# ECONOMIC RESPONSES TO THE OBJECTIONS AGAINST THE PROPOSED SETTLEMENT BETWEEN CLAIMANTS' ORGANIZATIONS AND AGEAS SA/NV

By

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## I. INTRODUCTION

### A. Context for the Rebuttal Report

- In May of 2016, we an Analysis Group team led by Dr. Marc Van Audenrode filed an expert report<sup>1</sup> (the "May 2016 Report") evaluating the economic reasonableness of the Settlement Agreement<sup>2</sup> entered into between Ageas SA/NV ("Ageas") and claimants' organizations<sup>3</sup> before the Amsterdam Court of Appeal (the "Court"). More specifically, Ageas had asked us to:
  - a. Calculate the potential price impact ("inflation") that might be associated with specific Fortis communications, which claimants have alleged to be defective;
  - b. Calculate the number of Fortis shares to which these potential price inflations would apply for each of the three periods being claimed in this settlement during which claimants have alleged that there were defective communications by Fortis (the "reference periods"<sup>4</sup>); and
  - c. Estimate whether the total amount awarded in the Settlement Agreement is adequate for compensating eligible shareholders who may have suffered economic losses.
- 2. Based on our review of information and data available to us at the time of the report, we found that the principles set forth in the Settlement Agreement between Ageas and claimants' organizations fairly compensated eligible shareholders for potential economic losses attributable to the allegedly defective communications by Fortis during the three reference periods being claimed in the Settlement Agreement.

<sup>&</sup>lt;sup>1</sup> Economic Expertise Regarding the Proposed Settlement between Claimants' Organizations and Ageas SA/NV by Analysis Group, Inc. and Marc Van Audenrode, Ph.D., Managing Principal, 20 May 2016 (hereinafter, "AG/Van Audenrode Report, May 2016").

<sup>&</sup>lt;sup>2</sup> Ageas Press Release, "Regulated information – Ageas, Deminor, Stichting FortisEffect, SICAF and VEB reach agreement aiming at settling all Fortis civil legacies," 14 March 2016, *available at* https://goo.gl/uZXSZL. Settlement Agreement between Ageas SA/NV and Vereniging van Effectenbezitters and DRS Belgium CVBA and Stichting Investor Claims Against Fortis, dated 14 March 2016 (*hereinafter*, "Settlement Agreement").

<sup>&</sup>lt;sup>3</sup> Claimant organizations are Deminor, Stichting FortisEffect, Stichting Investor Claims Against Fortis (SICAF), and Dutch Shareholder Association VEB.

<sup>&</sup>lt;sup>4</sup> The reference periods are as follows: 21 September to 7 November 2007 (Reference Period 1); 13 May to 25 June 2008 (Reference Period 2); and 29 September to 3 October 2008 (Reference Period 3). *See* Settlement Agreement, pp. 4-5.

- 3. We reached our conclusion after a careful analysis of all available claims, facts, and data. We relied on sound economic principles and state-of-the-art statistical techniques that are consistent with widely accepted methodologies published in peer-reviewed academic literature.
- 4. In a document filed with this Court,<sup>5</sup> the Defendants<sup>6</sup> who are asking the Court to reject the Settlement Agreement questioned the relevance of the analyses presented in our May 2016 Report and challenged our conclusions. However, many of the Defendants' criticisms suggest that they misunderstood the purpose of the May 2016 Report and were unaware of certain key economic principles and relevant economic methodologies.
- 5. The aim of this short rebuttal report is to respectfully remind the Court of the true purpose of our May 2016 Report, which has been inaccurately and unfairly characterized by the Defendants. In this report, we also respond to several arguments put forward by the Defendants that are incorrect.

#### **B.** Structure of the Report

6. Section II provides a summary of our conclusions. The remainder of this report is divided into four parts. Section III presents a short overview of the main purpose of our May 2016 Report, which suggests that many of the objections from the Defendants are based on a misunderstanding of the purpose of our May 2016 Report. Section IV specifically addresses the Defendants' objections to our estimates of shares that would potentially qualify for compensation from an economic perspective. Section V addresses several other objections made by the Defendants. Finally, Section VI responds to the summary of the report by an unnamed party attached to the document filed by the Defendants and to the statement submitted by Dr. Plantinga from the University of Groningen.

### II. SUMMARY OF CONCLUSIONS

7. Our May 2016 Report provided an opinion on the reasonableness of the Settlement Agreement from an economic perspective, not based on any legal principles or claims. Many of the Defendants' criticisms are not pertinent in view of the purpose of the report, as well as the approaches we adopted and the nature of the opinion that we expressed in it.

<sup>&</sup>lt;sup>5</sup> Verweerschrift Tegen Het 20 Mei 2016 Ingediende Verzoekschrift Inzake de Algemeen Verbindend Verklaring Van de Fortisschikking, 9 February 2017 (*hereinafter*, "Statement of Defense by Lawyers for Petitioners").

<sup>&</sup>lt;sup>6</sup> The Defendants are listed in Appendix 1 of the Statement of Defense by Lawyers for Petitioners.

- 8. The Defendants' objection to the estimates of qualifying shares presented in our May 2016 Report mainly stem from a misunderstanding of the distinction between shares that potentially qualify for compensation from an economic perspective and shares that are eligible for compensation from a legal perspective. From an economic perspective, whether a share can be considered as qualifying for compensation depends on the timing of its purchase and sale. Only shares that were bought at an inflated price and held until the date of a corrective disclosure can be claimed to have suffered economic losses from that price inflation. We recognize, however, that the Settlement Agreement is not an economic document. Our May 2016 Report attempted to bridge the gap between these economic and legal considerations by evaluating the maximum settlement amounts in light of economic loss estimates as well as amounts promised to different categories of eligible shares, as defined in the Settlement Agreement.
- 9. The methodology we relied on to estimate per share price inflation, the event study methodology, is the standard and appropriate economic approach in this case. The appropriate calculation of share price changes attributable to the alleged bad acts by Fortis is not a simple subtraction of the index return from the Fortis stock price return as the Defendants present. Instead, the appropriate calculation of potential economic loss uses an event study and an estimated market model to predict the stock price return attributable to market-wide fluctuations the remaining non-market-related return is the estimated abnormal return.
- 10. Our use of a 15 minutes response time for stock prices to adjust to new information disclosures in our May 2016 report is standard in the finance literature. Financial literature show that stock prices tend to internalize new information quickly and the reaction of stock prices to an announcement can occur within about 10 minutes. Contrary to Defendants claim, not all investors need to actually transact for the stock price to quickly converge to a new value. Even allowing for the possibility of longer response times, our calculations in the May 2016 Report indicated that settlement amounts remained high relative to the amounts that would be typically observed in securities litigation settlements with similar estimates of potential economic loss.
- 11. It would be incorrect to look at the price of the Fortis share on 14 October 2008 to measure the impact of the alleged miscommunications by Fortis during the third reference period (29 September to 3 October 2008) as the Defendants claim. Between 3 and 14 October 2008, all banking activities and its entire Dutch operations were separated from the Fortis Group. If we measured potential losses on 14 October 2008, our inflation estimate would grossly overestimate the economic loss suffered by the purchasers of Fortis shares.

