Market Commentary: Company Valuations in Context to COVID-19
February 2020

Having issued a COVID-19 Update just last week and with everyone in the world laser-focused on the spread and immediate effect of the disease, we figured it is a good time to discuss how businesses are generally valued and then circle back to how the virus truly affects those valuations.

Let’s start with a simple hypothetical paper company, we will call it Munder Difflin (“MD” - and yes, I finally got to watching “The Office;” don’t tell me the ending...).

If we decided that we wanted to purchase MD we may look at earnings over the last few years and infer a growth trajectory. If MD made $100K this year with a 10% growth rate for the next 5 years and then 5% thereafter and we necessitated a 15% return on equity, the valuation for MD may look like this:

MD 10% annual growth yr 1 -5; 5% thereafter

Investor demands a 15% return on equity (ROE / Discount rate)

Year	**Annual Earnings**	**Present Value**
1	$ 100,000	$ 86,957
2	110,000	83,176
3	121,000	79,559
4	133,100	76,100
5	146,410	72,792
Terminal Value	$ 1,464,101	**$ 632,971**
	SUM:	**$ 1,031,555**

Now let's say we estimate that between disruptions and weak sales due to COVID-19 that this year's earning would drop 50%, but that once contained we expect earnings to return to prior levels. In that case the valuation adjusts as follows:

COVID-19 cuts earnings in half in year 1 results in 4% drop in present v

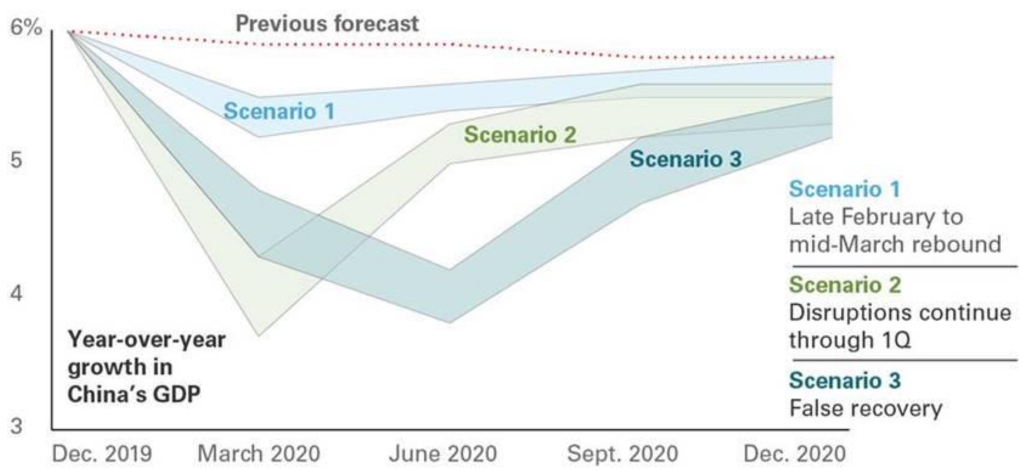
Year	**Annual Earnings**	Present Value
1	$ 50,000	$ 43,478
2	110,000	83,176
3	121,000	79,559
4	133,100	76,100
5	146,410	72,792
Terminal Value	$ 1,464,101	**$ 632,971**
	SUM:	**$ 988,077**
	Drop in Valuation	**-4.2%**

As can be seen, most of the present value is due to the Terminal Value, which is simply all future expected earnings discounted to present value. Furthermore, a 50% drop in earnings this year has only a 4% negative effect on valuation ($988K as compared to $1.032 mil).

Following is the hypothetical base case as well as some other potential outcomes:

- **Base Case:** A 50% drop in earnings where weak sales are simply lost rather than recaptured with the event isolated to the first year only.
- **Best Case**: MD recaptures some of the losses in year 1, either later in year 1 or year 2. Valuation would drop less than 4% in that scenario.
- **Worst Case**: Bankruptcy! MD cannot afford to navigate disruptions due to negative cash, lack of borrowing capability and client concerns (due credit concerns).
- **Recession Case**: A longer period of depressed earnings due to disruption resulting in other cracks and weakness within the system.

Bringing it back to the virus, the Street initially believed that the outcome would look like our Best Case though there are increasing concerns that some combination of Worst Case and Recession Case may play out. Ultimately, the outcome is dependent on how the virus plays out and how much financial support is needed and provided to the most vulnerable companies to avert cascading negative scenarios of closing companies, supply chain disruptions and unemployment. The graph below shows three scenarios that Vanguard put together on the virus's effect on China GDP. All scenarios assume that business normalizes within the next half a year – which has been the norm in past outbreaks. This means Vanguard most likely assumes that the Virus is beat one way or another or, at the worst, is not beat but allows business to proceed.



Source: Vanguard Investment Strategy Group

Now we fully expect both the US and China to provide a high level of financial support to the economy. Ignoring the uncertainties and justified health fears, there is real risk to smaller companies who cannot afford to weather a three to six month period of true negative cash flows. If enough smaller companies go belly up it will tremor through the economy as well as exposing cracks that were not noticed prior. At the moment though, the above graphic represents the general expectation of most institutional managers we have spoken to.

IMPORTANT DISCLOSURE

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