Coronavirus: Market Temperature Check

Don't rush to check-out; stock up on quality companies.

Morningstar Equity Research
23 March 2020

Contents

Executive Summary

Near-term news is likely to get uglier, but increased collective effort globally is expected to lead to containment of the coronavirus outbreak sometime over the next nine months. We base our view on historical analysis of previous pandemics as detailed in our March 9 report, "Coronavirus: Widespread Disease but Drug Pipeline Progress."

Experience with previous pandemics informs our assessment of a range of likely outcomes for global economic growth in 2020. We expect near-term impact to be savage, shaving off 2 percentage points from global GDP growth. However, we anticipate a vaccine ready to be deployed by mid- to late 2021, setting the stage for a return to normality. We expect a quick recovery of the global economy in 2021. The fast and furious monetary and fiscal interventions announced by central banks and governments globally provide enormous tailwinds for the world economy to grow above trend and undo most of the damage by 2024.

It has been difficult to keep on top of the rapidly shifting environment, but collectively we find more opportunities to buy than sell shares at the current level. Because this event presents a sharp short-term economic fallout for many companies, we think this crisis will certainly favor companies with economic moats and financial strength. We think there are a number of moaty names that investors should consider adding to their portfolios as well as heavily sold-down stocks that could see a good postvirus bounce.

In this report, we highlight 10 stock picks for each of the four main regions that Morningstar equity analysts cover: North America, Europe, Asia, and Australia and New Zealand. We can't begin to suggest when equity markets may bottom out, but we like where we see good value versus risk. We also focus on answering key questions investors may have about the impact on specific industries. We discuss emerging trends and disruptions and assess the likely near- and long-term impacts of those issues.

Key Takeaways

- We expect the coronavirus impact to be severe in 2020, with global GDP growing 2% below trend. This presents near-term downside risk to consensus earnings estimates and dividend yields.
- However, markets are too pessimistic, extrapolating the weak economic outlook for too long. We believe a treatment is likely to take the edge off the coronavirus scare from late 2020, with a vaccine available as soon as mid-2021. An abatement in active cases coupled with treatment and vaccine breakthroughs are potential catalysts for a change in market sentiment.

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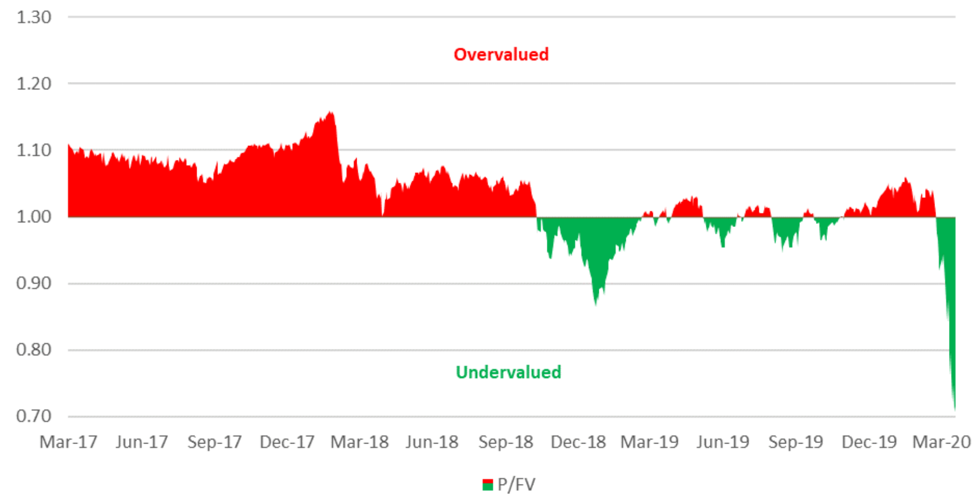
Exhibit 1 Fear Has Sent Equity Markets Well Below Fair Values
Our Morningstar coverage universe is trading at 0.72 times of our fair value estimates.



Source: Morningstar. Data as of March 19, 2020.

- Economic moats are as important as ever. While most businesses are likely to be affected, those with a competitive advantage could extend their lead.
- Some industries, like airlines, have a history of being procyclical, meaning, the bounce for them is likely to be more pronounced than others. Adding to soft oil demand, a price war is weighing on the energy industry. We surmise both factors are transitory.
- Consumer cyclical names are among the worst performing, but spending will recover and there are investment opportunities among moaty names with stronger financial positions.
- For streaming services, more people staying indoors will likely produce a material uplift in usage and tempt consumers to try new offerings.
- Despite significant short-term supply chain disruptions, we don't predict any long-lasting changes to company supply chain structures, but capital equipment demand will likely take some time to recover.
- Demand for healthcare products overall should stay fairly steady, given sales are supported by relatively inelastic demand for important healthcare needs.
- We readily admit that banks underperform during downturns, but we believe banks are generally better positioned than on previous occasions.
- For active managers with heavy equity exposure, we're likely to see the one-two hit of a decline in asset-based fees with the stock market rout, as well as net outflows from investors seeking safety. Financial exchanges and data firms should be relatively stable.
- The short-term impact to rents is likely limited with most tenants tied into long-term leases. Some REITs have rolled out some measures to help their tenants.
- We see relatively modest exposure to the effects of the coronavirus in the telecom industry, thus we believe opportunities have emerged.

Exhibit 2 Forty Global Stocks to Run the Ruler Over

Company	Morningstar Rating	Price/FVE	Moat	Industry	Region
3M Co	★★★★	0.74	Wide	Industrial Products	US
Amazon.com Inc	★★★★	0.76	Wide	Retail - Cyclical	US
ANTA Sports Products Ltd	★★★★★	0.67	Narrow	Travel & Leisure	Asia
Bayerische Motoren Werke AG	★★★★★	0.33	Narrow	Vehicles & Parts	EU
BHP Group Ltd	★★★	0.94	None	Metals & Mining	AU
Biomarin Pharmaceutical Inc	★★★★★	0.61	Narrow	Biotechnology	US
Blackmores Ltd	★★★★	0.81	Narrow	Consumer Packaged Goods	AU
CapitaLand Mall Trust	★★★★★	0.67	Narrow	REITs	Asia
CenturyLink Inc	★★★★	0.54	None	Telecommunication Services	US
China East Education Holdings Ltd	★★★★★	0.72	Narrow	Education	Asia
Cie Financiere Richemont SA	★★★★★	0.58	Wide	Retail - Cyclical	EU
CNOOC Ltd	★★★★★	0.50	None	Oil & Gas	Asia
Comcast Corp	★★★★	0.73	Wide	Media - Diversified	US
Corteva Inc	★★★★★	0.54	Wide	Agriculture	US
Credit Suisse Group AG	★★★★★	0.34	Narrow	Banks	EU
Dufry AG	★★★★★	0.25	Narrow	Retail - Cyclical	EU
Fanuc Corp	★★★★	0.70	Wide	Industrial Products	Asia
Galaxy Entertainment Group Ltd	★★★★	0.78	Narrow	Travel & Leisure	Asia
Hanesbrands Inc	★★★★★	0.33	Narrow	Manufacturing - Apparel & Accessories	US
Hon Hai Precision Industry Co Ltd	★★★★	0.72	None	Hardware	Asia
ING Groep NV	★★★★★	0.27	Narrow	Banks	EU
Macerich Co	★★★★★	0.13	Narrow	REITs	US
Murata Manufacturing Co Ltd	★★★★	0.67	Narrow	Hardware	Asia
National Australia Bank Ltd	★★★★★	0.60	Wide	Banks	AU
NN Group NV	★★★★★	0.48	None	Insurance	EU
Norwegian Cruise Line Holdings Ltd	★★★★★	0.18	Narrow	Travel & Leisure	US
Oversea-Chinese Banking Corp Ltd	★★★★	0.73	Narrow	Banks	Asia
Pfizer Inc	★★★★★	0.70	Wide	Drug Manufacturers	US
Premier Investments Ltd	★★★★	0.77	None	Retail - Cyclical	AU
Roche Holding AG	★★★★★	0.79	Wide	Drug Manufacturers	EU
Royal Dutch Shell PLC	★★★★★	0.36	Narrow	Oil & Gas	EU
Super Retail Group Ltd	★★★★★	0.45	None	Retail - Cyclical	AU
Telefonica SA	★★★★★	0.35	Narrow	Telecommunication Services	EU
Telstra Corp Ltd	★★★★	0.74	Narrow	Telecommunication Services	AU
Total SA	★★★★★	0.36	None	Oil & Gas	EU
Trip.com Group Ltd	★★★★	0.62	Narrow	Travel & Leisure	Asia
Unibail-Rodamco-Westfield	★★★★★	0.39	Narrow	REITs	AU
Viva Energy Group Ltd	★★★★★	0.42	None	Oil & Gas	AU
Westpac Banking Corp	★★★★★	0.58	Wide	Banks	AU
Woodside Petroleum Ltd	★★★★★	0.36	None	Oil & Gas	AU

Source: Morningstar, ratings as of March 19, 2020.

COVID-19 a Widespread Disease, but Has a Minimal Long-Term Economic Impact

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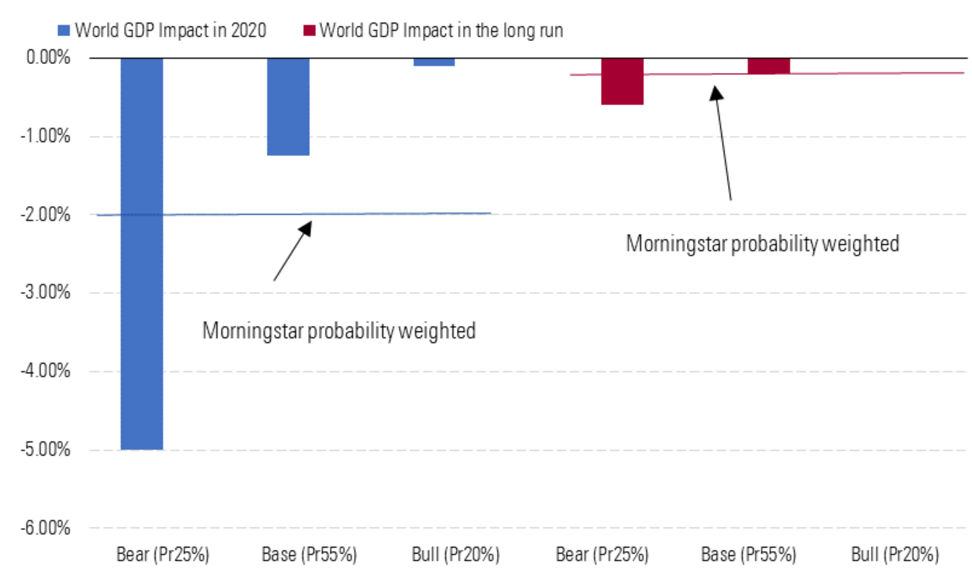
Markets have been volatile and corrected sharply as COVID-19, the disease caused by SARS-CoV-2 ("coronavirus"), spread across the globe. Fears of a global recession have triggered reserve banks and governments to respond with monetary easing and fiscal stimulus, respectively.

However, we expect the coronavirus pandemic to have minimal long-term economic implications, and we view the severe sell-off in global equities as overstated. The following recaps key views published in our report "Coronavirus: Widespread Disease but Drug Pipeline Progress." Based on our probability-weighted base-, bull-, and bear-case scenarios, we forecast the coronavirus hit to the global economy to be significant in 2020, but for low fatalities to allow a quick recovery from 2021. Our analysis of company impact and our fair value estimates are based on these underlying scenarios.

Exhibit 3 Morningstar Scenario Analysis: COVID-19 Health and Economic Hit



Source: Morningstar.

While we see a weighted average hit of 2.0% to 2020 global GDP, by 2024 we forecast long-run global GDP to be only 0.2% worse off than without the pandemic. We forecast a muted long-term impact because damage to productive capacity would be small, plus economic confidence should quickly return once the virus subsides. Therefore, our equity valuations on average should be unscathed if our long-term projections on the GDP are correct. We think a 30%-plus fall in global equities since the outbreak began is a gross overreaction.

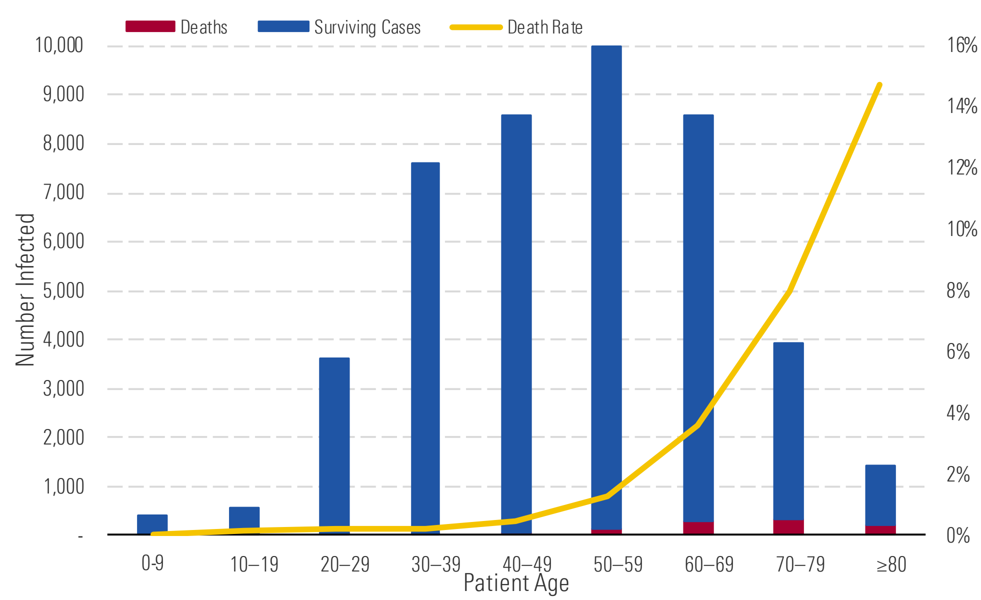
We assume a global fatality rate in our base case of 0.5% among those infected, higher than seasonal flu and recent pandemics like the 2009 swine flu, but much lower than levels reported to date (as diagnosis improves). We expect even lower fatality rates for developed countries (more ICU beds per capita, best practices), and the working-age population (the disease is most severe in the elderly).

We see reason for optimism surrounding vaccines and treatments. We should see initial data from Gilead's remdesivir by April 2020; this could be a strong defense for patients with severe disease. Among vaccines, Moderna is most advanced, but we don't expect use until 2021.

Base Case: Coronavirus Spread Begins to Resemble a Severe but Manageable Flu: 55% Probability

We assume a global fatality rate of 0.5% of those infected in our base case, much lower than levels reported to date, with even lower rates for developed countries (able to put risk mitigation measures in place) and the working-age population (the disease is most severe in patients over the age of 65, and particularly those over the age of 80 or with pre-existing conditions).

Exhibit 4 Demographics of Coronavirus Cases by Age and Death Rate, China CDC Report



Source: Morningstar, China CDC, "The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) — China, 2020."

We expect newer cases to become easier to diagnose and hospitals to learn how to best treat. Recent numbers show a 4.4% death rate in Hubei province, which includes Wuhan, versus a 1%-2% death rate outside of Wuhan, with most of these numbers still reflective of China's fatality rates. This should further lower the economic impact, even if global death rates are much higher than recent pandemics. This distinguishes the coronavirus from influenza pandemics, which often target younger patients as well (for instance, Spanish flu hit in a patient's prime).

This 0.5% global fatality rate is still well ahead of death rates from the flu, which is around 0.1%. Given the high transmissibility, we also expect 20% of the global population to be infected, or roughly 1.5 billion people, which is above the high end of the typical range for seasonal flu of 3%-11%[1], but consistent with the U.S. Department of Health and Human Services', or HHS', moderate to severe pandemic projections of 20%-30% infection rates[2] as well as infection rates for prior pandemic flu (between 20% and 40% of the U.S. population was infected by Spanish flu, Asian flu, and Hong Kong flu)[3]. This could result in nearly 8 million deaths globally, or more than 200,000 deaths in the U.S., well ahead of the typical U.S. deaths from seasonal flu (12,000-61,000, according to the CDC).

Given the potential for a second wave, we think the impact on the economy could be felt for the remainder of 2020, and we assume this could cost the U.S. 1.5% of 2020 GDP, consistent with Congressional Budget Office estimates of the impact of a more mild pandemic, similar to the 1957 or 1968 pandemics[4].

Exhibit 5 We Forecast a Negligible Long-Term GDP Impact From COVID-19 (Though 2020 Looks Bad)

Scenario	Fatalities (% of World Pop)	World GDP Impact: 2020	World GDP Impact: Long Run	Probability
Bear	0.2%	-5.00%	-0.6%	25%
Base	0.1%	-1.25%	-0.2%	55%
Bull	0.01%	-0.10%	0.0%	20%
Avg	**0.12%**	**-2.0%**	**-0.3%**	

Source: Morningstar.

Bear Case: Severe Pandemic More Akin to Spanish Flu, With Mitigation Measures Slightly Improving Comparisons: 25% Probability

In a bear case, we assume a potential pandemic cost of 5% of 2020 GDP, similar to the 1918 Spanish flu, consistent with past pandemic analysis from the Congressional Budget Office[5]. This would be the result of extended school closures (potentially six months), employees working from home, and significant impact on retail and service industries, as well as the higher pressure from employees caring for sick family members.

However, we do not assume widespread use of extreme measures such as walling off cities or entirely stopping transport (even though the U.S. government has the authority to limit civil liberties to protect

1 Tokars, Jerome I., Olsen, Sonja J., and Reed, Carrie, U.S. Department of Health and Human Services, "Seasonal Incidence of Symptomatic Influenza in the United States," May 2, 2018.

