Valuation in Abnormally Uncertain Times

May 2020

I Global public equity markets have declined sharply due to the increased uncertainty and economic impact of society lockdowns as a response to the rapidly spreading COVID-19 virus.

II The first quarter of 2020 has been devastating to shareholder values and required returns increased for Singapore Listed Companies ("ListCos").

III Whilst the Singapore ListCos experienced a slight valuation rebound by 30 April 2020, it is still premature to foretell the short-term, medium-term and long-term impact of the current situation with any certainty.

IV Based on our analysis of the COVID-19 impact on valuations and increase in required returns for Singapore ListCos, we provide guidance in this publication on valuations in times of abnormal uncertainty.

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EXECUTIVE SUMMARY

COVID-19 HAS CAUSED A SIGNIFICANT DECLINE IN MARKET VALUE, VALUATION MULTIPLES AND INCREASED THE REQUIRED RETURNS FOR SINGAPORE LISTCOS

An increase in uncertainty and risk generally leads to higher return expectations and hence lower asset prices. We analysed the value impact and return requirement for Singapore ListCos from 31 December 2019 to 30 April 2020 based on data from CapitalIQ.

Our analysis reveals the following key insights:

- The total market value of shareholders' equity of Singapore listed companies declined by SGD176 billion, equivalent to a decline of 24% in the first quarter.
- Although April showed a slight rebound, total shareholder value of SGD131 billion had evaporated since last year end, equivalent to an 18% decline.
- The median EV/EBITDA multiple declined from 10.3x as at 31 December 2019 to 8.3x by the end of the first quarter, a decline of 19%. As at 30 April 2020, the median EV/EBITDA multiple was 8.8x, a decline of 14% since 31 December 2019.
- The median Earnings Yield increased from 4.9% to 6.4% in the first quarter 2020, equivalent to an increase of 1.6% points and narrowed to an increase of 0.8% by end of April due to a rebound in share prices.

GUIDANCE FOR VALUATIONS IN ABNORMALLY UNCERTAIN TIMES

The value impact is significant and we outline our recommendations for taking into account the impact of the business disruptions caused by COVID-19 as follows:

- While valuations (pre COVID-19) are intact, for valuations as at 31 March 2020 and going forward, the uncertainties brought about by COVID-19 needs to be carefully considered and information that is either known or knowable or reasonably foreseeable as at the valuation date shall be incorporated into the valuation assumptions.
- COVID-19 has increased the complexity of projecting future cash flows and questions should be raised when projecting key financial drivers, e.g. how will customer demand and the supply chain be disrupted and what is the economic impact on working capital.
- In times of abnormal uncertainty, it may be relevant to consider various scenarios incorporating conservative and less conservative potential outcomes. A caveat when projecting various scenarios is to consider the issue of risk and not "double dip", i.e. to explicitly incorporate risk into the projected cash flows and the discount rate at the same time.
- The short-term, medium-term and long-term effect of the crisis on the key financial drivers need to be considered even though there is significant uncertainty as to whether the economic recovery will be in a "V", "U" or "W" shape. In this regard, and in addition to working with scenarios, it may be relevant to work with two-stage or three-stage models to reflect various possible recovery outcomes.
- We analysed the impact on the discount rate of the current unprecedented low interest rate environment and the impact of COVID-19 and concluded that:
  - Given the current unprecedented low levels of Singapore Government bond rates of around 1.0%, currently it could be considered applying a "normalised" level of 2.0% to 2.5% as representative for the level of a long-term risk free rate based on the average interest rate levels during the past 10-20 years. As an alternative to "normalising" the risk free rate from the current rate of about 1.0%, it can be considered to increase the Market Risk Premium by 100 to 150 basis points and utilise the current risk free rate.
  - Given the increase in median earning yields, we would consider adding 75 to 175 basis points to the cost of equity post COVID-19.
- Applying multiples from comparable transactions requires caution: If a transaction was completed pre COVID-19, the multiple should not be applied without any adjustment as a representative valuation multiple, as it would not have incorporated the COVID-19 impact. Under such circumstance, the adjustment can be made with reference to the evidence of declining multiples in the public markets.
- Fair value assessments, Mark-to-Market value exercises, as well as impairment of assets exercises should command heightened attention as a result of the disastrous effect of COVID-19; the guidance in this publication can be utilised when conducting these exercises.
- Valuations are complex and in times of abnormal uncertainty it is important to involve specialists early. By working with RSM Advisory you will:
  - benefit from the combined knowledge and experience of over 110 advisory professionals; and
  - draw on our experience in advising numerous SMEs, private equity houses and other financial institutions during times of crises or challenging periods over our more than 30 years of history.

