

Adjusting for COVID-19 in valuations

Cost of Equity update

Insights as at 30 April 2020



The insights in this paper are based on analysis of the Australian market and reflect the views of the PwC Australia firm. These insights may not be applicable in other territories given differences in local market practice and is predominantly focused on observations of Australian companies and financial exchanges.

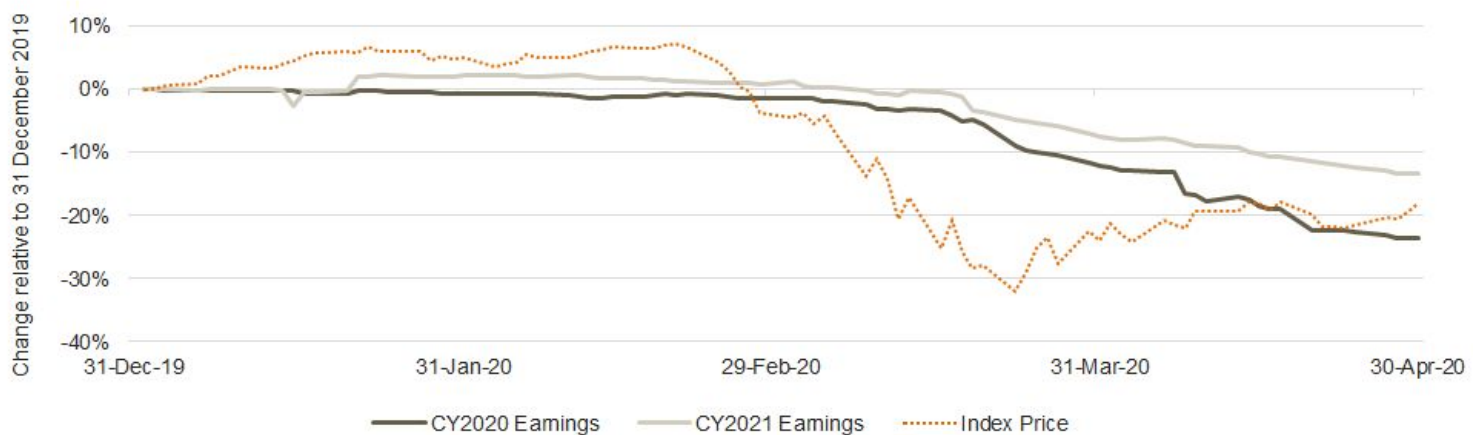
In our previous paper, <http://bit.ly/COVID19valuations>, (originally published 18 March 2020 and revised at 31 March 2020) we examined how the impact of COVID-19 could be factored into valuations in the short-term. During those early stages as stock markets declined and companies began to assess the fallout, it was challenging to disaggregate the impact on valuations between: reduced earnings expectations and increases in return expectations (i.e. equity discount rates). We suggested that, absent the availability of revised forecasts, companies would likely continue to use existing forecasts but apply a temporary adjustment to the discount rate as a short term solution for time-critical valuations.

A few weeks on, more information has become available and the markets have had more time to revise forecast earnings estimates. In this update, we revisit our analysis to examine what has driven the fall in stock markets and the implications for the cost of equity.

Earnings playing catch-up

Global stock markets began a correction around the weekend of 22/23 February as the world started to come to terms with COVID-19 as a global rather than a regional issue. At one stage the ASX200 had fallen by one-third from its 1 January level, although a subsequent rebound has reduced the decline to around 18% by 30 April.

Figure 1: Change in ASX200 Index and earnings forecasts



Source: S&P CapitalIQ

As expected, reductions in earnings forecasts lagged behind share price falls as companies and brokers took time to assess the impact and publish revised estimates. Meaningful downward revisions in earnings did not begin to come through until mid-March - three weeks after the stock market correction began.

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Whilst further reductions may be forthcoming, current indications suggest that to date brokers have pencilled in drops of 25% and 13% for 2020 and 2021 calendar year (“CY”) earnings respectively. When compared to the 18% fall in share prices, this means that current year earnings forecasts have reduced by slightly more than share prices, next year’s earnings are expected to decline by less.

What can we learn from the gap between the fall in share prices and the reduction in earnings estimates?

