DESAUTELS Capital Management Gestion de capitaux

Sector: TMT
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November 2, 2016

TMT Special Topic: Merger Update

Time Warner Inc.

(NYSE: TWX $88.10)

At a press conference on Saturday, October 22, Donald Trump stated: "As an example of the power structure I'm fighting, AT&T is buying Time Warner and thus CNN, a deal we will not approve in my administration because it's too much concentration of power in the hands of too few". Hillary Clinton was more measured in her response, stating "I am going to follow it closely, and obviously if I am fortunate enough to be president, I will expect the government to conduct a very thorough analysis before making a decision". The market was clearly spooked by these comments. The implied probability of the deal going through now stands at about 35%. We take the candidates' pre-election comments with a grain of salt. A closer look at regulatory considerations suggests there is a slightly better than 50% chance that the deal will go through, with certain stringent conditions, as explained below.

Key Points:

- **On October 22nd, AT&T announced a cash and share bid for Time Warner Inc., one of DCM's current holdings.**
- **Based on regulatory and industry factors, and precedent analysis, we believe there is a 55% chance the deal will go through. This compares to a market-implied probability of approximately 35%.**
- **Our valuation of TWX based on the probability of the deal closing and our intrinsic valuation gives us a price target of about $103.**
- **An important and overlooked feature of the merger deal is the collar structure of the share exchange. We use an options-based replicating strategy to value this component of the bid and to back out the market-implied probability of the deal closing.**

Regulatory Background

The Federal Communications Commission (FCC) is an independent agency of the US government and regulates the US' interstate radio, TV, wire, satellite and cable industries. The agency is led by five commissioners (all selected by the President and confirmed by the Senate) and a Chairman (one of the appointed commissioners). Only three of five commissioners can belong to the same political party. The current FCC Chairman is Tom Wheeler, a Democrat supporter appointed by President Obama. One of the FCC's stated goals is that "The competitive framework for communications services should foster innovation and offer consumers reliable, meaningful choice in affordable services". Overall, the FCC will be focused on trying to shape the business practices of the combined company – such as not allowing Time Warner's content to be offered exclusively to AT&T subscribers.

The Antitrust Division of the US Justice Department will also weigh in on the deal based on anti-competitive considerations. However, since the merger leads mainly to vertical integration there is less to worry from a competitive standpoint. Below we outline some regulatory issues in more detail.

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Potential Regulatory Hurdles

Over-the-Top (OTT) Restrictions

- We predict regulators will examine the impact of the integration of HBO NOW as AT&T's wireline pay-TV distribution services (~14% of revenues) has previously been threatened by OTT "disruptors"
- In theory, AT&T could discontinue the standalone OTT service HBO NOW so that consumers are forced to buy their pay-tv package from DirecTV. This would be perceived as anti-consumer and anti-innovation as it would restrict consumer offerings while putting too much bargaining power in the hands of AT&T
- If this deal goes through, DCM predicts there will be stringent conditions set on the discontinuation of standalone OTT

Restricting premium content access to competing MVPD's

- With this acquisition, AT&T will own some of the best content in the world. Given Turner has 3 of the top 10 primetime programs and HBO has some of the best premium content, AT&T could theoretically –
    1. Restrict other MVPDs' access to distribute their content
    2. Charge extremely high affiliate fees so that AT&T can underprice other MVPDs
    3. Favour Turner's channels over competitors' channels (ex: putting CNN next to all other premium channels on the guide while isolating Fox News)
- This would be deemed uncompetitive and we expect regulators to impose conditions on the pricing and distribution of Time Warner content

Net neutrality: Data Charge

- With the 10% acquisition of Hulu, Time Warner has entered the SVOD industry and intends to enter the live SVOD market in the new year. With the rise of many consumers (primarily millennials) switching to mobile streaming, companies have been targeting this segment
- Namely, Verizon's Go90 allows users to stream live and on-demand content such as NBA games through this service with no effect on their monthly data cap. Users can also stream Netflix through their mobile devices at the expense of hitting their data-cap
- This goes against the concept of net neutrality since Netflix data is unable to compete through price discrimination. Verizon is getting away with it because of nuances in the laws since they are not directly discriminating against competitors
- We expect AT&T will implement a similar model for Hulu/HBO NOW and we expect competitors and consumer groups to advocate for stringent regulation on this matter