SECTION 1:
ANALYSIS OF SINGAPORE LISTCOS PRE AND POST COVID-19

COVID-19 HAS CAUSED A SIGNIFICANT DECLINE IN MARKET VALUE

We have analysed the change in Market Capitalisation of Singapore ListCos from 31 December 2019 to 30 April 2020 and set out the analysis categorised by industries below:

Industry	Market Capitalisation (SGD MIllions) 31 December 2019 to 30 April 2020					
	31/12/2019	31/01/2020	29/02/2020	31/03/2020	30/04/2020	Change
Communication Services	65,782	64,454	59,261	50,826	55,814	(9,967)
Consumer Discretionary	39,644	37,886	35,884	28,391	30,653	(8,991)
Consumer Staples	81,215	75,599	74,277	60,817	67,332	(13,884)
Energy	3,223	2,965	2,854	2,170	2,393	(830)
Financials	183,454	179,962	173,426	140,178	152,227	(31,227)
Health Care	11,562	11,704	11,040	9,521	10,717	(845)
Industrials	131,035	128,421	123,162	100,490	102,373	(28,661)
Information Technology	11,857	11,324	10,817	8,709	10,428	(1,429)
Materials	3,421	3,281	3,100	2,571	2,783	(638)
Real Estate	194,886	194,229	185,118	147,168	161,079	(33,808)
Utilities	5,277	5,029	4,951	4,039	4,422	(855)
Total	**731,356**	**714,855**	**683,889**	**554,880**	**600,221**	**(131,135)**
% change from 31 December 2019		**-2%**	**-6%**	**-24%**	**-18%**	

Source: CapitalIQ

- The total market value of shareholders equity of Singapore Listcos declined from SGD731 billion to SGD555 billion from 31 December 2019 to 31 March 2020. By the end of first quarter of 2020, a total of SGD176 billion of shareholders value had evaporated, equivalent to a 24% decline.
- There was a slight rebound of the total market value by the end of April 2020 to about SGD600 billion equivalent to a total decline of 131 billion or approximately 18% from 31 December 2019 to 30 April 2020. It is, however, uncertain if the rebound will last.
- Industries that were hit the hardest (by 30 April 2020) were Real Estate (loss of SGD34 billion), followed by Financials (loss of SGD31 billion) and Industrials (loss of SGD29 billion).
- In terms of the decline rate, Energy was hit the hardest (26%), followed by Consumer Discretionary (23%) by 30 April 2020.

VALUATION MULTIPLES DETERIORATED

The significant decline in the market value of shareholders equity resulted in a decline in valuation multiples as well. We set out below the median EV/EBITDA multiples from 31 December 2019 to 30 April 2020:

Industry	Median EV/EBITDA Multiples				
	31/12/2019	31/01/2020	29/02/2020	31/03/2020	30/04/2020
Communication Services	11.1x	9.8x	9.8x	7.2x	8.0x
Consumer Discretionary	10.0x	10.0x	9.2x	7.9x	7.8x
Consumer Staples	12.6x	12.3x	10.2x	8.7x	9.4x
Energy	9.1x	7.4x	7.6x	5.5x	5.5x
Financials	9.8x	9.9x	9.4x	8.7x	10.6x
Health Care	11.4x	15.0x	13.0x	11.9x	12.1x
Industrials	9.0x	8.8x	7.4x	7.1x	6.9x
Information Technology	8.3x	8.2x	6.5x	5.1x	5.4x
Materials	5.6x	5.3x	5.3x	4.9x	4.8x
Real Estate	21.1x	21.0x	19.6x	16.8x	18.5x
Utilities	12.0x	10.9x	10.7x	10.5x	10.7x
Total	**10.3x**	**10.4x**	**9.2x**	**8.3x**	**8.8x**
% change from 31 December 2019		**1%**	**–11%**	**–19%**	**–14%**

Source: CapitalIQ

- The median EV/EBITDA multiple declined from 10.3x as at 31 December 2019 to 8.3x by the end of the first quarter of 2020, a decline of 19%.
- As a result of the slight rebound in the market value as at 30 April 2020, the median EV/EBITDA multiple was 8.8x, a decline of 14%, since year end 2019.
- As we can see, the various industries were by no means equally impacted.