- 12. The Defendants' assertion that take-up rates for non-active claimants in the current settlement would be higher than those estimated in literature are not founded on any economic evidence. Among other reasons, the literature indicates that a higher take-up by non-active claimants in this settlement is unlikely.
- 13. The Defendants argue that the amounts set aside to compensate non-active claimants are not sufficient and that dilution would likely to occur for them. However, the Defendants' claims are based on unrealistic take-up rates and hypothetical scenarios. As concluded in our May 2016 Report, we maintain that the amounts set aside to compensate both active and non-active claimants are sufficient under reasonable take-up scenarios.
- 14. The Defendants assert that the subscribers who exercised their rights to purchase Fortis shares during the first reference period suffered economic loss. However, economic evidence is inconsistent with the Defendants' claim. As discussed in our May 2016 Report, the lower bound on Fortis per share price under the alleged corrective information is above the right's exercise price, indicating that investors would still have exercised their rights and that subscribers did not incur any economic loss. Additional pieces of evidence also suggest that the rights issue would have succeeded had more detailed information been disclosed earlier.
- 15. The report by an unnamed party attempts to estimate the potential economic loss to Fortis shareholders resulting from the alleged miscommunications by Fortis. However, there are fundamental issues with the unnamed party's methodology and its underlying assumptions, resulting in the estimates of economic losses to shareholders being grossly overestimated.

#### **III. SUMMARY OF THE PURPOSE OF THE MAY 2016 REPORT**

- 16. Our May 2016 Report provided an opinion on the reasonableness of the Settlement Agreement from an economic perspective. As such, our opinion is not based on legal principles or claims that are specific to any country in North America or Europe. Instead, our assessment of the reasonableness of the Settlement Agreement relied on sound economic principles and methodologies that are widely accepted by economists worldwide.
- 17. As economists, we understand that legal damages can differ from economic harm. Not all economic harm can give rise to legal damages, and sometimes legal damages may compensate individuals over and above any economic harm. We do not have any opinion on what legal damages the active and non-active claimants may or may not be entitled to. Rather, in our May

2016 Report, we have offered an opinion on what economic harm the claimants may have suffered as a result of the alleged acts by Fortis. Hence the Defendants' broad claim that our May 2016 Report is irrelevant because the legal systems in the United States and the Netherlands are different<sup>7</sup> is not pertinent to the purpose of our report, as well as the approach we adopted and the nature of the opinion that we expressed in the report.

- 18. One fundamental economic principle in cases of alleged miscommunications by the management of publicly traded firms is that shareholders who were merely *holding* shares at the time the correct information should have been disclosed are not harmed from an economic perspective. Indeed, had the correct information been disclosed at the proper time, the value of the shares would have dropped at that time. The fact that this drop in price was delayed did not harm the shareholder, and may actually have benefitted him (if, for example, he sold the shares before the information became public). The fact that this economic principle is accepted by the U.S. courts is merely a reflection of its economic soundness.<sup>8</sup> Moreover, it is our understanding that the Court itself has accepted this economic principle in the *Converium* decision.<sup>9</sup> As economists, we do not offer any opinion on the validity of the Defendants' argument that shareholders who are holders (i.e., those who did not purchase any shares during the reference periods being claimed in this settlement<sup>10</sup>) are entitled to legal damages.<sup>11</sup>
- 19. We recognize, however, that the Settlement Agreement is not an economic document. Our May 2016 Report attempted to bridge the gap between these economic and legal considerations. To that aim, we assessed the reasonableness of the Settlement by responding to four fundamental questions:

<sup>&</sup>lt;sup>7</sup> Statement of Defense by Lawyers for Petitioners, ¶¶ 332-334.

<sup>&</sup>lt;sup>8</sup> See footnote 53 in AG/Van Audenrode Report, May 2016.

<sup>&</sup>lt;sup>9</sup> See Amsterdam Court of Appeal 17 January 2012, ¶ 5.1.2 ("The agreements aim to compensate loss caused, concisely put, by a decline in the value of Converium shares following disclosures by Converium in the period 2002-2004 with respect to its (anticipated) financial results and the provisions to be made for this. The Court references the amended petition at 3.2 and the interim decision at 2.1 and 2.2. The persons to whom the loss was caused are, concisely put, the non-US exchange purchasers.").

<sup>&</sup>lt;sup>10</sup> The three reference periods are the following: 21 September to 7 November 2007 (Reference Period 1); 13 May to 25 June 2008 (Reference Period 2); 29 September to 3 October 2008 (Reference Period 3). *See* Settlement Agreement, pp. 4-5.

<sup>&</sup>lt;sup>11</sup> Statement of Defense by Lawyers for Petitioners, ¶ 34.

- a. First, which shares potentially suffered economic losses as a result of Fortis alleged acts, and what is the magnitude of these potential losses?
- b. Second, are these individual shares which may have suffered economic losses adequately compensated in the Settlement?
- c. Third, are the maximum settlement caps for different classes of shares (i.e., "Box 1 Cap" and "Box 2 Cap")<sup>12</sup> sufficient to pay for the agreed upon amounts to the shares that may have suffered economic losses?
- d. Fourth, are the maximum settlement caps for different classes of shares in the Settlement Agreement sufficient to pay for the promised amounts to the different categories of *eligible* shares, as defined in the Settlement, regardless of whether these shares may or may not have potentially suffered economic losses?

# IV. DEFENDANTS' OBJECTIONS REGARDING OUR ESTIMATES OF QUALIFYING SHARES

- The Defendants object to the estimates of qualifying shares presented in our May 2016 Report.<sup>13</sup>
  In particular, the Defendants assert the following:
  - a. Every outstanding Fortis share "qualifies for compensation because either somebody held on to the share and thereby sustained loss or somebody purchased the share for too high a price and then sustained a loss."<sup>14</sup>
  - b. The calculations that led to the estimates of shares qualifying for compensation from an economic perspective do not make sense.<sup>15</sup> The number of outstanding Fortis shares after the September 2007 rights issue (approximately 2.2 billion shares) is not found the May

<sup>&</sup>lt;sup>12</sup> The total settlement amount of €1,203.7 million for all eligible shares and shareholders is the sum of the maximum settlement compensation caps of: €795.9 million for Active Claimants ("Box 1 Cap") and €407.8 million for Non-Active Claimants ("Box 2 Cap"). See Settlement Agreement, Schedule 2, § 3.