2 Pandemic Influenza Plan, 2017 Update, U.S. Department of Health and Human Services.

3 Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States, February 2007.

4 U.S. Congressional Budget Office, https://www.cbo.gov/system/files/2018-10/05-22-avian-flu.pdf

5 U.S. Congressional Budget Office, https://www.cbo.gov/system/files/2018-10/05-22-avian-flu.pdf

public health). Even if the virus fades by the end of 2020, we would expect recurrence of the disease as well as significantly more time for the economy to ramp back to its normal, more functional level, although the long-term impact is still relatively low.

We assume less significant improvement from ex-Hubei fatality rates, with a roughly 0.8% fatality rate for the remainder of the pandemic. This is similar to the U.K. action plan from March 2020, which discloses a worst-case scenario where 1% of infected patients die[6]. In such a scenario, we assume 30% of the global population could be infected, consistent with HHS' moderate to severe pandemic projections[7], but a smaller number than worst-case scenarios put forward by Harvard's Marc Lipsitch (40%-70%) and Australia's government (25%-70%, with 50% in a severe scenario[8]). Our assumptions imply more than 18 million deaths globally and nearly 700,000 in the U.S.

We don't assume as high a percentage of the world's population to succumb to the coronavirus in this scenario as in the Spanish flu (even in this bearish analysis, we assume 0.24% of the population could die). There were more than 50 million deaths from the Spanish flu, at a time when the world's population was just under 2 billion, implying more than 2% of the population died from the disease (roughly one third were infected)[9]. We assume mitigation measures are much improved from a century ago and would be applied more consistently. This benefit, however, is partly countered by greater international travel in modern society (although Spanish flu occurred at the end of the First World War, allowing troops to spread the disease across continents). Perhaps even more important, patients frequently died within hours of developing symptoms of Spanish flu, limiting the ability for diagnosis and treatment to improve outcomes. The coronavirus is extremely different in that sense, with the average time between developing symptoms and hospitalization (in severe cases) of at least nine days[10]. We think this buys time for patients to get diagnosed and get treatment, whether that is targeted treatment from novel medicines or simply the standard of care in hospitals.

Bull Case: COVID-19 Infects Widely but Fades in Severity, Like 2009 Pandemic: 20% Probability

We see limited economic impact in a bull-case scenario, where COVID-19 essentially slightly extends the typical flu season (which was already severe). In this scenario, we assume that fatality rates begin to fade rapidly, as they already have beyond Hubei province, settling closer to 0.1%, consistent with a typical flu. Given the high transmissibility, we still have a pandemic to be declared in this scenario. We model 10% of the global population infected, or roughly 770 million people, which is at the high end of the typical range for seasonal flu of 3%-11%[11], but would generally be seen as successful mitigation of a pandemic[12]. This results in fewer than 800,000 deaths globally this year (around 30,000 in the U.S.).

6 Department of Health & Social Care, Coronavirus: Action Plan, A Guide to What You Can Expect in the U.K., March 2, 2020.

7 U.S. Department of Health and Human Services, Pandemic Influenza Plan, 2017 Update.

8 Cunningham, Melissa, Aubusson, Kate, Australia would need 1.8 million beds if coronavirus pandemic hits, Sydney Morning Herald, Feb. 26, 2020.

9 Taubenberger, Jeffery K., Morens, David M., 1918 Influenza: The Mother of All Pandemics.

10 Fauci, Anthony S. et al. Covid-19-Navigating the Uncharted. New England Journal of Medicine, Feb. 28, 2020

11 Tokars, Jerome I., Olsen, Sonja J., and Reed, Carrie, U.S. Department of Health and Human Services, Seasonal Incidence of Symptomatic Influenza in the United States, May 2, 2018.

12 Germann, Timothy C., Kadau, Kai, Longini Jr., Ira M., and Macken, Catherine A., Mitigation strategies for pandemic influenza in the United States, Proceedings of the National Academy of Sciences of the United States, April 11, 2006.

We assume the coronavirus does not recur (and does not experience a second wave, effectively disappearing with warmer weather in the summer months), mostly limiting the economic impact to the first quarter, with China remaining the most heavily exposed by far.

What Are the Likely Channels for a Pandemic to Affect GDP?

In the short run, there are many channels through which a pandemic could have a negative impact on GDP. Below we list some of the channels categorized into "supply-side" and "demand-side." Supply-side factors include those which affect the productive capacity of the economy (often referred to as "Potential GDP"). Demand-side factors are those that affect actual GDP without affecting the productive capacity of the economy.

Key Supply-Side Factors

- Labor supply would be curtailed by death, illness, quarantining, and preventive furloughs. This could come either from government restrictions (for example, mandatory quarantines), or from voluntary worker decisions to avoid risk of infection.
- Businesses could close in at-risk industries to mitigate infection risk for employees and customers alike. Tourism, transportation, retail, and restaurants are possible examples.
- Regions or countries on which the pandemic does not have a direct impact could see supply chain impact via trading partners hit with the virus.

Key Demand-Side Factors

- "Confidence" is the key demand-side channel. Confidence is an elusive concept to quantify or model in a precise way, but it undoubtedly is a major demand-side driver of economic activity.
    - Falling consumer confidence could cause lower household consumption.
    - Falling business confidence could cause lower investment.
- Laid off or temporarily furloughed workers in affected sectors will likely reduce their short-term consumption, even if workers expect to regain employment in the near future.

Most Short-Run Factors Don't Make Sense as Long-Run Factors

While all of the factors listed above are serious potential drivers of short-run GDP impact, most of them should abate once the pandemic is over, and therefore they aren't logical contributors to long-term GDP impact.

On the supply side, for example, laid off or furloughed workers will be able to return to work when the outbreak subsides (with the exception of fatalities). On the demand side, confidence should return quickly, and consumers and businesses will be eager to make up for postponed expenditures.

Central Banks Can Mitigate Demand-Side Impact but Not Supply Side

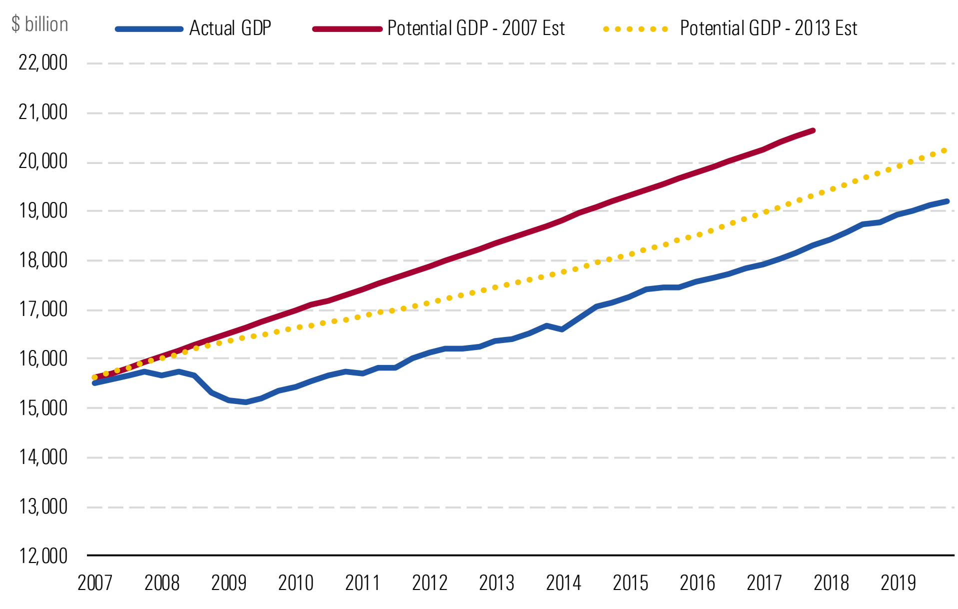
Central banks have some room to counteract the short-term GDP impact from COVID-19, and other countercyclical policies such as fiscal policy may have a role to play. However, countercyclical policies work via the demand side of the economy. These policies can compensate for a fall in confidence, for example (as the U.S. Federal Reserve has already attempted to do by cutting the federal-funds rate to zero, albeit with questionable success). The interest-rate cuts also aim to provide liquidity to the banking system, although whether banks lend depends on the institution's risk appetite.

However, countercyclical policies have only limited ability to mitigate supply-side impacts; for example, they cannot make up for the absent workers dragging on the economy's productive capacity.

Unlike the Financial Crisis, We Don't Think Recession Will Translate Into Long-Term GDP Loss

As discussed above, economic theory suggests that many short-run factors aren't consequential for long-term GDP, including in the pandemic-specific models listed in Exhibit 6. However, the recent empirical record of recessions gives us some pause in assigning zero long-term import to short-run factors. Many recent recessions have not seen a return to the prerecession trend in GDP growth. The post-2008 Great Recession in the U.S. is the most illustrative case. As shown in Exhibit 6 below, not only did the Great Recession cause an immediate 4% fall in U.S. real GDP, but by 2013 it had fallen 10% below the precrisis (2007) estimate of potential GDP. Therefore, seemingly the recession had a deleterious impact on the country's productive capacity, in addition to causing a shortfall in demand.

Exhibit 6 Example of Great Recession Looks Ominous, but We Think COVID-19 Situation Is Very Different
Actual GDP and Potential GDP (2007 and 2013 estimates) in chained 2012 dollars.



Source: Morningstar, St. Louis Federal Reserve, U.S. Congressional Budget Office.

However, we think several characteristics make a potential pandemic generated economic slowdown different from usual recessions (particularly the post-2008 Great Recession).

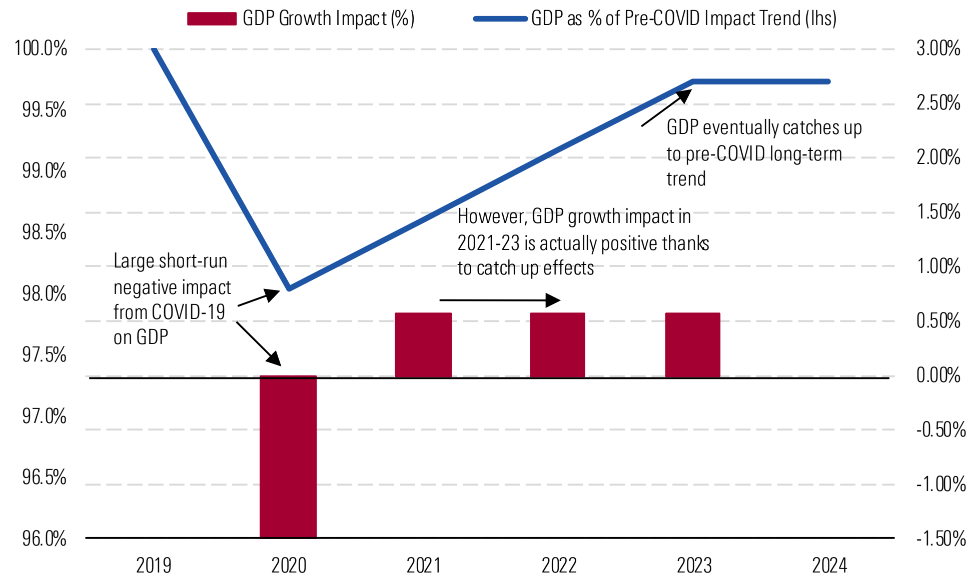
First, recent recessions have been accompanied by large-scale reallocation of labor and other resources across sectors. For example, the U.S. housing bust required massive reallocation of labor away from construction and real estate into other sectors. Unemployed workers in these sectors took many years to regain employment. Likewise, while the post-2000 tech bust was less consequential for labor markets, it still required a large redirection of business investment away from IT equipment and software. By contrast, workers unemployed/put on furlough because of the coronavirus are likely to resume their former positions. Overall, the former pattern of economic activity can be resumed, whereas usual recessions and their aftermath involve a reconfiguration of economic activity.

Second, recession duration is driven in part by lack of recovery in confidence. Confidence is impossible to measure with any degree of concreteness. Yet, it seems logical that economic confidence would quickly rebound once the epidemic recedes. In contrast, confidence did not recover quickly after the 2008 global financial crisis, with households and businesses remaining much more conservative in their expenditures and other behavior.

Short-Run Impact Looks Daunting, but GDP Will Experience Catch-Up Growth as COVID-19 Fades
While the short-run GDP hit of 2.0% in our average scenario (and especially 5% in our bear case) looks daunting, it's important to reiterate that this is a temporary shock to the economy. Many investors intuitively think of shocks to growth as being permanent, as many financial series are well modeled as (geometric) random walks.

To make this more concrete, consider Exhibit 7 below, an illustrative example based on our average COVID-19 scenario impact. The blue line is the ratio of scenario GDP to the level of GDP that would have occurred in each year in absence of the COVID-19 shock (presumably on a long-term upward trend). Growth falls by 2.0% in the first year (2020), and we assume that the economy reaches its long-run impact amount (negative 0.2%) by 2023. This is illustrated in the blue line returning to nearly 100% by 2023. A perhaps counterintuitive aspect of this dynamic is that in the years following the initial downward shock (2021-23), GDP growth is actually higher than we would have expected in the absence of COVID-19. This represents catch-up effects--as absent workers return to work or consumers resume their spending habits, this will cause temporary higher growth.

Exhibit 7 Large Short-Run Negative Impact From COVID-19 Will Eventually Reverse, as GDP Returns to Trend
Illustrative GDP impact timeline is based on our average scenario.



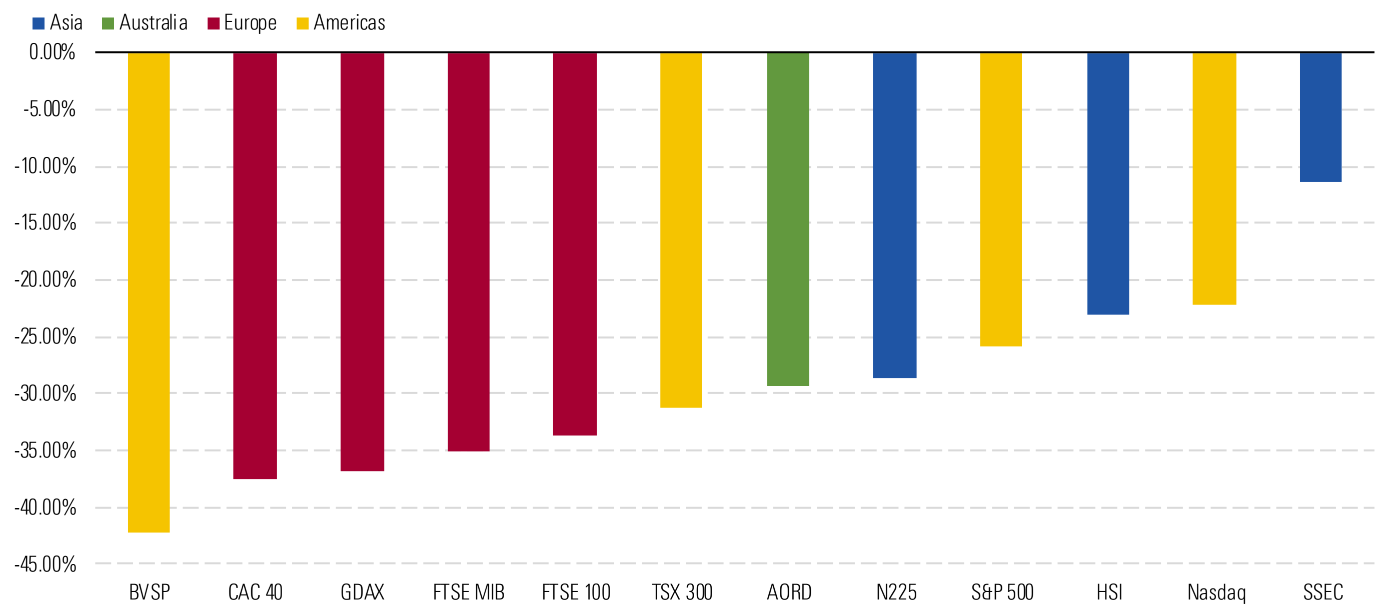
Source: Morningstar.

For further background on SARS-CoV-2, our assessment of the treatment and vaccine pipeline, and the virus' impact on our macroeconomic outlook, please refer to our special report "Coronavirus: Widespread Disease but Drug Pipeline Progress" published March 9, 2020.

Strong Medicine Gives Stock Markets the Chills; Time to Fill the Cart with Quality Companies

Global stock exchanges are retreating as government policies to slow the spread of the coronavirus are infringing on economic activity. In turn, fears of a global recession have triggered reserve banks and governments to respond with monetary easing and fiscal stimulus, respectively.

Exhibit 8 Chinese Exchange Indexes, Closet to the Initial Outbreak, Have Suffered the Least. Pandemic Fears Generally Hit European Stocks the Hardest.



Source: Reuters. Period from Jan. 2, 2020 to March 19, 2020. SSEC=Shanghai Stock Exchange, HIS=Hang Seng Index, AORD=ASX All Ordinaries, N225=Nikkei 225, GDAX=Deutsche Boerse DAX, TSX=Toronto 300, BVSP=Sao Paulo SE Bovespa.

Many leading economists are concerned the synchronized slowdown in global trade will lead to recessions in various markets. We don't disagree. Some economies are likely to slip into a few quarters of negative growth. While the overall global growth rate is certainly slowing, we anticipate 2020 global GDP growth to still be positive and increase by 1.3%. If a country is able to contain the coronavirus outbreak to four months, it's possible to avoid a recession, but given the global pandemic spread there's a good chance a recession will occur--although we think growth is still positive for the full year.