EARNINGS YIELD AS A PROXY FOR REQUIRED EQUITY RETURNS INCREASED

The Earnings Yield – the Earnings per Share divided by the Share Price – can be viewed as a proxy for the required returns on shareholders equity. An increasing Earnings Yield implies a higher required return from shareholders. We set out below the median Earnings Yield from 31 December 2019 to 30 April 2020:

Industry	Median Earnings Yield (%)				
	31/12/2019	31/01/2020	29/02/2020	31/03/2020	30/04/2020
Communication Services	3.5%	4.8%	5.2%	7.1%	6.0%
Consumer Discretionary	4.8%	4.9%	5.1%	6.5%	5.5%
Consumer Staples	4.4%	4.6%	4.5%	6.2%	5.8%
Energy	6.7%	6.4%	7.7%	7.6%	9.7%
Financials	6.0%	6.4%	6.0%	7.0%	7.1%
Health Care	4.5%	3.9%	4.3%	4.9%	4.0%
Industrials	5.6%	5.7%	5.3%	6.9%	6.2%
Information Technology	5.9%	6.0%	6.7%	8.5%	7.4%
Materials	5.2%	5.3%	5.2%	6.3%	6.8%
Real Estate	3.3%	3.4%	3.7%	5.1%	4.4%
Utilities	9.5%	9.7%	12.3%	14.9%	14.1%
Total	**4.9%**	**5.1%**	**4.9%**	**6.4%**	**5.7%**
% change from 31 December 2019		**0.2%**	**0.1%**	**1.6%**	**0.8%**

Source: CapitalIQ

- The median Earnings Yield increased from 4.9% to 6.4% in the first quarter 2020, equivalent to an increase of 1.6% points.
- Due to the rebound in share prices by 30 April 2020, the median Earnings Yield decrease to 5.7% from 31 March 2020. However, the median Earnings Yield is still 0.8% points higher than that as at 31 December 2019.

SECTION 2 :
GUIDANCE ON VALUATIONS IN ABNORMALLY UNCERTAIN TIMES

It is clear from the public equity markets that COVID-19 has had a devastating impact on the valuations and led to an increase in the returns required by shareholders.

In this section, we provide guidance on how to carry out valuations in abnormally uncertain times such as the current one.

GUIDANCE ON THE INFORMATION TO CONSIDER/INCLUDE AS AT THE DATE OF VALUATION

The key criteria for considering and including information as at the valuation date is whether the information was known or knowable. Subsequent events are generally not known or knowable, but if they are reasonably foreseeable they can be taken into account.

A valuation conducted as at 31 December 2019 will differ significantly from a valuation conducted on 31 March 2020, where COVID-19, being a subsequent event, should have no impact on the valuation analysis as at 31 December 2019.

For valuations as at 31 March 2020 and going forward, the uncertainties brought about by COVID-19 needs to be carefully considered and incorporated into the valuation assumptions.

GUIDANCE ON FREE CASH FLOW PROJECTIONS

To value an asset or business using the Discounted Cash Flow ("DCF") approach, projections for future free cash flows are typically constructed over a 5-year to 10-year period and should be extended to a future point in time where the subject of valuation has reached a steady growth state.

COVID-19 has definitely increased the complexity of projecting of the future free cash flows. We set out below some of the key questions to consider in relation to the key financial drivers in the DCF-model:

Key Financial Drivers	Considerations
Revenue	▪ How is customer demand affected by lockdowns and safety measures? Will it lead to contractions in quantities and potential price changes? ▪ How will demand evolve in the short-term, medium-term and long-term? ▪ Will there be a risk of losing long-term contracts? ▪ How will the customers' ability to pay for goods-and-services affect sales on credit terms?
Cost of Goods Sold	▪ How will the availability and timing of delivery of materials, etc. affect production schedules? ▪ How will the suppliers' financials affect supplies and payments? ▪ How will lockdowns and other mandatory safety measures affect production or services?
Operating Expenses	▪ How will lockdowns and other mandatory safety measures affect employee availability and productivity? ▪ Are there any government policies in place to help alleviate cash outflows in employee remuneration? ▪ Are there any opportunities to reduce operating expenses and efficiencies, e.g. negotiate rental rebates or utilise excess space?
Taxes	▪ Are there any incentives available to defer payments?
Working Capital	▪ How are Trade Receivable Days on Hand and bad debts affected, and how can collections be improved? ▪ How will inventory availability affect production and revenues? ▪ How are inventory Days on Hand and obsolescence affected, and how can inventory Days on Hand be improved? ▪ How are Trade Creditor Days on Hand affected, and how can these be improved?
Capital Expenditure	▪ How is major capital expenditure affected and should timing be reconsidered? ▪ How will increases in the cost of capital affect the viability of major capital expenditure projects?
Discount Rate	▪ How will the discount rates be affected by the abnormal uncertainty and what adjustments should be made?

