Valuations amidst the COVID-19 pandemic & significant economic uncertainties

Special brief

July 2020

Dear reader,

We hope that you are staying safe and healthy, especially during this unprecedented time.

The COVID-19 pandemic has affected our lives in different ways. This multi-faceted crisis has resulted in widespread macroeconomic uncertainty and significant volatility in the global financial markets. Global equity markets over these past months have experienced significant swings as economies implemented lockdown measures, supply chains were disrupted, and many businesses were fundamentally impacted. The eventual long-term shifts in consumer spending patterns, supply chains, and how businesses engage their customers remain to be seen.

Overlapping and intertwining with the COVID-19 pandemic are also significant volatilities in commodity prices, as seen when the price of crude oil futures turned negative for the first time in history in April 2020. Amidst these uncertainties, the fair values of many assets and liabilities have changed significantly. In fact, some businesses and sectors have experienced growth while others have been negatively impacted.

At KPMG, we strive to provide insights that can assist our clients to navigate these challenging times. While the consequences of the current crisis are still evolving, we have prepared various perspectives on valuations during this period. In this special brief, we will discuss the following:

- An overview of the global equity markets and sectoral impact
- An overview of the Singapore equity market and sectoral impact
- Impact on private equity valuations
- Application of valuation approaches

We wish you all the best and look forward to having robust discussions with you on any views or questions you might have regarding valuations in this current economic environment.

KPMG in Singapore

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1 Overview of Global Equity Markets and Sectoral Impact

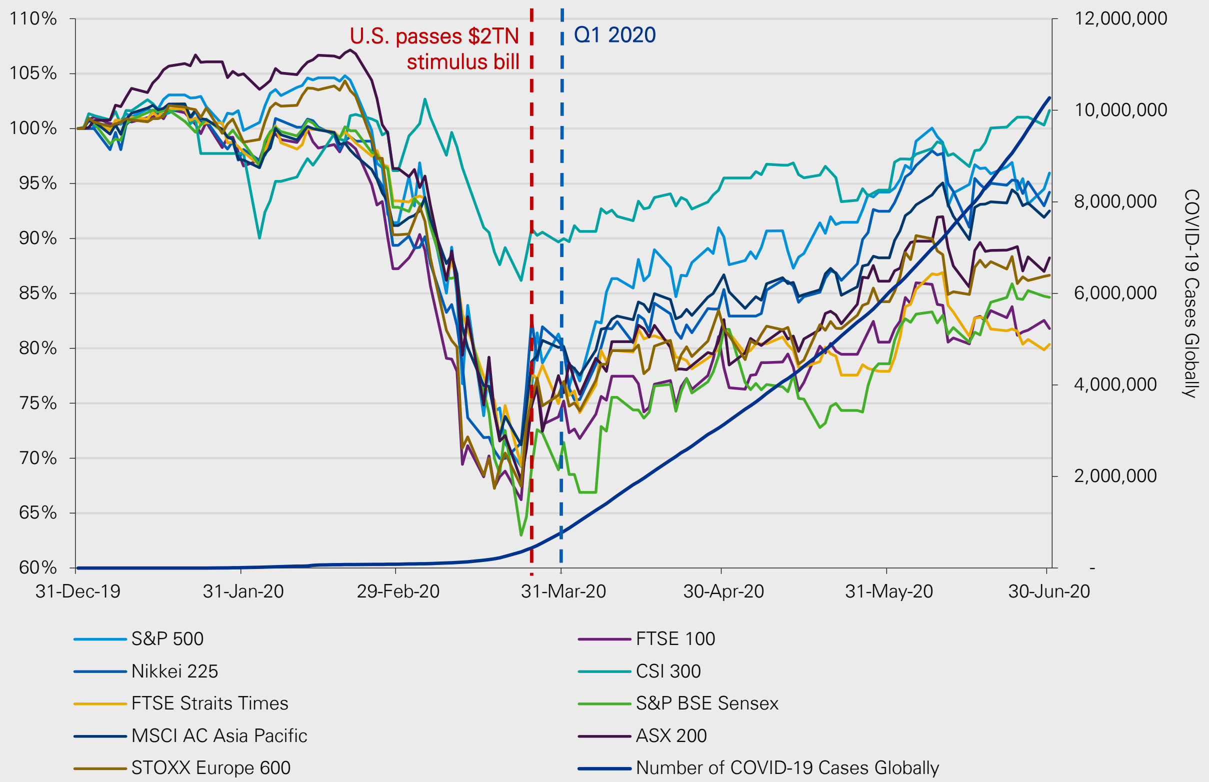
Global equity markets have experienced large swings over the past six months.

The emergence and spread of COVID-19 has led to never-before-seen closures and disruptions to the global economy.

This has resulted in wild swings in the global equity markets as seen in Figure 1, which shows the movement of global equity market indices versus the number of COVID-19 cases globally.

Equity markets globally have dropped by approximately 30% to 40% from 31 December 2019 to their lowest points in March 2020 before rebounding.

Figure 1 **Global Equity Markets Indices versus COVID-19 Cases Globally**



Note: Each index is set to 100% as at 31 December 2019 and the levels of the indices at the other dates are relative to the 31 December 2019 levels.
Source: S&P Capital IQ, Our World in Data, KPMG Analysis

With the widespread disruption to businesses, employment and key economic sectors, many countries have swiftly rolled out stimulus packages and adopted expansionary monetary and fiscal policies. And with the gradual re-opening of economies amidst progress towards the development of a vaccine, we have also seen equity markets rebound from lows made in end-March 2020.

Table 1 shows the percentage decline of global indices over Q1 2020 before recovering from their lows. Of note, as of 30 June 2020, the Chinese equity market has gone above the levels seen in December 2019, while equity markets in the U.S. and Japan have recovered close to their levels seen in end-2019.