<sup>&</sup>lt;sup>13</sup> Statement of Defense by Lawyers for Petitioners, ¶¶ 33-35 and 274-285.

<sup>&</sup>lt;sup>14</sup> Statement of Defense by Lawyers for Petitioners, ¶ 279. Loose translation of "Uiteindelijk zal elk aandeel in aanmerking komen voor de vergoeding, omdat hetzij iemand het aandeel heeft gehouden en zo schade heeft geleden, hetzij iemand het tegen een te hoge prijs heeft gekocht en vervolgens schade heeft geleden."

<sup>&</sup>lt;sup>15</sup> Statement of Defense by Lawyers for Petitioners, ¶ 33.

2016 Report<sup>16</sup> and the difference between the number of outstanding Fortis shares and the number of qualifying shares is not explained.<sup>17</sup>

Below, we respond to the Defendants' objections and provide a detailed explanation of the number of qualifying shares that we estimated and presented in Table 3 of the May 2016 Report that the Defendants have highlighted.<sup>18</sup>

- 21. We have always accepted as a given the number of Fortis shares outstanding at any point in time. This number was published by Fortis and is a key input in our estimations. There were approximately:
  - a. 1.3 billion shares outstanding at 30 September 2007;<sup>19</sup>
  - b. 2.2 billion shares outstanding at 15 October  $2007^{20}$ ;
  - c. 2.3 billion shares outstanding at 30 June 2008;<sup>21</sup> and
  - d. 2.5 billion shares outstanding at 31 December 2008.<sup>22</sup>
- 22. The Defendants suggest that the analysis of what we define as qualifying shares improperly impact our estimation of the reasonableness of the Settlement. This is incorrect. Given our mandate of evaluating the reasonableness of the Settlement from an economic perspective, we had to make the distinction between "qualifying shares" and "eligible shares" in our May 2016 Report.<sup>23</sup>
- 23. In our analysis of qualifying shares, we describe, from an economic perspective, which Fortis shares may have exposed investors to potential economic losses. They are shares that *(i)* were

<sup>&</sup>lt;sup>16</sup> Statement of Defense by Lawyers for Petitioners, ¶¶ 275-276.

<sup>&</sup>lt;sup>17</sup> Statement of Defense by Lawyers for Petitioners, ¶¶ 280-281.

<sup>&</sup>lt;sup>18</sup> Statement of Defense by Lawyers for Petitioners, ¶ 28.

<sup>&</sup>lt;sup>19</sup> Fortis, "Consolidated Interim Financial Statements for the First Nine Months of 2007," 8 November 2007, p. 17.

<sup>&</sup>lt;sup>20</sup> Fortis, "Fortis announces a EUR 13.4 billion 2 for 3 Rights Issue for 896,181,684 New Shares at EUR 15.00 per New Share," 21 September 2007.

<sup>&</sup>lt;sup>21</sup> Fortis, "Consolidated Interim Financial Statements for the First Half-Year of 2008," 4 August 2008, p. 16.

<sup>&</sup>lt;sup>22</sup> Fortis, "Consolidated Financial Statements 2008," p. 51.

<sup>&</sup>lt;sup>23</sup> See AG/Van Audenrode Report, May 2016, ¶¶ 53 and 57.

purchased at inflated prices during one of the reference periods and *(ii)* were not resold at inflated prices during the same periods. Shares that were not traded during reference periods did not expose investors to damages, and therefore, not all shares outstanding can be deemed to have suffered economic losses. Similarly, shares that were bought at an inflated price but also resold at an equally inflated price did not give rise to economic losses, and therefore, not all aggregate trading volumes qualify for compensation. Only shares that were bought at an inflated price and held until the date of a corrective disclosure can be claimed to have suffered economic losses from that price inflation. In our May 2016 Report, we also expressed the opinion that subscribers shares had not suffered economic losses and hence should not be included in the qualifying shares.

- 24. Thus, "qualifying shares" describe shares that could potentially qualify for compensation based on economic principles (i.e., regular shares that were bought at a potentially inflated price and held until the date of the alleged corrective disclosure). Estimating the number of qualifying shares is important to estimate measures of potential loss from an economic perspective, and to assess whether those investors who may have suffered economic losses are properly compensated under the Settlement. For example, the estimated number of qualifying shares allowed us to calculate (as shown in column (2) of Table 7 in the May 2016 Report) potential economic loss estimates for non-active buyers.
- 25. This notion of qualifying shares, however, has no bearing on our analysis of whether the total compensation available to claimant groups in the Settlement Agreement are sufficient to pay the amount promised in the Settlement. In these calculations, we used all the estimated "Buyers" shares for both Claimants and Non-Claimants, since in the Settlement Agreement, subscriber shares are entitled to compensation as well as regular shares. As such, our May 2016 Report introduced the term "eligible shares," which are shares that are entitled to compensation under the terms of the Settlement Agreement.
- 26. In evaluating whether the total settlement amounts allocated to each claimant group is sufficient and in analyzing the risk of dilution, all eligible shares are accounted for in our analysis, distinguishing between "Buyers" shares and "Holders" shares to account for differences in the per share compensation to each share type agreed in the Settlement. This is clear from the note provided in Table 7 of our May 2016 Report ("Buyer settlement compensation is calculated by multiplying both regular and subscribers estimates [...].") and from the fact that we compute a Settlement compensation for Holders in that table. In other words, in our analysis of whether the

Box 2 amount is sufficient to pay Non-Active claimants under various take-up rates, we have taken all eligible shares into account. The Defendants' notion that we were guided by our (more limited) opinion on which shares were potentially harmed from an economic perspective ("qualifying shares") in making this assessment is incorrect.

27. Furthermore, the Defendants claim that the estimates of potentially qualifying shares for active and non-active claimants shown in Table 3 of our May 2016 Report are inconsistent with our calculation of the blended take-up rate of 43% based on an assumed take-up rate of 100% for active claimant shares and an assumed take-up rate of 25% for non-active claimant shares.<sup>24</sup> The Defendants' claim seems to stem from confusing the number of investors with the number of shares and from misunderstanding of our calculation. As explained in our May 2016 Report, the blended take-up rate is calculated by taking the weighted average of the assumed take-up rates for active and non-active claimants, where the weights are given by each claimant group's proportion of eligible shares (i.e., shares that are entitled to compensation under terms of the Settlement Agreement).<sup>25</sup> Based on the data provided to us by Ageas on all shares bought and held by active claimants and estimates of the maximum number of outstanding shares in each reference period, we calculated active claimant's shares to be approximately 23.5% of all eligible shares across the three reference periods. This percentage is consistent with the Defendants' own calculation.<sup>26</sup> Therefore, assuming 100% take-up rate for active claimant shares and 25% take-up rate for nonactive claimant shares, we arrived at a blended take-up rate of 43% (= 100% × 23.5% + 25% × 76.5%).

