-MERGER ANTITRUST LAW

LAWJ/G-1469-05
Georgetown University Law Center
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CLASS 7 WRITTEN ASSIGNMENT—INSTRUCTOR'S ANSWER

Instructions

Submit by email by 11:10 am on Tuesday, September 19
Send to wdc30@georgetown.edu
Subject line: Merger Antitrust Law: Assignment for Class 7

Assignment

A. *Financial questions*: Calls for short answers in short paragraphs that the average person can understand. Math is neither required nor desired.

Company A wants to acquire 100% of Company B through a negotiated merger. The proposed plan of merger calls for Company A to pay cash to Company B's shareholders as consideration for their interests in Company B. Company B is a widely held Delaware corporation that only issues common stock. Company B's stock is traded on the New York Stock Exchange.

1. Explain what is meant by Company B's "market capitalization."
2. Explain why Company A will have to pay a premium above Company B's market capitalization in order to acquire Company B. (There are two reasons.)
3. Explain how Company A will determine the maximum price per share it would be willing to pay for Company B's stock.
4. Explain how Company B might try to bargain with Company A for a high purchase price.
5. Once the two companies have reached an agreement on price and signed a definitive merger agreement, explain how another company can make a bid for Company B that Company B's board of directors must consider.

B. *Aon/WTW*:[1] Calls for a prediction supported by a financial analysis. *The date is July 15, 2021*.

I encourage you to work in groups on this problem

On March 9, 2020, Aon and Willis Towers Watson (WTW), the second and third largest of the "Big Three" insurance brokers, announced their intention to combine in an all-stock transaction, creating a company with a pro forma combined equity value of approximately $80 billion. Under the merger agreement, WTW shareholders will receive 1.08 Aon shares for each Willis Towers Watson share for a total deal consideration of $30 billion [ADDED]. The purchase price

[1] This is a real matter and I have taken the facts in this problem from company reports and court documents. If you are interested in more on this case, see Aon/Willis Tower Watson in Unit 14 on AppliedAntitrust.com for additional materials. Although this is a merger, think of Aon as the buyer and WTW as the seller (since WTW shareholders get premium).

represents a 16.2% premium to Willis Towers Watson's closing share price on March 6, 2020, and will result in the WTW shareholders holding 37% of the stock in the combined company.

The companies expect that the transaction will yield annual synergies of $267 million in the first year, $600 million in the second year, and $800 million thereafter. They also anticipate that the transitional cost to achieve these expected synergies will be $1.4 billion split equally in the first two years. The companies also expect transaction costs of approximately $200 million and retention costs of up to $400 million, both payable in the first year. In its investor presentation at the time of the deal's announcement, Aon stated that it anticipates "over $10 billion of expected shareholder value, from the capitalized value of expected pre-tax synergies and net of expected one time transaction, retention and integration costs."[2]

The drop-dead date for the deal is September 9, 2021. If the deal does not close for antitrust reasons, Aon must pay WTW an antitrust reverse termination fee of $1 billion.

The transaction is subject to review by the United States and the European Commission.[3] The European Commission approved the deal with conditions (divestitures) on July 9, 2021. Given that the EC review is suspensory, the deal could not have closed before receiving EU approval. In setting their strategy, the parties assumed that the EC-required divestitures, perhaps with some additional divestitures that would be acceptable to the parties, would be sufficient to satisfy the Department of Justice and enable the parties to close under a consent decree.

The parties were wrong. The DOJ refused to accept the additional divestitures offered by the parties to settle the investigation. On June 16, 2021, the Department of Justice filed a Section 7 complaint in the United States District Court for the District of Columbia. The parties say that the divestitures required by the European Commission plus additional divestiture they offered negates all Section 7 concerns about the deal and that they intend to litigate the fix.

The case was assigned to Judge Reggie Walton. Citing the drop-dead date of September 9, the merging parties asked Judge Walton to begin the trial on August 23 or as soon thereafter as possible (suggesting implicitly that the parties would extend the drop-dead date for at least a short period of time beyond September 9). The DOJ responded with a proposed trial date of February 28, 2022, five and a half months later than the date proposed by the merging parties and a little more than eight months after the filing of the complaint. On July 9, Judge Walton set the trial dates for November 18, 2021, to November 23, 2021, and from December 20, 2021, to December 22, 2021, for a total of seven trial days. Judge Walton, presumably recognizing that a trial starting eight months after the filing of the complaint was unusually long in these types of cases, explained that these were the earliest times he had available given the criminal trials already scheduled involving prosecutions in connection with the January 6 insurrection.