Table 1 **Decline in Global Stock Markets since 31 December 2019**

Country/Region	Stock Index	% Decline to 31 March	% Decline to 30 June
China	CSI 300	10%	(2)%
United States	S&P 500	20%	4%
Japan	Nikkei 225	20%	6%
Asia Pacific	MSCI AC Asia Pacific	20%	7%
Australia	ASX 200	24%	12%
Europe	STOXX Europe 600	23%	13%
Hong Kong	Hang Seng	16%	13%
India	S&P BSE Sensex	29%	15%
UK	FTSE 100	25%	18%
Singapore	FTSE Straits Times	23%	20%

Source: S&P Capital IQ, KPMG Analysis

Crude oil and coal prices plunged to new lows in April 2020 and have since seen gradual recoveries.

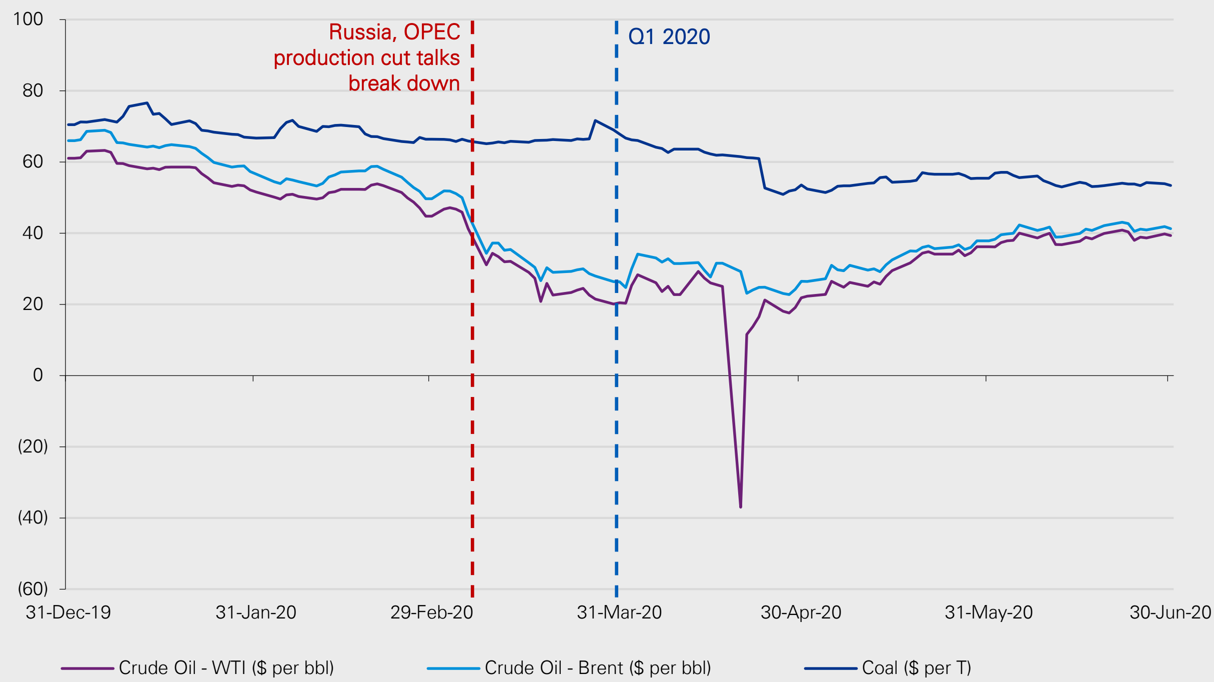
Commodities markets have also seen significant volatility year-to-date.

Figure 2 shows the crude oil and coal prices over this period.

Crude oil prices had dropped from US$60 – US$70 per barrel to an all-time low of negative US$37 per barrel in April for WTI Crude Oil before gradually recovering to approximately US$40 per barrel in June 2020.

These price declines have been exacerbated by lower demand due to the lockdowns of many economies and its corresponding impact on air travel and transportation.

Figure 2 **Crude Oil and Coal Prices**



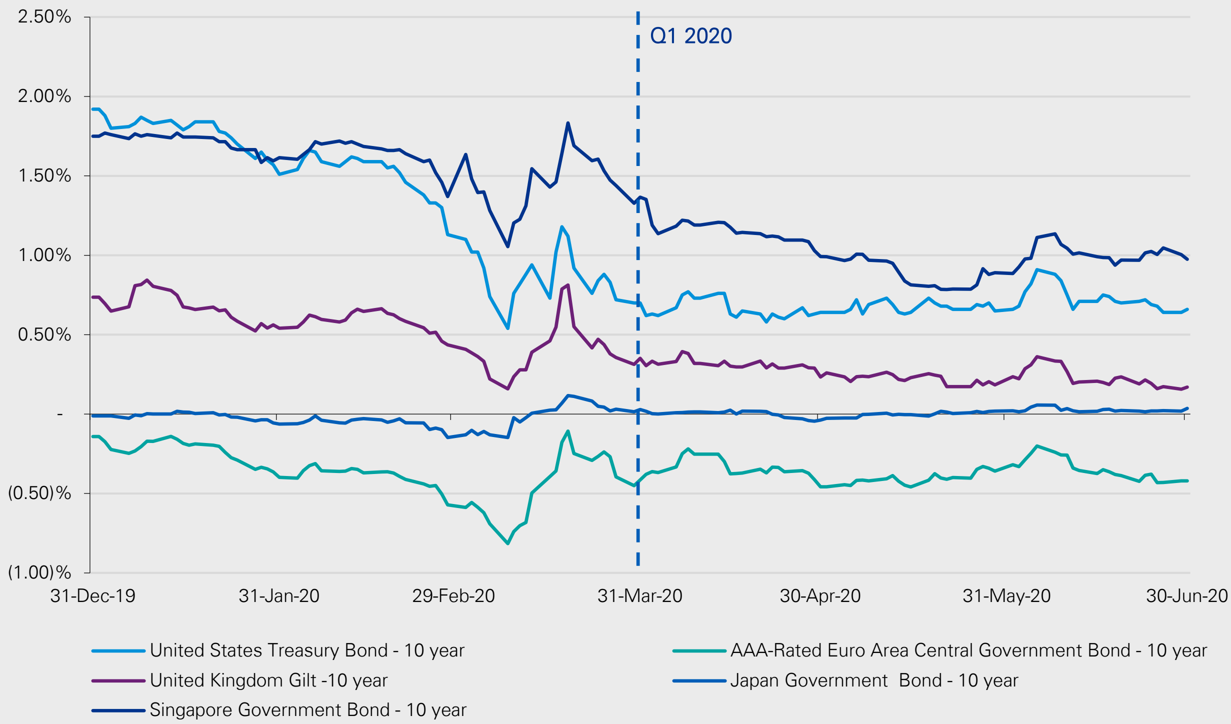
Source: S&P Capital IQ

Government bond yields have generally fallen year-to-date due to government policies and a flight to safety.

