Bridging the Valuation Gap: Assessing Twitter's Market Premium Using Meta as a Strategic Benchmark

FNCE30011
Essentials of Corporate Valuation

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Part A. PE Multiples of Meta and Twitter

1. Meta

- Share Price Close 29/04/2022: **$200.47**

- Shares Outstanding 22/04/2022:
  - Class A: 2,293,518,778
  - Class B: 412,804,609
  - **Total: 2,706,323,387**

- Market Cap = Share Price x Shares Outstanding
  = $200.47 x 2,706,323,387
  = **$542,536,649,391.89**
  - Note: Since data for outstanding shares was only available up until 22/04/2022, there could be a small discrepancy in market cap value since we are using the close price on 29/04/2022.

- Earnings After Tax (EAT):
  - Since we are using Meta's share price on 29/04/2022 to calculate the trailing PE multiple, we need to find the net income for the period 01/05/2021 to 29/04/2022. However, we only have financial data from Meta up until 31/03/2022. Therefore we will use the TTM EAT as at 31/03/2022.
  - **TTM EAT (as at 31/03/2022):**
    = 10K 2021 EAT – Q1 2021 EAT + Q1 2022 EAT
    = 39,370,000,000 – 9,497,000,000 + 7,465,000,000
    = **$37,338,000,000**

- **TTM PE Multiple:**

$$PE = \frac{Market\ Cap}{EAT}$$

$$PE = \frac{542{,}536{,}649{,}391.89}{37{,}338{,}000{,}000}$$

$$\boldsymbol{PE = 14.53}$$

- The above TTM PE multiple is representative of Meta's core operations and surplus assets. We can breakdown the PE multiple into $PE_{core\ ops}$ and $PE_{surplus\ assets}$ to get a better understanding of Meta.

- To calculate the TTM $PE_{core\ ops}$ multiple we need to adjust Meta's market cap for assets and liabilities unrelated to the firm's operations, giving us a more accurate estimate. The following figures were obtained from Meta's 10Q 2022 statement.

  Surplus Assets:

  - Cash & Cash Equivalents: $14,886,000,000
  - Marketable Securities: $29,004,000,000
  - Equity Investments: $6,775,000,000
  - Goodwill: $19,923,000,000
  - **Total: $70,588,000,000**

  Surplus Liabilities:

  - Instalment of one time tax payment (included in other liabilities line item, refer to notes p.44 in Meta's 10Q 2022):
    $1,510,000,000

- **Adjusted Market Cap = Market Cap – Surplus Assets + Surplus Liabilities**
  = $473,458,649,391.89

- We now need to find Meta's EAT excluding the effect of surplus assets (SA).
    - TTM surplus asset income before tax (as at 31/03/2022):
        = 10K 2021 SA income − 10Q 2021 SA income + 10Q 2022 SA income
        = 531,000,000 − 125,000,000 + 384,000,000
        = $790,000,000
    - Using the US corporate tax (21%) we can find Meta's after tax earnings from surplus assets:
        = 790,000,000 x (1 − 0.21)
        = $624,100,000
    - Meta's EAT excluding the effect of surplus assets is:
        = 37,338,000,000 - 624,100,000
        = **$36,713,900,000**
- **TTM $PE_{core\ ops}$ Multiple:**

$$PE_{core\ ops} = \frac{Adjusted\ Market\ Cap}{EAT\ excluding\ effect\ of\ surplus\ assets}$$

$$PE_{core\ ops} = \frac{473,458,649,391.89}{36,713,900,000}$$

$$\boldsymbol{PE_{core\ ops} = 12.90}$$

- **TTM $PE_{surplus\ assets}$ Multiple:**

$$PE_{surplus\ assets} = \frac{Net\ Value\ of\ Surlpus\ Assets}{EAT\ of\ surplus\ assets}$$

$$PE_{surplus\ assets} = \frac{69,078,000,000}{624,100,000}$$

$$\boldsymbol{PE_{surplus\ assets} = 110.68}$$

2. Twitter

- Share Price Close 29/04/2022: **$49.02**
- Shares Outstanding 22/04/2022: **764,180,688**
- Market Cap = Share Price x Shares Outstanding
  $49.02 x 764,180,688
  $37,460,137,326.00
  - Note: Since data for outstanding shares was only available up until 22/04/2022, there could be a small discrepancy in market cap value since we are using the close price on 29/04/2022.
- Earnings After Tax (EAT):
  - Since we are using Twitter's share price on 29/04/2022 to calculate the trailing PE multiple, we need to find the net income for the period 01/05/2021 to 29/04/2022. However, we only have financial data from Twitter up until 31/03/2022. Therefore we will use the TTM EAT as at 31/03/2022.
  - **TTM EAT (as at 31/03/2022):**
    = 10K 2021 EAT – Q1 2021 EAT + Q1 2022 EAT
    = -221,409,000 – 68,005,000 + 513,286,000
    = **$223,872,000**
- **TTM PE Multiple**:

$$PE = \frac{Market\ Cap}{EAT}$$

$$PE = \frac{37,460,137,326}{223,872,000}$$

$$\boldsymbol{PE = 167.33}$$

- The above TTM PE multiple is representative of Twitter's core operations and surplus assets. We can breakdown the PE multiple into $PE_{core\ ops}$ and $PE_{surplus\ assets}$ to get a better understanding of Twitter.

- To calculate the TTM $PE_{core\ ops}$ multiple we need to adjust Twitter's market cap for assets and liabilities unrelated to the firm's operations, giving us a more accurate estimate. The following figures were obtained from Twitter's 10Q 2022 statement.

