlackRock Investment Management (UK) Ltd.	Investment Advisor/Hedge Fund	4.910%
Lazard Asset Management, L.L.C.	Investment Advisor/Hedge Fund	2.633%
The Vanguard Group, Inc.	Investment Advisor/Hedge Fund	1.728%
Thornburg Investment Management, Inc.	Investment Advisor	1.419%
BlackRock Institutional Trust Company, N.A.	Investment Advisor	1.336%
Norges Bank Investment Management (NBIM)	Sovereign Wealth Fund	1.117%
Colonial First State GAM Global Listed Infrastructure	Investment Advisor	0.557%
Fidelity International	Investment Advisor	0.500%
Pictet Asset Management Ltd.	Investment Advisor/Hedge Fund	0.490%
RARE Infrastructure Limited	Investment Advisor	0.466%
Nordea Funds Oy	Investment Advisor	0.438%

Table A5.2 Main Shareholders of Atlantia as of August 31, 2018. Source: Eikon Thomson Reuters.

Finally, the result as of end of February 2019, 6 months post-collapse is given:

Main Shareholders of Atlantia as of 28/02/2019		
Name	Type	% Ownership
Edizione, S.r.l.	Holding Company	30.250%
GIC Private Limited	Sovereign Wealth Fund	8.140%
Fondazione Cassa di Risparmio di Torino	Corporation	5.060%
Lazard Asset Management, L.L.C.	Investment Advisor/Hedge Fund	5.017%
HSBC Global Asset Management (UK) Limited	Investment Advisor/Hedge Fund	5.010%
BlackRock Investment Management (UK) Ltd.	Investment Advisor/Hedge Fund	4.910%
The Vanguard Group, Inc.	Investment Advisor/Hedge Fund	1.798%
BlackRock Institutional Trust Company, N.A.	Investment Advisor	1.381%
Thornburg Investment Management, Inc.	Investment Advisor	1.254%
Norges Bank Investment Management (NBIM)	Sovereign Wealth Fund	1.117%
Fidelity Investments Canada ULC	Investment Advisor	0.738%
Colonial First State GAM Global Listed Infrastructure	Investment Advisor	0.634%
Pictet Asset Management Ltd.	Investment Advisor/Hedge Fund	0.486%
Fidelity International	Investment Advisor	0.466%
RARE Infrastructure Limited	Investment Advisor	0.456%

Table A5.3 Main Shareholders of Atlantia as of February 28, 2019. Source: Eikon Thomson Reuters.

From the three tables it can be seen that:

- 1- The three main shareholders did not change its position.
- 2- Lazard Asset Management is the fund which more heavily invested post-collapse. Not immediately but in a 6-month time frame it went from 2.45%-2.63%-5.01%, being today the 4th major holder of shares in Atlantia.
- 3- The majority of the funds acted doing an accordion. From July to August they have reduced its position but as of end of February they have recovered its original stake.
- 4- No major exit among the majority shareholders took place. Fidelity International being the one which reduced its stake further at the month after the incident, from 0.9% to 0.5%, but today already recovered part of it standing at 0.74%.

In the Table below, the top 10 buys during the month of the incident are presented:

Top Buys ins after Collapse of Morandi Bridge				
Investor Name	Investor Sub-Type	% Ownership Jul'18	% Ownership Aug'18	% Change
NNIP Asset Management B.V.	Investment Advisor	0.001%	0.005%	820.000%
First Trust Advisors L.P.	Investment Advisor	0.000%	0.001%	300.000%
Nextam Partners SGR S.p.A.	Investment Advisor/Hedge Fund	0.001%	0.002%	228.571%
BayernInvest Kapitalanlagegesellschaft mbH	Investment Advisor	0.001%	0.002%	171.429%
Tresides Asset Management GmbH	Investment Advisor	0.002%	0.004%	62.500%
Swiss Life Asset Management	Investment Advisor	0.004%	0.007%	57.143%
Banor Capital Limited	Investment Advisor/Hedge Fund	0.004%	0.006%	56.410%
Macquarie Investment Management Ltd.	Investment Advisor/Hedge Fund	0.071%	0.105%	47.479%
Xact Kapitalforvaltning AB	Investment Advisor	0.008%	0.011%	40.000%
M.M.Warburg & CO Luxembourg S.A.	Bank and Trust	0.001%	0.002%	38.462%

Table A5.4 Top Buy ins after the collapse of the Morandi Bridge. Source: Eikon Thomson Reuters.