Government bond yields for major currencies have fallen significantly year-to-date, apart from the Japanese Government bond yield which started at negative levels and ended close to their starting levels by 30 June 2020.

Figure 3 and Table 2 show the Government bond yields and the change in those yields year-to-date.

Figure 3 Government Bond Yields



Source: S&P Capital IQ

Table 2 Government Bond Yields relative to 31 December 2019

Country/Region	Bond	31 Dec 19	31 Mar 20	30 Jun 20
United States	United States Treasury Bond - 10 year	1.92%	0.70%	0.66%
	Change		*(1.22)%*	*(1.26)%*
Europe	AAA-Rated Euro Area Central Government Bond - 10 year	(0.14)%	(0.41)%	(0.45)%
	Change		*(0.27)%*	*(0.31)%*
UK	United Kingdom Gilt -10 year	0.74%	0.35%	0.17%
	Change		*(0.39)%*	*(0.57)%*
Japan	Japan Government Bond - 10 year	(0.01)%	0.03%	0.04%
	Change		*0.04%*	*0.05%*
Singapore	Singapore Government Bond - 10 year	1.75%	1.37%	0.97%
	Change		*(0.38)%*	*(0.78)%*

Source: S&P Capital IQ, KPMG Analysis

The fall in government bond yields may be attributed to expansionary monetary policies that many governments have adopted to support their economy and businesses during this crisis, as well as a flight to safety by investors to Government bonds as a safer haven relative to equity investments.

While the relative performance of sectors globally and in the Asia-Pacific are similar, each sector's performance has been significantly different.

Zooming in to how different sectors have performed amidst the current economic environment, certain sectors have consistently performed better than others.

Figure 4 looks at the month-by-month ranking of each sector by the percentage change of its respective S&P Global 1200 sector indices since 31 December 2019.

We note that the Financials and Energy sectors have been consistently underperforming relative to other sectors, while the rankings of the Real Estate, Utilities, Industrials and Consumer Staples sectors have declined over time.

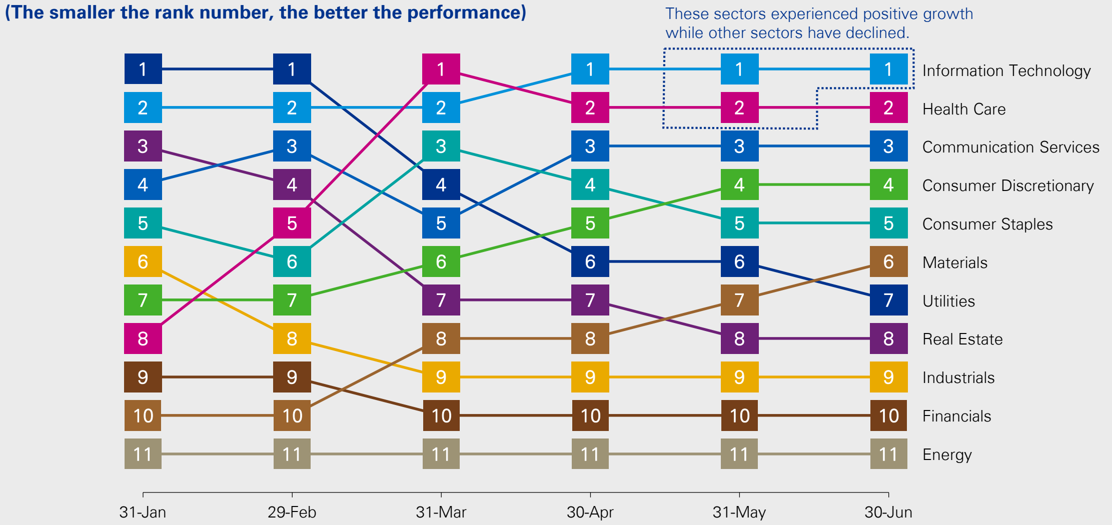
The Information Technology, Communication Services, Heath Care and Consumer Discretionary sectors have relatively outperformed other sectors year-to-date. In particular, the Consumer Discretionary and Materials sectors have steadily improved their ranking over time as economies re-open from their lockdowns.

Figure 5 shows a similar analysis as Figure 4 for the same sectors in the Asia-Pacific, using MSCI AC Asia-Pacific indices.

Interestingly, we noted that the top five sectors and the bottom six sectors are the same globally as well as in the Asia-Pacific.

Figure 4 **Rank Chart by performance for Global S&P 1200 Sector Indices**

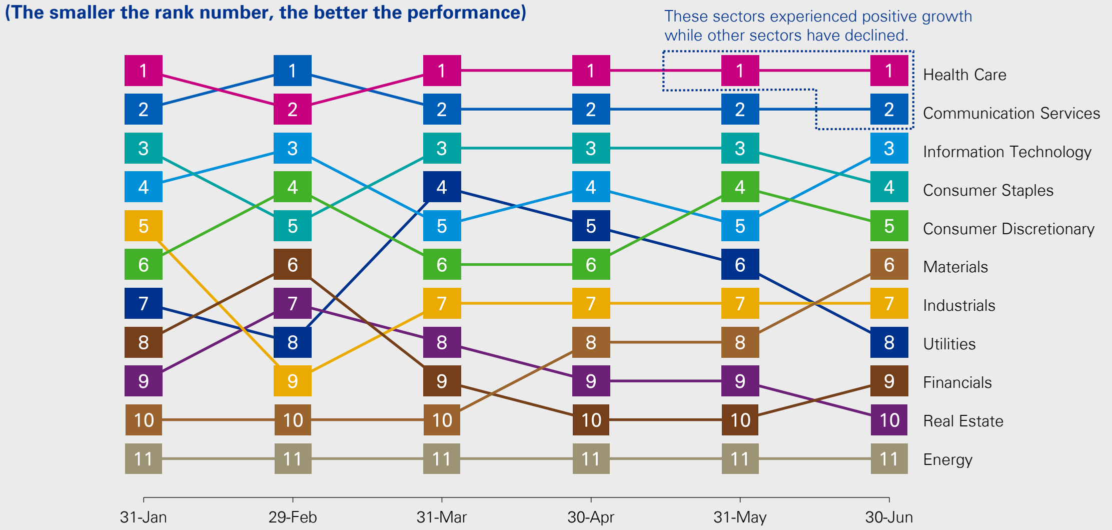
(The smaller the rank number, the better the performance)