The date is July 15, 2021. You are advising an arbitrager. The arb wants to know whether you think WTW will exercise its unilateral right to terminate the merger agreement on the September 9 drop-dead date and take the $1 billion reverse breakup fee or instead agree to

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[2] Aon plc & Willis Towers Watson, Investor Presentation: Combination of Aon and Willis Towers Watson: Creating a Next Generation Global Professional Services Firm 6 (Mar. 9, 2020).

[3] It is also subject to review in a variety of other jurisdictions, including Australia, Canada, New Zealand, Singapore, and South Africa. The merging parties claim, and you should assume here, that these other jurisdictions will clear the deal by September 9 either finding no competitive concerns with the deal or accepting a fix offered by the companies.

extend the termination date until the trial court issues a decision (most likely in February 2022). Assume that it will cost WTW $10 million in out-of-pocket expenses for its part in the litigation beyond the drop-dead date. The companies have not announced how the divestitures required by the EC or offered to the United States will affect the synergies expected from the transaction. GuruFocus.com reported that on July 15, 2021, WTW's weighted average cost of capital (WACC) was 5.16% and its return on invested capital (ROIC) was 3.19%.

Bonus question: Should Aon agree to extend the drop-dead date in order to litigate, or should it terminate the deal on September 9 and pay WTW the $1 billion breakup fee? Assume that Aon will pay $15 million in out-of-pocket expenses for its part in the litigation. GuruFocus.com reported that on July 15, 2021, Aon's weighted average cost of capital (WACC) was 5.8% and its return on invested capital (ROIC) was 8.47%.

Send me an email if you have any questions. See you in class.

INSTRUCTOR'S ANSWER

A. Financial questions

1. Explain what is meant by Company B's "market capitalization."

   Market capitalization is the aggregate value of the company's outstanding capital stock measured by the number of shares times the trading price for each share.[4] For example, if Company B only has one class of capital stock (common stock), has 100,000 shares outstanding (issued) of this stock, and the trading price is $76 per share, then Company B's market capitalization is 100,000 times $76 or $7,600,000. If Company B has multiple classes of capital stock, its market capitalization is the aggregate value of all classes of the outstanding stock. A company's market capitalization changes with changes in the number of shares of capital stock outstanding or in the stock price.

2. Explain why Company A will have to pay a premium above Company B's market capitalization in order to acquire Company B. (There are two reasons.)

   First, the trading price of a company's shares is the price at which demand for the stock equals the supply so that (in principle) there is no trading. In other words, no stockholder is willing to sell one or more of its shares at a price that a buyer is willing to pay. This means that every shareholder values the shares it owns at least at the trading price, and some shareholders are likely to value their shares at a much higher price (that is, they expect the company to do better than the trading price would predict). This generates an upward-sloping supply curve for the stock. If Company A wants to purchase a certain quantity of Company B's shares and Company A cannot discriminate in the prices it pays

[4] Capital stock is the number of common and preferred shares that a company is authorized to issue under its corporate charter. The outstanding capital stock are the shares that the company has actually issued.

to Company B selling shareholders, Company A will have to offer a price sufficiently above the current trading price to induce Company B's existing shareholders to sell the number of shares that Company A wants to buy.

Second, Company A will have to pay Company A will want to buy Company B only if Company A believes that Company B will be more valuable in Company A's hands than the price Company A will have to pay (including the amount necessary to induce the required stock sales on the supply curve) to acquire Company B. Call this the "gains from trade" of Company A acquiring Company B. If Company B can block the sale,[5] then Company B can bargain for a portion of these gains from trade in terms of higher consideration to be paid to Company B's shareholders. This additional force will require Company A to pay more than the market price for Company B's shares.

The difference between the price Company A pays to acquire a share of Company B and the unaffected trading price is called the *premium per share*.[6] The aggregate amount of this premium Company A will have to pay is the *premium over market capitalization*.