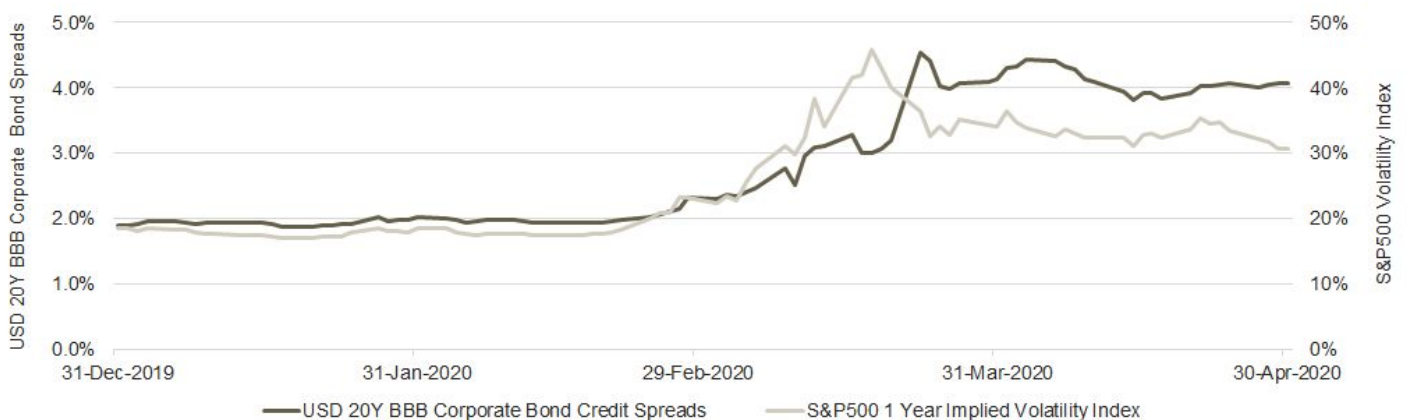
If we revisit the situation faced in the weeks immediately following the COVID-19 fallout, we can now begin to examine what the market may be telling us about changes to earnings estimates versus equity discount rates. For earnings reductions to fully explain the 18% share price decline, whilst assuming no change to the equity discount rate, would require:

- forecast earnings for 2021 to continue to be revised lower; **and**
- these revisions to apply in future years - i.e. earnings for 2022 and beyond to also be c.18% lower than previous forecasts. It is important to remember that the value impact is driven much more by the shape of the recovery and assumptions for longer-term growth, than by the immediate decline in near-term earnings.

This scenario may imply the feared “L”-shaped recession, which for the time-being is not the predominant view. As such, a more realistic scenario is likely to be that the change in market valuations is driven by a combination of a fall in earnings expectations and a rise in equity discount rates. Effectively investors are not only pricing in lower earnings but are also demanding higher returns for the increased uncertainty surrounding what those earnings will actually be.

Intuitively, this view feels more appealing as other key risk indicators (corporate bond credit spreads and volatility indices) are also suggesting that the price of risk has increased.

Figure 2: Movements in Corporate Bond Spreads and Volatility Indices



Source: S&P CapitalIQ

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How to quantify the change in discount rates?

In order to estimate a change in discount rates from equity markets, you first need to develop a longer-term view on earnings.

If we assume that the 25% and 13% forecast reductions in ASX200 earnings for 2020 and 2021 respectively are accurate and that previous growth rates for future years continue to apply (from the lower 2021 earnings). This would effectively assume a rebasing of each year's forecasts earnings to be 13% below previous expectations.

A more likely variant on this may be that near-term earnings see a larger reduction but that there is a more substantial rebound with longer-term earnings returning closer to previous estimates (i.e. more of a "U" shaped recovery). The challenge with the approach, especially in a time when earnings are so uncertain, is it requires the modelling of various scenarios, payout ratios and growth assumptions to appropriately interrogate the result. This is difficult given the current high levels of volatility in share prices and earnings estimates.

A simpler way?

So is there a simpler way to test movements in the cost of equity? If we are looking to get a rough estimate? An alternative approach is to look at the implied trading multiples of individual companies and that of the ASX200 Index:

$$\text{Index Price} = \text{Index Earnings} \times \text{Earnings Multiple}$$

The inverse of the earnings multiple is the capitalisation rate and this is a combination of the cost of equity and the growth rate (i.e. much like the Gordon Growth formula).

$$\text{Capitalisation Rate} = 1 / \text{Earnings Multiple}$$

$$\text{Capitalisation Rate} = \text{Cost of Equity} - \text{Earnings Growth}$$

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Given that earnings forecasts have now started to be revised by companies and brokers, the earnings multiples implied by the ASX200 have become more meaningful than was the case immediately after COVID-19 began to impact financial markets (when share prices immediately fell but earnings estimates did not). Utilising the most forward looking multiple that is available and reliable, currently this is likely to be the CY2021 implied multiple, changes in the P/E multiple can then be used to determine how much the capitalisation rate has changed.