In its January 2020 update to its World Economic Outlook, the International Monetary Fund, or IMF, estimated world GDP growth at 2.9% in 2019 and forecast a global economic growth rate of 3.3% for 2020[13]. There was no mention of risks to China's economy from the coronavirus in the IMF's update. Therefore, we use this pre-COVID-19 growth forecast as our baseline of an undisturbed state of the global economy.

The intensive countermeasures taken by the Chinese government have hit economic activity hard in the first quarter. We lowered our 2020 China real GDP growth forecast by 250 basis points, to 2.2%, some 100 basis points ahead of the average global decline.

However, the Shanghai and Hong Kong stock exchanges have performed surprisingly well year to date. Among select 12 global exchanges of G20 nations, the Brazilian exchange underperformed the most. European markets have underperformed U.S. markets. The second quarter of 2020 is likely to be severely impacted outside of China. While Chinese workers are returning to offices and factories, many G20 nations are moving to significant curfews on public life and restrictions on economic activity.

Mainland China Slowly Returning to Norm, Next 14 Days Will Be Key to China

Perhaps the reason the Asia markets have lagged the recent rout in European and U.S. markets is because Asia has had a head start on this outbreak and domestic spread cases have generally peaked. We are seeing a second wave in mainland China and Singapore recently due to returning residents who have picked up the virus on their travels, but the governments appear to be confident that this can be contained at the source through either mandatory quarantines for all returnees and visitors or by banning the latter outright. As a result, stores and schools that had previously been shut are reopening. But what will be key is if China has 14 straight days of no local transmitted cases. If that happens, additional lockdown practices may be relaxed.

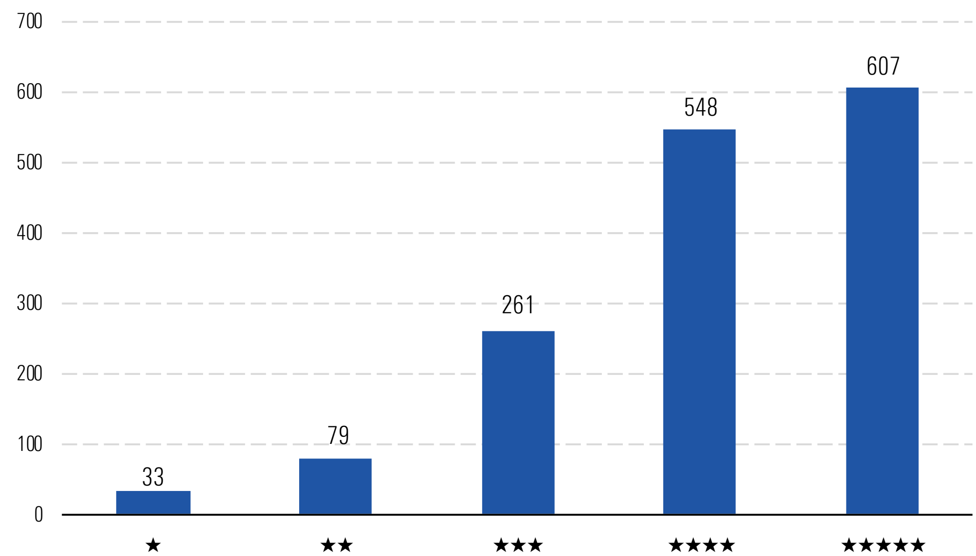
It's still too soon to see what the national data may show but we think some sequential improvement in China consumption data is possible based on individual company guidance. The latest data shared by CK Hutchison-owned drugstore chain Watsons is that at the peak of the virus outbreak in China in February, 64% of its 3,947 stores were closed and store traffic fell 90%. More than 95% of its stores are now open and foot traffic has recovered, and while still down 50%, it still marks a sharp improvement. If there are 14 straight days with no local cases, we anticipate a stronger recovery in consumer confidence. Notably, the U.S. and Europe will still be seeing cases rise, so uncertainty will remain a drag and economic activity will still be sluggish in China on subdued global demand.

13 International Monetary Fund, World Economic Outlook, January 2020.

Market Fair Value Screening as Attractive

Earlier this year, we estimated the market fair value of Morningstar's global coverage universe was overvalued by 7%, with a Market Fair Value of 1.07 as of Jan. 17, 2020. Following the significant global market downturn, we estimate the global market fair value to be 0.70 or 30% undervalued as of March 19, 2020.

Exhibit 9 Plenty of 5-Star Opportunities for Global Investors



Source: Morningstar, ratings as of March 19, 2020.

Opportunities abound, offering investors material margins of safety. Over half of our global recommendations are 4- or 5-star ratings. Besides the absolute price/fair value ratio, our uncertainty ratings are the other determining factor of our star ratings. All else equal, a stock with a higher uncertainty requires a higher margin of safety to switch between star ratings. The 40% or 607 names of our global equities coverage that are 5-star-rated present the most appealing investments on an uncertainty adjusted basis.

About 7% of our global coverage still screens as overvalued, despite the sharp recent stock market declines, but only a mere 2% of these are 1-star-rated. We rate 17% of companies covered by Morningstar at 3 stars, which we expect to yield their cost of capital to shareholders, but don't offer a significant margin of safety.

The Market Correctly Picked the Weakest Links, but It's Extrapolating Soft Short-Term Earnings

Humankind is looking down the barrel of a global health crisis. For most, 2020 is shaping up as a year best forgotten from a personal health as well as a financial perspective, at least for now. However, we don't expect the world to come to an end.

While we anticipate the coronavirus impact to be taxing on global GDP growth and company profits in 2020, we don't envisage long-lasting effects. Rather, a strong rebound is highly likely once a treatment and subsequently a vaccination become available. Reserve banks and politicians around the world have learned from the global financial crisis and reacted quickly with monetary easing and fiscal stimulus, respectively. We forecast these tailwinds, together with new infections abating, to underpin global economic growth above trend in 2021-23, before returning to trend growth from 2024.

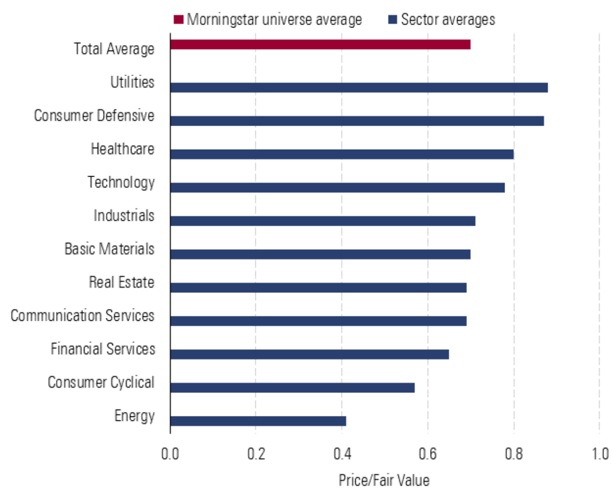
The market's view seems to differ from ours. The steep discounts to our fair value estimates in some sectors suggest the market is extrapolating the current weakness to persist much longer into the future. This opens a raft of opportunities for investors willing to cut through the noise and instead in a disciplined manner assess the extent to which the pessimism toward long-term corporate earnings is warranted.

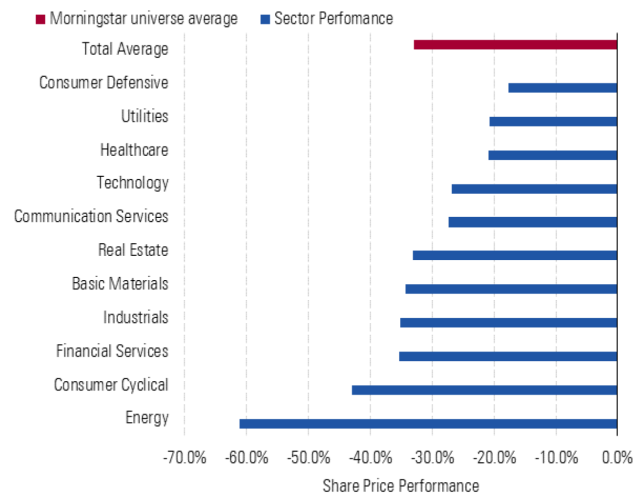
The heaviest sold-off sectors are energy, consumer cyclical, and financial services, all very procyclical sectors. However, as the term procyclical suggests, those sectors are likely to outperform when the economy recovers. Generally, the performance of the 11 sectors categorized by Morningstar is strongly correlated with our average price/fair values of the respective sectors. That is, we estimate those sectors, which experienced the poorest performance year to date, to be the most undervalued.

We concede that sector-specific issues beyond the coronavirus come into play, but we surmise that the global health crisis is in most instances the main driver of recent performance.

An obvious outlier is the energy sector, which is grappling with a price war between OPEC and Russia exacerbating already softer demand for crude oil due to a material slowdown in global travel and economic weakness in general. However, a relatively low oil price is likely to benefit the bottom line of companies consuming energy directly by lowering their cost of doing business, but also indirectly as it swells consumers wallets, which can redirect consumer spending from petrol stations to retailing, health care, rent, or other expenses.

Exhibit 10 Hardest-Hit Sectors Generally Offer the Greatest Discounts to Fair Value





Source: Morningstar. Period from Jan. 2, 2020 to March 19, 2020.

Conversely, utilities are at the relatively expensive end, although we see value emerging for the first time in many years. As our utilities analyst, Travis Miller wrote, U.S. utilities' 15% sell-off March 11-12 leaves the sector cheaper than it's been since 2009. The U.S. sector is 7% undervalued based on Morningstar's fair value estimates. The downturn in utilities opens long-awaited buying opportunities, especially for defensive investors. Most utilities are financially strong with attractive growth potential and historically high dividend yields relative to interest rates. We do not plan any significant fair value estimate or moat rating changes based on coronavirus impacts. Before the downturn, we were among the few who thought utilities valuations were far too rich. U.S. utilities peaked at 21% overvalued in mid-February, based on our fair value estimates. The sector is down 24% since then.

Further breaking down the performance of the individual Morningstar sectors to the Morningstar industry level gives more granular detail. For instance, within the consumer cyclical sector, the market appears to view the auto parts industry as less exposed than footwear and accessories. We agree with this view, that it is more urgent for many consumers to fix a broken-down car than buying the latest Adidas Kicks. Other discrepancies are intuitively not as easily verified. We question why travel services have been hit that much harder than airlines and the lodging industry.

In the next section, we explore key topics that we believe are and have been front-of-mind for market participants. The list of questions is by no means comprehensive. It isn't intended to be. Rather, we use our assessment of those issues to identify 10 stocks in each of our four regions to which we see appealing value to long-term investors.

Exhibit 11 Global Morningstar Coverage Performance by Industry Classification

Morningstar Industries	Price Change YTD	Morningstar Industries	Price Change YTD	Morningstar Industries	Price Change YTD
Oil & Gas Drilling	-74%	Building Products & Equipment	-38%	Insurance - Property & Casualty	-26%
Travel Services	-71%	Education & Training Services	-38%	Computer Hardware	-26%
Rental & Leasing Services	-70%	Farm & Heavy Construction Machinery	-37%	Tools & Accessories	-26%
Oil & Gas E&P	-69%	Furnishings, Fixtures & Appliances	-37%	Health Information Services	-26%
Oil & Gas Equipment & Services	-64%	REIT - Diversified	-37%	Electronic Components	-26%
Oil & Gas Midstream	-60%	Real Estate - Diversified	-36%	Utilities - Independent Power Producers	-26%
Leisure	-59%	Insurance - Reinsurance	-36%	REIT - Specialty	-25%
Oil & Gas Refining & Marketing	-58%	REIT - Retail	-36%	Industrial Distribution	-25%
Department Stores	-55%	Asset Management	-36%	Diagnostics & Research	-24%
REIT - Hotel & Motel	-55%	Banks - Regional	-36%	Food Distribution	-24%
Recreational Vehicles	-54%	Security & Protection Services	-35%	Publishing	-24%
Auto & Truck Dealerships	-53%	Conglomerates	-35%	Uranium	-24%
Oil & Gas Integrated	-52%	Footwear & Accessories	-35%	Beverages - Wineries & Distilleries	-24%
Advertising Agencies	-51%	Banks - Diversified	-34%	Tobacco	-23%
Metal Fabrication	-51%	Agricultural Inputs	-34%	Utilities - Regulated Gas	-22%
Lodging	-51%	Specialty Industrial Machinery	-34%	Real Estate Services	-22%
Apparel Manufacturing	-51%	Capital Markets	-34%	REIT - Industrial	-21%
Mortgage Finance	-50%	Internet Content & Information	-33%	Software - Infrastructure	-21%
Resorts & Casinos	-49%	Electrical Equipment & Parts	-33%	Business Equipment & Supplies	-21%
Airports & Air Services	-49%	REIT - Residential	-33%	Electronic Gaming & Multimedia	-21%
Airlines	-48%	Chemicals	-33%	Software - Application	-21%
Credit Services	-48%	Restaurants	-32%	Utilities - Diversified	-21%
Electronics & Computer Distribution	-48%	Infrastructure Operations	-32%	Waste Management	-21%
Engineering & Construction	-46%	Semiconductors	-32%	Telecom Services	-20%
Lumber & Wood Production	-46%	Entertainment	-32%	Medical Instruments & Supplies	-20%
Aluminum	-45%	Real Estate - Development	-31%	Railroads	-20%
Marine Shipping	-44%	Luxury Goods	-31%	Utilities - Renewable	-20%
Insurance - Specialty	-43%	Semiconductor Equipment & Materials	-31%	Beverages - Non-Alcoholic	-19%
Broadcasting	-43%	Medical Devices	-31%	Internet Retail	-19%
Specialty Retail	-43%	Other Industrial Metals & Mining	-31%	Medical Care Facilities	-19%
Aerospace & Defense	-43%	Packaging & Containers	-29%	Utilities - Regulated Electric	-18%
Gambling	-43%	Healthcare Plans	-29%	Packaged Foods	-17%
Auto Parts	-42%	Beverages - Brewers	-29%	Financial Data & Stock Exchanges	-17%
Auto Manufacturers	-42%	Thermal Coal	-29%	Biotechnology	-16%
REIT - Healthcare Facilities	-42%	Information Technology Services	-29%	Gold	-16%
Apparel Retail	-42%	Consulting Services	-29%	Drug Manufacturers - General	-15%
Residential Construction	-41%	Scientific & Technical Instruments	-29%	Trucking	-14%
Steel	-41%	Insurance Brokers	-28%	Confectioners	-14%
Copper	-41%	Communication Equipment	-28%	Medical Distribution	-14%
Staffing & Employment Services	-41%	Drug Manufacturers - Specialty & Generic	-28%	Household & Personal Products	-13%
Home Improvement Retail	-40%	REIT - Office	-27%	Farm Products	-12%
Solar	-40%	Specialty Chemicals	-27%	Discount Stores	-7%
Insurance - Diversified	-40%	Integrated Freight & Logistics	-27%	Grocery Stores	-6%
Insurance - Life	-40%	Specialty Business Services	-27%	Utilities - Regulated Water	-6%
Building Materials	-38%	Consumer Electronics	-26%	Personal Services	4%
				Grand Total	**-33%**

Source: Morningstar, unweighted average price change year-to-date to March 19, 2020.

A Few Key Questions We Want to Give Clarity

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What Is the Impact to Consumer Spending? Will E-Commerce Offset Lower Foot Traffic?

Consumer cyclical stocks have collectively seen the steepest sell-off, after the energy sector. Social distancing, event and facility closures, travel, and shaken consumer confidence will be felt by many companies. Even though consumer defensive sector share prices have held up relatively well, brewers have dropped 29% year-to-March 19. In contrast, e-commerce retailers are benefiting. We take a look at where we think opportunities lie to capture an eventual recovery in consumer confidence.

Exhibit 12 Year-to-Date Performance of Industries

Morningstar Industries	Price Change YTD
Leisure	-59%
Department Stores	-55%
Apparel Manufacturing	-51%
Specialty Retail	-43%
Apparel Retail	-42%
Footwear & Accessories	-35%
Restaurants	-32%
Luxury Goods	-31%
Beverages - Brewers	-29%

Source: Morningstar. Year-to-date as of March 19, 2020.

Share Price Falls Bring Opportunities in Picking Up Luxury Names

Aligned with our overall assessment of COVID-19 economic impact, we believe that the epidemic's impact on the luxury goods sector is likely to be severe but short-lived with no material long-term implications. Nonetheless, since we saw most luxury shares as overvalued at the beginning of year, trading well above our fair value estimates and at multiples well above their historical averages, price declines of 10%-35% following the outbreak bring those valuations closer to reasonable levels and create investment opportunities.