Source: S&P Capital IQ, KPMG Analysis

Figure 5 **Rank Chart by performance for MSCI AC Asia-Pacific Sector Indices**

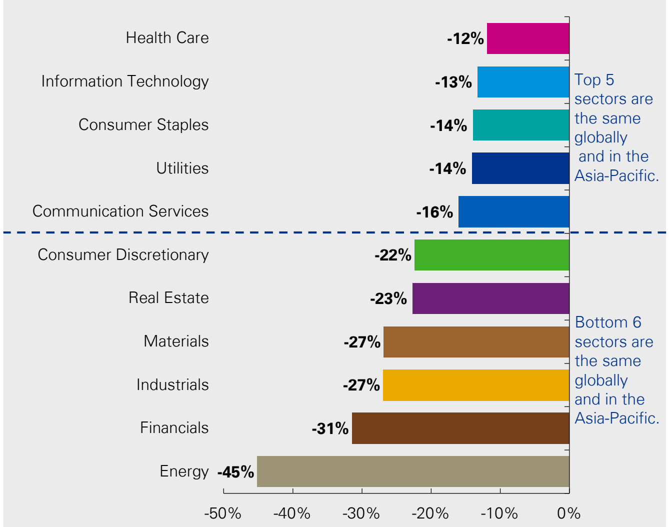
(The smaller the rank number, the better the performance)



Source: S&P Capital IQ, KPMG Analysis

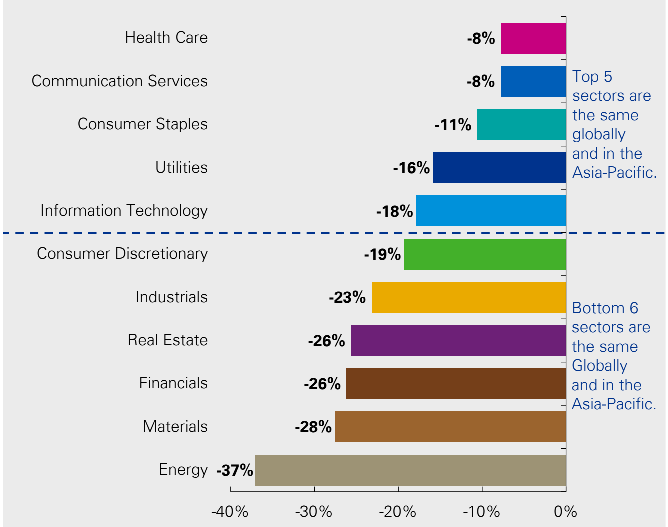
Figures 6 to 9 show the percentage change of each sector from 31 December 2019 to 31 March 2020 and 30 June 2020, for both the global and Asia-Pacific indices.

Figure 6 Global Sectors – % Change from 31 Dec 19 to 31 Mar 20



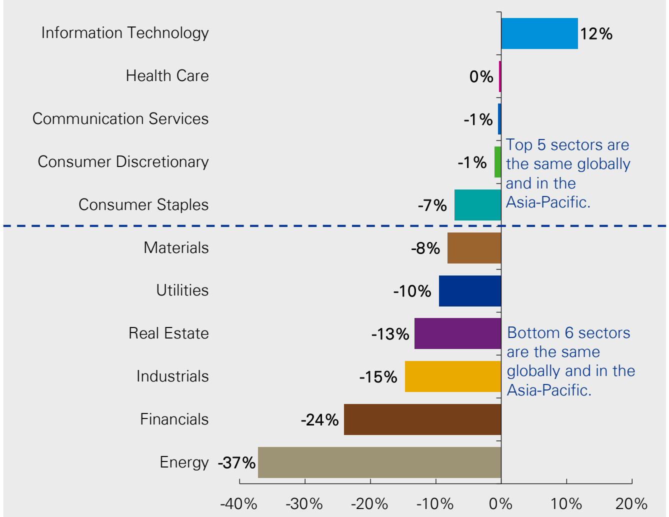
Source: S&P Capital IQ, KPMG Analysis

Figure 7 Asia Pacific Sectors – % Change from 31 Dec 19 to 31 Mar 20



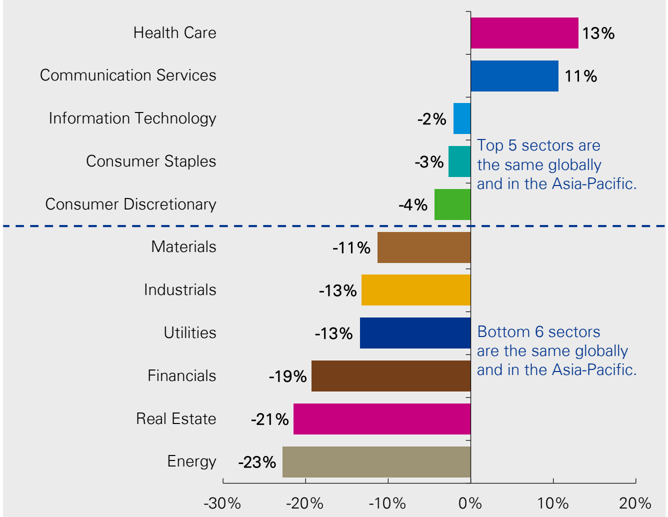
Source: S&P Capital IQ, KPMG Analysis

Figure 8 Global Sectors – % Change from 31 Dec 19 to 30 Jun 20



Source: S&P Capital IQ, KPMG Analysis

Figure 9 Asia Pacific Sectors – % Change from 31 Dec 19 to 30 Jun 20



Source: S&P Capital IQ, KPMG Analysis

Based on the sectors' performance over Q1 2020, for funds that are marking to market their investments as at 31 March 2020, we expect valuations to fall by approximately 10% to 40% over Q1 2020 relative to their valuations as at 31 December 2019.