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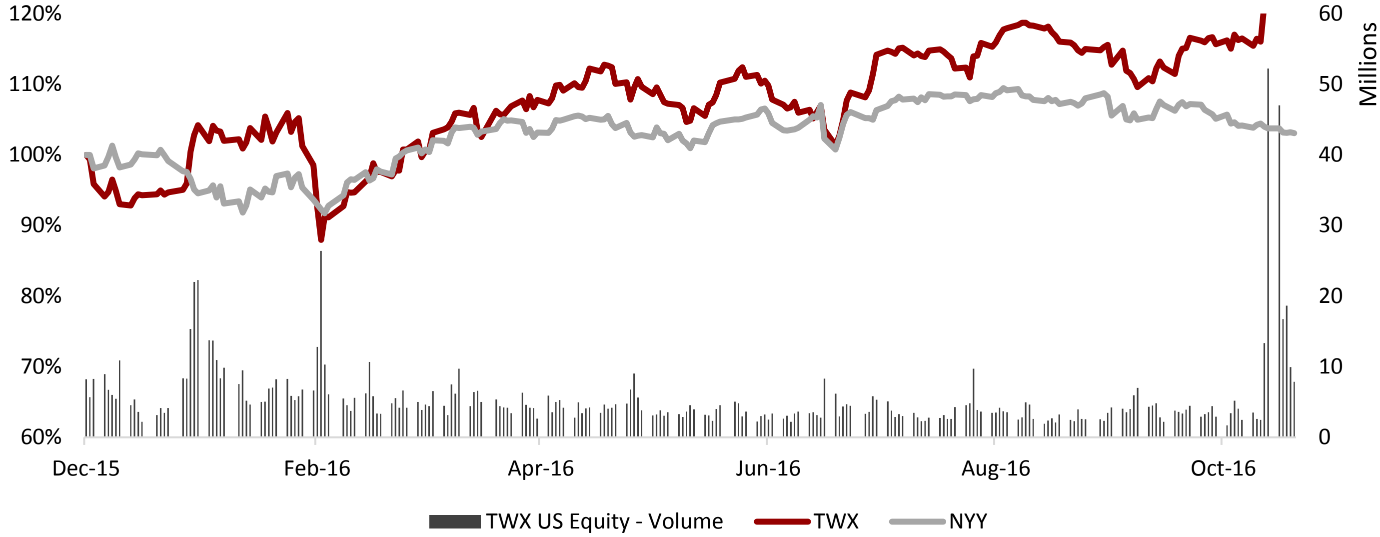
Price Target: $103.20

Trading History (1 year)



Precedent Analysis

Telecommunications & Media Space Precedent Transactions						
Buyer	Seller	Year	Valuation($USDbn)	Buyer Positioning	Strategic Integration	Regulatory Approval
Charter Communications	Time Warner Cable	2016	55.1	#4	Horizontal	Success
AT&T	DirecTV	2015	67.0	#2	Veritcal	Success
Comcast	Time Warner Cable	2014	45.2	#1	Horizontal	Failure
AT&T	T-Mobile USA	2011	39.0	#2	Horizontal	Failure
Comcast	NBC Universal	2009	30.0	#1	Vertical	Success
Mean			47.3			
AT&T	Time Warner Inc.	2016	85.0	#2	Vertical	

1. ***Charter Communication – Time Warner Cable (2016, $55.1bn)***
   Charter Communications, the fourth largest American cable operator, acquired Time Warner Cable in 2016 to position itself as a clear #2 to Comcast in the American broadband and cable provider space. This merger was approved in the wake of the failed Comcast – Time Warner Cable deal in 2014. In comparison, this deal actually helped equalize the playing field rather than consolidate market power (helping Charter catch up to Comcast), which was most likely why it was approved, despite the high degree of horizontal integration involved.