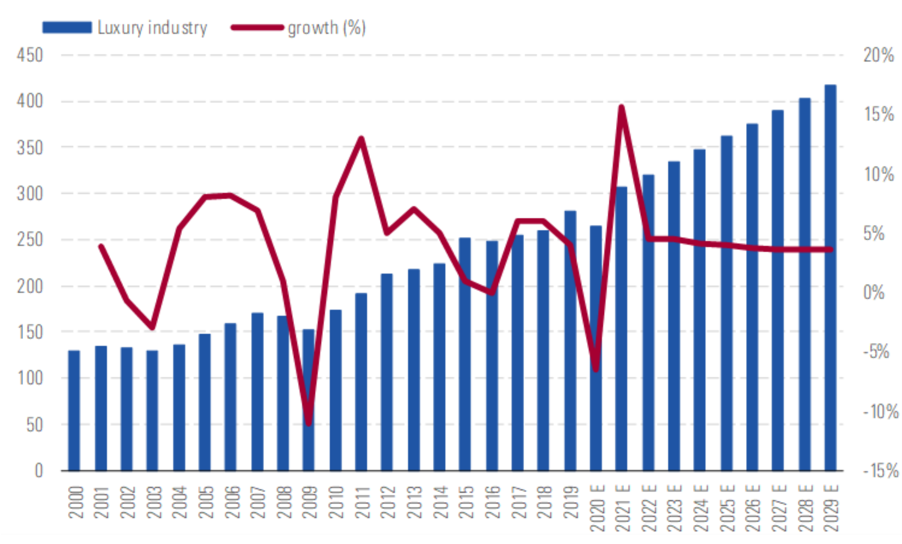
We believe luxury industry revenue could decline in 2020 by some 6%, with a more pronounced drop in the first two quarters of the year. This compares to an 11% decline in the luxury industry's revenue during the financial crisis.

We expect demand to bounce back after the epidemic peaks with some pent-up demand from delayed spending, especially for seasonless items such as accessories, watches, or jewelry. We have been anticipating some cyclical weakness for luxury goods and the virus outbreak moves that downturn forward. We don't expect long-term negative implications for luxury goods demand, hence our fair value estimates remain intact.

First-Quarter Sales Will Be Hit by China Containment, but China Will Be Ahead in Recovery

In the first quarter of 2020, we expect the impact to be felt most because of less demand from Chinese clientele both domestically and abroad. Mainland China accounts for 10%-11% of the luxury industry's revenue and according to company commentary, between one third and one half of the stores in China were closed for around a month during the first quarter. The remainder of stores were operating at reduced hours and experienced traffic declines of 70% to over 80%. Toward the end of February and early March stores have been reopening, however, with no improvement in traffic. Travel restrictions on Chinese customers globally, imposed from late January, remain in place at the time of writing and should continue dampening Chinese luxury demand into the second quarter. We expect Chinese luxury demand abroad and domestically to be reduced by 35%-50% in the first two quarters as a result. We expect the third quarter to see some stabilization, with domestic Chinese buying bouncing back sooner than demand abroad, given the seemingly effective containment measures in China and uncertainty about the global spread of the virus. Italy, now in lockdown, contributes around midsingle digits to luxury industry sales, by our estimates.

Exhibit 13 Strong Rebound in Demand for Luxury Goods in 2021 Returns the Industry to Its Long-Term Trend



Source: Morningstar.

Rest of World Demand to Bounce Back in Fourth Quarter, China to Bounce 20%-25%

We expect steep declines in other Asian-nationality luxury buying with double-digit declines in Japanese consumption (10% of total luxury) and other Asian countries (10%), with the Korea market hit strongly in the first two quarters. A decline in tourist buying (around 46% of European luxury goods sales) is likely to have a material impact on demand for luxury goods in Europe; however, we expect local demand to also remain muted and decline 2% annually. So far, we expect similar declines in American luxury buying, albeit the situation on both continents remains very fluid.

On a global basis we expect demand to bounce back in the fourth quarter (20%-25% growth for Chinese buying with some pent-up demand) and a strong recovery into 2021 on a very low comparable basis. From luxury subsectors, we expect apparel with its higher share of seasonal items to be more adversely affected because of less pent-up demand. A consumer who didn't buy a winter coat in January is unlikely to purchase a winter coat in summer, versus accessories, jewelry, and watches, which are more likely delayed rather than omitted purchases (should personal incomes and wealth not experience lasting declines). Since over 70% of luxury purchases are researched online prior to purchase, with spare time at hand, consumers could choose and buy their next purchase while being quarantined at home.

From channel mix, we expect online luxury to outperform, while airport retail is set to lag. We expect online luxury purchases to grow by 12% this year versus a 6% decline in total luxury buying, bringing the share of online industry penetration to 14%. This compares with around 20% growth in luxury e-commerce in 2019, with the online growth rate weakened by general soft consumer sentiment and potential logistics disruptions at e-commerce operations of some brands. Pure plays like Farfetch (4 stars, no moat), so far, haven't seen an adverse impact of the pandemic, with no disruptions to either supplies or logistics.

With Italy in a lockdown, supplies of leather goods, apparel and jewelry may be disrupted. However, given there is also a demand shock, scarcity of supply should not be a major problem--orders have been reduced as it is. For smaller Italian companies, such as Moncler, Salvatore Ferragamo and Prada, Italy is a meaningful revenue contributor (Moncler 11%, Prada 14%, and Ferragamo 18%) and could be negatively affected not only by the decline in Chinese tourism, but also by a decline of tourism from other European countries and the U.S., as well as subdued local consumption.

Outside of luxury retailing, we expect e-commerce overall to be the preferred channel with Amazon and China's JD.com and Alibaba to benefit and take share during the crisis, assuming that e-commerce remains safe. Our current thinking holds is that it's unlikely the virus would survive transfer to a surface or box in a warehouse and then transit to a home.

Aside from Amazon, big U.S. retailers Walmart and Target should be able to benefit from their strengthening ship-to-home capabilities. While both firms still depend on in-store traffic for over 90% of sales, their ability to move some sales to their digital platforms should help offset the negative impact of traffic headwinds after stock-up trips subside as the outbreak takes hold. However, we do not expect a one-for-one transfer, with Amazon's far more robust infrastructure, assortment, third-party marketplace, and logistics options likely to lead some sales that otherwise would have gone to omnichannel players toward their main digital rival. Walmart's ability to fulfill digital orders outside of stores gives it more flexibility than Target, with its significant grocery delivery capabilities allowing it and rivals like Kroger to benefit from an acceleration in online sales that may persist, building on an existing durable digitization trend. (Digital sales for grocers and general merchandisers remain margin-dilutive, though.)

Still, the impediments to e-commerce adoption among lower-income consumers (including shipping costs, limited access to credit cards, and delivery difficulties in high-crime areas) remain in place, cushioning in-store sales at firms like Walmart and Dollar General to the extent that the employment picture and local health conditions permit. Firms like the off-price apparel retailers are considerably more vulnerable as they do not have meaningful e-commerce operations, though discretionary apparel is likely to be far from the top of homebound shoppers' minds in a severe outbreak, regardless of channel.

In China, we think the impacts of the coronavirus outbreak on the e-commerce sector are more positive than negative in the long term, mainly because of faster penetration of online shopping into lower-tier cities and rural areas, and into groceries and fresh food, with Alibaba and JD.com the main beneficiaries. Given the fear and discouragement of going out, this epidemic has led to more people in the lower-tier cities and rural areas trying online shopping, and people in all regions trying to shop for fast-moving consumer goods, groceries and fresh food. In fact, in 2003, SARS helped give rise to e-commerce in China. Please refer to our Feb. 12 report: " Amid Coronavirus Outbreak, Chinese Internet Firms Could Benefit" for details.

Restaurants Are Under Pressure, but the Pullback Offers Several Investment Opportunities

The restaurant sector is under pressure as several markets have restricted dine-in service in an effort to curb the spread of COVID-19. Restrictions vary by state and city, but even in markets where carry-out and drive-thru orders are still permitted, we expect severe guest count declines for at least the next two months and an uneven traffic recovery into the back half of 2020. The situation is fluid, but our best guess is that most U.S. quick-service chains will experience at least high-single-digit to low-double-digit comp declines for the year, while casual-dining chains are looking at comp declines of 30% or more. While restaurants find themselves with a difficult 2020 ahead, we believe the sector's pullback offers several investment opportunities.

What criteria should investors use to evaluate opportunities during heightened uncertainty? First, value-oriented players tend to outperform during economic shocks, positioning those players that can be more aggressive on pricing for relative transaction outperformance as the year progresses. Second, we believe those players that are further along with their mobile platforms--particularly, personalized marketing efforts--should be better positioned to communicate with consumers during the social distancing and the coronavirus recovery period. Third, we'd look at companies and franchisee systems with healthy balance sheets.

Due to recent refranchising activity, many operators and their franchisees are now overleveraged (many are now leveraged 6-7 times forward EBITDA), making it more difficult to navigate extended periods of restaurant restrictions.

Brewers Will Be Decimated in the Short Term by Closures to On-Premises Channels

Our new base case assumes a fairly short-lived global recession, with all regions affected in similar ways. During the quarantine period, which we assume to last three months and to occur globally, we estimate that around two thirds of the on-premises channel will be decimated, mitigated to a limited degree by a shift to the off-premises channel. The net impact is a mid- to high-20s percentage reduction in revenue in the affected quarter, although the timing of the impact varies based on the geographical exposure of the business, and a high-single-digit decline for the full year. Beyond the lockdown period, we expect a global recession, with elevated unemployment rates and beverage volume recovering only gradually throughout the rest of the year. With several major sporting events being postponed rather than canceled, however, it seems likely that revenue will recover to the 2019 level in 2021, with the secular growth rate of 4%-5% resuming thereafter. Our moat ratings are unchanged, and we see little long-term impact to the business models or cash flow generation.

These assumptions appear roughly consistent with the limited commentary from the companies. In its 2019 results release, AB InBev management guided to a negative impact to revenue of $285 million in the first two months of 2020. Extrapolating that to the three-month estimate for the peak impact of the virus and assuming a similar quantum across the globe, AB InBev group revenue could fall around 8% in fiscal 2020 on a constant-currency basis. Likewise, Pernod Ricard, making similar assumptions to us in terms of the length of the lockdown period, estimated that the drop in Asia sales would slow profit from recurring operations growth by around 3 percentage points. Extrapolated across all geographies, we estimate the impact to be around 7%. The length of the lockdown period is a key assumption and as yet unknown, and a prolonged period of enforced social distancing forms the basis of our bear-case scenarios.

The decline in volume and revenue will have a negative impact on profitability. We estimate that around two thirds of the brewers' total operating costs are fixed, which would imply further operating deleverage at the EBIT line. At an organic decline rate in revenue of 8%, we forecast a roughly 12%-13% drop in operating profit, which is roughly in line with the historical degree of operating leverage of roughly 1.5 times.

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When Will Travel and Tourism Recover?

Exhibit 14 Year-to-Date Performance of Industries

Morningstar Industries	Price Change YTD
Travel Services	-71%
Recreational Vehicles	-54%
Lodging	-51%
Resorts & Casinos	-49%
Airports & Air Services	-49%
Airlines	-48%

Source: Morningstar. Year-to-date as of March 19, 2020.

While Severe in the Near Term, We Think the Travel Industry Disruption Caused by COVID-19 Containment Measures Will Be a Temporary Shock and Shouldn't Affect Long-Term Global Travel
According to Dufry and Amadeus, previous epidemics or recessionary events depressed travel demand for four to seven months before beginning to recover. As discussed in the Morningstar report "Coronavirus: Widespread Disease but Drug Pipeline Progress," aggressive containment measures with immediate severe economic impact could help contain the virus spread, leading to lesser long-term negative economic implications.

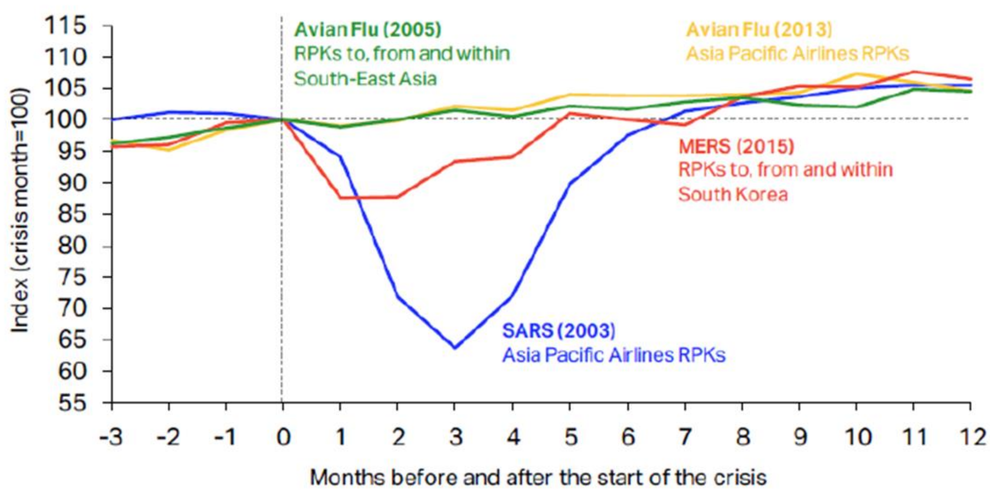
Amadeus recently noted that previous disease outbreaks recovered to preoutbreak levels in six to seven months after the peak of the outbreak. Also, while perhaps not a perfect precedent, narrow-moat companies Amadeus and Sabre, whose platforms service a large amount of global airline bookings, recently highlighted data on what occurred on their Global Distribution System, or GDS, networks in 2003 during the SARS outbreak. In 2003, the GDS industry saw a 10% to midteens % drop in revenue during the first two quarters of that year, which was followed by stabilization in the second half of that year (flat revenue year over year), and then 5.5%-6% growth in 2004 (recovery). Exhibit 15 shows past impacts, according to Amadeus.

With the new ban on travel from Europe to the U.S., it has extended the halt in flow of potential travelers entering and leaving the U.S. For the cruise operators, we do not anticipate a recovery in demand until around eight weeks past the peak of the outbreak, which has just begun in the U.S. and Europe. This is when past booking behavior has returned to normal in prior geopolitical and health related events. It would likely take another few months for postponed bookings to catch back up. Additionally, if the travel ban to Europe is extended beyond 30 days, it could prevent Americans from getting abroad for the summer sailing season.

Drawing on the SARS experience in China, at that time Trip.com's second-quarter 2003 revenue fell 42% sequentially and bounced 196% sequentially in the third quarter. However, we don't think recovery from COVID-19 will be as quick as SARS. SARS was not as widespread globally as COVID-19.

The outbreak of COVID-19 within and outside of China substantially reduces travel demand and supply for international, outbound and domestic travel businesses. Despite more moderate increases in confirmed new cases in China, there is a rising concern of imported confirmed new cases. So, while China's domestic airline routes may start to recover by end-2020, overall international travel and tourism is unlikely to recover until 2021.

Exhibit 15 Asia-Pacific Revenue Passenger Kilometers in Past Outbreaks



Source: International Air Transport Association, Amadeus IT Group.

Casinos Will Have to Endure Fewer Visitors in Near Term, so We Prefer Those With Lower Debt Levels

Recent social distancing efforts involved in containing the coronavirus are placing increased financial pressure on casino companies, and we think the demand recovery in 2021 could be more paced than past industry demand shocks, placing operator 2021 sales roughly flat versus 2019 previrus demand levels. For context, we estimate the global distribution industry returned to 2002 pre-SARS levels in 2004, while Amadeus' 2010 sales were 4% above its 2008 prerecession revenue level.

Macau gaming revenue fell off the cliff in February with an 89% year-over-year decline. The Chinese government is likely to exert caution even after a period of zero confirmed new cases before resuming the individual visit scheme for visitors to Macau, in our view. For the gaming revenue to recover, we need to see a normalization of all restrictions to be lifted as well as a rebound in consumer confidence. In this regard, we only expect a full recovery in 2021.

In the meantime, a number of casino stocks are attractively valued, but given the risks from a prolonged outbreak, we prefer companies with lower debt, such as narrow-moat-rated Las Vegas Sands and Macau's Galaxy Entertainment.

Coronavirus Wreaks Havoc on Airline Industry, Will Start Recovering on Pent-Up Demand by Year-End

The fallout so far has been worse than we expected; airlines have announced steep capacity reductions, and load factors (that is, capacity utilization) in 2020 may fall well below our previous expectations. For example, United Airlines management recently said load factors could fall into the 20%-30% range if demand trends don't worsen; the firm's recent full-year load factors have been in the low 80s. Delta's management reduced capacity by 40%, which is the largest capacity reduction in the firm's history. Delta expects to operate with this much lower level of capacity for at least the next several months. Singapore Airlines, whose routes are entirely international, has cut scheduled capacity by 50% through April.

Regardless, airlines would have to survive around seven months of significantly lower demand, which strains their working capital. We already see cuts to capital expenditure and salaries to try to preserve liquidity. Voluntary furloughs requested of staff wouldn't be a complete match to route reductions. At Australian and New Zealand national carriers Qantas and Air New Zealand, we anticipate labor costs, which make up around one third of their operating costs, are largely fixed, weighing on profitability. However, these airlines do have levers to pull to reduce the impact, including executive pay cuts, hiring freezes, and voluntary leave for employees. We expect the reduction in fuel bills--both from lower consumption due to cuts in capacity and the lower jet fuel price--to offset some of the impact. It has helped that crude oil prices have halved since the beginning of 2020. In line with the airlines, Sydney and Auckland airports would face weaker aeronautical revenue from lower passenger volumes and weaker retail revenue as airports become less hospitable environments. Capital-intensive projects such as building new terminals may be postponed to free up cash flow and help the airports service their debt obligations amid lower revenue.

We continue to believe that once coronavirus fears fade, air traffic will improve and could overshoot normalized demand for a period as pent-up demand (for example, postponed family vacations or business conferences) is released. So, despite weak short-term earnings, we anticipate the travel downturn to be short-lived and firms with strong balance sheets to be able to weather the storm.

We anticipate a U-shaped impact on demand from COVID-19, similar to the shape of the impact experienced during SARS in 2002, and forecast a return to capacity growth from early calendar 2021. We expect retail revenue per passenger to also recover as passenger confidence is restored. Longer term, we continue to expect growth in the Asian middle class to drive relatively strong passenger growth.