### V. DEFENDANTS' OTHER OBJECTIONS

28. In this section, we provide responses to several other objections and claims made regarding our May 2016 Report by the Defendants in their document submitted to the Court.

<sup>&</sup>lt;sup>24</sup> Statement of Defense by Lawyers for Petitioners, ¶ 23-31.

<sup>&</sup>lt;sup>25</sup> See AG/Van Audenrode Report, May 2016, footnote 5.

<sup>&</sup>lt;sup>26</sup> Statement of Defense by Lawyers for Petitioners, ¶ 26.

#### A. Links between Stock Prices and Overall Market Prices and Market Models

- 29. Event studies are widely used to examine share price movements associated with information disclosures.<sup>27</sup> They are used extensively in academic research and in litigations across the world to help establish the materiality of information and loss causation.<sup>28</sup> Event studies have a long history in finance and economics, with the first study having been published by Dolley in 1933.<sup>29</sup> In academic settings, event studies have been used to examine different types of events, such as mergers and acquisitions and corporate reorganizations.<sup>30</sup>
- 30. Event studies rely on the assumption that markets are efficient and that stock prices nearly immediately impound newly disclosed relevant information. Event studies often involve the estimation of market models to establish the extent to which market-wide information influences the movements of individual stock prices.<sup>31</sup> Market models make it possible to separate the influence of market information from the influence of new disclosures on stock prices.
- 31. In litigation settings, the efficient markets hypothesis is often combined with one of its derivatives, the fraud-on-the-market theory. According to this theory, investors rely on the market price as an accurate reflection of its value and may be harmed by inappropriate disclosures through their impact on the market price. The fraud-on-the market theory protects investors from needing to prove that they relied on an alleged misrepresentation at the time of their stock purchase or sale.<sup>32</sup> Investors do not have to prove that they would have followed and reacted to news about a stock, because the stock price incorporates all the news as it becomes available through the trading of shareholders who follow it, even if not all do.

<sup>30</sup> S.P. Kothari and Jerold B. Warner, "Econometrics of Event Studies," in *Handbook of Corporate Finance*, ed. B. Espen Eckbo (Amsterdam: Elsevier B.V., 2007), pp. 3-36.

<sup>31</sup> Richard A. Brealey, Stewart C. Myers, and Franklin Allen, *Principles of Corporate Finance* (New York: McGraw-Hill Irwin, 2011), p. 318.

<sup>&</sup>lt;sup>27</sup> Richard A. Brealey, Stewart C. Myers, and Franklin Allen, *Principles of Corporate Finance* (New York: McGraw-Hill Irwin, 2011), p. 318.

<sup>&</sup>lt;sup>28</sup> Nicholas I. Crew, Kevin L. Gold, Marnie A. Moore, "Federal Securities Acts and Areas of Expert Analysis," in *Litigation Services Handbook: The Role of the Financial Expert*, ed. Roman L. Weil, Daniel G. Lentz, Daniel G. Lentz, and David P. Hoffman (Somerset: John Wiley & Sons, 2012), pp. 10 and 23.

<sup>&</sup>lt;sup>29</sup> John Y. Campbell, Andrew W. Lo, and A. Craig MacKinlay, *The Econometrics of Financial Markets* (Princeton: Princeton University Press, 1997), 149. J. Dolley, "Characteristics and Procedure of Common Stock Split-Ups," *Harvard Business Review*, pp. 316-326.

<sup>&</sup>lt;sup>32</sup> See Mark L. Mitchell and Jeffrey M. Netter, "The Role of Financial Economics in Securities Cases: Applications at the Securities and Exchange Commission," *The Business Lawyer* Vol. 49, No. 2 (1994): 545-90.

- 32. The efficient markets hypothesis that underpins event studies corresponds to the idea that it is not possible to exploit new relevant information to generate above-average trading returns. Because prices adjust quasi immediately, there is no strategy more profitable in the long run than holding the market index. These ideas also underpin the Black-Scholes-Merton model relied upon by the unnamed party.<sup>33</sup>
- 33. The Defendants state that "the Analysis Group does not compute the loss by performing a subtraction using the index price change. Rather, when performing the subtraction, it uses an additional price change."<sup>34</sup> Defendants calculate the difference between the share price decrease of 5.8% and index decrease of 1.3% as 4.5%, and contrast this with the 3.6% abnormal return estimate in the May 2016 Report. They perform analogous calculations for periods 2 and 3 and state that "despite the absence of a demonstrable reason for this, in both cases the Analysis Group places a limit on the loss that goes beyond the comparison with the relevant index. On this point as well the loss report falls short."<sup>35</sup>
- 34. These passages illustrate the Defendants misunderstanding of the event study methodology, the standard approach for damages calculations. The May 2016 Report uses an event study and market model to distinguish between the effect of firm-specific and market-wide information on Fortis prices. As stated in the May 2016 Report, "a stock price return depends on a) fluctuations in market-wide returns and b) the stock's *responsiveness* to fluctuations in market-wide returns."<sup>36</sup>
- 35. Some stocks are not very responsive to market-wide returns; others respond strongly. If a stock is very responsive, the percentage change in stock price will be, on average, larger than observed percentage changes in the index. For example, the stock prices of food producers and of water

<sup>&</sup>lt;sup>33</sup> See Jean-Philippe Bouchard and Marc Potters, *Theory of Financial Risk and Derivative Pricing* (Cambridge: Cambridge University Press, 2005), 228-29. Note, however, as explained below, the Black-Scholes-Merton model is not appropriate for predicting future stock prices, because the model assumes that asset returns are distributed normally. This assumption is valid only for very short (infinitesimal) time periods and, therefore, is not applicable to forecasting of daily stock prices.

<sup>&</sup>lt;sup>34</sup> Statement of Defense for Lawyers by Petitioners, ¶ 324. Loose translation of "Echter, telkens als de koersbeweging is vastgesteld en ook de koersbeweging van de relevante index, berekent de Analysis Group niet de schade door de koersbeweging van de index in mindering te brengen, maar brengt zij nog een extra koersbeweging in mindering."

<sup>&</sup>lt;sup>35</sup> Statement of Defense for Lawyers by Petitioners, ¶¶ 329-330. Loose translation of "In beide gevallen beperkt de Analysis Group de schade verder dan de vergelijking met de relevante index, terwijl geen aantoonbare reden voor is. Ook op dit punt schiet het schaderapport derhalve tekort."