For the purposes of projecting free cash flows in times of abnormal uncertainty, it may be relevant to consider various scenarios, incorporating conservative and less conservative potential outcomes. A caveat when projecting various scenarios is to consider the issue of risk and not "double dip", i.e. to explicitly incorporate risk in the projected cash flows and the discount rate at the same time. It is important to calibrate the discount rate to reflect the level of risk commensurate with the projected free cash flows, such that a lower discount rate is applied to a more conservative scenario and a higher discount rate to a less conservative scenario.

The short-term, medium-term and long-term effect of the crisis on the above key financial drivers need to be considered even though there is significant uncertainty as to whether the economic recovery will be in a "V", "U" or "W" shape. In this regard, and in addition to working with scenarios, it may be relevant to work with two-stage or three-stage model to reflect various possible recovery outcomes.

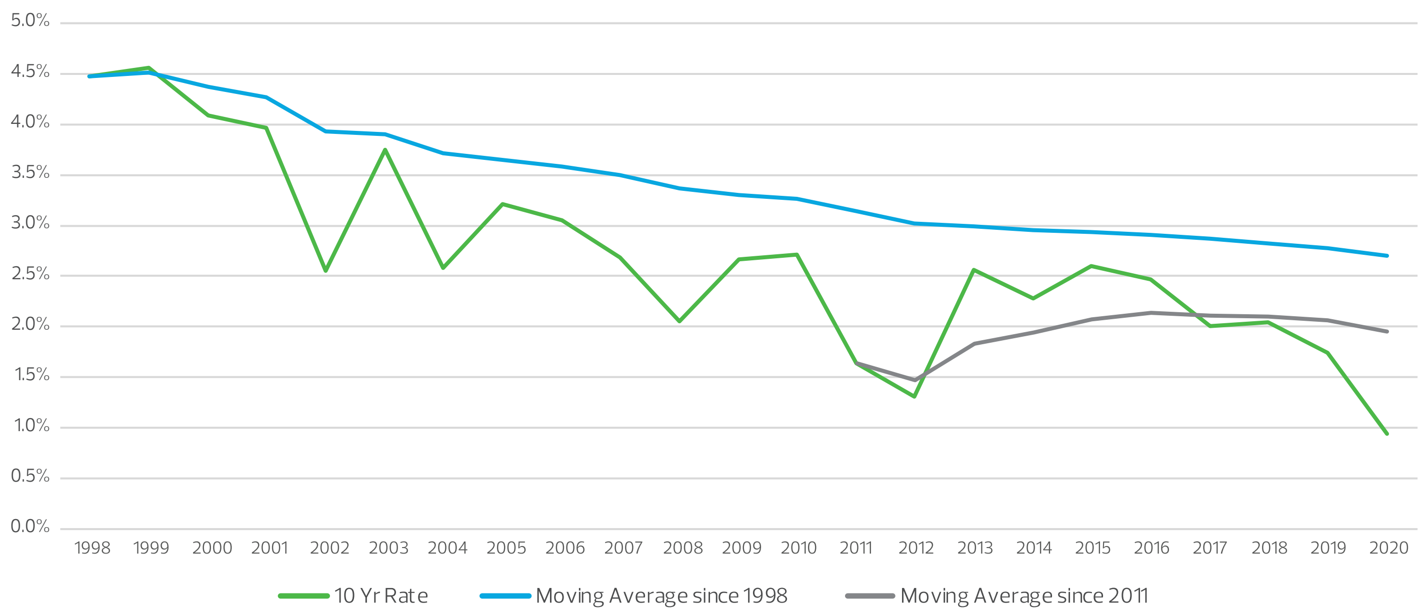
GUIDANCE ON DISCOUNT RATES

Cost of equity

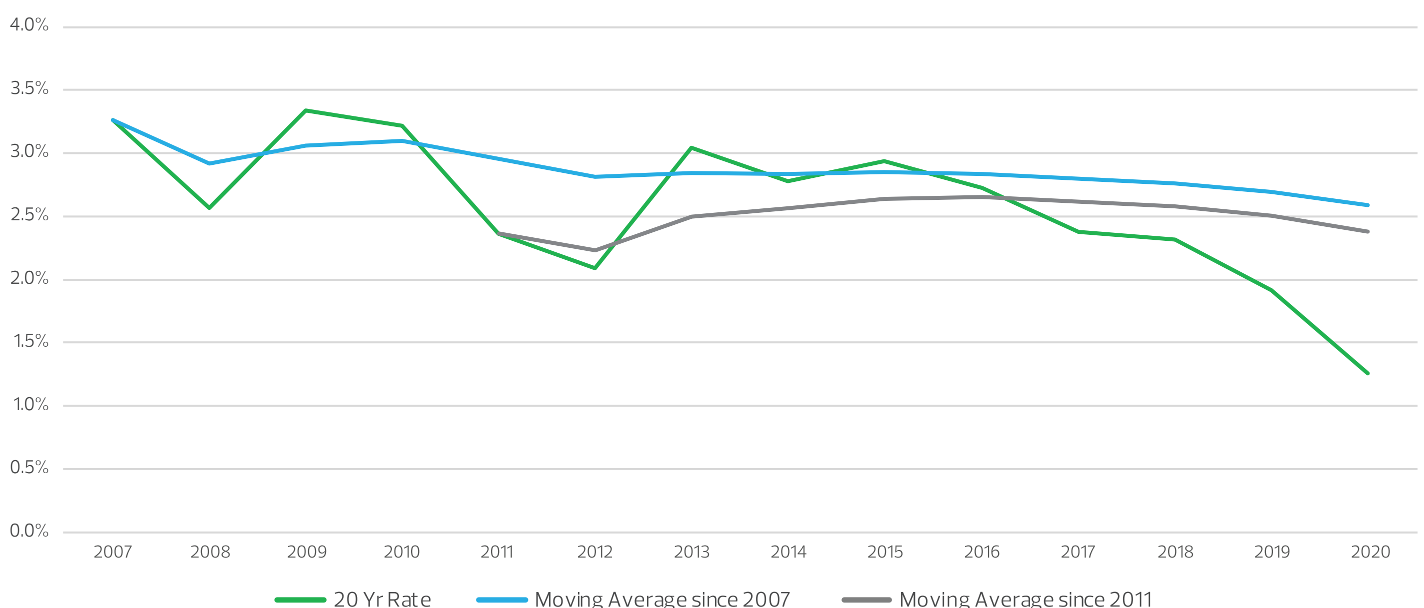
To estimate the required return on the public equity market as a whole we consider adjustments to the risk free rate/market risk premium as a result of the current low interest rate level and the risk premium related to the uncertainties brought about by COVID-19.

Adjustments to the Risk Free Rate/Market Risk Premium

"Risk Free rates", i.e. returns on longer term government bonds have seen a significant decline over the past years. The Singapore 10-year and 20-year government rates have declined to 0.93% and 1.25% respectively in April 2020. We set out below the historical returns in the 10-year and 20-year rates as well as the moving averages.



