Navigating valuations in the world of COVID-19

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Purpose
Navigating valuations in the world of COVID-19

Given the continued increase in the number of worldwide cases of COVID-19 accompanied by the decline in equity market values and higher volatility resulting from increased economic uncertainty and public health concerns, we expect valuations to be increasingly complex in the weeks to come. In particular, valuation preparers will be faced with the difficult task of assessing fair value for the 31 March 2020 reporting date (and thereafter). Public companies may be faced with triggering events and be compelled to re-evaluate recoverable amounts and fair values of assets. Similarly, private equity and pension funds may need to assess fair value adjustments. These valuations will require significant professional judgment.

The purpose of this document is to highlight some, but not necessarily all, of the challenges that preparers of valuations are likely to face in the coming weeks. It is not meant to prescribe solutions for valuation issues or represent a PwC conclusion as to how one should proceed. Similarly, this document has been prepared for discussion and informational purposes only and accordingly, PwC makes no representations, and accepts no liability, with respect to the suitability of the matters discussed herein for individual valuation purposes and any conclusions drawn.
Background
COVID-19 has caused equity markets to drop and volatility to rise dramatically

- Since the last week of February, the SSE Composite Index, SZSE Composite Index, CSI 300, HSI and other major world indices all saw a steep decline in value on rising trading volumes.
- Major indices in Mainland China generally outperformed the HSI and other major world indices such as the SPX.
- At the same time, volatility indices began rising sharply (e.g. from 10% – 20% to a peak of ~65% for the HSI).

Navigating valuations in the world of COVID-19

PwC
Most sectors in Mainland China and Hong Kong have been impacted, but some more than others

- Both globally and in Mainland China the energy sector has been the hardest hit in the first quarter, due largely to the drop in oil prices. The real estate and financials sectors have been the next hardest hit.
- Hong Kong has seen similar percentage falls in both the energy and real estate sectors, but with the consumer sector showing even worse performance.
The corporate bond market in the US is more liquid than those in Mainland China and Hong Kong. It can be observed that the 20-year US bond spread (BBB versus Treasury) widened by about 1% between the end of February and 31 March 2020.
By way of comparison, bond spreads increased significantly during the credit crisis in 2008 but such increase was measured over weeks.
Trading multiples have generally declined

- Due to volatility in stock markets, the median trading multiples have generally fallen in Mainland China and Hong Kong.
- As with the decline in equity values, the impacts to trading multiples differ across industry sectors.

**P/E – Mainland China-listed Stocks**
(12/31/2019 - 03/31/2020)

**P/E – Hong Kong-listed Stocks**
(12/31/2019 - 03/31/2020)
There has been a steep decline in global M&A activity

- There has been a gradual decline in value (USD billions) and count in global M&A quarterly activity since Q2 2018 with a significant drop in Q1 2020 in both volume and deal value.
- Average control premiums have followed a similar trend with a drop to ~10% in Q1 2020 vs. an average premium of ~20% in 2018 and 2019.
3

Value considerations
In the face of the COVID-19 pandemic, the concepts and objectives of **Fair Value**, **Fair Market Value** and **Market Value** remain unchanged.

### Key concepts of **Fair Value**, **Fair Market Value** and **Market Value**

In the face of the COVID-19 pandemic, the concepts and objectives of **Fair Value**, **Fair Market Value** and **Market Value** remain unchanged.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fair Value</strong></td>
<td>“The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.”</td>
<td>IFRS 13</td>
</tr>
<tr>
<td><strong>Fair Market Value</strong></td>
<td>“The price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts.”</td>
<td>US IRS</td>
</tr>
<tr>
<td><strong>Market Value</strong></td>
<td>“The estimated amount for which a valuation subject is exchanged on the date of valuation between a willing buyer and a willing seller in an arm’s length transaction, where the parties each acted rationally and free from compulsion.”</td>
<td>China Appraisal Society Guidance Notes</td>
</tr>
</tbody>
</table>

Key concepts of **Fair Value**, **Fair Market Value** and **Market Value** include, but are not limited to the following:

- A notional market transaction → contemplates a transaction
- An exit value → business / asset to be sold in current market conditions
- A willing buyer and seller
- The parties are under no compulsion to act → not a fire sale
- Reasonable knowledge of relevant facts → what is known / knowable as at the valuation date
- At a specific point in time → hindsight should not be considered (other than to test known facts)
Forecasting may present new challenges

An increased amount of diligence and scrutiny may be required when assessing forecasts over the next 6 to 18 months. It is important to understand how each component of the business is affected, level of preparedness and the crisis plan implemented.

Consider the impact of...

- Product demand and mix changes
- Demand volume volatility
- Contract renegotiations
- Major supply chain disruption
- Workforce safety and restructuring
- Production and factory shutdowns
- Termination of leases
- Stimulus and fiscal and monetary policy
- Trade terms and price wars
- F/X changes

And the impact on...

- Immediate cash runway
- Medium-term cash pressure
- Covenants and debt maturity
- Upcoming re-financings / capital raises
- Supply chain, demand and operations planning
- Forecast dividends and distributions and share price

There may be a greater need for sensitivity and scenario analysis (to derive probability adjusted cash flows) in certain areas:

- Length of time shock reflected and to what extent.
- Length of recovery period and what recovery period looks like.
- Impacts to revenues, costs, working capital, capex, financing, and government intervention.