For the Q2 2020 mark-to-market, we note that the relative performance of each sector can differ very significantly depending on the particular sector as shown in Figures 8 and 9.

Of note, by Q2 2020, a few top performing sectors have recovered and risen above their levels as at December 2019.

The Information Technology sector has performed well based on its global sector index, but the same result was not seen in the Asia-Pacific sector index. This is likely due to the fact that many large technology companies are situated in the United States.

Hence, the strong performance of the global IT sector index may be a reflection of the strong recovery seen in the United States equity market.

2 Overview of the Singapore Equity Market and Sectoral Impact

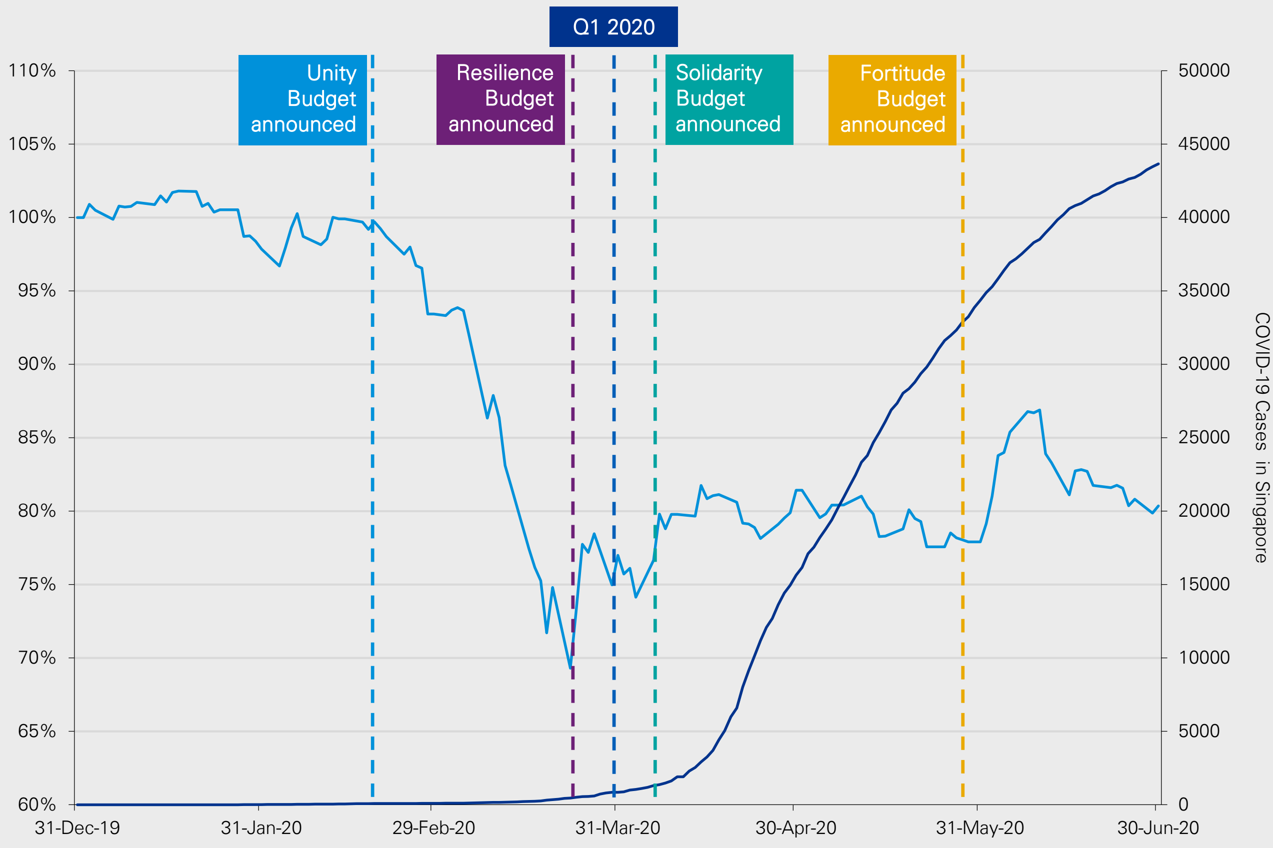
The Singapore equity market had dropped 25% to 30% to its lows in March 2020. Since then, recovery has been slow.

Figure 10 shows the movement of the Singapore stock market versus the number of COVID-19 cases in Singapore year-to-date.

Singapore's stock market dropped by 25%-30% by end-March 2020 and has experienced slow recovery relative to other equity markets globally.

While the U.S. equity market has rebounded with large capitalization technology stocks leading the charge, the Singapore equity market is still 20% below its end-2019 level as at 30 June 2020. This reflects the continuing issues in the Singapore economy.