Source: Based on data from the Monetary Authority of Singapore



Source: Based on data from the Monetary Authority of Singapore

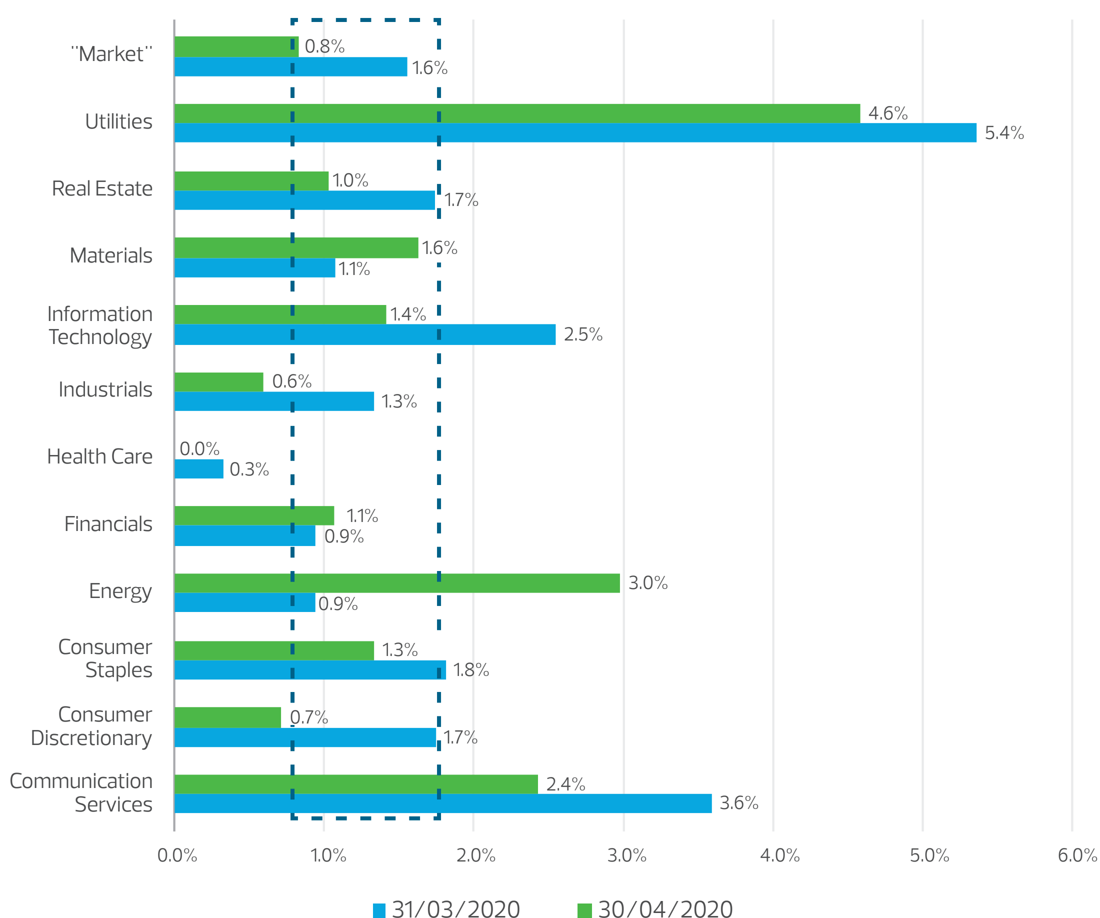
It is obvious that the 10-year and 20-year Singapore Government bond rates are now at their lowest in history. To mitigate the abnormal low level of the risk free rate, a "normalisation" adjustment can be considered. As a proxy for a normalised risk free rate, we have computed the moving average of the 10 year and 20 years Government bond rates. Data is available since 1998 for the 10 year rate and the moving average is 2.69%. Measured over the past 10 years, i.e. since 2011, the moving average is 1.96%. For the 20 year rate, data is available from 2007 and the moving average is 2.59%. Measured over the past 10 years, i.e. since 2011, the moving average is 2.38%. Based on this a normalised risk free rate would be in the range of 2.0% to 2.5%.

Given the current unprecedented low levels of Singapore Government bond rates of around 1.0%, currently it could be considered applying a "normalised" level of 2.0% to 2.5% as representative for the level of a long-term risk free rate based on the average interest rate levels during the past 10-20 years. As an alternative to "normalising" the risk free rate from the current rate of about 1.0%, it can be considered to increase the Market Risk Premium by 100 to 150 basis points and utilise the current risk free rate.

Risk Premium for COVID-19

In Section One, we looked at the Earnings Yield and the change in the Earnings Yield as a proxy for the impact that the COVID-19 crisis have had on the required returns on equity. We set out the change in the Earnings Yield for the ListCos or the "market" as a whole below as at 31 March and 30 April 2020:

Change in Earnings Yield by Industry 31 March & 30 April 2020



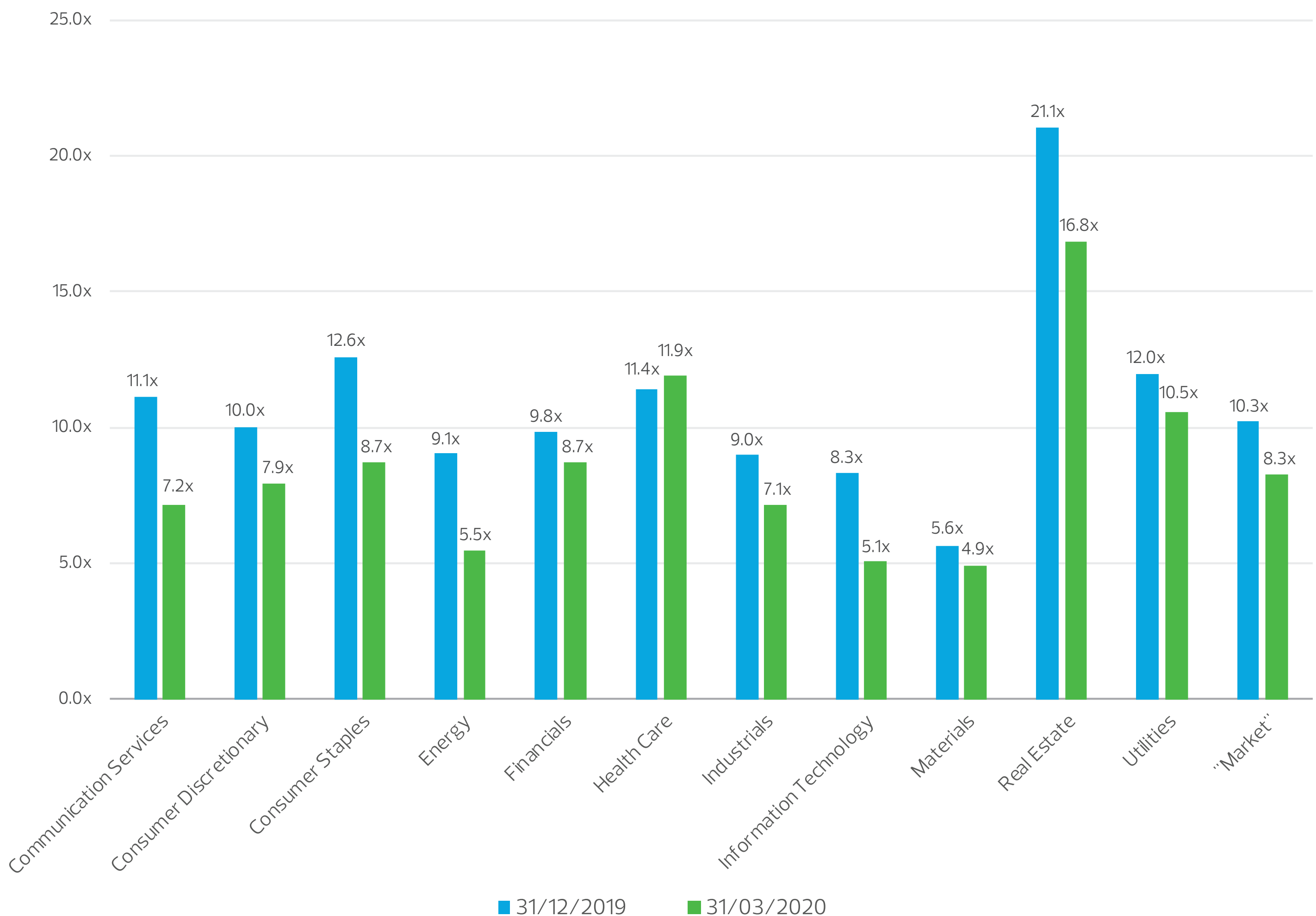
Source: Based on data from CapitalIQ

The overall impact on the market median Earnings Yield was 1.6% as at 31 March 2020 and 0.8% as at 30 April 2020. Given these medians, we would consider adding 75 to 175 basis points to the cost of equity post COVID-19. However, variations between industries will matter as can be seen.

GUIDANCE ON THE MARKET MULTIPLES APPROACH

As discussed in the previous section, the median EV/EBITDA multiple for Singapore ListCos declined from 10.3x to 8.3x in the first quarter and improved slightly to 8.8x by end of April 2020.

There is considerable variation in the impact on the various industries as we can see below:



Source: Based on data from CapitalIQ

The steepest decline in multiples in the first quarter was seen in Energy with a decline of 40% from 9.1x to 5.5x. The second steepest decline was within Information Technology with a decline of 39% from 8.3x to 5.1x. This decline was mainly driven by the sub-industries of Electronic Equipment, Instruments and Components as well as Semiconductors and Semiconductor Equipment.

It is clear that valuations in the private market (as at 31 March 2020) will be significantly affected by the decline in valuation multiples in the public markets across all industries.

A caveat when looking at comparable transactions is to consider the completion date of the transactions. If a transaction was completed pre COVID-19, the multiple without any adjustment should not be applied as a representative valuation multiple, as it would not have incorporated the effects. In such circumstances, an adjustment would be relevant to factor in the impact on the valuation multiples and the evidence from declining multiples in the public markets can be used as a rough guide to do so.