One may need to consider extending forecasts to get to a point where a terminal growth factor (e.g. inflation) can be applied.
Greater attention to individual cost of capital inputs is likely required

**Illustrative Weighted Average Cost of Capital ("WACC")**

The following table shows the key inputs used in the determination of the WACC:

<table>
<thead>
<tr>
<th></th>
<th>Mainland China-based</th>
<th>Hong Kong-based</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12/31/2019</td>
<td>03/31/2020</td>
</tr>
<tr>
<td><strong>Risk-free rate</strong></td>
<td>3.1%</td>
<td>2.8%</td>
</tr>
<tr>
<td><strong>Equity risk premium</strong></td>
<td>7.7%</td>
<td>8.4%</td>
</tr>
<tr>
<td><strong>Relevered equity beta</strong></td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Size premium</strong></td>
<td>3.4%</td>
<td>3.2%</td>
</tr>
<tr>
<td><strong>Company-specific risk premium / alpha</strong></td>
<td>0.0%</td>
<td>0.5%</td>
</tr>
<tr>
<td><strong>Cost of equity</strong></td>
<td><strong>11.9%</strong></td>
<td><strong>13.2%</strong></td>
</tr>
<tr>
<td><strong>Pre-tax cost of debt</strong></td>
<td>6.0%</td>
<td>7.0%</td>
</tr>
<tr>
<td><strong>Tax rate</strong></td>
<td>25.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td><strong>After-tax cost of debt</strong></td>
<td><strong>4.5%</strong></td>
<td><strong>5.3%</strong></td>
</tr>
<tr>
<td><strong>Debt as a % of total capital</strong></td>
<td>20.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td><strong>After-tax WACC (rounded)</strong></td>
<td><strong>10.4%</strong></td>
<td><strong>11.6%</strong></td>
</tr>
</tbody>
</table>

* Represents the unsystematic or diversifiable risk associated with a specific company which is not included in the Capital Asset Pricing Model (CAPM) calculation.

**Risk-free rate** – there has been an overall decline in risk free rates due to central bank actions.

**Beta** – careful consideration should be given to movements in observed betas when using historical observations.

**Equity risk premium (ERP) and alpha** – given the volatility observed in stock markets, there is likely to be an increase in risk which may either be reflected in the ERP or through an alpha adjustment (see comments on next page).

**Cost of debt** – bond spreads have generally increased and credit ratings may be adjusted which will impact costs of debt.

**Capital structure** – should be based on a long-term forward looking view however historical market observations may be distorted given volatility in both equity and debt markets.
Where forecasts cannot be updated, an “alpha” factor may need to be applied to the discount rate

- The alpha is likely to be a key area of focus in the near term (e.g. 31 March 2020 valuation date) as it may be difficult to re-forecast with any level of precision yet.
- Adjustments to the alpha could be significant if forecasts have not been revised. Key considerations may include:
  - Cash flow assumptions relative to macro economic factors.
  - COVID-19 forecast risks – e.g. loss of customers, supply, etc.
  - Use sensitivity / scenario analysis to help assess risk and impact on value for alternative outcomes.
- It is important to note however, that compensating for forecast risks through an alpha adjustment is a highly judgmental exercise and could under or over compensate for these risks.
- Where an alpha adjustment is considered necessary, additional analysis and cross checks should be undertaken to assess the reasonableness of the cash flow impacts implied by the alpha.
When using multiples, extra analysis may be required

**Trading multiples**
- As with the DCF method, there may be challenges in applying the market approach due to volatility in market values.
- Exercise extra caution when considering forward looking multiples due to the higher uncertainty in forecasting.
- Assess if there is sufficient trading volume so that share prices can be used as proxies for values.
- Even if no perfect comparable company, one should likely consider sector movements.
- Trading multiples reflect minority positions but are generally still liquid. When considering control premiums, consider these may not be at historical levels and liquidity benefits may compensate for the benefits of control.
- A lack of information for investors and analysts may impact how some sectors are trading.
- Ensure target company and comparable company earnings have been appropriately adjusted to reflect expected impacts of COVID-19 for comparability, and that such impacts have been communicated to the market.

**Precedent transactions**
- Consider whether comparable transactions completed in 2019 or early 2020 are still relevant given market conditions.
- Reduced transaction activity may imply liquidity constraints (i.e. discounts) for privately held companies as prospective purchasers may be hesitant to pay “full” price, or assets may take longer to dispose of.
Diligence regarding balance sheet analysis

Cash and cash equivalent
- Valuation preparers should assess whether companies have sufficient levels of cash to weather a downturn, and over what period.
- In certain instances, treating cash balances as redundant assets may not be appropriate.

Working capital
- Valuation preparers should assess whether companies have sufficient levels of inventory to sustain a supply shortage, and assess any supply chain issues.
- Collection of receivables can also be impacted by the customer liquidity constraints.
- One should consider whether companies’ payables are being stretched.
- For businesses where there are large amounts of deferred revenue, a drop in bookings and income may trigger working capital shortfalls that need to be filled.

Leverage and debt financing
- Attention should be given to potential covenant breaches and their impacts on liquidity.
- Companies with debts coming to maturity in the very short term may face refinancing risks.
- Given the recent volatility in yields and spreads, the book values of certain debts may be significantly different than their fair values. The values of zero coupon and fixed rate debts with long maturities are quite sensitive to market yields.
Going concern considerations

- Valuations are often performed under the assumption of a going concern.
- This assumption may be tested for some industry sectors and companies where COVID-19 impacts have been significant, and/or, where the subject company does not have adequate liquidity to manage a sustained business disruption.
- As a result, asset based approaches may be relevant, including liquidation scenarios.
We are here to help

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