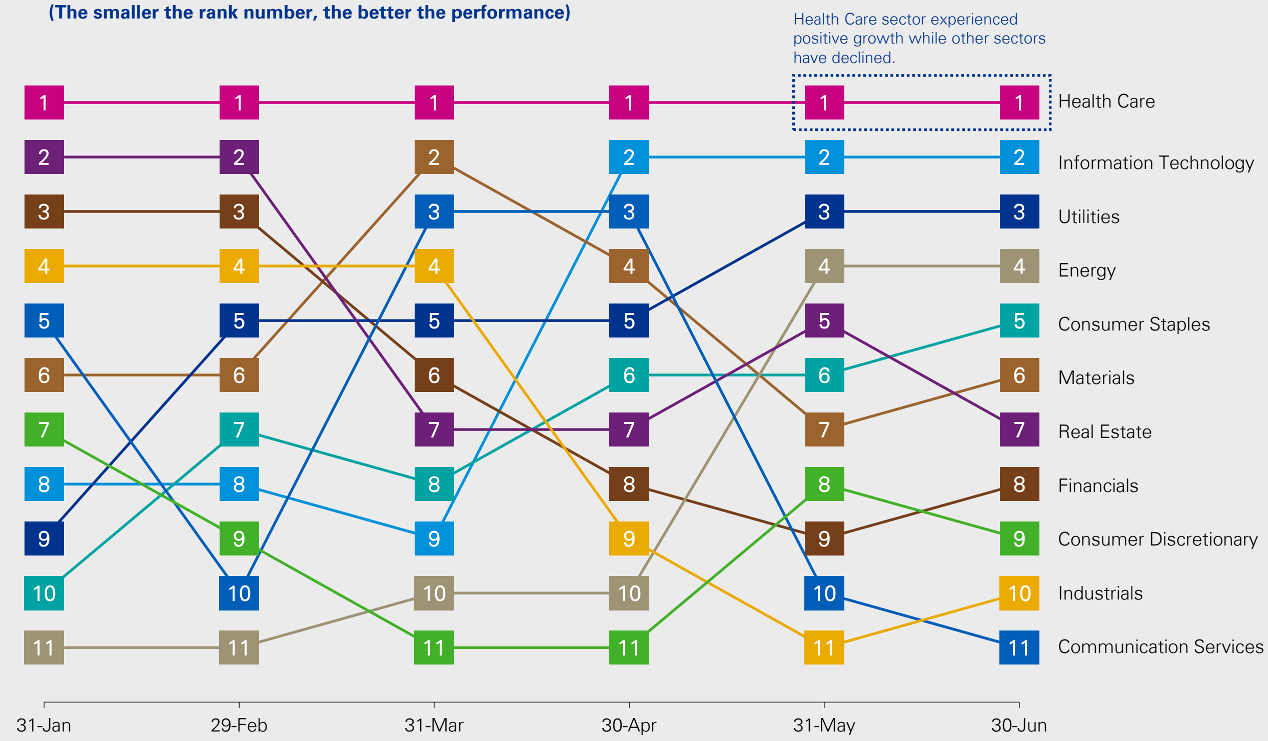
Figure 10 **FTSE Straits Times Index versus COVID-19 cases in Singapore**



Note: The FTSE Straits Times index is set to 100% as at 31 December 2019 and the level of the index at the other dates are relative to the 31 December 2019 level.
Source: S&P Capital IQ, Our World in Data, KPMG Analysis

Figure 11 **Rank Chart by performance for Singapore Sectors**

(The smaller the rank number, the better the performance)



Source: S&P Capital IQ, KPMG Analysis

The impact on Singapore sectors differs significantly from their global and Asia-Pacific counterparts.

We have classified each stock listed on the Singapore Exchange (both the Mainboard and Catalist) into the respective sectors. For this analysis, to understand how Singapore sectors are impacted, we have only included companies which have primary listing on the Singapore Exchange.

Figure 11 (above) shows the similar rank chart for Singapore sectors based on the percentage change in market capitalizations of the companies in each sector.

While we noted that the sector rankings fluctuate significantly month-to-month, the Health Care sector consistently remained the top performing sector. Also worth noting: the Utilities sector is among the better performing sectors rather than being in the bottom half as seen in the global and Asia-Pacific sector rankings.

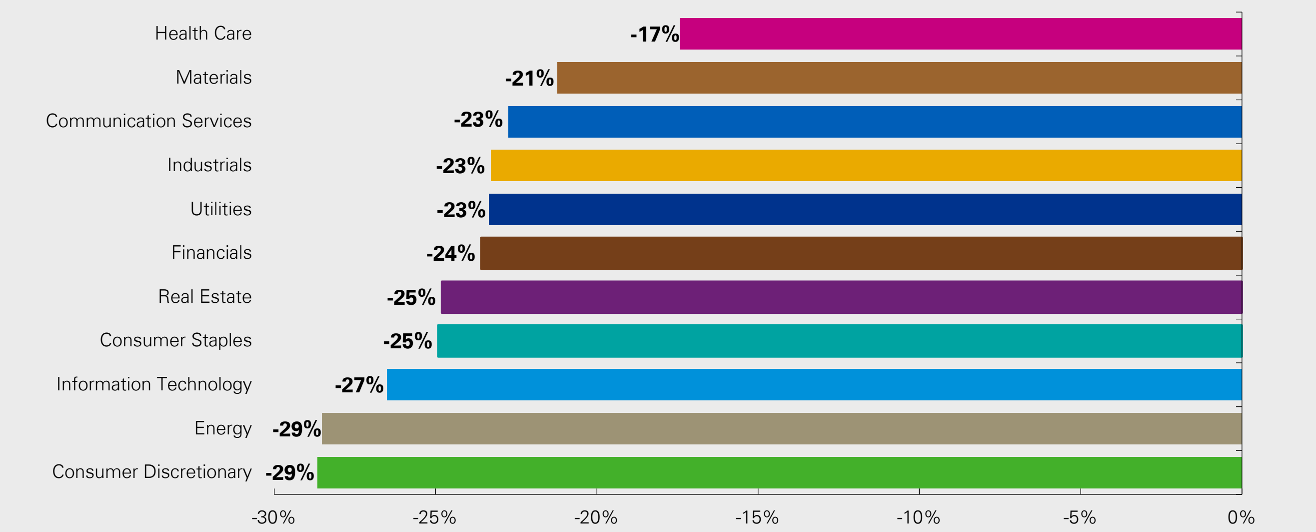
Figures 12 and 13 (below) shows the percentage change over Q1 2020 and year-to-date for Singapore sectors.

Based on the sectors performance over Q1 2020, we expect the valuations for funds that are marking to market their Singapore investments as at 31 March 2020 to fall by 15% to 30% over Q1 2020, relative to their valuations as at 31 December 2019.

For Q2 2020 mark-to-market, except for the Health Care sector which has shown positive growth, we expect valuations to be lower by 10% to 25% compared to their valuations as at the end of 2019.