3. Explain how Company A will determine the maximum price per share it would be willing to pay for Company B's stock.

   As explained above, Company A will be willing to acquire Company B only if Company A believes that Company B will be more valuable in Company A's hands. Thus, the maximum price per share Company A would be willing to pay for Company B's stock is the amount that would make Company A indifferent to acquiring or not acquiring Company B. For example, if Company B has a current market capitalization of $7,600,000 and Company A believes that the acquisition of Company B would yield $400,000 of discounted present value in synergies, then Company A would be willing at most to pay $8,000,000 for Company B.

4. Explain how Company B might try to bargain with Company A for a high purchase price.

   As explained above, if Company B can block Company A's acquisition of Company B's shares, then Company B refuses to deal with Company A unless Company A pays a higher price.

   Moreover, if there are other potential buyers for Company B, then Company B can "play off" Company A and the other potential buyers against each other and thereby obtain a higher price. Assuming Company A has the highest willingness to pay for Company B, then Company B should be able to bargain for a purchase price equal to the second highest maximum willingness to pay of the remaining bidders.

5. Once the two companies have reached an agreement on price and signed a definitive merger agreement, explain how another company can make a bid for Company B that Company B's board of directors must consider.

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[5] In the case where Company B is the wholly owned subsidiary of Company C, Company C can simply refuse to sell unless Company A gives some of the gains from trade with Company C. In the case of a widely held public company, Company B's board of directors may be able to influence the willingness of Company B's shareholders to sell their stock through its recommendations to Company B's shareholders.

[6] "Unaffected" here means the price at which the stock would be trading if there was no information in the market that Company A wanted to buy Company B.

Company B is a Delaware corporation and the transaction is a state law merger, which will require approval by a shareholder vote. Under Delaware corporate law, Company B's directors would violate their fiduciary duties to Company B's shareholders if the directors did not retain the right to terminate the purchase agreement with Company A and accept a superior offer by another bidder up until the time Company B's shareholders vote to approve the merger with Company A.

B. Aon/Willis

The date is July 15, 2021. You are advising an arbitrager. The arb wants to know whether you think WTW (the "seller") will (a) exercise its unilateral right to terminate the merger agreement on the September 9 drop-dead date and take the $1 billion reverse breakup fee, or (b) agree to extend the termination date until the trial court issues a decision (most likely in February 2022). The arb tells you to assume that it will cost WTW $10 million in out-of-pocket expenses for its part in the litigation. The companies have not announced how the divestitures required by the EC or offered to the United States will affect the synergies expected from the transaction. GuruFocus.com reported that on July 15, 2021, WTW's weighted average cost of capital (WACC) was 5.16% and its return on invested capital (ROIC) was 3.19%.

The first step is to identify the sources of WTW's gain if the deal is enjoined at the end of the litigation and does not close. There are three factors to consider: (1) the discounted present value of the $1 billion reverse breakup fee given the five-month delay in the receipt; (2) out-of-pocket litigation expenses of $10 million; and (3) further declines in WTW's "going concern value" as a result of the "damaged goods" problem confronting sellers.[7] Each of these losses needs to be evaluated for its presented discounted value. For the present value calculations, the "present" is the drop-dead date.

1. *The antitrust reverse termination fee*. The critical thing to observe here is that in the injunction scenario, the ARTF is *delayed* but not eliminated by the litigation. The earliest WTW would unilaterally terminate the purchase agreement is the drop-dead date of September 9. Judge Walton's decision reasonably could be expected in February, about five months later. So the loss of the ARTF is the loss associated with delaying the ATF payment for five months. This loss is equivalent to the discounted present value of $1 billion payable five months from September 9. WTW's weighted average cost of capital is 5.16%, so this is a good annual discount rate to use.

The formula for present value is:

$$PV = \frac{FV}{(1+r)^n},$$

where

[7] A fourth source of loss would be distraction of senior management by the litigation. After 18 months of investigation and litigation, the additional time senior management needs to spend on the remaining litigation should be relatively insignificant. The time already spent in defending the investigation is already sunk. We should be looking only at incremental losses.

PV is the discounted present value
FV is the future value (here, $1 billion)
r is the discount rate (here, 5.16% annually or 0.43% monthly)
n is the number of periods (here, 5 months)

So (in $millions):[8]

$$PV = \frac{FV}{(1+r)^n} = \frac{\$1000}{(1+0.0043)^5} = \$978.77$$

The loss associated with the delay is then:

FV – PV = $978.77 million − $1000 million = −$21.23 million

That is, in present value terms, the WTW shareholders will receive $21.23 million less in the current buying power of the reverse breakup fee because of the five-month delay in receiving the payment. Net, however, they would receive $978.77 million in discounted present value as of September 9.