Date	ASX200 Price/Earnings Multiple (CY2021)	Implied Capitalisation Rate
1 January 2020	17.0x	5.9%
30 April 2020	16.0x	6.3%
Change	-1.0x	+0.4%

Source: S&P CapitalIQ

Simplifying the capitalisation rate, it is a combination of the cost of equity and earnings growth. However, if we make the assumption that the rate of earnings growth has not changed from 2022 onwards then the change in the capitalisation rate is equal to the change in the cost of equity.

This is admittedly a big assumption to make given what has happened to inflation, the earnings profile and other economic indicators. However, it does give a useful indication and suggests that the cost of equity has revised in the order of **0.25%-0.75%**.

Choose your own scenario

There are of course many other valid earnings scenarios, both in CY2021 and beyond, that would lead to different results for the implied change to the cost of equity. However, the earnings and cost of equity assumptions go hand in hand and so making more optimistic assumptions about earnings implies larger increases in the cost of equity. This can be simply illustrated below by calculating the implied rate for more or less optimistic earnings assumptions than current broker forecast estimates, and reconciling this with the 18% reduction in the ASX200 index price.

Forecast CY2021 Earnings Reduction	Implied Multiple	Capitalisation Rate	Implied change in Cost of Equity from 1 January 2020
5%	14.7x	6.8%	+0.9%
10%	15.5x	6.5%	+0.6%
Actual ~13%	16.0x	6.3%	+0.4%
15%	16.4x	6.1%	+0.2%

Source: S&P CapitalIQ

Whilst the market shifts could also be explained, at least in part, by assuming lower earnings growth for longer (i.e. the other element of the capitalisation factor) this requires making additional assumptions around an inherently uncertain earnings profile.

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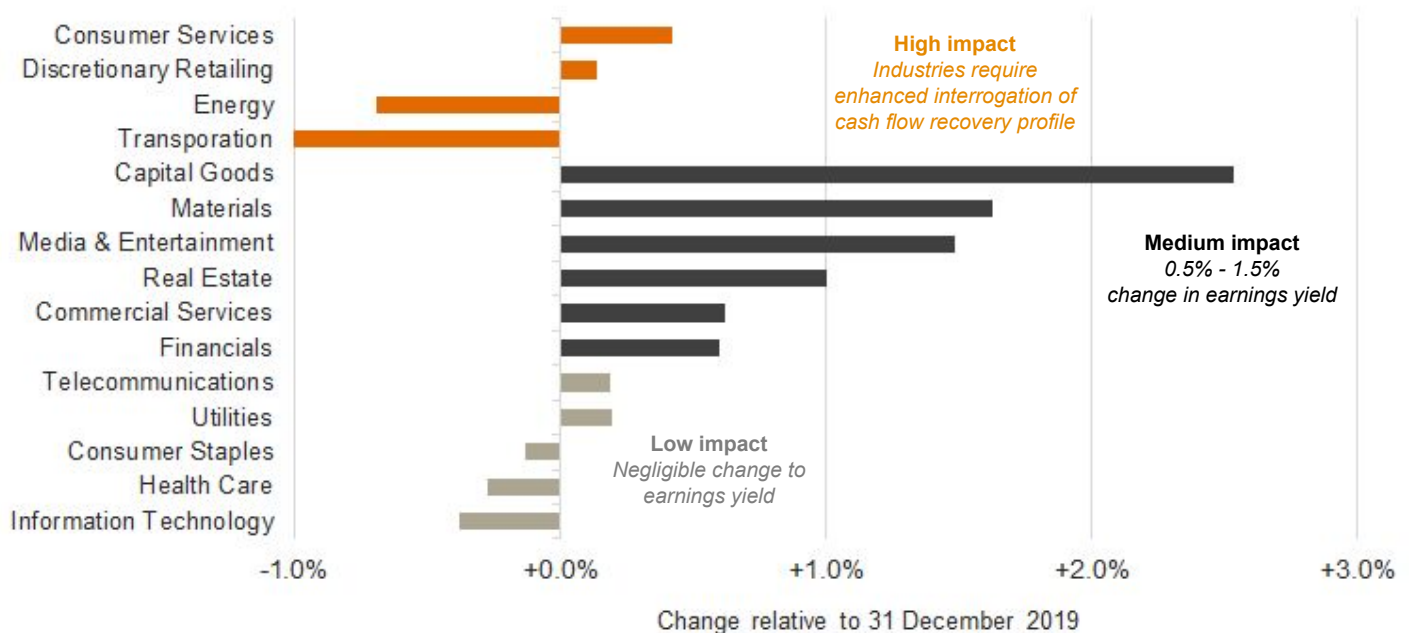
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Dissecting the data - a sector view

For most (although not all) businesses, it is difficult to be optimistic on earnings and to assume minimal (or no) changes to the cost of equity, and rationalise this given the significant market shifts that have occurred. That said, we have broken the data out by sector to provide some indication of the level of earnings adjustments that have been forecast to date and what this implies about the change in the cost of equity.