While it's still early, data from China is tracking our base-case expectations. The Chinese carriers began to see traffic bottoming in mid-February with fewer flights canceled. Assuming the conditions in China continue to stabilize, we expect domestic passenger traffic to bounce back to 2019 levels in third-quarter 2020. We also anticipate similar patterns (a rebound in the second half of 2020) for the Hong Kong and Singapore carriers. Over the past decades, the aviation industry has been resilient to shocks, including pandemics, and history teaches us that adverse effects on air transport are always temporary.

With More People Staying Indoors, Will Video Streaming Get a Boost?

Exhibit 16 Year-to-Date Performance of Industries

Morningstar Industries	Price Change YTD
Internet Content & Information	-33%
Entertainment	-32%
Electronic Gaming & Multimedia	-21%

Source: Morningstar. Year-to-date as of March 19, 2020.

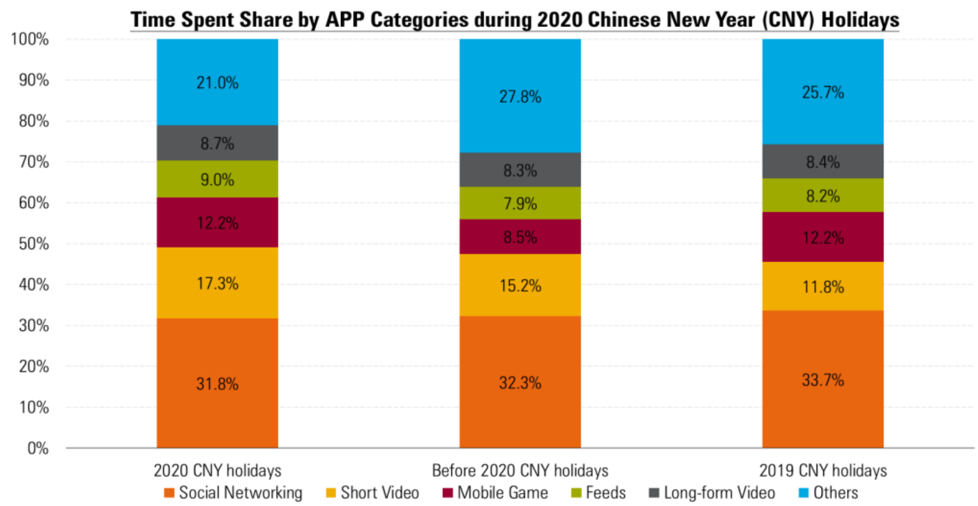
For streaming services, more people staying indoors will likely produce a material uplift in usage and tempt consumers to try new offerings. For the market leaders like Netflix in the U.S., increased usage may not provide a material uplift in revenue, as most households already subscribe or have tried the service. For newer entrants like Disney+, however, additional time spent provides an opportunity to accelerate adoption. Firms that plan to launch streaming services later in the year, like Comcast's NBC Peacock and AT&T's HBO Max, may see slower adoption than expected if pent-up demand to get out of the house leads to lower television viewing than normal for a period of time. Postponing or cancelling the Olympics over the summer would also slow Peacock's launch as Comcast intends to use the even to promote the service.

Similarly, video game usage will likely benefit as people move indoors, potentially providing material revenue gains from both full-game sales and additional in-game purchases. Naturally, we would expect console and PC games to gain more of the additional sales than mobile games.

As seen in Exhibit 17, mobile games and video content as a share of online activity gained in China during the Chinese New Year period as people stayed home. Global mobile game downloads were up 39% in February as per Sensor Tower, while Apple's App Store in China registered a 62% increase in game downloads. Due to the outbreak of COVID-19 and Chinese New Year holiday, China's mobile time spent share of games was up 370 basis points to 12.2% during Feb. 4-10, compared with Jan. 2-8, according to QuestMobile. There are reports by 36kr of a surge in traffic in leisure games in China. Puzzle games like Brain Out and Tencent's online battle game Honor of Kings were among the most downloaded games in China as per App Annie. Tencent's Game for Peace ranked number two in terms of user spending. We think the Chinese online gamer base is mature, given the industry's single-digit growth, so we don't expect faster adoption and expect only a boost in earnings in the gaming sector resulting from this pandemic this year.

There is greater upside potential for video stream services. The outbreak of COVID-19 and Chinese New Year holiday led to a 210 basis points increase in mobile time spent share in short videos, a popular form of online entertainment in China, during Feb. 4-10, 2020 to 17.3% compared with Jan. 2-8, 2020, according to QuestMobile, and online video's mobile time spent share was up by 40 basis points during the period. Online long-form video memberships have increased as a result, some of whom could be first-time subscribers. While some subscribers are expected to drop off after the pandemic is over, we think some of them who never paid for online videos might stay if they enjoy the services.

Exhibit 17 Games and Video Streaming Gained in China over Chinese New Year 2020 as People Were Stuck Indoors



Source: Quest Mobile, "2020 CNY holidays" represents Jan. 24-Feb. 2, 2020; "Before 2020 CNY holidays" represents Jan. 2-Jan 8, 2020; "2019 CNY holidays" represents Feb. 4-Fe.b 10, 2019.

On the other hand, advertising is a significant revenue driver for short- and long-form online videos, and a weak macroeconomic outlook puts pressure on revenue. As the economy fully recovers after COVID-19, we believe advertising growth will pick up in 2021 to its normalized level. IQiyi, the leader of online long-form videos expected revenue to increase 2% to 8% year over year in the first quarter of 2020, similar to the 7% year-over-year increase in the fourth quarter of 2019, although we would have expected a higher revenue growth in the first quarter if not for COVID-19.

Will Supply Chain Disruptions and Delayed Capital Expenditure Be Material?

Exhibit 18 Year-to-Date Performance of Retailing and Capital Investing Industries

Morningstar Industries	Price Change YTD
Electronics & Computer Distribution	-48%
Engineering & Construction	-46%
Auto Parts	-42%
Specialty Industrial Machinery	-34%
Information Technology Services	-29%
Industrial Distribution	-25%
Food Distribution	-24%
Business Equipment & Supplies	-21%

Source: Morningstar. Note: Year-to-date as of March 19, 2020

Supply-side disruptions are a significant risk amid the coronavirus pandemic. The entire supply chain is at risk of shutdowns and slowdowns, all the way from raw material production, shipping, distribution, and end point sales.

We observe generally three types of supply chain scenarios facing manufacturers, customers and retailers, each resulting in a myriad of knock-on effects. However, we view supply chain disruptions to gradually dissipate as the coronavirus crisis is overcome.

First, we envision cases of product oversupply meeting soft demand. As Chinese factories ramp up production again, worries about supply chain disruptions are likely easing. However, the tables have turned, and manufacturers could potentially overproduce whilst offshore demand weakens. This oversupply could cause retail prices to deflate, and combined with lower near-term consumer spending, this would be a double whammy for retailer revenue. For example, the auto supply industry is likely to curtail production with large global auto manufacturers ceasing production at various sites to prevent this oversupply.

At this point, it would be premature for us to forecast the full impact of COVID-19 on 2020 automotive sector fundamentals. Both demand and supply chain disruptions will be ongoing until the virus is contained. So far, European automakers have had varying degrees of demand and supply impact. Renault and Peugeot both have facilities in Wuhan, which were slated to resume production. BMW, Daimler, and Volkswagen as well as all of our auto parts suppliers have Chinese facilities that saw extended shutdowns after the lunar holiday. Jaguar Land Rover were airlifting some components from China to keep operating in Europe. Fiat Chrysler also had a supply problem for one European facility but managed a work around. With Italy's containment measures, Fiat Chrysler said it would temporarily close Italian facilities where necessary. We do not envision any scenario where COVID-19 effects our midcycle assumptions and do not expect any substantial changes to our auto sector fair value estimates.

Second, we see situations where supply chain disruption can cause lower stock availability but still meet, or partially meet, lower demand. For instance, apparel retailers facing lower consumer demand are likely to be less impacted by lower stock availability.

Third, significantly higher demand has caused supply chain stress in some categories, especially supermarkets. Panic buying for food and sanitary products has been widespread, boosting grocers' revenue line, but we expect it is also introducing more costs such as labor cost per carton or higher wastage. Efficient, low cost supermarket supply chains are reliant on well planned deliveries and streamlined stock handling at warehouses and in-store.

Despite these significant short-term supply chain disruptions, we don't predict any long-lasting changes to company supply chain structures. Some businesses might consider decentralized manufacturing. It is not a difficult decision for retailers who outsource their productions as they are naturally inclined to engage multiple OEMs to avoid overly relying on one supplier. However, retailers who manufacture products in house must weigh the risk of disruptions against additional capital expenditures and production costs. Also, the coronavirus crisis is unlikely to increase inventory levels in the long-term. At face value, this could prepare companies better for major disruptions. However, events of this magnitude are rare, and unlikely to justify the higher cash intensity of such a switch in a normalized environment.

Capital equipment demand will likely take some time to recover but the long-term outlook for industrial robotic demand gets a boost. Capital expenditure plans that have been delayed will not immediately return and instead will likely resume more gradually. Those projects in the earlier stages may be deferred indefinitely until businesses restore normal operations and confidence increases to resume investing in growth. While we have been expecting cyclical headwinds arising from the U.S./China trade friction and reduced global capital spending to have an impact on the companies until the first half of fiscal 2020 (ending in August/September), we believe the market is expecting that the effects of the coronavirus will lead to a prolonged decline in growth in the factory automation sector after 2020 as well. The increased uncertainty from the pandemic is likely to delay capital spending by the automobile manufacturers (as we are seeing temporary production shutdowns in the United States) over the next six months; however, we believe we have already accounted for the near-term year-on-year reduction in capital spending by automobile manufacturers in our fair value estimates.

Lessons from the pandemic could include seeing the benefits of industry 4.0 software for remote plant management and the deployment of robotics to improve manufacturing capacity flexibility. Our base scenario is that global economic activity normalizes by end-2020. However, we expect the pandemic's knock-on effect to spread over two years for some companies.

In 2020, we expect short-cycle product revenue to decline. These are mainly robotics with concentrated end-markets in automotive and consumer electronics, as well as the electrical and automation component categories, that might take one to two quarters to deliver. These are categories that have seen deep declines in volume in past periods of economic uncertainty but equally see a bounce back in demand within a year. Hence, we assume most of the additional loss in 2020 from the pandemic will rebound in 2021 due to pent-up demand, as we are convinced that more companies will have a sense of urgency and consider making factory automation investments so that their production can continue to run even in times of difficulties with labor constraints.

We think this strengthens the Japanese factory automation companies' long-term growth potential. We continue to believe the Japanese factory automation companies are well-positioned for long-term, secular factory automation growth due to factors like aging population, increasing wage costs, and increased need for production efficiencies in key markets such as Japan and Asia. In the near term, we assume that an increase in semiconductor and 5G-related investments will serve as the initial catalyst to a cyclical recovery in the factory automation market this fiscal year; however, we now expect much of this recovery will be delayed from the beginning of fiscal 2020 to around the second and third quarters, assuming the pandemic will be contained within the first half of fiscal 2020. We believe Yaskawa Electric is best positioned for these investments, since 25% of its motion control sales (its largest business segment) comes from sales related to semiconductors and electric components.

We do not see any material capital constraints or supply-side issues over the near term as a result of the pandemic. With consecutive positive free cash flow for over the past five years, as well as lack of any interest-bearing debt for Fanuc and Keyence and a low net debt/EBITDA ratio of 0.09 times, we believe the Japanese factory automation companies would be able to withstand any potential material impact from the coronavirus. Further, we believe having the majority of the production base in Japan will mitigate supply-side risks in case the pandemic affects production facilities in China. While there is more risk related to parts procurement with Fanuc and Yaskawa's industrial robot segments, considering both companies produce their own key components such as servo motors for the robots, we do not believe Fanuc or Yaskawa would face serious capacity constraints where they would not be able to meet demand, in a worst-case scenario.

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Which Subsectors and Companies in Healthcare Stand to Benefit?

Exhibit 19 Year-to-Date Performance of Drug Manufacturers and Medical Instruments and Devices

Morningstar Industries	Price Change YTD
Medical Devices	-31%
Drug Manufacturers - Specialty & Generic	-28%
Health Information Services	-26%
Diagnostics & Research	-24%
Medical Instruments & Supplies	-20%
Medical Care Facilities	-19%
Biotechnology	-16%
Drug Manufacturers - General	-15%
Medical Distribution	-14%

Source: Morningstar. Year-to-date as of March 19, 2020.

Who Benefits From Developing Coronavirus Treatment and Vaccines?

Investors have been eager to find firms with the most promising technologies for containing the coronavirus outbreak and helping infected patients recover. As far as infectious disease expertise, the leader among the large caps would be Gilead (undervalued), and the most advanced with remdesivir, a drug originally developed for Ebola that now has very preliminary positive data for COVID-19. However, this drug is a small driver in our Gilead model, with many past outbreaks dissipating before development could complete, and the potential for generics to serve patients well. A vaccine would be a preferred product, but development would likely take longer than Gilead's treatment due to significantly more safety hurdles.

Generally speaking, the U.S. firms with experience in vaccines would be topped by Sanofi, GSK, Pfizer, and Merck (all undervalued), and could benefit from the coronavirus. Additionally, a company called Moderna (not covered by Morningstar) looks like a leader in developing a vaccine candidate with its first human dosage delivered. Other vaccine programs have been flagged by GSK/Clover, Sanofi and Johnson & Johnson, but remain in early stages. Outside of the therapeutic area, healthcare technology firms could also benefit. Teladoc would likely be a benefactor as remote services would be an attractive option to prevent infection (this was even recommended by the Centers for Disease Control and Prevention). Several undervalued U.S. drug firms with limited exposure to the impact of COVID-19 include Alexion, Intercept and Roche.

Overall, we believe that demand for all healthcare products should stay fairly steady, particularly long-term, given sales are supported by relatively inelastic demand for important healthcare needs. Nevertheless, we would expect some minor short-term disruptions to sales given the jarring impact from the coronavirus. Preventive products like masks, soaps, and sanitizer should see increased short-term demand, but these are commodity-like in nature with firms having limited ability to retain excess profits. With heightened awareness of health and immunity, we see potential for producers of vitamins and supplements like Australia's Blackmores to benefit, as well as some makers of traditional Chinese and cold medicines that can provide symptomatic relief.

Some China drugmakers will be hit by shutdowns. Across our Asia coverage, the virus is expected to be a negative hit to earnings this quarter with factories in many regions shutting down. Additionally, injectable drugs, which typically are consumed at the hospital under a doctor's supervision, should have lower sales due to increased fear of hospitals, and doctors being encouraged to reduce the frequency of patient visits. However, we don't expect these to persist in the long term, and we think that a near-term drop in price could present a buying opportunity.

Of these, 3SBio (01530 HK) looks cheap, currently 5 stars. In our view, the stock price is depressed for three reasons: 1) concerns about slowing growth for Yisaipu (an etanercept biosimilar), one of its core drugs, 2) departure of key personnel including the CFO over the past three months, and 3) the aforementioned shutdown of manufacturing facilities earlier this year (they are back on line now) and the lower demand for injectables (all of 3SBio's main drugs are injectables). The latter two do not have long-term implications on the stock. The former does, but we believe it is already considered in our stock price valuation.

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Where Do Oil Prices Go From Here?

Exhibit 20 Year-to-date Performance of Energy and Resources

Morningstar Industries	Price Change YTD
Oil & Gas Drilling	-74%
Oil & Gas E&P	-69%
Oil & Gas Equipment & Services	-64%
Oil & Gas Midstream	-60%
Oil & Gas Refining & Marketing	-58%
Oil & Gas Integrated	-52%

Source: Morningstar. Year-to-date as of March 19, 2020.

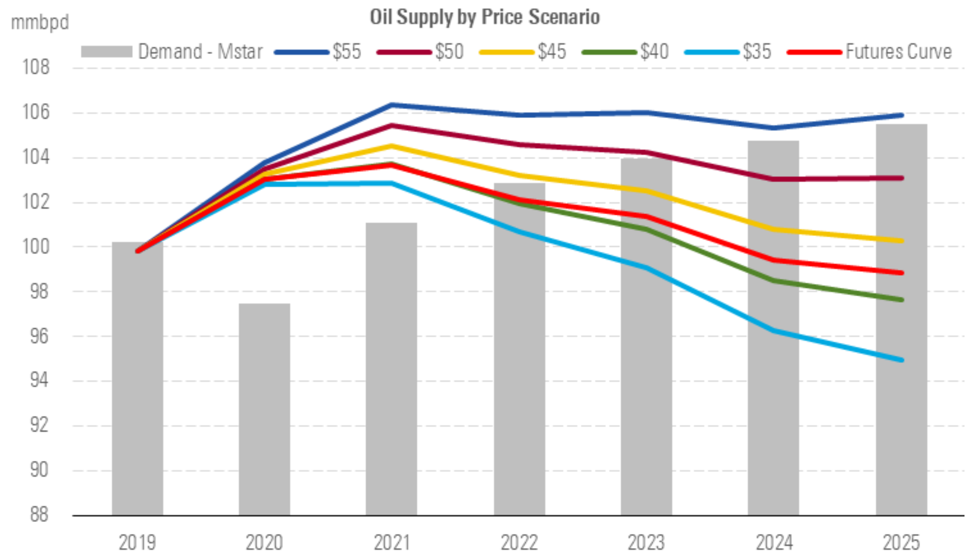
The failure of the OPEC+ coalition to reach an agreement on production cuts on March 6 sent oil prices into a tailspin. Before this, the prevailing view was that the cartel and its partners, including Russia, would continue to support oil prices as the outlook for demand growth continues to deteriorate (due to the worldwide coronavirus outbreak and its economic ramifications). Investors were anticipating, at minimum, that OPEC+ would agree to extend the current cuts through 2020, instead of letting them expire at the end of March 2020. But as Russia refused to participate, the opposite happened. With no new agreement in place cartel members are now free to ramp production to capacity and worsen the current supply-demand imbalance. The situation was further exacerbated when Saudi Arabia started selling crude at heavy discounts, essentially igniting a price war.