<sup>&</sup>lt;sup>36</sup> AG/Van Audenrode Report, 2016, ¶ 22 (emphasis added).

utilities will tend to weakly respond to market movements; the demand for food and water typically exhibit little correlation with financial markets. By contrast, bio-technology stocks will tend to respond strongly to market changes. The success of bio-technology firms greatly depend on the market. For example, their ability to bring products to the markets will often depend on their ability to raise capital; underperforming financial markets reflect poor economic prospects and will come with lower opportunities for firms to sell innovative products. For a 1% change in market indexes, Professor Aswath Damodaran of New York University reports that European food wholesalers will on average only change by 0.68% and European water utilities by 0.85% versus 1.30% for European biotechnology firms.<sup>37</sup>

36. The calculation presented by the Defendants mistakenly assumes that the response of Fortis stock prices to changes in the market would be 1 to 1, when it was in fact significantly higher. The appropriate calculation of share price changes attributable to the alleged bad acts by Fortis is not a simple subtraction of the index return from the Fortis stock price return the Defendants present. Instead, the appropriate calculation of potential damages uses the estimated market model to predict the stock price return attributable to market-wide fluctuations – the remaining non-market-related return is the estimated abnormal return. This methodology was described in Section IV.A and Appendix C of the May 2016 Report.

#### **B.** Speed of Adjustment of Stock Prices in an Efficient Market

- 37. The Defendants also object to the consideration of stock prices' response time of 15 minutes to new information disclosures in our May 2016 report.<sup>38</sup> As a basis for their criticism, the Defendants only speculate on the possibility that some investors may not have been aware of new information or would not have made trades within that time frame.
- 38. When there are sufficiently many investors who have an incentive to trade (buy or sell) shares after a new disclosure, these investors cause the share price to converge to a new value that accounts for the disclosure: upward if the disclosure reveals better prospects for the firm and downward otherwise. There is no need for uninformed investors to trade for the share price to

<sup>&</sup>lt;sup>37</sup> Aswath Damodaran, "Beta, Unlevered beta and other risk measures: Western Europe," 5 January 2017, *available at* http://www.stern.nyu.edu/~adamodar/pc/datasets/betaEurope.xls.

<sup>&</sup>lt;sup>38</sup> Statement of Defense by Lawyers for Petitioners, ¶ 286-292.

adjust; these investors will be price-takers.<sup>39</sup>. As explained above, the same economic theory that supports the idea that investors are harmed by misrepresentations even if they do not follow stock market news closely implies that the market prices adjust even if these same investors do not trade actively.

- 39. Consistent with this idea, our May 2016 Report describes several studies that show that stock prices tend to internalize new information quickly<sup>40</sup> and the reaction of stock prices to an announcement can occur within about 10 minutes.<sup>41</sup> In major and liquid financial markets, like the ones in which the Fortis share were traded, evaluations of news announcements on stock prices typically allow for a response time of 10 to 15 minutes after a disclosure.<sup>42</sup>
- 40. Given these findings in economic literature, we considered a response time of 15 minutes in the main results presented in our May 2016 Report. As noted in the report, maintaining a small time window also reduces the risk that the estimated share price inflation will be affected by other communications that may take place at other moments in the day, particularly during turbulent periods for a given stock.
- 41. Furthermore, in our May 2016 Report, we conducted and presented results from sensitivity checks in our May 2016 Report using a response time of 30 and 45 minutes.<sup>43</sup> We also evaluated the reasonableness of the settlement compensation relative to the estimated potential economic loss considering response times of 15, 30, and 45 minutes.<sup>44</sup> Even allowing for the possibility of

<sup>&</sup>lt;sup>39</sup> This is consistent with the fraud-on-the-market theory used in financial securities litigation. As explained above, the theory protects investors from needing to prove that they relied on an alleged misrepresentation at the time of their stock purchase or sale. The theory also implies that market prices adjust even if these same investors do not trade actively.

<sup>&</sup>lt;sup>40</sup> See for example, Mitchell and Netter (1994), p. 557; see also, Sok Tae Kim, Ji-Chai Lin, and Myron B. Slovin, "Market Structure, Informed Trading, and Analysts' Recommendations," *Journal of Financial and Quantitative Analysis*, Vol. 32, No. 4 (1997): 507-524; Jason T. Greene and Susan G. Watts, "Price Discovery on the NYSE and the NASDAQ: The Case of Overnight and Daytime News Releases," *Financial Management*, Vol. 25, No. 1 (1995): 19-42.

<sup>&</sup>lt;sup>41</sup> See Torben Anderson, Tim Bollerslev, Francis X. Diebold, and Clara Vega, "Micro Effects of Macro Announcements: Real-time Price Discovery in Foreign Exchange," American Economic Review, Vol. 93, No. 1 (2003): 38-62 at 49-50; see also, Louis H. Ederington and Jae Ha Lee, "The Short-Run Dynamics of the Price Adjustment to New Information," The Journal of Financial and Quantitative Analysis, 1995, 30(1): 117-134; see also Louhichi Waël, "Adjustment of stock prices to earnings announcements: evidence from Euronext Paris," Review of Accounting and Finance, Vol. 7, No. 1 (2008): 102-115.

<sup>&</sup>lt;sup>42</sup> See Refet Gurkaynak and Jonathan Wright, "Identification and Inference Using Event Studies," *The Manchester School*, Supplement (2013): 48-65 at 53.

<sup>&</sup>lt;sup>43</sup> See AG/Van Audenrode Report, ¶¶ 38, 75 and Table 6.

<sup>&</sup>lt;sup>44</sup> See AG/Van Audenrode Report, ¶¶ 89-91.

longer response times, our calculations indicated that settlement amounts remained high relative to the amounts that would be typically observed in securities litigation settlements with similar estimates of potential economic loss.

### **C. Measurement of Third Reference Period Damages**

- 42. The Defendants assert that the damages incurred by shareholders as a consequence of the alleged miscommunication by Fortis during the Third Reference Period should be measured on 14 October 2008.
- 43. However, it would be incorrect to look at the price of the Fortis share on 14 October 2008 to measure the impact of the alleged miscommunications by Fortis during the third reference period.<sup>45</sup> Between 3 and 14 October 2008, the Fortis group was amputated of all its banking activities and the entirety of its Dutch operations. The group changed irreversibly in its nature during that period. The price at which Fortis shares were exchanged when trading on Fortis shares resumed reflected this radical change in the group's identity and business, far beyond any alleged misrepresentation that Fortis may have made between 29 September and 3 October 2008.
- 44. If we were to measure potential losses on 14 October 2008, we would be unable to distinguish the stock price impact of the alleged misrepresentations and from the impact of Fortis losing of its banking and Dutch businesses. The inflation estimate that we would measure would grossly overestimate the economic loss suffered by the purchasers of Fortis shares during the first week of October and would be wholly inappropriate.

### **D.** Take-up Rate of Non-Active Claimants

45. The Defendants object to estimates of take-up rates from literature considered in our May 2016 Report on the basis that most of these estimates are derived from settlements of securities litigations in the U.S.<sup>46</sup> Defendants, however, provide no evidence on why take-up rates in the U.S. would be necessarily different from those that would be observed in Europe or in the Netherlands. Instead, the Defendants point to the fact that U.S. laws (common law) are different

<sup>&</sup>lt;sup>45</sup> Statement of Defense by Lawyers for Petitioners, ¶¶ 316-322.