2. *Litigation costs*. If WTW agrees to litigate, it will incur anticipated additional litigation costs of $10 million. It will incur no litigation costs beyond those incurred before the drop-dead date if it terminates the purchase agreement on September 9.

Loss associated with additional litigation costs: $10 million[9]

3. *Additional loss of going concern value*. Sellers typically lose going concern value and become "damaged goods" between the signing of the merger agreement and the closing. During this time, the target often loses strategic direction, fails to make investments or pursue opportunities it otherwise would have done in the absence of the pending transaction, and employees—some of them key, especially in sales—leave the company for other jobs rather than wait and risk getting laid off after the closing. This probably happened to WTW after it signed the merger agreement. But the signing occurred on March 9, 2020, 18 months before the drop-dead date. Most of the damage to WTW's going concern value probably will occur during this period, with relatively little or no additional damage during the additional five months between the drop-dead date and the end of the litigation.

Loss associated with additional diminution in going concern value: $0

Total gain to WTW shareholders if they litigate and lose:
$978.77 million − $10 million + $ 0 million = $968.77 million loss

[8] You can calculate this out manually or, better yet, use the PV function in Excel.

[9] We could try to do a present value calculation if we made some assumption how the $10 million in litigation expenses would be allocated over time, but the difference between the nominal value and the discounted present value is so small that we can ignore it.

The second step is to identify and value the gains to the WTW shareholders if the deal closes at the end of litigation. There are three factors to consider here: (1) the litigation costs; (2) the premium WTW will pay to the Aon shareholders in the deal purchase price upon closing, and (3) the net present value of the deal synergies WTW shareholders expect from their 37% equity share in the combined company as the synergies accrue.

1. *Litigation costs*. −$10 million.

2. *The deal premium*. The parties' investor presentation states that the WTW shareholders will receive Aon stock valued at $30 billion in exchange for their WTW shares, yielding a deal premium of 16.2%. In dollars, the deal premium is 16.2% of $30 billion or about $4.86 billion. In other words, if the deal closes after litigation, the WTW shareholders will immediately gain $4.86 billion in value apart from any synergy gain.[10]

   But the deal will not close until February 2022, so the deal premium must be discounted to the present (i.e., the drop-dead date):

$$PV = \frac{FV}{(1+r)^n} = \frac{\$4860}{(1+0.0043)^5} = \$4756.84 \text{ million}$$

3. *The net present value of the synergies*. The parties anticipate annual run-rate synergies of $800 million beginning in year 3. They also expect gross synergies to be $267 million in the first year after closing and $600 million in the second year. Attaining these synergies entails transitional costs of $1.4 billion split equally in the first two years. In addition, the companies expect transaction costs of approximately $200 million and retention costs of up to $400 million, all to be incurred in the first year.

   The following table gives the anticipated annual synergies, expenses, and net cashflow in nominal dollars for the combined company in the first twenty years following the closing:

[10] This is not quite right, but I did not give you the information necessary to do the correct calculation. The problem is that Aon closing share price increased from $214.81 on March 6, 2020 (the date before the announcement) to $231.26 on July 15, 2021 (the date the question is being asked) while the stock exchange ratio in the all-stock deal stayed constant at 1.08 shares of Aon stock for each share of WTW stock. By using the original deal premium of $4.86 billion, we implicitly assumed that the Aon stock price had not changed. In fact, the Aon stock price had increased 7.7%. At the same time, however, WTW's "unaffected" stock price might have changed with changes in the broader market. The parties terminated the deal on July 26, 2021, and the WTW stock price in the next few following days should have reflected in "unaffected" stock price around July 15. The WTW average closing stock price for the five business days following the announcement was $208.00. With Aon shares at $214.81 and WTW's "unaffected" stock price of $208.00, then at a stock exchange ratio of 1.08 the deal premium on July 15, 2021 would have decreased to 11.54% or $3.462 billion, a loss of $1.398 billion.