  Surplus Assets:
  - Cash & Cash Equivalents: $2,283,308,000
  - Short-term Investments: $3,978,645,000
  - Goodwill: $1,298,462,000
  - **Total: $7,560,235,000**
- **Adjusted Market Cap = Market Cap - Surplus Assets + Surplus Liabilities**
  = $29,899,902,326

- We now need to find Twitter's EAT excluding the effect of surplus assets (SA).
  - TTM surplus asset income before tax (as at 31/03/2022):
    = 10K 2021 SA income – 10Q 2021 SA income + 10Q 2022 SA income
    = 132,812,000 + 1,456,000 – 11,007,000
    = $123,261,000
  - Using the US corporate tax (21%) we can find Twitter's after tax earnings from surplus assets:
    = 123,261,000 x (1 – 0.21)
    = $97,376,190
  - Twitter's EAT excluding the effect of surplus assets is:
    = 223,872,000 - 97,376,190
    = **$126,495,810**

- **TTM $PE_{core\ ops}$ Multiple:**

$$PE_{core\ ops} = \frac{Adjusted\ Market\ Cap}{EAT\ excluding\ effect\ of\ surplus\ assets}$$

$$PE_{core\ ops} = \frac{29{,}899{,}902{,}326}{126{,}495{,}810}$$

$$\boldsymbol{PE_{core\ ops} = 236.37}$$

- **TTM $PE_{surplus\ assets}$ Multiple:**

$$PE_{surplus\ assets} = \frac{Net\ Value\ of\ Surlpus\ Assets}{EAT\ of\ surplus\ assets}$$

$$PE_{surplus\ assets} = \frac{7{,}560{,}235{,}000}{97{,}376{,}190}$$

$$\boldsymbol{PE_{surplus\ assets} = 77.64}$$

Part B. Twitter Valuation Using Meta as Sole Comparator

Firm	Meta	Twitter
ESTIMATING EARNINGS FROM CORE OPERATIONS		
Earnings After Tax (EAT)	$ 37,338,000,000.00	$ 223,872,000.00
Before Tax Surplus Assest Income	$ 790,000,000.00	$ 123,261,000.00
Tax on Surplus Assest Income (21%)	$ 165,900,000.00	$ 25,884,810.00
After Tax Surplus Assest Income	$ 624,100,000.00	$ 97,376,190.00
EAT excluding Surplus Assest Income	$ 36,713,900,000.00	$ 126,495,810.00
ESTIMATING PE OF COMPARATOR FIRM (Meta)		
Equity (Firm)	$ 542,536,649,391.89	
less Surplus Assets	$ 69,078,000,000.00	
Equity (Core Operations)	$ 473,458,649,391.89	
PE (core operations)	12.90	12.90
VALUING Twitter WITH Meta's PE		
Equity (Core Operations)		$ 1,631,276,855.80
add Surplus Assets		$ 7,560,235,000.00
Equity (Firm)		**$ 9,191,511,855.80**

Part C. Discussion & Conclusion

- Using Meta as a sole comparator, Twitter's actual market equity value of $37,460,137,326 is overpriced by a factor of more than four compared to the firm equity value of $9,191,511,855.80 calculated above.

- However, this valuation is likely to be inaccurate. Accurate estimation of a firm's value using PE multiples relies on both firms having similar core operations, and more specifically, having similar **risk** and **growth potential**. Since Meta and Twitter are both tech stocks, we would expect them to have high risk relative to the market as a whole. Yet, comparing Meta's TTM $PE_{\text{core ops}}$ of 12.90 to Twitter's TTM $PE_{\text{core ops}}$ of 236.37, we notice an extremely large variation. This imbalance could be explained by Twitter having relatively lower risk and/or much higher growth potential than Meta. That being said, Meta's PE is also relatively low compared to the average market PE. A possible explanation for this could be Meta's recent extreme change in strategy, pivoting away from being a traditional social media platform to the "metaverse", which is essentially a network of virtual reality worlds focused on connection. Since this technology is very new and has an unpredictable future, it makes sense that Meta's risk has greatly increased and growth potential is uncertain (thereby reducing its PE). Therefore, it no longer has similar risk and growth potential compared to Twitter, so it should not be used as a sole comparator to value Twitter.

- Since Twitter was valued with a lower TTM PEcore ops multiple than it should have been, it is clear that its true valuation is higher than what we calculated. However, without data from a comparable firm with similar risk and growth potential, it is hard to say what Twitter's true valuation is. Therefore, it is challenging to accurately evaluate Elon Musk's takeover offer of $54.20 per share. If we were to use Twitter's share price as at 29/04/2022 ($49.02), Musk would be paying a premium for control of: $\frac{54.20-49.02}{49.02} = 10.57\%$. This is much lower than the average 20% to 35% premium for control, however many factors affect the premium for control actually paid such as overall market conditions, the state of a particular industry and findings during due diligence. For example, during the due diligence period Musk stated, via a tweet on twitter, that the firm had a larger number of bots (automated accounts) than initially disclosed. Since Twitter's main source of revenue is from online advertisements, this claim is quite serious, and the deal has currently been put on hold. Since Musk's tweet, Twitter's share price has fallen to about $37.

- In conclusion, to make a comparison of Twitter's value and Musk's takeover offer, an Independent Expert's Report would need to be carried out, or at the very least we ourselves would need data from a firm with operational risk and growth potential similar to Twitter for our results to be reliable.

Reference

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