2. ***AT&T – DirecTV (2015, $67.0bn)***
   AT&T, the second largest American wireless carrier after Verizon, successfully acquired DirecTV in 2015 to add broadband satellite TV to its repertoire to position itself as the second largest TV Provider after Comcast. The vertically integrated aspect of this deal most likely contributed to AT&T's favorable ruling since this type of deal is less punishing to peer competition and consumer power than market-taking horizontally integrated deals. Moreover, the deal only places them at a tertiary position rather than a leading one, with the presence of incumbent Comcast to keep them in check.

3. *Comcast – Time Warner (2014, $45.2bn)*
   Before the successful acquisition of Time Warner Cable in 2016, Comcast made the same bid for the popular cable company but was not granted approval by the FCC. Like the successful Chartered acquisition, this was a horizontally integrated deal. However, this would have propelled Comcast into being the dominant US cable and broadband provider by a large margin. The deal was blocked by the FCC on the basis of one entity holding too much power (merger to monopoly).

4. *AT&T – T-Mobile USA (2011, $39.0bn)*
   Horizontally integrated deal attempt in 2011 that was not approved by the FCC, which cited the following rationale: "significant harms to competition are likely to result, primarily in the form of increased prices for consumers, reduced incentives for innovation, and decreased consumer choice". This merger would have united the 2nd and 3rd largest mobile carriers in the US and allowed them to surpass the current leader (Verizon Wireless). This effectively consolidates the market into two giant players, leaving the third runner-up, Sprint Corporation, with merely a third of the respective revenues of the two leaders. Consistent with the theme we observed with Comcast - Time Warner Cable, in the eyes of the FCC, a market leader horizontally integrated merger, which further consolidated an already consolidated industry is a big red flag.

5. *Comcast – NBC Universal (2009, $30.0bn)*
   This 2009 FCC approved deal, which combined NBC Universal's media content with Comcast's distribution channels, is the best comparison to the current AT&T – Time Warner Inc. deal. Both are cases of vertical integration between a media conglomerate and a broadband/cable distributor. The primary concern with this deal was the potential for Comcast to abuse the proprietary content produced by NBC Universal (increasing prices for their competitors, restricting access, etc.) which is the exact form of behavior anti-trust laws seek to protect against. However, the eventual approval of this deal has since poised the vertically integrated "creator-distributor" model as an accepted industry standard.

Valuation

Our overall 103.20 TWX valuation is based on the probability that the deal closes (55% in our view), the value of the bid if the deal closes (103.35) based on our calculations below, and the value of TWX if the deal fails to materialize (103). The latter is based on our original TWX price target, which is based on our fundamental analysis of the company on a stand-alone basis. We also consider the case where the stock price reverts to its pre-announcement value of 80, in which case the overall value is 93.

If the deal closes, TWX shareholders will receive 53.75 in cash, and 53.75 worth of AT&T shares *if AT&T's average stock price is between 37.411 and 41.349 at closing*. If, however, the share price is outside this range, shareholders will get 1.437 AT&T shares if AT&T's average stock price is below 37.411 at closing and 1.3 AT&T shares if AT&T's average stock price is above 41.349 at closing. The payout structure of the share portion of the deal is known as a collar, sometimes referred to as a "Travolta" (from Saturday Night Fever) due to the visuals of the payout profile shown below.