Table 1
Combined Company Net Synergy
Nominal Cashflow

Year	Synergies	Costs	Net CF
1	$267.00	$1,300.00	($1,033.00)
2	$600.00	$700.00	($100.00)
3	$800.00	$0.00	$800.00
4	$800.00	$0.00	$800.00
5	$800.00	$0.00	$800.00
6	$800.00	$0.00	$800.00
7	$800.00	$0.00	$800.00
8	$800.00	$0.00	$800.00
9	$800.00	$0.00	$800.00
10	$800.00	$0.00	$800.00
11	$800.00	$0.00	$800.00
12	$800.00	$0.00	$800.00
13	$800.00	$0.00	$800.00
14	$800.00	$0.00	$800.00
15	$800.00	$0.00	$800.00
16	$800.00	$0.00	$800.00
17	$800.00	$0.00	$800.00
18	$800.00	$0.00	$800.00
19	$800.00	$0.00	$800.00
20	$800.00	$0.00	$800.00

The numbers in Table 1 need to be discounted to their present value as of September 9 and then summed to obtain the net discounted value of the synergies cashflow expected from the deal. This calculation requires a discount rate and the time period for the cash flows to be considered.

The discount rate should take account of the time value of money to WTW as well as the risk of uncertainty and volatility in the synergies. GuruFocus.com reported that on July 15, 2021, WTW's weighted average cost of capital (WACC) was 5.16%, which is a good starting point for the time value of money. However, while low today, interest rates could be considerably higher in the future, suggesting that the discount rate should be higher. Moreover, there is risk that the combined company will not achieve the anticipated $800 million in run-rate synergies and that the nominal value of the synergies will decline over time with changes in products or the competitive landscape. A discount rate of 8% is likely to provide a more realistic net present value.[11]

[11] Obviously, different people will have different views of the proper discount rate. Since we are trying to predict the behavior of WTW, the people that count in this exercise are the WTW management.

Again, because the future is difficult to predict with confidence, the WTW shareholders are likely to look at anticipated cash flows over 10, or maybe 15 or even 20 years, but not in perpetuity. Using the present value formula, we can calculate the present value for each of the cash flows in Table 1 at an 8% discount rate. The cumulative present value (CPV) of the cash flows is then the sum of the cash flows over the period in question. The WTW shareholders, however, will not receive 100% of the benefits of the synergies since they will own only 37% of the combined company, so Table 2 adds a final column giving the value of 37% of the combined company's synergy CPV.

Table 2

Combined Company Synergy NPV

(discounted at 8%)

Year	Synergies	Costs	Net CF	PV	CPV	37%
1	$267.00	$1,300.00	($1,033.00)	($956.48)	($956.48)	($353.90)
2	$600.00	$700.00	($100.00)	($85.73)	($1,042.22)	($385.62)
3	$800.00	$0.00	$800.00	$635.07	($407.15)	($150.65)
4	$800.00	$0.00	$800.00	$588.02	$180.87	$66.92
5	$800.00	$0.00	$800.00	$544.47	$725.34	$268.38
6	$800.00	$0.00	$800.00	$504.14	$1,229.48	$454.91
7	$800.00	$0.00	$800.00	$466.79	$1,696.27	$627.62
8	$800.00	$0.00	$800.00	$432.22	$2,128.48	$787.54
9	$800.00	$0.00	$800.00	$400.20	$2,528.68	$935.61
10	$800.00	$0.00	$800.00	$370.55	$2,899.24	$1,072.72
11	$800.00	$0.00	$800.00	$343.11	$3,242.34	$1,199.67
12	$800.00	$0.00	$800.00	$317.69	$3,560.04	$1,317.21
13	$800.00	$0.00	$800.00	$294.16	$3,854.19	$1,426.05
14	$800.00	$0.00	$800.00	$272.37	$4,126.56	$1,526.83
15	$800.00	$0.00	$800.00	$252.19	$4,378.76	$1,620.14
16	$800.00	$0.00	$800.00	$233.51	$4,612.27	$1,706.54
17	$800.00	$0.00	$800.00	$216.22	$4,828.48	$1,786.54
18	$800.00	$0.00	$800.00	$200.20	$5,028.68	$1,860.61
19	$800.00	$0.00	$800.00	$185.37	$5,214.05	$1,929.20
20	$800.00	$0.00	$800.00	$171.64	$5,385.69	$1,992.71

So, for example, using a 10-year outlook, the net present value of the synergies anticipated to result from the merger at an 8% discount rate is $2,899.24 million, of which $1,072.72 million will accrue to the benefit of the WTW shareholders if the court denies the injunction and the deal closes.