However, we anticipate these issues will only affect cash flows in the next one to two years. Russia and OPEC lack the capacity to displace U.S. shale producers in the global supply stack, which means the marginal supply cost is still $60 per barrel for Brent (see Exhibit 21). And we think vested interest should eventually see order return to oil markets.

In the meantime, oil and gas companies will suffer across the board. Those most at risk with current low prices are companies with leveraged balance sheets and those placed higher on the operating cost curve. More detailed information on integrated oil majors, many of which are currently undervalued, can be found in our March 17 report "Integrated Oils: Yields Are Spiking, So Are Dividends Safe?" Also, we detail our reasons for keeping our midcycle oil price forecasts unchanged in our March 19 report, "After Coronavirus and OPEC+ Chaos, Can Energy Come Back?"

In Australia, most companies fortunately have comparatively low operating costs. We estimate free cash flow break-even Brent prices of Australian E&Ps at approximately $20-$30 per barrel. This contrasts favorably with U.S. shale producers, for example, where $40 per barrel and higher is the mark. Further, most Australian companies have comparatively healthy balance sheets, ranging from unleveraged to moderate leverage.

Exhibit 21 Oil Supply Can't Meet Long-Term Demand Unless Prices Rebound
Global oil supply for various scenarios of real WTI oil price.



Source: Morningstar, Rystad, IEA.

How Will Banks Fare in an Environment of Lower Interest Rates and Higher Credit Costs? European Banks Have High Exposure to the Oil and Gas Sector?

Exhibit 22 Year-to-Date Performance of Banks and Credit Services

Morningstar Industries	Price Change YTD
Credit Services	-48%
Banks - Regional	-36%
Banks - Diversified	-34%

Source: Morningstar. Year-to-date as of March 19, 2020.

We readily admit that banks underperform during downturns and we expect increasing pressure on credit quality in the short-term, but COVID-19 does not overly change our long-term outlook as banks are generally in our view better positioned. Banks are inherently macro sensitive. While the impact of slower growth, lower interest rates, and higher credit costs is relatively well understood, the real key in our minds is whether banks are better positioned from a credit and capital standpoint, and we believe they are. Banks were hurt to an unusual degree during the global financial crisis, but there were systemic issues at play and capital levels were too low, causing the need for equity capital raises. Once a bank gets to a point of requiring capital infusions, permanent impairment of capital is occurring for shareholders. Currently, we don't see a systemic financial crisis brewing, and as such, we don't expect permanent impairments of capital to occur.

The good news for the Japanese banks is the Bank of Japan, or BOJ, didn't expand its negative interest-rate policy, which cratered share prices of local banks when it was first launched in early 2016. Instead, the BOJ's actions were confined to measures that are unlikely in our view to hurt banks' profitability much and could help them navigate short-term stresses. These are: 1) provision of additional U.S. dollar liquidity to banks at lower rates and for longer terms than previously; 2) a new operation to provide one-year loans at 0% against corporate debt as collateral, together with additional potential purchases by the central bank of commercial paper and corporate bonds; and 3) larger targets for the central bank's ongoing purchases of stock index funds and real estate investment trusts.

Weaker net interest margins are likely in Asia banks, but impact will vary. Most Asia banks are net lenders and with the U.S. Federal Reserve making consecutive cuts to the federal fund rate to 0-0.25%, we expect lower interbank rates in Korea, Hong Kong, and Singapore to flow through to weaker net interest margin and profitability. The impact depends on the level of liquidity in the respective banking system and how this translates to interbank rates.

We lowered our forecasts on the four Korean banks we cover to incorporate even steeper erosion in net interest margins, or NIMs, than we previously expected, as well as a sharp upturn in credit costs. We now expect NIMs to fall between 12 and 20 basis points in 2020 and by a further 5 basis points in 2021, roughly double our previous expectation. We also now expect credit costs to approximately double in 2020 compared with 2019 levels and to remain elevated thereafter. We expect earnings for all the banks to decline by more than 20% in 2020 due to increased credit costs and potential asset write-downs. Nevertheless, current valuations of around 0.3 times book value mean that the shares of Korea banks in our coverage remain very attractive for long-term buyers, in our view.

Exhibit 23 Key Central Bank Measures to March 19, 2020

Authority	Date of annoucement	Measures
People's Bank of China	February 2, 2020	inject 1.2 trillion yuan ($174 billion) worth of liquidity into the markets via reverse repo operations on February 3, to maintain banking liquidity and stability of monetary market amid the outbreak
	February 7, 2020	issue loans totaling 300 billion yuan ($43 billion) to policy and commercial banks via its re-lending program as part of measures to finance the control of the outbreak.
	February 13, 2020	cut the one-year loan prime rate from 4.15% to 4.05%, and the five-year rate from 4.80% to 4.75%
	February 26, 2020	1) increase the re-loan and re-discount quota by 500 billion yuan in total for financial inclusion purposes; 2) provide support to enterprises that satisfy conditions by means of market-based methods 3) cut interest rate for agricultural and small businesses support re-loans from 2.75% to 2.5%
	March 2, 2020	call for domestic banks to provide certain micro, small and medium en-ter-prises (MSME) with temporary extensions on loan repayments for loans that mature after 25 January 2020, with a maximum extension period of until 30 June 2020
	March 13, 2020	cut targeted reserve requirement by 50-100bps , starting from March 16, 2020, with the expectation of releasing 550 billion yuan ($79 billion)
U.S. Federal Reserve	March 3, 2020	lower the target range for the federal funds rate by 50 bps, to 1% to 0.25%
	March 15, 2020	1) further lower the target range for the federal funds rate to 0% to 0.25%; 2) increase its holdings of Treasury securities by at least $500 billion and its holdings of agency mortgage-backed securities by at least $200 billion 3) lower the primary credit rate by 150 basis points to 0.25%
	March 19, 2020	establish temporary U.S. dollar liquidity arrangements (swap lines) with other central banks with the goal to help lessen strains in global U.S. dollar funding markets, thereby mitigating the effects of these strains on the supply of credit to households and businesses, both domestically and abroad
European Central Bank	March 12, 2020	modify the key parameters of the third series of targeted longer-term refinancing operations (TLTRO III) to support the continued access of firms and households to bank credit, including reducing interest rate on TLTRO III by 25 bps and allowing it to be as low as 25 bps below average deposit facility rate during period from June 2020 to June 2021
	March 12, 2020	initiate additional longer-term refinancing operations (LTROs), which will be conducted as fixed rate tender procedures with full allotment, to provide immediate liquidity support to banks and to safeguard money market conditions
	March 12, 2020	allow banks to operate temporarily below the level of capital defined by the Pillar 2 Guidance (P2G), the capital conservation buffer (CCB) and the liquidity coverage ratio (LCR)
	March 18, 2020	1) launch a new temporary asset purchase programme of private and public sector securities - new Pandemic Emergency Purchase Programme (PEPP) , to counter the serious risks to the monetary policy transmission mechanism and the outlook, with overall envelope of€750 billion ($820 billion) 2) make all commercial papers of sufficient credit quality eligible for purchase under corporate sector purchase programme (CSPP); 3) ease the collateral standards by adjusting the main risk parameters of the collateral framework

Source: Morningstar, People's Bank of China, Federal Reserve, European Central Bank.

From a sensitivity perspective, we estimate the impact of a 25-basis-point cut on net interest margin is 2-5 basis points for the Singapore banks and 3-5 basis points for the Hong Kong banks. In addition to the liquidity level within each banking system, we expect the banks to actively manage their asset yields and funding costs. For HSBC in Hong Kong, the bank held their prime rate, or best lending rate, unchanged, and this should support asset yield, in our view. On the liability side, fixed deposit rates were lowered, and we expect this to alleviate funding costs for the bank. Both measures are expected to minimize pressure on net interest margin and other banks domestically should follow suit. Uncertainty remains high given the diverse outcome of the coronavirus situation and the monetary responses by central banks.

In China, for instance, while we expect recent policy easing and slower growth to expedite the falling interest rate trend in 2020, we believe the negative impact on earnings will be similar to 2015-16 for large banks. Here, the previous easing cycle saw a 165-basis-point decline in the lending benchmark rate, and about 50% growth in credit costs from 2014's level, leading to average net profit growth of 0.7% and 1.6% in 2015 and 2016, respectively. Now, the loan prime rate, or LPR, has declined roughly 26 basis points to 4.05%, and we anticipate the full rate cut cycle to likely range from 50 to 100 basis points. However, we expect the magnitude of an interest rate cut to be less than the 165 basis points we saw previously, as lower rates will largely be realized through an asymmetric rate cut to LPR. Besides, we expect fiscal stimulus, rather than credit easing to be playing a leading role this time.

For large banks in China, we also don't expect credit costs to double like in 2008 when the economy was more reliant on exportation. We believe banks have stronger capital and more sufficient provisions to buffer against the risks. Over the past seven years banks have optimized their loan portfolios, adopted strict bad debt classification standards, and lifted provision coverage loans, under a more stringent financial regulatory framework. For the big four Chinese banks, the average provision coverage ratio of total overdue loans had improved from 121% by end-2015 to 207% as of mid-2019. Thus, we project a 5-20-basis-point increase in credit costs in the next two years and expect both net profits and dividends for the large banks to be flat in 2020 and 2021.

Our European banking coverage list has an average exposure to oil and gas equal to 33% of common equity Tier 1 capital. The sharp decline in the price of oil has brought to the fore the risk faced by banks that have granted significant credit to oil and gas firms. Three banks with significant oil and gas exposure do boost the average significantly, however. Natixis, Credit Agricole, and ING have oil and gas exposure equal to 134%, 105%, and 82% of their respective common equity Tier 1 capital bases. On the other end of the spectrum, Julius Baer, Handelsbanken, Intesa Sanpaolo, UBS, Lloyds, and KBC have oil and gas exposure equal to less than 10% of their capital bases.

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How Will Higher Market Volatility Affect Financial Services Companies?

Exhibit 24 Year-to-Date Performance of Banks and Credit Services

Morningstar Industries	Price Change YTD
Rental & Leasing Services	-70%
Credit Services	-48%
Banks - Regional	-36%
Banks - Diversified	-34%

Source: Morningstar. Year-to-date as of March 19, 2020.

There aren't many firms in the financial sector that are immune to the coronavirus, but financial exchanges and data firms should be relatively stable. Market data is an essential purchase for many financial services companies, and higher market volatility should boost trading activity in equities and derivatives. The long-term impact is more difficult to assess, as a prolonged bear market may reduce investors' risk appetite for an uncertain duration; turnover and liquidity may remain low despite a market recovery. The benefit to other firms with material trading revenue, such as investment banks and retail brokerages, will likely be more than offset by a decline in other portions of their business. Fewer companies IPO when markets are volatile, which will affect equity underwriting. Restructuring advisory will improve in a recession, but it won't be enough to offset mergers and acquisitions advisory, which will likely be subdued until corporate executives gain more confidence in the economic outlook. Retail brokerages will have higher client trading activity; however, higher trading revenue will be more than offset by a decline in net interest income from the recent reduction in interest rates. The effect on insurers is also likely to be negative, with declining investment income and unusual liabilities associated with business disruption emerging.

If this bear market follows the same course as the 2008-09 financial crisis, then active asset managers with heavier exposures to money market funds and fixed-income will see some benefit as investors park capital in perceived safe havens (with bond funds benefitting from both inflows and market gains as bond prices rise in response to reduced rates and investor rotation into fixed income). As for those with heavier active equity exposures, we're likely to see the one-two hit of a decline in asset-based fees with the stock market rout, as well as net outflows from investors seeking safety. Importantly, increased volatility will also prove the strong active managers from the weak, and a test whether active equity management can truly outperform during a downturn. If they do outperform, we would only expect to see a modest improvement in organic growth as investors generally need to be convinced that it is sustainable. Passive equity managers are likely to suffer more from market losses than net outflows, but redemptions could accelerate if the market continues to be volatile and falls further from here.

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REITs: What Is the Likely Pressure on Rental Rates?

Exhibit 25 Year-to-Date Performance of REITs

Morningstar Industries	Price Change YTD
REIT - Retail	-36%
REIT - Residential	-33%
REIT - Office	-27%
REIT - Industrial	-21%

Source: Morningstar. Year-to-date as of March 19, 2020.

The short-term impact to rents is likely limited with most tenants tied into long-term leases. Tenants are locked into long-term leases that renew only every five to 10 years, so only about 13% of the REITs' tenants are up for renewal in a given year. As long as this event doesn't dramatically shift all consumer behavior to online shopping, the long-term cash flow outlook should be relatively intact. However, if the virus outbreak is prolonged, leading to bankruptcies, the possible reduction in occupancy rates could take time to replace, which would have a significant short- to medium-length impact.

Industrial REITs have a higher portion of short-term leases relative to retail and office REITs, so there is a slightly bigger short-term impact as a higher percentage of leases come up for renewal each year. Obviously, industrial REITs, like retail REITs, are exposed to consumer spending. Therefore, a severe recession would probably have a negative impact in the medium term. However, we think the likelihood that individuals switch channels from physical retail to online purchases provides a significant offset. The severity of a downturn is likely to dictate in which direction this washes out. In a severe or lengthy downturn, the negative impact from lower consumer spending will likely outweigh channel switching. However, in a less severe downturn, industrial REITs may see improved performance as demand for warehouse space becomes even greater. Disruptions in supply chains remain a potential negative factor, but it is difficult to gauge how severe this impact is and will be highly situational. Because of the longer-term contracts, we don't think this is an issue for the industrial REITs because global supply chains will likely to be able to adjust over time.

Specifically, for logistics properties, the overall short-term effect is negative, due to the hit to the GDP. The long-term effect is likely positive, for two reasons: First, developments will likely be delayed or mothballed, pushing out the arrival of supply. Second, a trend that was already in place will be accelerated, that of reducing supply chain risk. That could be implemented by bringing manufacturing onshore, diversifying offshore manufacturing across multiple offshore locations, and most important, for industrial property, retailers will likely hold more stock.

In Asia markets such as Singapore, REITs have rolled out some measures to help their tenants. With most retail tenants in Singapore being affected by the coronavirus outbreak through lower footfall and sales, the trusts have rolled out several measures to help their tenants in addition to passing through the 15% property tax rebate provided by the government to the affected tenants. In order to ease the short-term cash flow challenges of their tenants, some trusts allowed the use of one month of security deposits to offset rent, while others allowed tenants to convert security deposits into banker's guarantees. In addition, some trusts are providing up to half a month of rental rebates to affected tenants. In order to increase footfall and sales, the trusts have increased marketing efforts by giving additional promotions and rebates as well as free parking at selected hours to try to attract people to visit and spend at the malls.

As for the leases that are up for renewal, we expect only a slight drop in rental rates at the moment as we expect the impact from the coronavirus outbreak to be temporary. We think that the trust could lower the rental rates for this year and bake in some rental escalation throughout the lease as the situation stabilizes. This can help to alleviate the cash flow burden of their tenants and would not affect the average rental yield throughout the lease. However, if the economic conditions were to worsen for a longer period, we could then see a larger decline in rental reversions going forward.

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Is There a Risk of Dividend Cuts for REITs, Banks, and Oil and Gas Companies?

Exhibit 26 Year-to-Date Performance of Energy, Resources, and Consumer Defensive

Morningstar Industries	Price Change YTD
Oil & Gas Drilling	-74%
Oil & Gas E&P	-69%
Oil & Gas Equipment & Services	-64%
Oil & Gas Midstream	-60%
Oil & Gas Integrated	-52%
Credit Services	-48%
Banks - Regional	-36%
REIT - Retail	-36%
Banks - Diversified	-34%
REIT - Residential	-33%
REIT - Office	-27%
REIT - Industrial	-21%

Source: Morningstar. Year-to-date as of March 19, 2020.

The REITs are unlikely to cut their dividends. They are required to pay out 90% of their net income, so there are restrictions on how much they could cut. However, any cut sends a very negative signal that their long-term cashflow is going to be materially lower. Since this should be a short-term event, with even the worst-case scenario only having a major negative impact for 12-18 months, we don't think the REITs will want to do something that causes long-term damage to their image with investors given the short-term nature of the disruption. However, we expect many REITs will stop increasing their dividends in the short term until the full impact of the fallout is understood. The risk that industrial REITs cut their dividends is very low. Unlike retail REITs, however, industrial REITs are paying much lower dividend yields and have experienced significant growth amid the rise of e-commerce.

For the banks, dividend sustainability essentially comes down to two things: net income and capital levels. They are better-positioned today. Banks need a certain level of capital to remain well capitalized, and they need a certain level of net income to maintain dividend payments. Credit losses can eat away at capital levels, presenting one risk to dividend sustainability. As capital is depleted, the bank will need to use its net income to rebuild capital, potentially putting dividend sustainability at risk. Net income, used to fund the dividends and therefore lower income, even without credit losses, also puts a strain on funding the dividend. If a bank gets lower net income and big hits to capital levels, then it puts a double strain on the bank because it has to use a more limited net income stream to first fund its capital, and there isn't as much left over for a dividend. Any dividend payout that exceeds net income will reduce capital over time.