GUIDANCE FOR VALUATION FOR FINANCIAL REPORTING PURPOSE

Fair Value assessments, Mark-to-Market value exercises, as well as impairment of assets exercises should command heightened attention as a result of the disastrous effect of COVID-19. The guidance in the previous sections can be utilised when conducting these exercises.

For Impairment of Assets, it would be expected that companies would not only be assessing the value of goodwill, but also the value of their long-lived assets. The Financial Reporting Standard ("FRS") 36 outlines a number of "triggering events" that would necessitate an impairment analysis considering both external and internal sources of information:

External sources of information

a. There are observable indications that the asset's value has declined during the period significantly more than would be expected as a result of the passage of time or normal use.

b. Significant changes with an adverse effect on the entity have taken place during the period, or will take place in the near future, in the technological, market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated.

c. Market interest rates or other market rates of return on investments have increased during the period, and those increases are likely to affect the discount rate used in calculating an asset's value in use and decrease the asset's recoverable amount materially.

d. The carrying amount of the net assets of the entity is more than its market capitalisation.

Internal sources of information

a. Evidence is available of obsolescence or physical damage of an asset.

b. Significant changes with an adverse effect on the entity have taken place during the period, or are expected to take place in the near future, in the extent to which, or manner in which, an asset is used or is expected to be used. These changes include the asset becoming idle, plans to discontinue or restructure the operation to which an asset belongs, plans to dispose of an asset before the previously expected date, and reassessing the useful life of an asset as finite rather than indefinite.

c. Evidence is available from internal reporting that indicates that the economic performance of an asset is, or will be, worse than expected.

Impairment of assets can have significant impact on the company's financials as impairment charges are put through the profit or loss statement. It is therefore important to start the impairment assessment early in order to rigorously analyse potential scenarios resulting in a robust valuation.

HOW CAN RSM ADVISORY HELP?

Valuations are complex and as has been demonstrated in this publication in times of abnormal uncertainty even more complex and require deep technical knowledge and knowledge of various markets, geographies and industries. By working with RSM Advisory you will:

- benefit from the combined knowledge and experience of over 110 advisory professionals; and
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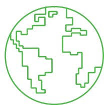

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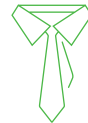

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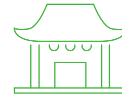

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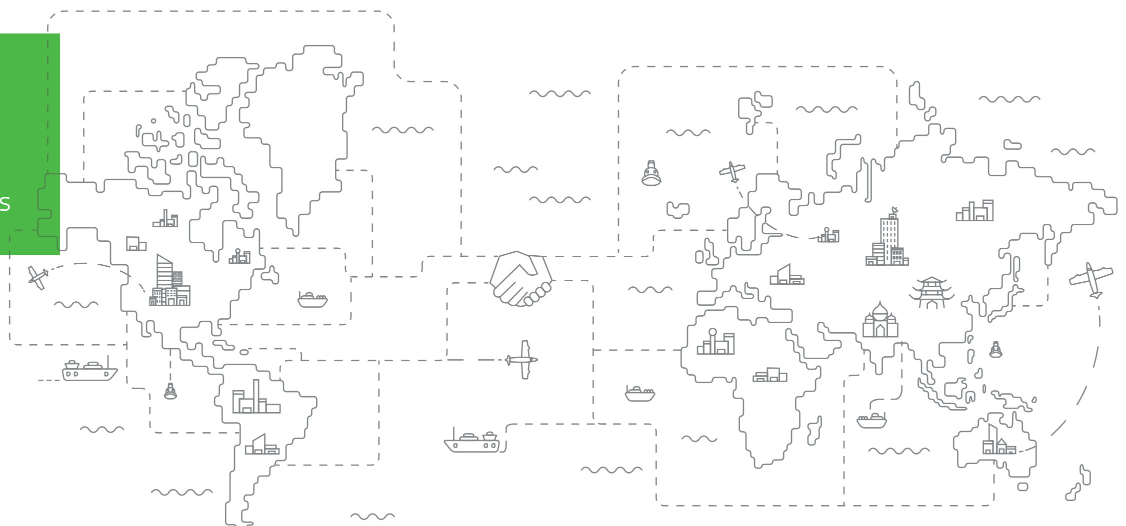

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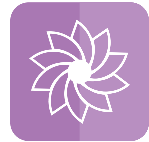

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