Under our assumptions and a 10-year time horizon, the total gain to WTW shareholders if they litigate rather than terminate the merger agreement on the drop-dead date and the deal closes is:

$$-10 \text{ million} + \$4{,}756.84 \text{ million} + \$1{,}072.72 \text{ million} = \$5{,}819.56 \text{ million}.$$

The question for the WTW shareholders is whether they should terminate the deal at the drop-dead date or agree to extend the drop-dead date and litigate. This question is equivalent to asking whether they would risk losing $31 million in order to gamble on winning about $5.8 billion.

We can be more precise. Suppose Aon is a risk-neutral firm and that it evaluates its options based on their expected value. Let p be WTW's (subjective) probability of winning the litigation and closing the deal. We can calculate the tipping probability p^* by equating the expected value of extending the drop-dead date with the expected value of terminating on September 9:

$$\begin{aligned} \text{E(extending)} &= \text{E(terminating)} \\ (p^*)(\text{extending and winning}) + (1-p)(\text{extending and losing}) &= \text{E(terminating)} \\ (p^*)(5819.56) + (1-p^*)(\$968.77) &= 1000 \end{aligned}$$

Solving for p^*, the tipping point is 0.64%.[12] So WTW should terminate and take the $1 billion ARTF on September 9 only if it believes that the probability of winning is less than 0.64%.

Two observations on this:

1. Unless the WTW shareholders believe that the merging parties have almost no chance of success on the merits in the litigation, they should extend the drop-dead date and litigate the merits.

2. Given the wide disparity between the contingent loss and the contingent gain, the conclusion is not very sensitive to our assumptions. Over 75% of the contingent gain is in the deal premium, so that even if the annual run-rate synergies were $400 million rather than $800 million—or even if they were zero—any material probability of winning would justify litigation. Likewise, the WTW discount rate could be much higher or the time horizon for evaluating the synergies could be much shorter, and the same conclusion would result.

Bonus question: Should Aon agree to extend the drop-dead date in order to litigate, or should it terminate the deal on September 9 and pay WTW the $1 billion breakup fee? Assume that Aon will pay $15 million in additional out-of-pocket expenses for its part in the litigation.

[12] You can solve this by hand, but the easy way is to use the MathPapa algebra calculator.

GuruFocus.com reported that on July 15, 2021, Aon's weighted average cost of capital (WACC) was 5.8% and its return on invested capital (ROIC) was 8.47%.

The analysis here is analytically similar to the WTW shareholder analysis we just performed. Aon should look at the costs of litigating and losing compared to the possible gain from litigating and winning.

The costs of litigating and losing are (1) the out-of-pocket costs of litigating and (2) the "costs" of delaying the payment of the antitrust reverse termination fee by five months.

1. *Costs of litigation*. Aon estimates that the additional costs of litigating beyond September will be $15 million.

2. *"Costs" delaying ARTF payment*. The "cost" of delaying the payment is actually a gain since Aon can earn the float on the $1 billion breakup fee during the five months of delay. Aon's weighted average cost of capital is 5.8% or about 0.48% a month, so the present value of $1 billion paid five months from September 9 is.

$$PV = \frac{FV}{(1+r)^n} = \frac{\$1000}{(1+0.0048)^5} = \$976.34 \text{ million}$$

where

P is the principal (here $1 billion)
r is the interest rate (here 5.8% annually or 0.4833% per month)[13]

The gain to Aon associated with the delay is then:

FV – PV = $1000 million - $976.34 million = $23.66 million

Total loss to Aon shareholders if they litigate and lose:
-$15 million -$976.34 million = -$991.34 million
For a gain of $8.66 million compared to terminating on the drop-dead date

The gain from litigating and winning is Aon's share of the NPV of the synergies resulting from the deal minus the deal premium minus the $15 million in litigation expenses.

1. *Gain from the synergies*. Assume again a discount rate of 8% as we did in creating Table 2. This time, however, 63% of the synergies will accrue to Aon. Table 3 provides the results.