Today, while it is admittedly tough to tell what the fallout will be from the coronavirus, at the very least we can say that the banks are much better positioned today than they were during the financial crisis. Dividend payout ratios are generally lower than before, with most banks we cover at around 30%, and several closer to 40%. Capital levels are also higher. Tangible equity/tangible asset levels are up more than 60% since 2007.

In order for dividends to come under threat, there would have to be a severe recession, causing net income to fall significantly for a sustained period of time, while causing credit losses to increase a significant amount. We believe it would have to be severe enough for net income to decrease roughly 40% or more, while credit losses would have to be large enough to eat up materially more than 40 basis points of common equity Tier 1 each year, likely at least 150 basis points more than 40 basis points. In all cases under our coverage, banks have more than 150 basis points of cushion within their common equity Tier 1 ratios before they begin to reach certain minimum requirements, and in most cases they have more than 200 basis points of room. Right now, most excess cash has been used to make share repurchases, and the banks can easily stop these repurchases if earnings start coming under severe pressure. The severely adverse scenario described above could happen, but for now we would view it as very unlikely.

The energy sector is notoriously cyclical and not normally considered a go-to area for dividends, but integrated oil and gas majors have been paying attractive yields in recent years, and we think this will continue. Based on our estimates, assuming $40/bbl oil through 2021, no integrated oil sees debt rise to 40%. In fact, only three firms--BP, Equinor, and Repsol exceed 30%, the upper end of the typical targeted range. Shell touches 30%, but does not exceed it. Meanwhile, Chevron is able to keep its net debt/capital ratio below 20%. Given even the highest levels remain manageable--we are not assuming any proceeds from asset sales or reductions in capital spending, both of which are likely--these figures demonstrate dividend cuts are unlikely, in our opinion.

For the Chinese national oil companies, while the coronavirus outbreak is expected to weigh on oil demand, our base-case view assumes the impact to be mainly felt in 2020. Coupled with the lower oil prices, we anticipate the NOCs to cut their dividends in 2020 to levels similar to 2016, and we expect them to trim their capital expenditure in the near term to alleviate cash flow pressure.

Be that as it may, for other oil and gas subindustries, there is absolutely a risk of cuts to even the modest dividends that are paid. We have cut energy price expectations for the next two years, so we have slashed earnings and consequently dividend expectations in accord. We have reduced our fiscal 2020 and fiscal 2021 DPS forecasts for Australian exploration and production companies representatively by 50%-70%. We now countenance modest fiscal 2020 DPS of just AUD 3.0 cents for Oil Search in 2020. Fiscal 2020 DPS forecasts for Woodside and Santos fall by 54% and 40% to AUD 69 cents and AUD 12 cents, respectively. Ironically, despite these sharp cuts, yields have actually improved given very sharp share price retreats as growth has been priced out.

Outside the exploration and production companies, earnings and dividends can often be viewed as less cyclical (more sustainable) in the refined fuel retailers. Higher crude prices are effectively passed through to fuel customers, and lower crude prices tend to support demand for the same reason. But this time it's not so assured. The Singapore weighted average margin is being affected on the back of soft global demand for gasoline and distillates due to the coronavirus. Demand reductions due to the coronavirus are further compounded by the current commitments made by OPEC and other oil producers to maintain current production levels. We now assume regional refiner margins will suffer because of excess of capacity over demand and have, for example, reduced Caltex's refiner margin for 2020 by 47% to $6.25 per barrel and for 2021 by 30% to $8.55. This means our 2020 and 2021 DPS forecasts decline by 28% and 13% to AUD 1.21 and AUD 1.55, respectively.

The resulting supply shock essentially coincides with a demand shock related to COVID-19. Initial estimates for the impact now look overly optimistic, as the outbreak continues escalating around the world. We think zero demand growth this year is plausible, bucking the recent trend for at least 1/ mmbpd of additions in the past few years, and some forecasters are now calling for meaningful demand declines. Thus the near-term outlook for energy companies is already bleak and could deteriorate further, depending on how the virus spread ultimately plays out. As a result, producers are already announcing steep capital cuts this year, and some have started cutting dividends as well. But unless the situation does get much worse, these issues only affect cash flows in the next one to two years. Russia and OPEC lack the capacity to displace U.S. shale producers in the global supply stack, which means the marginal supply cost is still $55/bbl WTI. As such, we think energy stocks are oversold, creating a buying opportunity. But we caution that the probability of things getting worse before they get better is not trivial.

Will Telecommunications Weather the Storm Through Higher Usage and Cloud Services? When Will the Supply Chain in Asia Recover, and How Will It Impact Smartphone Demand and 5G Rollout?

Exhibit 27 Year-to-Date Performance of IT and Telecom Services

Morningstar Industries	Price Change YTD
Information Technology Services	-29%
Telecom Services	-20%

Source: Morningstar. Year-to-date as of March 19, 2020.

Telecom Stocks Haven't Been Immune to the Recent Market Sell-Off Surrounding COVID-19, Despite the Industry's Relatively Modest Exposure

Telecom services demand is generally highly recession resistant and the nature of COVID-19 disruption will likely only enhance that position. Internet access, both at home and on the go, has become indispensable for consumers and businesses alike, enabling communication across a broad array of platforms, access to information, and the availability of a wide range of services.

For instance, the Chinese telecom industry was growing strongly when SARS hit Asia in 2003--China Mobile reported first-half 2003 revenue growth of 33% and operating profit growth of 23%. Capital expenditure in that period was much lower than expected. While there might be some reductions in high-margin international roaming revenue, we expect most customers to keep their mobile and fixed-line connections as they are such an integral part of life now.

As consumers stay indoors, demand for wireless services will likely decline, but most consumers will still need the ability to communicate when they do leave home. Firms with large prepaid customer bases could see a hit to revenue, but most wireless revenue in the U.S. and many developed markets isn't usage based. Also, as more individuals work remotely and consume more entertainment at home, demand for high-quality Internet access could increase further, though broadband is a mature business in most developed markets.

We Believe the Decline in Valuations Has Created Two Sets of Opportunities

First, a handful of large-cap firms have dropped meaningfully, allowing investors to purchase shares in businesses that should deliver consistent cash flows over time at good valuations.

Second, risky firms with uncertain long-term payoffs have been overly beaten up. The second opportunity group provides greater potential rewards than available a few weeks ago for bearing risks that have little direct tie to COVID-19. For these firms, access to capital is generally the largest concern.

In Australia, We Expect the Telecommunications Sector Likely to Weather the Storm

This is not because it will benefit from higher usage and cloud services, as such usage is merely transferred from corporate networks to consumer networks, and telecom companies' earnings are more corelated to market shares than usage volume by existing customers. Rather, the sector will weather the storm because Australian telecom company balance sheets are generally solid and fortified by these companies' defensive earnings, derived from providing what are vital, essential services.

A weaker economy and consumer demand from the coronavirus will have an impact on smartphone demand. However, we believe it is likely to be merely deferment of purchases and perhaps a longer handset replacement cycle. Similarly, the fallout from the virus may delay 5G rollout but not terminate it, as it is key infrastructure vital for the long-term functioning of the information economy. It is difficult to determine when the supply chain in Asia will recover, but signs are already emerging of production capacities returning in countries such as China.

Barring a major re-escalation of COVID-19 in mainland China, we believe that supply disruptions will be less of a concern for the market going forward. For instance, Hon Hai Precision is currently operating at normalized production capacity utilization rates of around 50%-60% and it expects to gradually recover to 100% of normalized capacity utilization by the end of March 2020. While the recovery profile across supply chains could vary, our bigger concern is the magnitude and timing of order cuts by OEMs. Assuming most of the supply chain normalizes by April or May 2020, we anticipate downward order revisions will begin to come through toward the middle and end of the second quarter of 2020, once OEMs have a clearer picture of the demand-side situation.

We Think That Global Smartphone Demand Will Be Negatively Affected in 2020

The negative spillover effect of COVID-19 on economic growth will likely dampen discretionary spending for consumer electronics such as smartphones. However, we expect a sequential improvement in smartphone demand in the second half (versus first half), driven by a continued rollout of 5G infrastructure and new 5G smartphone models. While it is difficult to predict the size of 5G smartphone demand in the short term, we are positive on the longer-term rollout of 5G infrastructure and we think that the negative impact of COVID-19 is likely to only delay the demand for 5G smartphones into 2021, when we forecast the global economy to stabilize.

Despite the recent COVID-19 outbreak, China's three major telecommunication carriers, China Unicom, China Mobile, and China Telecom have pledged to maintain the pace of 5G base station installations.

The three Chinese telecom companies are due to report 2019 results over the next few weeks and we expect an update on the coronavirus impact. In terms of their 5G rollouts, there could be delays in the supply of equipment and parts, as well as a shortage of staff to implement the rollouts.

Would a Delay in 5G Network Rollouts Be a Big Negative for Chinese Operators?

Given the heavy capital expenditure outlays and uncertain business plans, investors have hardly been particularly positive about 5G's impact on mobile operators. They have all underperformed the market over the past six to 12 months. We believe a 5G rollout delay shouldn't be seen as a huge negative for them as revenue generated from 4G networks will still be rolling in.

Conversely, there is a possibility that Chinese telecom operators accelerate the rollouts in the second half of 2020 to help stimulate the economy. We believe that the 5G infrastructure buildout remains a key priority for the Chinese government. Furthermore, we think that increasing online work--and consumption-related activities as a result of COVID-19--is another reason to accelerate 5G deployment. On the demand side, we think that the Chinese government may introduce 5G handset subsidies for end consumers to partially offset some of the headwinds in the macroeconomy. This could resemble the handset subsidies implemented by the Chinese government when China migrated to the 4G telecom network.

Our Coronavirus Picks Spanning Regions and Sectors

Top 10 U.S. Ideas

Exhibit 28 Morningstar's U.S.-Listed High Conviction Undervalued Stocks, With Little Exposure to, or Overstated Long-Term Implications From, COVID-19

Ticker	Company	Morningstar Rating	Price/FVE	Moat	Industry
MMM	3M Co	★★★★	0.74	Wide	Industrial Products
AMZN	Amazon.com Inc	★★★★	0.76	Wide	Retail - Cyclical
BMRN	Biomarin Pharmaceutical Inc	★★★★★	0.61	Narrow	Biotechnology
CTL	CenturyLink Inc	★★★★	0.54	None	Telecommunication Services
CMCSA	Comcast Corp	★★★★	0.73	Wide	Media - Diversified
CTVA	Corteva Inc	★★★★★	0.54	Wide	Agriculture
HBI	Hanesbrands Inc	★★★★★	0.33	Narrow	Manufacturing - Apparel & Accessories
MAC	Macerich Co	★★★★★	0.13	Narrow	REITs
NCLH	Norwegian Cruise Line Holdings Ltd	★★★★★	0.18	Narrow	Travel & Leisure
PFE	Pfizer Inc	★★★★★	0.70	Wide	Drug Manufacturers

Source: Morningstar. Ratings as of March 19, 2020.

3M (Joshua Aguilar)

Market sentiment has turned against 3M for three reasons: slowing organic growth as the wide-moat company matures; recent weakness in the auto, semiconductor, and Chinese markets; and litigation risks related to polyfluoroalkyl substances, or PFAS. As a result, bears now maintain 3M's model is irretrievably broken. We disagree. In our view, coronavirus fears now offer potential 3M investors an uncommon Mr. Market opportunity to own the shares of a well-run, defensive franchise that offers safety of principal and yield, and the potential for modest capital appreciation. The effects and related fears over the virus will undoubtedly hurt 3M's supply chain and most of 3M's short-term results, given its material geographic exposure to China. That said, we think the valuation remains too attractive to pass on based on our $186 fair value estimate. At current valuations, in our opinion, investors are getting nearly any growth in 3M from these levels "for free," even after servicing its PFAS liability.

We think the market is also discounting short-term catalysts in the stock. 3M possesses a historical ability to retool its operations to capture higher-growing portions of GDP amid short-cycle headwinds. We specifically point to 3M's personal protective equipment division, where global demand for its N95 respirator now exceeds supply and could drive greater-than-expected division revenue growth. Finally, long-term secular drivers include an aging population, urbanization and industrialization trends, as well as a rise in chronic disease and surgical procedures. We expect that the more stable portions of 3M's portfolio should allow the stock to trade like a consumer-healthcare stock, and we would not be surprised by a rerating in line with its historical norms (just under 20 times our next year EPS estimate of $9.49).

Amazon.com (R.J. Hottovy, CFA)

As one of the global leaders in online commerce, wide-moat Amazon finds itself in a unique position amid the global coronavirus outbreak. As containment efforts hasten and more consumers isolate themselves, we believe certain Amazon services will see increased adoption. The most obvious example is online grocery, which has accelerated "significantly" in recent weeks based on our discussions with logistics industry executives. With a spike in telecommuting, Amazon Web Services, or AWS, also stands to benefit from increased enterprise cloud computing, storage, networking/content delivery, and digital security usage. On top of increased enterprise-level cloud demand, we anticipate Amazon will benefit from increased demand for entertainment content, either directly (its own content portfolio) or indirectly (AWS functionality for Netflix and other content providers).

While Amazon finds itself well positioned to capitalize on coronavirus-related demand, it could also face obstacles. At the top of the list is reduced discretionary spending. The company has done a better job diversifying its product mix toward more consumer staples in recent years, but a material consumer slowdown would still impact top-line growth. While we would expect online retail to outperform physical retailers during a quarantine situation, online retailers would not be immune to potential disruptions stemming largely from logistics staffing availability. Additionally, we expect supply chain disruptions for Amazon (including its own hardware) and its third-party sellers to result in some shipment delays and product availability. Still, we expect consumers to prioritize online shopping in months to come. At current share prices, Amazon trades at a significant discount to our $2,400 fair value estimate.

Biomarin Pharmaceutical (Karen Andersen, CFA)

BioMarin's orphan drug portfolio and strong late-stage pipeline support a narrow moat, and we think the market underappreciates the firm's entrenchment in current markets as well as its potential in new markets, particularly with its emerging gene therapy pipeline. BioMarin has several products on the market to treat rare genetic diseases; these products generally see strong pricing and have limited competition because of a solid combination of patent protection, complex manufacturing, and BioMarin's close relationships with patients who rely on its therapies for chronic treatment. At current share prices, Biomarin trades at a significant discount to our $119 fair value estimate.

CenturyLink (Matthew Dolgin, CFA)

No moat CenturyLink has dropped about 35% in recent weeks to trade at about half of our $19 fair value estimate with a dividend yield of 10%. We think CenturyLink's stock has been hit especially hard because the market has become fearful of firms with highly leveraged balance sheets. However, we believe the transformation in CenturyLink's business following the Level 3 acquisition, has left it in a better position than most investors realize. CenturyLink was aggressive in refinancing debt during 2019, pushing its maturities further into the future. We don't expect the firm will need access to credit markets until 2022. In addition, we don't believe its business, which primarily provides networking solutions for enterprises and governments, is especially sensitive to the economy, so we don't expect a substantial downturn in the event of a global recession. We still expect the firm to earn about $3 billion in free cash flow over each of the next two years, a time in which it has a total of $3.3 billion in debt maturing. CenturyLink's current dividend requires $1 billion of the cash each year. We think the dividend would be on the chopping block only if financial market conditions remain depressed and the firm becomes concerned about its ability to refinance a portion of the $4.4 billion in debt coming due in 2022. We don't think CenturyLink has a compelling business growth story, but we see it as too cheap for a firm that is relatively stable. CenturyLink's equity is currently trading at about 3 times trailing free cash flow.

Comcast (Michael Hodel, CFA)

Wide moat-rated Comcast's core cable business (more than half of consolidated revenue, about 70% of consolidated EBITDA) is in great shape and should see minimal impact from COVID-19. The theme parks business will be hurt, but it is small at 5% of revenue and 7% of EBITDA in 2019. Longer term, the parks business is a key asset behind Comcast's media efforts. The Sky acquisition added to Comcast's debt load, but the balance sheet remains solid. Net debt is at 3.0 times EBITDA versus around 4.6 times EBITDA for cable peer Charter, and 5.3 times for Altice USA. Valuation isn't as attractive as early 2018, during the battle for Fox, but is still solid at a nearly 30% discount to our $49 fair value estimate. The firm is trading at 7.5 times trailing EBITDA, down from more than 9.0 times in mid-February.

Corteva (Seth Goldstein, CFA)

Wide moat-rated Corteva is trading at a significant discount to our $40 fair value estimate. The pure-play agriculture inputs company generates around half of its profits from seeds and the other half from crop chemicals. Corteva manufactures all of its seeds locally, resulting in minimal exposure to international supply chain disruptions. In crop chemicals, the supply chain is more global, with manufacturing sites around the world for its intermediate and finished products. However, this footprint is well-diversified and not reliant on any single country. Further, the company currently has around a year of inventory on hand, which should provide some buffer.

Corteva's largest market is U.S. farmers, which account for around half of revenue. Following 2019, which saw the lowest U.S. acres planted in over a decade, farmers are expected to plant more crops this year, which should translate to sales and profit growth in 2020. Outside of the U.S. our current expectation is that farmers will plant crops as usual in 2020, and Corteva should see normal demand, particularly for its premium products that help farmers increase yields by controlling pests. Additionally, we think the market is undervaluing the launch of eight new crop chemicals products and the Enlist GMO corn and soybean seeds. These products will drive revenue growth and profit margin expansion in the years to come.