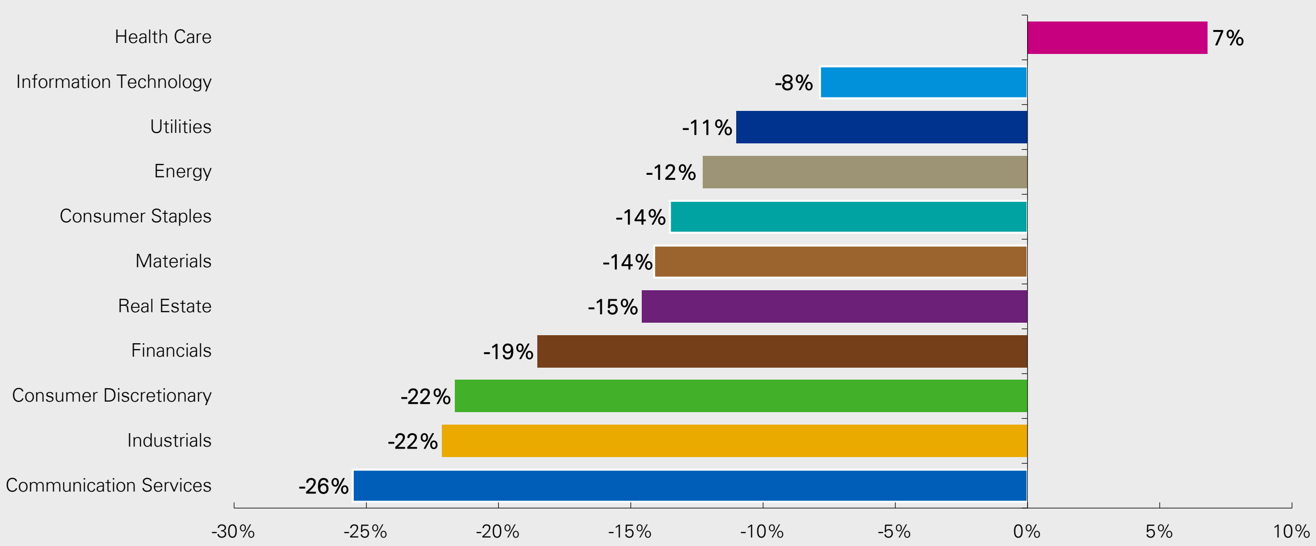
For funds that are marking to market their Singapore investments as at 30 June 2020, excluding the Health Care sector, we expect valuations to fall by 10% to 25% relative to their valuations as at 31 December 2019.

Figure 12 **Singapore Sectors - % Change from 31 Dec 19 to 31 Mar 20**



Source: S&P Capital IQ, KPMG Analysis

Figure 13 **Singapore Sectors - % Change from 31 Dec 19 to 30 Jun 20**



Source: S&P Capital IQ, KPMG Analysis

3 Impact on Private Equity Valuations

Given the significant swings in the market valuations of publicly-listed companies seen globally, the valuations of private companies would correspondingly be impacted, in both positive and negative ways.

Private equity is not insulated from public markets and the economy.

While private companies do not have a mark-to-market each day, given that investors are able to channel funds toward similar publicly-listed companies that are trading ‘cheaper’ or ‘pricier’ relative to private companies, the pricing of private companies would not be immune to public market pricing and would therefore be similarly impacted.

Buyers’ willingness and ability to pay would put pressure on private equity valuations.

From a buyer’s perspective, the current economic environment and market prices impact both their willingness and ability to pay.

With firms and banks tightening their credit policies amidst global uncertainties, deal financing has shrunk and credit spreads have widened.

Additionally, many private equity buyers are taking a wait-and-see approach. This has caused deal processes to be lengthened, with potential re-negotiation of terms, additional due diligence, extra scrutiny by the Board, and delays in getting approvals and financing.

All these factors have put pressure on private market valuations as well.

The purpose and premise of the valuation is key.

Some may ask, “*What about investments that maintain their long-term value? And should private equity valuations be impacted when fund managers can choose not to sell their investments in a downturn environment?*”

Fund managers can indeed hold on to their investments. However, when a mark-to-market is required for financial reporting or investor reporting, the premise of the mark-to-market under fair value or market value is generally on an ‘exit value’ notion, i.e. how much would be received if the investment is sold as at the valuation date regardless of whether the fund intends to or is able to sell.

Under this premise, even if long-term value is maintained, the valuation would need to consider the market prices and economic environment as at the valuation date.

4 Application of Valuation Approaches

The COVID-19 pandemic and the current economic environment has necessitated greater care when applying generally-adopted valuation approaches.

As many firms may face short-term cash flow and liquidity issues given the economic disruptions, it is imperative that the going-concern status of companies is evaluated when assessing the appropriate valuation approach to be adopted.

Income Approach – Discounted Cash Flow (DCF)
- Cash Flow Projections
- Discount Rate: Cost of Equity
- Discount Rate: Cost of Debt

Market Approach – Comparable Companies Method
- Trailing Multiples
- Forward Multiples

Market Approach – Comparable Transactions Method

Income Approach – Discounted Cash Flow (DCF) Method

Cash Flow Projections

When performing a DCF analysis, given that businesses can be impacted differently (both positively and negatively) by COVID-19 and economic conditions as at the valuation date, cash flow projections should be reviewed and revised to reflect any impact of these conditions as at the valuation date on the business' likely future performance.

Where there could be significant variability in future cash flows, different cash flow scenarios may have to be prepared to assess the likely impact on valuation.

While risks may be taken into account through cash flows and/or discount rates in a DCF, we recommend that risks in future business cash flows be addressed directly through the adjustment of cash flow projections or the development of cash flow scenarios, rather than indirectly through discount rate adjustments. Given that discount rate adjustments are typically applied bluntly across all cash flows, estimating an appropriate quantum in place of cash flow adjustments is challenging – if at all possible – in this uncertain and fluid environment.

We recommend that the following key factors be considered, at the minimum, when preparing or reviewing cash flow projections.