[13] The discounted present value of $1 billion paid five months out will differ between Aon and WTW because their respective discount rates differ.

Table 3

Combined Company Synergy NPV

(discounted at 8%)

Year	Synergies	Costs	Net CF	PV	NPV	63%
1	$267.00	$1,300.00	($1,033.00)	($956.48)	($956.48)	($602.58)
2	$600.00	$700.00	($100.00)	($85.73)	($1,042.22)	($656.60)
3	$800.00	$0.00	$800.00	$635.07	($407.15)	($256.50)
4	$800.00	$0.00	$800.00	$588.02	$180.87	$113.95
5	$800.00	$0.00	$800.00	$544.47	$725.34	$456.96
6	$800.00	$0.00	$800.00	$504.14	$1,229.48	$774.57
7	$800.00	$0.00	$800.00	$466.79	$1,696.27	$1,068.65
8	$800.00	$0.00	$800.00	$432.22	$2,128.48	$1,340.94
9	$800.00	$0.00	$800.00	$400.20	$2,528.68	$1,593.07
10	$800.00	$0.00	$800.00	$370.55	$2,899.24	$1,826.52
11	$800.00	$0.00	$800.00	$343.11	$3,242.34	$2,042.68
12	$800.00	$0.00	$800.00	$317.69	$3,560.04	$2,242.82
13	$800.00	$0.00	$800.00	$294.16	$3,854.19	$2,428.14
14	$800.00	$0.00	$800.00	$272.37	$4,126.56	$2,599.73
15	$800.00	$0.00	$800.00	$252.19	$4,378.76	$2,758.62
16	$800.00	$0.00	$800.00	$233.51	$4,612.27	$2,905.73
17	$800.00	$0.00	$800.00	$216.22	$4,828.48	$3,041.94
18	$800.00	$0.00	$800.00	$200.20	$5,028.68	$3,168.07
19	$800.00	$0.00	$800.00	$185.37	$5,214.05	$3,284.85
20	$800.00	$0.00	$800.00	$171.64	$5,385.69	$3,392.99

Again, if Aon looks only ten years out, the net present value of the synergies that will accrue to it is $1,826.52 million.

2. *Present value of the deal premium*. The nominal loss here is the same magnitude (only negative) as the deal premium gained by the WTW shareholders, that is, $4,800 million, which needs to be discounted to the present for the five months of delay at Aon's 5.8% WACC:

$$PV = \frac{FV}{(1+r)^n} = \frac{\$4860}{(1+0.0048)^5} = \$4{,}686.44 \text{ million}$$

3. *Litigation costs*. Aon anticipates the costs of litigating the merits after the drop-dead date to be $15 million.

Bottom line: The gain to Aon from litigating and wining is

$1,826.52 million − $4,686.44 million − $15 million = −$2,874.92 million!!

Under our assumptions, Aon should not litigate but rather should cut its losses, terminate the merger agreement at the drop-dead date, and pay the $1 billion ARTF.

What is going on here?

As noted in the problem, Aon stated in its investor presentation at the time of the announcement of the deal that it anticipates "over $10 billion of expected shareholder value, from the capitalized value of expected pre-tax synergies and net of expected one time transaction, retention and integration costs." A NPV of $10 billion for the combined company yields a NPV benefit to the Aon shareholders of $6.3 billion given its 63% ownership of the combined company. Redoing the gains from litigating and winning calculation, we now have a significant but not huge positive return:

$$\$6{,}300 \text{ million} - \$4{,}800 \text{ million} - \$15 \text{ million} = +\$1{,}485 \text{ million}$$

This provides the justification for Aon going forward with the deal in the first instance. It would gain $1,500 million in NPV synergy gain after paying the deal premium to the WTW shareholders.

But does the $10 billion in the present value of synergy gains net of costs make sense? The excluded costs totaled $2 billion, so that the net present value of the gross synergies gain for the combined company would have to be $12 billion. At a zero discount rate, it would take 15 years of earning $800 million per year to reach a NPV of $12 billion, but certainly the proper discount rate must be much higher than zero. This suggests that the time horizon for the cash flow must be much greater than 12 years. Indeed, at an 8% discount rate, shows that it would take over 100 years just to cover the deal premium.