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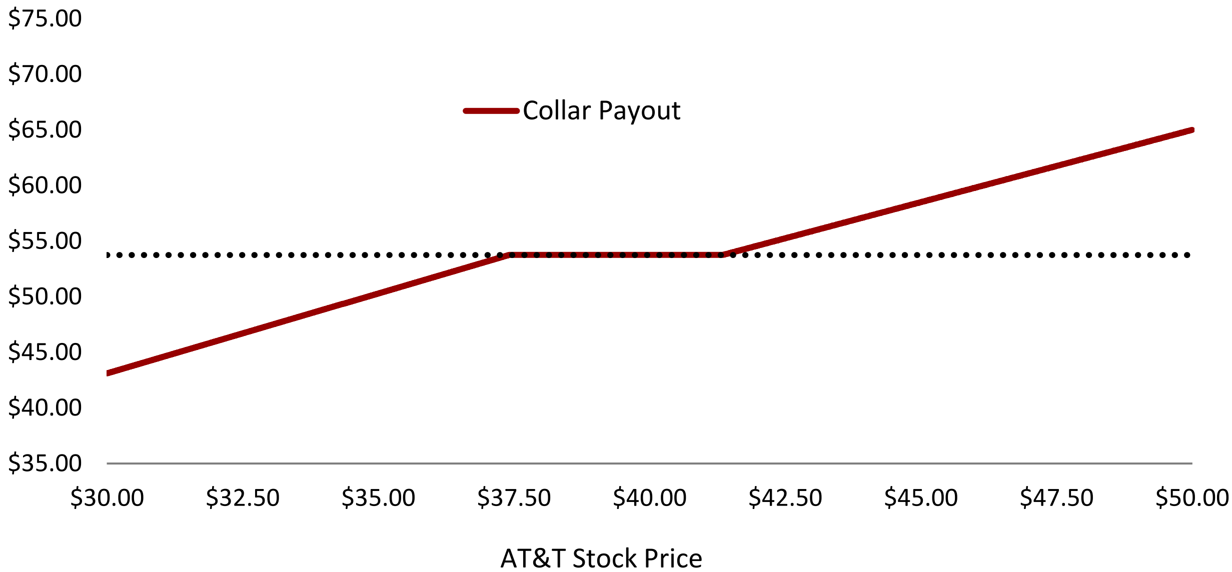

In order to value the collar, we valued a set of securities that would mimic the collar payout if the deal were to close. TWX shareholders' compensation from the collar portion of the deal is equivalent to:

i. long 1.437 shares of AT&T
ii. short 1.437 call options on AT&T with a strike price of 37.411 and maturity 1 year
iii. long 1.3 call options on AT&T with a strike price of 41.349 and maturity 1 year

We estimate the cost of the above, and add to this the Present Value of the 53.75 cash portion of the deal and obtain a value of 103.35. Note that this is about $4 below the widely quoted figure of $107.50, which ignores the fact that TWX shareholders won't necessarily get $53.75 worth of AT&T shares if the deal closes, due to the collar structure. Intuitively, the asymmetry of the collar makes it so that the upside benefit is less valuable than the downside risk.

Overall, the value of one share of TWX at time t can be thought of as:

$TWX_t = P[\, 1.437(S_t) - 1.437(C_{1t}) + 1.3(C_{2t}) + PV(53.75)] + (1-P)[PV(TWX_0)]$

where

- P is the probability that the deal goes through
- PV(53.75) is the present value of the 53.75 cash portion of the deal
- TWX_0 is the value of TWX if the deal fails. We assume two cases here.
    - Case 1: we use our own intrinsic valuation for the stock, which we believe is $103, based on our price target prior to the merger announcement
    - Case 2: the stock price reverts back to the pre-announcement level of 80
- S_t is AT&T's stock price at time t (can be observed at any time t)
- C_{1t} is the price of the 37.411 call (assumed maturity of 1 year based on estimated time to closing)
- C_{2t} is the price of the 41.349 call (assumed maturity of 1 year based on estimated time to closing)

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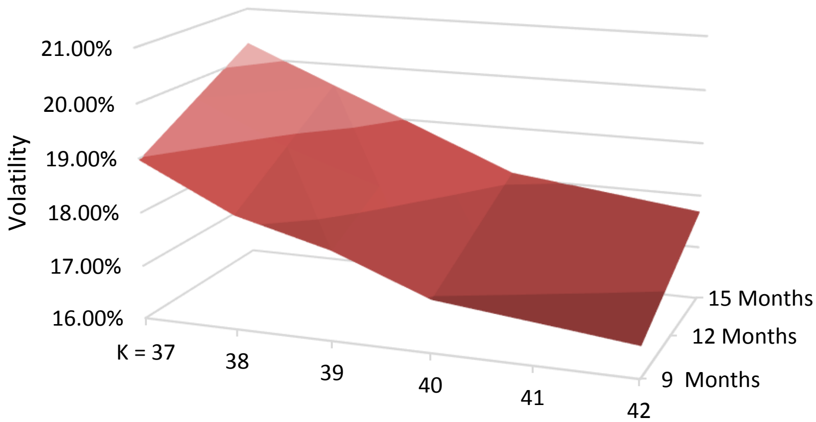
In order to estimate the value of the options we first back out the implied volatility from current prices of publicly traded options on AT&T. Since public quotes are not available for 1 year expirations, and are only available at discrete strike prices, we linearly interpolated the implied volatility surface based on 9-month and 15-month options, with strike prices nearest to the collar-end values. Next, based on the interpolated implied volatilities, we used the Black-Scholes formula to price the options. The implied volatility surface and the estimated option prices are shown below.