1. **Industry and business model changes:**
   - Have there been industry-wide changes that would affect the business?
   - Has the business model of the company changed? How does that affect future expected cash flows?

2. **Revenue:**
   - How have revenues been affected since the start of the year, and what is the expected trajectory moving forward?
   - Has there been a reduction in production capacity?
   - If the business needs to restart operations, how long would it take to ramp up to meet customer demand?
   - How has COVID-19 affected customers and their future spending?
   - Would discounts need to be given to retain and capture new customers, and how would that impact the bottom-line?
   - What is the expected revenue level when business returns to normal, and what would the 'new normal' look like?

3. **Costs:**

- What are the expenses and working capital required to resume business operations?
- How has the supply chain changed and how have costs been impacted?
- Are there any costs associated with breaches of contractual obligations due to government lockdowns? Can *force majeure* clauses be invoked?
- Would there be a reduction in costs when employees work from home on a long-term basis?
- Is the business able to take advantage of Government support measures that would help to reduce costs, such as support for salary expenses, rental waivers, tax breaks, etc.?

4. **Capital Requirements and Financing:**

- Are revenues able to cover costs and meet other contractual obligations? If there are liquidity issues, how much financing needs to be raised for the business to weather the net cash outflows before returning to profitability?
- For early-stage companies making losses, would there be an issue raising the next round of financing? Would there be a going-concern issue?
- Is the credit-worthiness of customers affected? How does this affect the working capital required?
- Would any debt covenants be breached? If yes, how would those be resolved?

5. **Others:**

- Are there any impairments required for receivables or inventories?
- Are there cash flows, both expected revenues and costs, associated with new initiatives such as digitalization?
- Are there any changes to previous expansion or restructuring plans?
- Are the business cash flows susceptible to volatility in commodity prices? If yes, how has that been considered in the cash flow projections?
- If the business is sensitive to foreign exchange fluctuations, has scenario analysis on the future foreign exchange rates been considered in the cash flows?

Discount Rate – Cost of Equity

The decline in equity market prices over the first quarter of 2020 coupled with a decline in Government interest rates have resulted in a significant increase in implied equity market risk premiums (MRP)[1], particularly at end-March 2020 when many stock market indices were at their lowest points since December 2019.

To take this into account, one of the following potential methods should be adopted when estimating the cost of equity for a valuation date of 31 March 2020:

i. Increasing the market risk premium
ii. Adding a specific risk premium
iii. Using normalized risk-free rates and normalized market risk premiums

Based on what we have observed, we note that valuation practitioners have generally adopted an additional MRP or specific risk premium of 50 bps to 100 bps.

As equity markets gradually recover from their lows as at end-March 2020, if that recovery is sustained and uncertainties for businesses reduce, we expect implied MRPs to revert gradually to pre COVID-19 levels.

Discount Rate – Cost of Debt

The current economic environment has impacted companies' ability to raise financing and the cost of that financing. To weather the current economic disruption, many companies have been raising funds through rights offerings and issuances of new shares. At the same time, start-ups may find it more challenging to raise financing and the process may take longer.

When estimating discount rates amidst the current environment, the impact to the cost of debt needs to be considered.

With widening market credit spreads, companies would need to consider whether pre COVID-19 credit spreads are still relevant, i.e. would they still be able to borrow on those terms, or are adjustments required.

[1] Equity market risk premium = Required rate of return on a market portfolio *less* risk-free rate

Market Approach – Comparable Companies Method

When updating past valuations, additional consideration should be given to whether the comparability of previously-selected comparable companies has been affected, i.e. certain companies may no longer be comparable if they are impacted to a significantly different degree due to COVID-19. Such considerations should apply in the selection of new comparable companies as well.

In addition, market multiples may be volatile during this period. Hence, alternative methods to estimate appropriate multiples may need to be considered.

Trailing Multiples

Trailing market multiples (e.g. last 12 month multiples) continue to be applicable given that the numerator (usually enterprise value or equity value) is calculated based on stock prices that would have incorporated the impact of COVID-19 and the current economic environment, and the denominator is on the same basis across the comparable companies and the subject entity to be valued.

Forward Multiples

Forward multiples are calculated using a current numerator (e.g. an enterprise or equity value as at the valuation date) and a forward denominator (e.g. the expected net income in the future).

As the denominator is a forecast of a future metric, such forecasts may not have been updated to take into account economic conditions as at the valuation date.

Accordingly, care needs to be taken when applying forward multiples to ensure that:

i. the multiples are calculated on a consistent basis across all comparable companies (all multiples use pre COVID-19 forecasts, or all multiples use post COVID-19 forecasts); and

ii. they are appropriately applied to the subject entity's metric (e.g. if the multiples are calculated using post COVID-19 forecasts, the subject entity's metric should similarly be a post COVID-19 forecast).

Given the inherent difficulty in developing reliable forecasts in the current economic environment, we believe that the use of trailing multiples should be preferred over forward multiples unless there are specific considerations which indicate that using trailing multiples would not lead to reasonable valuation conclusions.

Market Approach – Comparable Transactions Method

Using recent transaction prices to mark-to-market investments is an approach commonly adopted by fund managers. As transaction prices determined pre COVID-19 would not have considered the impact of COVID-19 and the current economic environment, such transaction prices have a presumption that they would not be fair for valuation dates after 31 December 2019.

Accordingly, adjustments to those transaction prices should be made, or an explanation provided on why the transaction prices can still be applied.

Adjustments to past transaction prices may require consideration of the movement in market multiples and the subject entity's financial metrics (e.g. EBITDA) since the transaction to the valuation date.

5 Conclusion

As seen in the earlier sections of this special brief, the COVID-19 pandemic and high volatility in the energy markets have led to significant macroeconomic uncertainty and large swings in asset prices.

Certain sectors and businesses have benefited from this disruption while others have been severely and negatively impacted.

Performing valuations in this economic climate has certainly become more challenging. It will require extra care and careful consideration to ensure that valuations are robust, are able to meet the required standards of value and/or regulatory requirements, and have considered market conditions and expectations prevailing as at the date of valuation.

We hope that the perspectives presented in this special brief will be helpful in that regard.

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