To take the extreme, let's assume the time horizon is perpetual, that is, it goes on forever. The Aon investor presentation does not give us the details of its NPV calculation, but consider the discount rate that would be required on a perpetuity of $800 million to achieve a NPV of $12 billion:

$$\frac{\$800}{r} = \$12{,}000,$$

which implies that $r = 6.67\%$. This discount rate is only 87 basis points greater than Aon's WACC of 5.8% and 1800 basis points lower than the 8.47% that Aon earns on average on its invested capital. This suggests that a NPV synergy gain of $10 billion for the combined company is unrealistically high and that, when properly evaluated, the deal did not make sense from the beginning for Aon.

The market apparently agreed. On March 9, 2020, the date of announcement, Aon's stock price closed down 16% compared to its close on the previous business day (214.81 to 178.93), indicating that the market believed that Aon stock would lose value as a result of the deal. As we will discuss in class, it is not unusual for the buyer's stock price to fall with the announcement of a significant acquisition.[14]

[14] The market also was down on March 9. The Dow Jones closed down 1.0%, the S&P closed down 1.7%, and the NASDAQ closed down 1.9%.

Moreover, Aon stock did not recover over time when compared to the Dow Jones Industrial Average (DJIA):

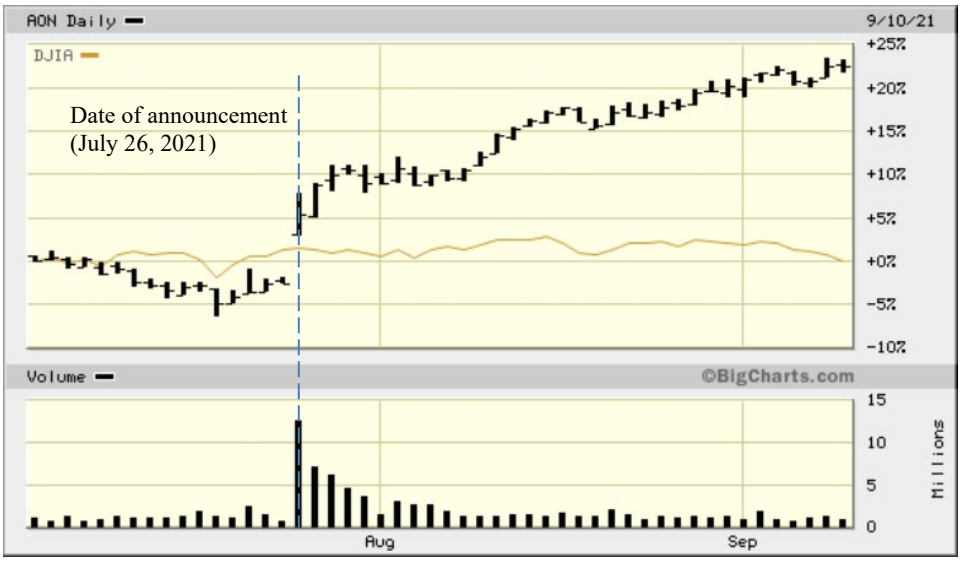
Between the announcement (March 9, 2020) and July 24, 2021, Aon stock rose 17.1% while the DJIA rose 35.9%.

What ultimately happened?

On July 26, 2021, Aon and WTW announced that they had agreed to terminate their merger agreement. The joint press release, of course, said that the agreement to terminate was mutual.[15] It could have been if both parties assessed the chances of prevailing in litigation at essentially zero, but otherwise, as the analysis above shows, WTW should have wanted to fight it out because the deal premium was so high and litigation would only delay—but not eliminate—the payment of the antitrust reverse breakup fee if the litigation failed. Did WTW really want to walk or was Aon the moving force here? I have not been able to find out. But note that Aon stock closed up 8.2% on the day of the announcement and has continued to increase significantly compared to the Dow Jones Industrial Average. The arbs who were long on Aon were not disappointed with the collapse of the deal. Conversely, WTW stock dropped 9.0% the day of the announcement. See the charts below.

[15] News Release, Aon plc & Willis Towers Watson, *Aon and Willis Towers Watson Mutually Agree to Terminate Combination Agreement* (July 26, 2021)

Percentage Change in Aon Closing Prices
July 1, 2021 – September 10, 2021



Percentage Change in WTW Closing Prices
July 1, 2021 – September 10, 2021