Option Pricing	
Prices	
Short call	$1.66
Long call	$0.55
Stock	$36.56
Assumptions	
Risk free rate	0.65%
Cost of Carry	-4.72%

As noted above, our overall valuation turns out to be 103.20 for Case 1 and 93 for Case 2, both above the current TWX share price. We estimate that the market implied probability of the deal closing is about 35%, which is below our 55% estimate.

Leverage Analysis

When evaluating the deal, our team was initially concerned about AT&T's ability to pay without becoming severely over-levered. However, upon further analysis, as seen below, AT&T's leverage ratio will not exceed 3.0x on a pro-forma basis, which we consider to be within a reasonable range. In the calculations, we assume AT&T will raise $40bn in debt and acquire $21.9bn in net debt of Time Warner. Additionally, we assumed $1bn of synergies realized over the first three years post-closing and an interest rate of 3.25% on the debt.

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Go-Forward Leverage Calculation	
2016E TWX+T Debt	172.0
2017E TWX FCF	4.8
2017E T FCF	18.7
Run-Rate Synergies	0.7
Incremental Interest Expense	1.3
Incremental Dividends Paid	2.4
Cash Available for Debt Repayment	27.9
Pro Forma 2017E TWX+T Debt	**144.1**
T 2017E EBITDA	55.4
TWX 2017E EBITDA	8.9
Run-Rate Synergies	0.7
Pro Forma TWX+T EBITDA	**65.0**
Pro Forma Net Debt / EBITDA	**2.2x**

Pro Forma 2016E Leverage Calculation	
Existing T Net Debt	110.1
Net Debt From Transaction	61.9
Pro Forma TWX+T Debt	**172.0**
T 2016E EBITDA	53.2
TWX 2016E EBITDA	8.3
Run-Rate Synergies	0.3
Pro Forma TWX+T EBITDA	**61.8**
Pro Forma Net Debt / EBITDA	**2.8x**

Summary

Historically, the main regulatory risk factors have been: horizontal integration and highly monopolistic consolidation. Looking at the successes of the past seven years, there have been two approved vertically integrated deals and one approved horizontally integrated deal. AT&T and Time Warner Inc. will be a vertically integrated merger, which is generally less privy to public backlash and intense regulatory scrutiny. Unlike their Comcast-NBC Universal pioneer predecessors, AT&T and Time Warner will have the added benefit of being able to point to a similar successful previous transaction.

AT&T's biggest regulatory challenge will be to prove to regulators that this deal will benefit third parties and the innovation of video streaming. DCM believes there is a case to be argued. With the rapid advancement of technological innovations in the wireless space, it is clear that there is massive growth in mobile streaming. AT&T can argue that internalizing the content creators' operations with the distributor's will accelerate the process of optimizing mobile streaming by avoiding the bureaucratic hurdles of contract negotiations and litigations. In addition, AT&T can leverage their data to push customized advertisements to their users, allowing them to compete with the mobile-ad powerhouses of Facebook and Google while enabling better service with digital advertisers. Both of these cases illustrate AT&T's ability to accelerate innovation while creating a more competitive mobile advertisement space. As previously outlined, we believe there will be tough regulations that will impede on potential synergies but that AT&T can get this deal through.

Based on our analysis of AT&T's pro-forma fundamentals, we see that financing should not be an issue. We believe the market is pricing in a very low probability of a successful merger because the press concerning this merger has been quite pessimistic with a large political focus. In our opinion, however, this is a classic case of political rhetoric that will not get acted on. Moreover, we think there is still value to extract and we maintain our price target of about $103.

Overall, we will continue to hold our position in TWX unless there are further developments in the merger or the stock price gravitates towards our intrinsic value.

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