<sup>&</sup>lt;sup>46</sup> Statement of Defense by Lawyers for Petitioners, ¶ 331-344.

from those of the Netherlands (civil law).<sup>47</sup> The Defendants do not explain why they expect these differences would impact take-up rates in settlements.

The Defendants also assert that the take-up rates for non-active claimants in the current settlement 46. would be higher than those estimated in literature, and therefore, there would likely be a higher risk for dilution.<sup>48</sup> Similarly, the Defendants while asserting that the compensation in the Settlement Agreement is "completely insufficient,"<sup>49</sup> also claim that the potentially high value of settlement compensation per shareholder would lead to higher take-up rates than are found in literature.<sup>50</sup> Although studies on take-up rates do not provide information on the average total settlement compensation per shareholder, an examination of the distribution of take-up rates in literature indicate that higher take-up rates are not likely. Figure 1 below shows the distribution in take-up rates in one of the most comprehensive studies on take-up rates based on data from 118 securities fraud class action settlements.<sup>51</sup> Data indicate that in these 118 settlements, the take-up rate never exceeded 54% and that only in 13% of the settlements, the take-up rate did exceed 43%, which is the blended take-up rate<sup>52</sup> that was used to determine the maximum compensation for all Active and Non-Active Claimants. In many of these settlements, the average estimated measure of losses was substantial, leading the authors to conclude that potential claimants with "significant provable losses" fail to submit their claims in securities class action settlements.

<sup>&</sup>lt;sup>47</sup> Statement of Defense by Lawyers for Petitioners, ¶ 344.

<sup>&</sup>lt;sup>48</sup> Statement of Defense by Lawyers for Petitioners, ¶¶ 160-189. According to the Settlement Agreement, if the total compensation claimed by Active or Non-Active Claimants exceeds the Box 1 Cap or Box 2 Cap, respectively, the per share compensation for the relevant claimant group will be adjusted downwards proportionally until the total compensation is equal to the Box 1 Cap or Box 2 Cap. This effect is called "dilution" and refers to the possibility that per share compensation can decrease if take-up rate or the proportion of buyer shares among estimated eligible shares is higher than anticipated.

<sup>&</sup>lt;sup>49</sup> Statement of Defense by Lawyers for Petitioners, ¶ 336. Loose translation of "absoluut niet toereikend".

<sup>&</sup>lt;sup>50</sup> Statement of Defense by Lawyers for Petitioners, ¶ 336.

<sup>&</sup>lt;sup>51</sup> See James D. Cox and Randall S. Thomas, "Letting Billions Slip Through Your Fingers: Empirical Evidence and Legal Implications of the Failure of Financial Institutions to Participate in Securities Class Action Settlements," *Stanford Law Review*, Vol. 58, No. 2 (2005): 411-454, Table 1.

<sup>&</sup>lt;sup>52</sup> The blended take-up rate is calculated by taking the weighted average of the assumed take-up rates for active and non-active claimants, where the weights are given by each claimant group's proportion of eligible shares.

Figure 1 Distribution in Take-Up Rates in Securities Fraud Class Action Settlements



47. It is also worth noting that the active claimants in this settlement are represented by claimant organizations who are experienced in identifying, contacting, and registering claimants in class action litigations. The non-active claimants are specifically those who have not taken affirmative steps to submit their claims or to respond to claimant organizations. It is difficult to expect that these non-active claimants would have substantially higher take-up rates than those identified in literature.

#### E. The Risk of Dilution for Non-Active Claimants

48. As we noted in Section IV above, our May 2016 Report did not only estimate whether the Settlement Agreement adequately compensated shareholders who might have suffered an economic loss because of Fortis' alleged miscommunications, but it also evaluated whether settlement amounts were sufficient to pay the amounts promised in the Settlement Agreement to eligible shareholders who are likely to claim these payments. In our May 2016 Report, we had reached the conclusion that the amounts set aside to compensate both active and non-active

claimants were sufficient under reasonable take-up scenarios.<sup>53</sup> In their statement, however, Defendants argue that the amounts set aside to compensate non-active claimants are not sufficient and that dilution will likely to occur for them.<sup>54</sup>

- 49. To reach that conclusion, the Defendants consider artificial scenarios in which they assume non-active claimants would have a 100 percent take-up. They also illustrate their point by considering, among other examples, a highly unlikely case in which non-active claimants purchased their shares between 21 September 2007 and 7 November 2007; then they sold them between 7 November 2007 and 13 May 2008, to buy them back again between 13 May 2008 and 25 June 2008. Later, *all* of the non-active claimants sold *all* of their shares between 25 June 2008 and 29 September 2008, to buy *all* of them back again between 29 September 2008 and 3 October 2008. Furthermore, *all* of non-active claimants would have held *all* of their shares through 3 October 2008.<sup>55</sup>
- 50. In Section V.D above, we have already discussed the reasons why it is unrealistic to assume that take-up for Non-Active Claimants would be 100 percent. Furthermore, the Two Trader Model ("TTM") that we used to reach our conclusions regarding the risk of dilution is precisely designed to account for the many scenarios of sales and purchases described by the Defendants. The TTM accounts for these different possible scenarios by evaluating whether the trading patterns they imply are consistent with the trading patterns observed in the real world, as opposed to simply enumerating far-fetched hypothetical scenarios.
- 51. Finally, the Defendants also implicitly assume that none of the non-active claimants would hold more than 400 shares.<sup>56</sup> Despite repeatedly acknowledging that the claim form add-on fee is limited to €200 per claimant in the Settlement,<sup>57</sup> the Defendants' calculations are always based on the assumption that the non-active claimants would be entitled to a claim form add-on fee of €0.50 per share for all their shares.<sup>58</sup>

<sup>&</sup>lt;sup>53</sup> See AG/Van Audenrode Report, ¶¶ 88.

<sup>&</sup>lt;sup>54</sup> Statement of Defense by Lawyers for Petitioners, ¶ 160-169.

<sup>&</sup>lt;sup>55</sup> Statement of Defense by Lawyers for Petitioners, ¶ 358.

<sup>&</sup>lt;sup>56</sup> The claim form add-on supplement agreed upon in the Settlement grants non-active claimants EUR 0.50 per share, with a limit of EUR 200 per claimant.

<sup>&</sup>lt;sup>57</sup> Statement of Defense by Lawyers for Petitioners, ¶ 166.

<sup>&</sup>lt;sup>58</sup> Statement of Defense by Lawyers for Petitioners, ¶ 167.