On the contrary, below it is shown the top buy outs from July to August, defined as those funds which reduced its position by more than 30%:

Top Exits after Collapse of Morandi Bridge				
Investor Name	Investor Sub-Type	% Ownership Jul'18	% Ownership Aug'18	% Change
Cicero Fonder AB	Investment Advisor/Hedge Fund	0.005%	0.000%	-100.000%
Habbel, Pohlig & Partner Institut für Bank	Investment Advisor	0.002%	0.000%	-100.000%
Evangelische Kreditgenossenschaft eG	Investment Advisor	0.001%	0.000%	-100.000%
Edge Capital Partners, LLC	Investment Advisor	0.005%	0.000%	-100.000%
Albemarle Asset Management Ltd.	Investment Advisor/Hedge Fund	0.002%	0.000%	-100.000%
BlackRock International Ltd.	Investment Advisor/Hedge Fund	0.001%	0.000%	-100.000%
Brand New Day Bank N.V.	Investment Advisor	0.005%	0.000%	-100.000%
Assenagon Asset Management S.A.	Investment Advisor	0.020%	0.000%	-100.000%
Deutsche Asset & Wealth Management	Investment Advisor	0.001%	0.000%	-100.000%
Credit Suisse Asset Management Funds S.p.A.	Investment Advisor	0.005%	0.000%	-100.000%
Nikko Asset Management Co., Ltd.	Investment Advisor/Hedge Fund	0.001%	0.000%	-100.000%
Ninepoint Partners LP	Investment Advisor/Hedge Fund	0.001%	0.000%	-100.000%
Zenit SGR S.p.A.	Investment Advisor/Hedge Fund	0.003%	0.000%	-100.000%
SYZ & CO Asset Management LLP	Investment Advisor	0.073%	0.000%	-100.000%
Payden & Rygel	Investment Advisor	0.041%	0.000%	-100.000%
LBBW Venture Capital GmbH	Venture Capital	0.002%	0.000%	-100.000%
Sal. Oppenheim jr. & Cie. AG & Co. KGaA	Investment Advisor	0.010%	0.000%	-100.000%
Raiffeisen Kapitalanlage-Gesellschaft mbH	Investment Advisor	0.013%	0.000%	-100.000%
Raiffeisen Vermögensverwaltungsbank AG	Investment Advisor	0.003%	0.000%	-100.000%
JPMorgan Asset Management U.K. Limited	Investment Advisor/Hedge Fund	0.108%	0.001%	-99.349%
Principal Management Corporation	Investment Advisor	0.100%	0.002%	-97.698%
Commerzbank AG	Bank and Trust	0.003%	0.000%	-96.000%
Jupiter Asset Management Ltd.	Investment Advisor/Hedge Fund	0.013%	0.001%	-93.651%
JP Morgan Asset Management	Investment Advisor	0.017%	0.001%	-93.333%
1832 Asset Management L.P.	Investment Advisor	0.343%	0.039%	-88.730%
AXA Rosenberg Investment Management Ltd.	Investment Advisor/Hedge Fund	0.021%	0.003%	-88.095%
INVESCO Asset Management Limited	Investment Advisor/Hedge Fund	0.187%	0.047%	-74.973%
CI Investments Inc.	Investment Advisor/Hedge Fund	0.071%	0.022%	-69.307%
Decalia Asset Management	Investment Advisor	0.013%	0.004%	-66.923%
Amundi Ireland Limited	Investment Advisor/Hedge Fund	0.142%	0.050%	-64.627%
Candriam Belgium S.A.	Investment Advisor/Hedge Fund	0.025%	0.010%	-62.302%
LBBW Investmentgesellschaft mbH	Investment Advisor	0.062%	0.028%	-54.369%
Fideuram Asset Management (Ireland) dac	Investment Advisor	0.007%	0.003%	-53.030%
Fideuram Investimenti SGR S.p.A.	Investment Advisor	0.164%	0.087%	-46.883%
Fidelity International	Investment Advisor	0.901%	0.500%	-44.521%
Siemens Fonds Invest GmbH	Investment Advisor	0.013%	0.008%	-41.860%
Duff & Phelps Investment Management Compar	Investment Advisor	0.064%	0.038%	-40.472%
BlackRock Financial Management, Inc.	Investment Advisor/Hedge Fund	0.203%	0.123%	-39.407%
Morval SIM SpA	Investment Advisor	0.001%	0.001%	-33.333%
Morgan Stanley Investment Management Ltd. (N	Investment Advisor	0.003%	0.002%	-32.258%
Epsilon SGR SpA	Investment Advisor	0.030%	0.020%	-32.215%

Table A5.5 Top Buy out after the collapse of the Morandi Bridge. Source: Eikon Thomson Reuters.

It can be concluded that a lot more funds reacted negatively to the news and decided to sell part of its stake on Atlantia while a few saw it as an opportunity to enter. The ones who entered decided to do it strongly, while reductions were a bit more moderate in % terms.

Such a picture confirms the cash flow profiles depicted on Chapter 3.5.

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