Figure 3: Changes in ASX200 earnings yield by sector



Source: S&P CapitalIQ; PwC Analysis

Low Impact: For some sectors the implied change in the earnings yield is negligible. These are generally sectors that have experienced limited downside (or even positive) impacts from COVID-19 and there is less uncertainty around future earnings expectations.

Medium Impact: In these sectors there has been an increase in earning yields of c.0.5%-1.5%. This suggests investors expect to be compensated for the additional uncertainty that is currently present in the forecast cash earnings estimates for these industries.

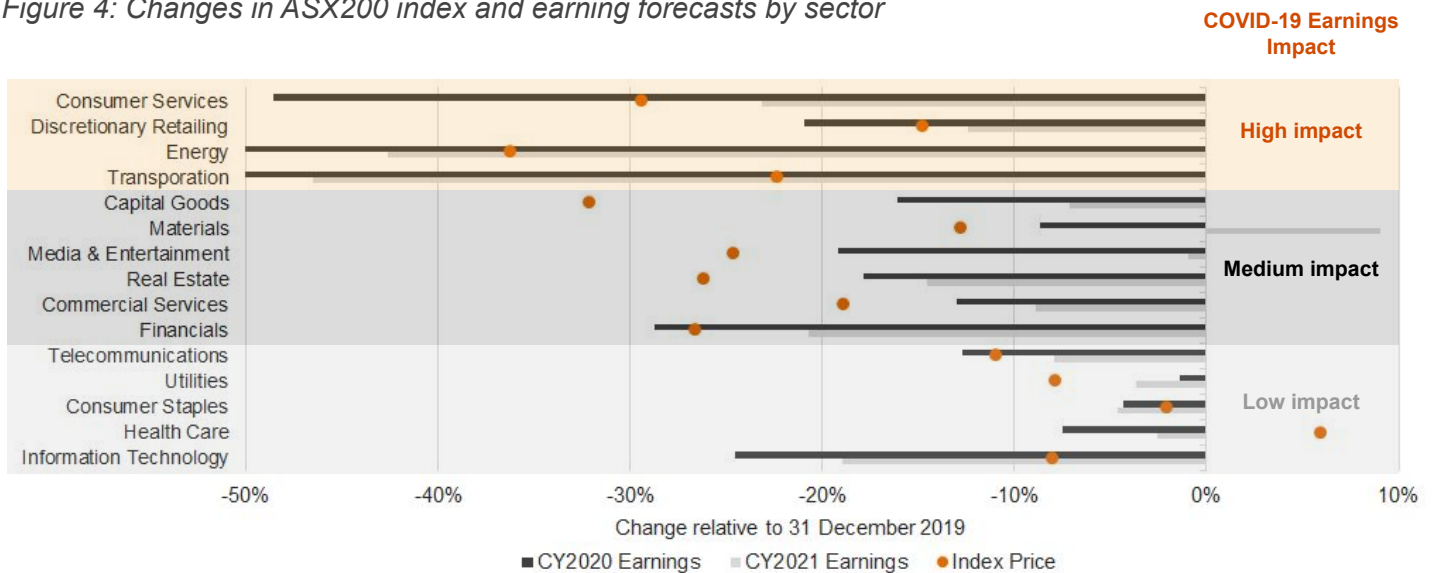
High Impact: These sectors have been heavily impacted by COVID-19 but appear to have seen limited changes to the earnings yield (Hotels, Energy, Transport, etc.). These industries require particular caution because their earnings for CY2021 have been revised significantly lower (25%+). Rather than the cost of equity having fallen, these sectors are expected to have longer recovery periods that stretch beyond CY2021. As such, to appropriately assess the cost of equity changes for these industries requires enhanced interrogation of long-term cash flow forecasts and scenario testing (beyond the additional analysis currently required for all companies).

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Figure 4: Changes in ASX200 index and earning forecasts by sector



Source: S&P CapitalIQ; PwC Analysis

Conclusion

The **0.25%-0.75%** range represents a reasonable starting point for considering how the overall market's cost of equity may have changed after cash flows have been updated to incorporate the expected impact of COVID-19. However, unlike the previous Global Financial Crisis, the impacts are much more sector specific and the above starting point needs to be adjusted for:

- Specific industry characteristics
- The level of financial and operational leverage
- The level of cash flow adjustment and how this compares to peers
- The timing and profile of the recovery in earnings
- The assumptions regarding longer-term growth and inflation

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