- 52. By definition, we do not know much about non-active claimants. We only know how many shares they represent together. In the absence of their trading records, we can estimate using the TTM how many of these shares would be eligible for compensation as buyers and how many would be eligible for compensation as holders. Beyond that, we do not know how many individuals would be eligible for compensation and for how many of them the maximum of €200 claim form add-on would be binding. Given the absence of reliable information, we chose to not to evaluate this aspect of the Settlement in our May 2016 Report, while still acknowledging that under some take-up scenarios, there exists a small risk of dilution.
- 53. Nevertheless, our conclusion was and remains that the compensation stipulated in the Settlement Agreement is largely sufficient to compensate non-active claimants for their potential economic losses.

#### F. Damages to Rights Subscribers

- 54. The Defendants also assert that the subscribers who exercised their rights to purchase Fortis shares during the first reference suffered economic loss. The Defendants support their claim by speculating about the alleged impact and sufficiency of the information about sub-prime mortgages that were revealed around the time the purchasing rights were issued. However, the Defendants do not provide any economic analysis of their claims or produce any specific evaluation of information that were or were not available at the time of the rights issue.
- 55. It is likely that the Fortis 2007 rights issue would still have occurred, and under similar terms, had Fortis disclosed more detailed information about its subprime portfolio in its September 25 prospectus. In our May 2016 Report, we estimated the upper bound estimate of the abnormal return during the first reference period to be 3.6%.<sup>59</sup> Applying this percentage drop to the unadjusted price of Fortis stocks on September 25, 2007 (the first day of trading on these rights) of €20.26 indicated that the lower bound on Fortis per share price under the alleged corrective information would have been €19.53.<sup>60</sup> This is above the right's exercise price of €15; therefore investors would still have exercised their rights and the rights offer would have been after

<sup>&</sup>lt;sup>59</sup> See AG/Van Audenrode, Section IV.A.2 and ¶ 56.

<sup>&</sup>lt;sup>60</sup> €20.26 × (1 - 0.036) = €19.53.

removing any alleged price inflation, the subscribers did not incur any potential economic loss and should not qualify for compensation from an economic perspective.<sup>61</sup>

56. Two additional considerations give further evidence that the rights issue would have succeeded had more detailed information been disclosed earlier. First, top executives, who had all available information about Fortis at the time of the issue, largely subscribed to the offer. Collectively they purchased over €4 million in Fortis shares.<sup>62</sup> Second, investment bank underwriters, particularly knowledgeable and sophisticated investors, committed to buying all shares that were not taken by shareholders.<sup>63</sup> This decision gave them considerable exposure to Fortis and indicates their confidence the Fortis portfolio was sound.

# VI. RESPONSE TO THE REPORT BY AN UNNAMED PARTY AND STATEMENT FROM DR. PLANTINGA

- 57. The summary of the report by an unnamed party attempts to estimate the potential economic loss to Fortis shareholders resulting from the alleged miscommunications by Fortis. Although the report is short on details on the approach adopted by the unnamed party, it provides just enough information for us to assess the relevance of their methodology. The considerations below are based on our understanding of what the unnamed party does.
- 58. The unnamed party relies on Black-Scholes-Merton pricing models to project how the Fortis share prices might have evolved starting on three specific dates:
  - a. 26 September 2007, corresponding to the start of the first reference period;

<sup>&</sup>lt;sup>61</sup> There are at least two reasons why this calculation overestimates the drop in the Fortis stock price and should be viewed as conservative. Investors were less concerned with subprime defaults on September 25, 2007 compared to November 8, 2007; AAA and AA ABX indices were stable in September but were falling in November 2007; therefore, the Fortis stock price would likely have fallen by less than 5.6%. Second, since the Fortis stock price was lower on November 8, 2007, applying the same price decline to September 25, 2007 would result in a greater euro loss calculation. By overestimating the drop in the Fortis stock price, this conservative calculation underestimates the likelihood of exercise of the rights.

<sup>&</sup>lt;sup>62</sup> Information on Fortis executive's trading behavior is publicly available (and online) since insider trades need to be reported to the Belgian Financial Services and Markets Authority (FSMA), *available at* http://www.fsma.be/fr/Supervision/fm/ma/trans\_bl/TransactionsSearch.aspx?s=1&from=&until=&c=Fortis&P. *See*, in particular, Filip Dierckx, Herman Verwilst, Philippe Bodson, J. Clijsters, Peer van Harten, Gilbert Mittler, Reiner Hagemann, Jozef De Mey, Maurice Lippens, Clara Furse, Karel De Boeck, and Alois Michielsen.

<sup>&</sup>lt;sup>63</sup> See Schedule 2 to the Underwriting Agreement.

- b. 18 June 2008, a date towards the end of the second reference period; and
- c. 29 September 2008, corresponding to the start of the third reference period.
- 59. The unnamed party claims that if the information just prior to a specific date is complete and if Fortis is as sensitive to financial information as an average insurer or bank,<sup>64</sup> Fortis share price should evolve after the date in a manner comparable to one of three benchmarks: (i) the Fortis share price just prior to the date; (ii) a European insurance index during the same period; or (iii) a European banking index during the same period.<sup>65</sup> The unnamed party considers that the potential evolution of the share price over each reference period is fully characterized by the statistical distribution of the returns of the benchmarks. In using a Black-Scholes-Merton model, the unnamed party assumes that this distribution is a normal distribution (i.e. a bell curve.)
- 60. Relying on these particularly restrictive assumptions and on the Black-Scholes-Merton model, the unnamed party repeatedly projects hundreds of different evolution scenarios that mimic the certain and an uncertain component which together determine the path of future prices.<sup>66</sup> This establishes an envelope within which it considers that the Fortis share price should have evolved between the retained date and 14 October 2008. The unnamed party then repeats this analysis for each retained period and for each of its benchmark.
- 61. For each projection, the unnamed party considers the set of possible prices on 14 October 2008 and identifies what they refer to as the "lowest realistic value."<sup>67</sup> Under the assumptions of their analysis, they assert that, if the information just prior to the retained date been accurate, there is a 95% probability that the Fortis share price should have been above the lowest realistic value.<sup>68</sup> The difference between this lowest realistic value and the observed share price on 14 October 2008 is their estimate of loss due to incomplete information.<sup>69</sup>

<sup>&</sup>lt;sup>64</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 9, p. 2.

<sup>&</sup>lt;sup>65</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 9, p. 1.

<sup>&</sup>lt;sup>66</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 9, p. 1.

<sup>&</sup>lt;sup>67</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 9, p. 2. Loose translation of "de laagst realistische waarde."

<sup>&</sup>lt;sup>68</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 9, p. 2.

<sup>&</sup>lt;sup>69</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 9, p. 2.

- 62. An independent expert, Dr. Plantinga from the University of Groningen, gives an opinion with many broad reservations on the unnamed party's conclusions. On the one hand, he states that markets are not perfectly efficient and are influenced by irrational investors, that it is necessary to calculate damages over the whole period during which misrepresentations were made until "the three authorities intervened"<sup>70</sup> and that the assumptions made by the unnamed party are reasonable. On the other hand, Dr. Plantinga also states that "it is not possible to establish that damages calculated in this way necessarily resulted from the incorrect disclosure of information to shareholders" <sup>71</sup> and that "the actual loss could be both higher or lower" <sup>72</sup> than that computed by the unnamed party.
- 63. There are fundamental issues with the unnamed party's methodology and its underlying assumptions, and the conclusions that the unnamed party draws from its findings. In our opinion, the Black-Scholes-Merton model adopted by the unnamed party is entirely inadequate to project the potential future evolution of share prices after a certain date. The Black-Scholes-Merton model was developed for the purpose of understanding the short-term relation between the price of a stock and the price of an option. It is essentially a model which emphasizes short-term relations. Consequently, the Black-Scholes-Merton model relies on hypotheses that may be acceptable in a short-term context, but are entirely inadequate for performing long-term projections.
- 64. First, the Black-Scholes-Merton model assumes that past returns and future returns are normally distributed and that this distribution does not change over time. However, this assumption is contrary to the findings in financial literature. The distribution of stock returns is not constant over time nor is it normally distributed. Near-zero returns and large positive and negative returns occur more frequently than a normal distribution.<sup>73</sup> For example, **Figure 2** compares the actual

<sup>&</sup>lt;sup>70</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 10, p. 2. Loose translation of "de drie overheden hebben geïntervenieerd."

<sup>&</sup>lt;sup>71</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 10, p. 2. Loose translation of "Het is niet mogelijk om vast te stellen dat de schade aldus berekend noodzakelijkerwijs volgt uit de onjuiste informatievoorziening aan de aandeelhouder."

<sup>&</sup>lt;sup>72</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 10, p. 3. Loose translation of "De feitelijke schade zou zowel hoger of lager kunnen zijn."

<sup>&</sup>lt;sup>73</sup> A large part of the empirical literature in finance is dedicated to understanding how the distribution of stock returns differs from the normal distribution. For example, *see* Rama Cont, "Empirical Properties of Asset Returns: Stylized Facts and Statistical Issues," *Quantitative Finance*, Vol. 1, No. 2 (2001): 223-236. *Also see* European Central Bank, "The information content of interest rates and their derivatives for monetary policy," in *ECB Monthly Bulletin* (Frankfurt: European Central Bank, 2000), pp. 37-56. These researchers state "Although"

distribution of returns for the Fortis share between 2 January 1999 and 25 September 2007 with the normal distribution estimated over the same history. Returns near zero and in the tails of the distribution are more likely (higher) than suggested by the normal distribution.

65. Assuming that stock returns are normally distributed greatly underestimates the downside risk incurred by Fortis shareholders. In other words, it assumes an overly optimistic future evolution of the Fortis stock price. Comparing this projection to the actual share price on 14 October 2008 overestimates the economic loss to shareholders.





#### Notes:

The actual distribution of Fortis stock returns is shown as a histogram and the estimated normal distribution of returns is shown as a solid continuous line.

# Sources: [1] Bloomberg, L.P.

the Black-Scholes model is widely used to price options and to calculate implied volatilities, it is commonly known that many of its underlying assumptions do not hold in the real world. In particular, the assumption that asset returns are normally distributed with constant volatility can be rejected for the vast majority of existing assets. In fact, volatility tends to vary over time and return distributions tend to have fatter tails than a normal distribution would imply (i.e. extreme price movements are more frequent than a normal distribution would predict)."

- 66. Second, market conditions affect how well the Black-Scholes-Merton model performs. Researchers have found ample evidence that the model performs differently in the period after the bankruptcy of Lehman Brothers, September 15, 2008, than in the period before.<sup>74</sup> This is important since the Lehman Brothers bankruptcy falls within the projection period of the unnamed party. The unnamed party does not take this major financial market event into account in their analysis, however.
- 67. Third, the unnamed party estimates their model using historical returns of a banking industry index (STOXX Europe 600 Banks) and an insurance industry index (STOXX Europe 600 Insurance). These indices are comprised of many stocks, which will tend to be correlated with one another. While these stocks will exhibit random moves, within each index, these random moves will tend to cancel out. Stock indices, therefore, have a lower absolute level of volatility than individual stocks. Assuming that Fortis stock prices would have evolved like a banking or insurance industry index underestimates the downside risk of Fortis shares. The set of possible prices on 14 October 2008 from projections based on indices will be distributed closer together than the possible paths of an individual stock price. Comparing these projections to the actual share price on 14 October 2008 overestimates the economic loss to shareholders.
- 68. Fourth, while the unnamed party uses projections based on the price history of Fortis's shares, they assert that "this is probably the least reliable method, because it uses information from a previous period rather than the same period."<sup>75</sup> We agree with this assessment. This methodology completely ignores the evolution of the market during each reference period. Moreover, the distribution of Fortis stock returns over the boom that preceded the financial crisis is not an adequate benchmark to assess how the Fortis stock should have behaved during the financial crisis.
- 69. Finally, the unnamed party implicitly assumes that *all* of the underperformance of the Fortis stock is attributable to wrongful disclosures. The reservations of Dr. Plantinga make it clear that he

<sup>&</sup>lt;sup>74</sup> See Andrea Angeli and Cornelius Bonz, "Changes in the Credibility of the Black-Scholes Option Pricing Model Due to Financial Turbulences," Umeå School of Business Working Paper, 2010.

<sup>&</sup>lt;sup>75</sup> Statement of Defense by Lawyers for Petitioners, Exhibit 9, page 3. Loose translation of "dit waarschijnlijk de minst betrouwbare methode is, omdat hier informatie wordt gebruikt uit een eerdere periode in plaats van dezelfde periode."

disagrees with this assumption.<sup>76</sup> Between each of the retained dates and 14 October 2008, there were many pieces of information that Fortis and others (e.g., credit rating agencies) disclosed correctly and in a timely fashion. Several of these disclosures caused the Fortis stock price to underperform. The unnamed party benchmarks the performance of the Fortis stock over extended periods of time without consideration for these valid disclosures. In so doing, they are effectively pooling disclosures during the period(s) together and suggesting the economic loss to claimants is that attributable to the accumulation of all negative events and disclosures. This leads to a gross overestimation of the value attributable to the alleged wrongful disclosures.

Executed on 24 February 2017,

Marc Van Audenrode

<sup>&</sup>lt;sup>76</sup> He states "it is not possible to determine that the loss so calculated necessarily follows from the wrong disclosures made to the shareholder." Statement of Defense by Lawyers for Petitioners, Exhibit 10, p. 2. Loose translation of "Het is niet mogelijk om vast te stellen dat de schade aldus berekend noodzakelijkerwijs volgt uit de onjuiste informatievoorziening aan de aandeelhouder."