Hanesbrands (David Swartz)

We believe narrow-moat Hanesbrands is in better shape to ride out the COVID-19 crisis than many other international apparel manufacturers. In contrast to many of them, Hanes has minimal product sourcing and sales in China so should suffer limited direct impact from the most affected nation. However, Hanes' sales will certainly suffer if the crisis causes severe economic downturns in North America, Europe, or Australia. Hanes, though, remained profitable throughout the 2008-9 financial crisis and its business rebounded nicely in 2010-11. Hanes sells replenishment products that people buy regularly, regardless of the economy. Over the long-term, we still believe Hanes can improve production efficiency. We forecast operating margins of 15.3% in 2024 from 13.7% in 2019 and estimate that Hanesbrands will generate approximately $3.9 billion in free cash flow to equity over the next five years. Although Hanesbrands is prioritizing debt reduction, it pays an annual dividend of 60 cents per share and plans to repurchase $200 million in shares in 2020. At current share prices, Hanes trades at a significant discount to our $27 fair value estimate.

Macerich (Kevin Brown, CFA)

A recession would negatively impact narrow moat-rated Macerich's results for the next 2-4 years, and a permanent change to consumer behavior would lower their long-term growth potential. They are also facing a potential dividend cut as they try to finance both a very high dividend and their renovation plans. That said, we still like the company and think it screens as extremely attractive at current prices. We believe that Class A retail will be the winners among brick-and-mortar retail and see positive growth over the next decade, while the major bankruptcies and store closures will occur among the Class B and Class C properties. Their renovation plans should unlock a lot of value at their properties and provide significant tailwinds for the earnings growth starting in late 2021. Finally, trading at such a massive discount to NAV (anywhere from a 60% to 80% discount versus all street estimates), that they could be a target of a takeover offer like Taubman and GGP have been in the past two years. Shares are currently trading at a significant discount to our $51 fair value estimate.

Norwegian Cruise Line Holdings (Jaime Katz, CFA)

Narrow-moat Norwegian has a wide margin of safety to our $42.50 fair value. Fears surrounding the coronavirus outbreak have weighed on travel stocks, and oversupply concerns have echoed through the cruise marketplace over the past few years, bounding share gains. While 2020 has a dour outlook, we believe the impact from COVID-19 will begin to alleviate in 2021 as Norwegian's brand power should still resonate with consumers. However, we have placed a very high uncertainty rating on the stock, given the uncertain duration of the COVID-19 outbreak and the lasting impact it could have on traveler perception. We forecast yield to decline by 25% in 2020 but believe Norwegian should still print positive EPS with costs to decline by around half that amount. At the end of 2020 we also forecast the EBITDA/interest ratio will be at 4 times (down from 8 in 2019) and the net debt/total capital ratio will be at 50%. In our opinion, current concerns are transitory and plenty of global demand remains untapped to support industry growth once the virus abates. Cruise companies are expanding the aggregate demand pie by tapping into new geographies and demographics via wider market segmentation than in the past. With Norwegian's compelling value-added bundling and market-to-fill strategies, we think it's poised to pivot nimbly to capitalize on evolving consumer trends and increase average EPS growth again in 2021 as COVID-19 concerns dissipate.

Pfizer (Damien Conover, CFA)

We believe the market is underappreciating wide moat Pfizer's next-generation drugs, which should drive strong long-term growth. Further, the pipeline drugs focus on areas of unmet medical need where pricing power is strong. Additionally, the company is facing very few major patent losses over the next five years, which should also support steady growth. Lastly, the divestment of the established products group Upjohn to Mylan creates a new entity with robust cash flows, likely supporting a strong dividend. Shares are currently trading at a significant discount to our $46 fair value estimate.

Top 10 Asia Ideas

Exhibit 29 Morningstar's Asia-Listed High Conviction Undervalued Stocks, With Little Exposure to, or Overstated Long-Term Implications From, COVID-19

Ticker	Company	Morningstar Rating	Price/FVE	Moat	Industry
2020	ANTA Sports Products Ltd	★★★★★	0.67	Narrow	Travel & Leisure
C38U	CapitaLand Mall Trust	★★★★★	0.67	Narrow	REITs
667	China East Education Holdings Ltd	★★★★★	0.72	Narrow	Education
883	CNOOC Ltd	★★★★★	0.50	None	Oil & Gas
6954	Fanuc Corp	★★★★	0.70	Wide	Industrial Products
27	Galaxy Entertainment Group Ltd	★★★★	0.78	Narrow	Travel & Leisure
2317	Hon Hai Precision Industry Co Ltd	★★★★	0.72	None	Hardware
6981	Murata Manufacturing Co Ltd	★★★★	0.67	Narrow	Hardware
O39	Oversea-Chinese Banking Corp Ltd	★★★★	0.73	Narrow	Banks
TCOM	Trip.com Group Ltd	★★★★	0.62	Narrow	Travel & Leisure

Source: Morningstar. Ratings as of March 19, 2020.

Anta Sports Products (Ivan Su)

The majority of Anta's revenue losses took place in February, which was the lightest month for retail because of the timing of Chinese New Year. As the outbreak comes under control in China, almost all of Anta's stores have reopened, and we think sales will recover to prior levels by the end of May. Although Amer has more exposure outside of China, the negative impact is limited by its single-digit percentage earnings contribution. We also do not expect Amer's retail store closures in the U.S. and Europe to last more than two months. We do not expect the firm to run into liquidity issues, given its solid balance sheet and expectation of steady free cash inflow in 2020. Therefore, the material drop in the stock price was unwarranted, and we encourage investors to take advantage of Anta shares on a bargain.

Barring the transient impacts from the coronavirus, Anta's book of business is looking more robust than ever. Sales of Fila products are on track to deliver a 30% CAGR over the next three years, and the core brand should continue to provide steady growth in second- and third-tier Chinese cities. As leisure sports like climbing and hiking, which a generation ago were unheard of pastime pursuits, are becoming more popular, Amer brands are set to benefit.

CapitaLand Mall Trust (Ken Foong, CFA)

Narrow-moat CapitaLand Mall Trust has a strong record of adding value to its portfolio by doing asset enhancement initiatives and redeveloping existing properties. This has delivered solid rental and income growth. We continue to expect near-term growth to be supported by the reopening of Funan in June 2019 following its redevelopment, and the merger with CapitaLand Commercial Trust that is expected to be completed by June 2020. The combined entity will be named CapitaLand Integrated Commercial Trust and it will be the largest REIT in Singapore and the third largest in Asia Pacific by market capitalization. We view this merger positively as: 1) it will benefit from the larger capital base as the increased debt headroom is crucial for larger acquisitions or asset-enhancement initiatives that could drive long-term growth of the trust; 2) it improves the trust's ability to undertake and own integrated development, as commercial development is trending toward this kind of project; 3) it allows unitholders to own a larger trust with a more diversified portfolio that is more resilient through market cycles; and 4) it is distribution-per-unit-accretive to unitholders. In the long term, we expect the trust to continue to generate value for investors from asset enhancement initiatives, actively managing tenant and trade mix, and redevelopment of its properties, driving our SGD 4.60 fair value estimate.

China East Education (Jenny Tsai)

We view narrow-moat China East Education as defensive in this climate and consider short-term weakness as an attractive buying opportunity. We see existing student contributions to continue given that 90% of their school programs are longer than a year. In addition, we are likely to see a pickup in new student recruitment in the second half of 2020, given that China East is expecting to expand new schools and increase student enrollment. The stock is currently trading at 17.3 times 2021E P/E, with a solid ROE of 18.7% over the same period; thus, we view shares to be undervalued to our HKD 18.80 fair value estimate. We expect China East's five-year net profit CAGR to grow at 36%. This is driven by both an increase in student enrollment and tuition fees, which have also been steadily increasing operating cash flow in the past three years. In the near term, we expect the coronavirus impact to be limited. We anticipate a few schools in Wuhan, Hubei province to remain closed until further notice, but most schools are located outside of this region and have already started their general operations, as well as preparing for future online recruitment. China East's management has not seen any dropouts or refunds from existing students. Even if the coronavirus situation takes slightly longer to stabilize, we view the impact to existing students to be minimal and offset by rising demand for online teaching.

CNOOC (Chok Wai Lee, CFA)

No-moat CNOOC is the upstream arm of China's third state-owned oil company, China National Offshore Oil. As a result, it's the most direct option for investors seeking exposure to China's energy security policy and long-term plans to increase its oil supply. As it does not have downstream activities, the company has also avoided a large legacy labor force. None of the company's sales is subject to government price controls. CNOOC also benefits from a weaker Chinese yuan given the firm's upstream focus. We think CNOCC is currently undervalued with weakness in oil prices largely priced in, while the firm's 2020 dividend yield of more than 5% is decent. Given CNOOC's cost efficiency (all-in cost of around $30 per barrel), we believe the firm will remain profitable in the long term using our midcycle Brent oil price forecast of $60 and underlies our HKD 15.80 fair value estimate.

Fanuc Corp (Jason Kondo)

As one of the "Big Four" industrial robotics companies, wide-moat Fanuc boasts the leading market share with its industrial robots and computer numerical controls, or CNC, for machine tools. The company is currently trading at a discount to our JPY 20,500 fair value estimate after its shares fell by approximately 30% since the beginning of February. While we have been expecting cyclical headwinds arising from the U.S./China trade friction, and reduced global capital spending to have an impact until the first half of fiscal 2020, we believe the market is expecting that the effects of the coronavirus will lead to declining growth persisting beyond fiscal 2020 as well. The increased uncertainty from the pandemic will likely delay capital spending by the automobile manufacturers over the next six months;

however, we believe the majority of this is priced into our fair value estimate, with the remaining loss likely to be offset within two years upon containment. In fact, we are convinced that more companies will now have a sense of urgency and consider making factory automation investments so that their production can continue to run even in times of difficulties with labor constraints, which strengthens Fanuc's long-term growth potential.

We believe Fanuc is well-positioned for long-term, secular factory automation growth due to factors like aging population, increasing wage costs, and increased need for production efficiencies in key markets such as Japan and Asia. In the near-term, we assume that an increase in semiconductor and 5G related investments will serve as the initial catalyst to a cyclical recovery in the factory automation market this fiscal year; however, we now expect much of this recovery will be delayed from the beginning of fiscal year 2020 to around the second and third quarters of the same year, assuming the pandemic will be contained within the first half of fiscal year 2020. With a positive free cash flow and a net cash position for more than 10 years, as well as lack of any interest-bearing debt, we believe the company has accumulated enough capital to be able to withstand any potential material impact from the coronavirus. Further, we believe having the majority of its productions in Japan will mitigate supply-side risks, especially since the company produces its own key components such as servo motors.

Galaxy Entertainment (Chelsey Tam)

Despite the high uncertainty of how long the coronavirus outbreak will last, we believe narrow-moat Galaxy Entertainment is well-positioned to weather the storm given its ample cash holdings, and we are comfortable with our HKD 62 fair value estimate. Galaxy had HKD 52 billion in net cash as of December 2019, and only HKD 15 billion capital expenditure to spend for its Galaxy Macau phase three and four in the next two to three years. When the coronavirus outbreak subsides and the economy is back on track, we expect the VIP segment, in which Galaxy Macau has a high contribution of approximately 50%, to be the one that will come back first and come back strongly. This is because only a small volume of VIP customers that are willing to bet large sums of money are sufficient to help increase VIP revenue growth noticeably, and these customers are more likely to hold business visas that allow them to enter Macau currently, unlike holders of the individual visit scheme visas. In our view, the Chinese government is likely to exert caution before resuming the individual visit scheme, even after a period of zero confirmed new cases. However, VIPs with visas other than the individual visit visas can come back to Macau as long as they believe the COVID-19 situation is already under control. Galaxy expects to open its part one of Galaxy Macau phase three in the first half of next year, although this might be delayed due to COVID-19. Assuming that the impact of COVID-19 on the economy will largely be over by 2021, we expect to see Galaxy to benefit more from the pent-up demand with new openings and new hotel capacity.

Hon Hai Precision Industry (Kazunori Ito)

Since COVID-19 emerged in late January, no-moat Hon Hai's share price has dropped more than 20% and is currently trading on a price/book (LTM) ratio of 0.8 times, its lowest level in history. We think most of the negative impact has been priced in and we consider shares to be trading at a more-than 30% discount to our TWD 104 fair value estimate. The recent escalation of COVID-19 in key markets for Apple poses downside risk to Hon Hai's revised 2020 low-single-digit revenue growth estimate and believe that demand visibility for Apple is very low now. Hence, we may only see order cuts from Apple begin to come through in the middle or end of the second quarter. Assuming Hon Hai's production capacity recovers to normalized levels by the end of March and the COVID-19 outbreak in the U.S. and Europe peaks in May or June, we could see better demand in the second half than in the first half. However, the magnitude of demand recovery in the second half is still uncertain, given the potential negative spillover impact on global consumer discretionary spending. Despite demand softness, we think that the supply disruption impact to Hon Hai's 2020 gross margin will be more muted than the market had initially feared. This is because the firm can rely on several internal cost-cutting initiatives, in addition to labor and logistical costs being partially subsidized by customers and local governments as a result of COVID-19.

Murata Manufacturing (Kazunori Ito)

Narrow-moat Murata is the global top supplier of passive components, such as multilayer ceramic capacitors (40% market share) and sound acoustic wave filters (45% market share). Murata's revenue has almost doubled over the past five years, as approximately half of its revenue is from handsets. Smartphones use a larger number of passive components than feature phones; in addition, progress of communication standards requires more content per smartphone, becoming the driver of Murata's revenue growth over the past decade. Even though the yearly shipment of smartphones seems to have hit a ceiling, diffusion of 5G communication and auto digitalization will drive Murata's revenue growth in the long run. 5G smartphones need to handle more spectrums and thus require better power management than 4G phones. Therefore, Murata's broad product portfolio of passive components will provide larger growth opportunity to the company, driving our JPY 7,400 fair value estimate. While it is quite difficult to assess the impact of COVID-19, we view that increasing base station investment and content per phone will mitigate the impact in the short term and drive passive components' growth in the medium term. This is based on our view that 5G base station investment and 5G smartphone production in China will resume in the second half of 2020 to stimulate the economy.

Oversea-Chinese Banking Corp (Michael Wu)

Singapore-based Oversea-Chinese Banking is trading at an attractive discount to our SGD 12.40 fair value estimate. We believe OCBC is less affected by a decline in interest rates given a higher contribution from noninterest income, at slightly higher than 40% of total income. A larger proportion of fixed deposits within its deposit base is also expected to see repricing benefit. The bank's noninterest income is supported by a strong private banking franchise: the Bank of Singapore. Assets under management of SGD 117 billion mean the private bank is in the top 10 in the region. With the common equity Tier 1 ratio at 14.9% and a strong capital position, we expect the narrow-moat bank to at least maintain its dividend of SGD 0.52 per share, which represents a dividend yield of close to 6%. Lower profitability in 2020 is expected to translate into a dividend payout ratio closer to 55%-60%, from 50% last year.

Trip.com Group (Chelsey Tam)

Narrow-moat Trip.com has been facing headwinds such as public relations scandals, weak macroeconomics, weak sentiment amid the trade war, Hong Kong protests, and China's ban on individual travel to Taiwan, and we believe the pandemic will further delay its recovery. But we urge investors not to lose sight of its long-term growth potential. Recovery will come from the global containment of the coronavirus, and the de-escalation of the trade war with the phase one deal and gradually improving economy in China.

Trip.com is dominant in outbound travel and the higher-end travel segment in China. Its market share in online accommodation reservations was 67.5% in the second quarter of 2019. Online accommodation reservation penetration in China was roughly 36% in 2018 versus over 50% in the United States and Europe. Only 14% of the Chinese population was estimated to have passports as of the end of 2019, versus 42% in America in 2017.

We think its faster-growing higher-margin international business will raise the overall margin after COVID-19. International products have higher margins as the price is on average 2 times higher than domestic businesses, and the take rate for international air tickets is also higher than domestic by 2 times. Operating leverage will rise as both the outbound and domestic businesses make use of the domestic infrastructure that is already well established. Increasing outbound travel from China, which has the largest population in the world, will give Trip.com scale and bargaining power in the global travel industry. Shares are currently trading at a significant discount to our $37 fair value estimate.

Top 10 EU Ideas

Exhibit 30 Morningstar's Asia-Listed High Conviction Undervalued Stocks, With Little Exposure to, or Overstated Long-Term Implications From, COVID-19

Ticker	Company	Morningstar Rating	Price/FVE	Moat	Industry
BMW	Bayerische Motoren Werke AG	★★★★★	0.33	Narrow	Vehicles & Parts
CFR	Cie Financiere Richemont SA	★★★★★	0.58	Wide	Retail - Cyclical
CSGN	Credit Suisse Group AG	★★★★★	0.34	Narrow	Banks
DUFN	Dufry AG	★★★★★	0.25	Narrow	Retail - Cyclical
INGA	ING Groep NV	★★★★★	0.27	Narrow	Banks
NN	NN Group NV	★★★★★	0.48	None	Insurance
ROG	Roche Holding AG	★★★★★	0.79	Wide	Drug Manufacturers
RDSA	Royal Dutch Shell PLC	★★★★★	0.36	Narrow	Oil & Gas
TEF	Telefonica SA	★★★★★	0.35	Narrow	Telecommunication Services
FP	Total SA	★★★★★	0.36	None	Oil & Gas

Source: Morningstar. Ratings as of March 19, 2020.

Compagnie Financière Richemont (Jelena Sokolova, CFA)

Trading at a 40% discount to our unchanged CHF 88 fair value with a dividend yield of almost 4% and ample liquidity to weather the crisis (net cash of 0.8 times EBITDA or EUR 2.3 billion), wide-moat Richemont presents a compelling opportunity for long-term investors. With Cartier and Van Cleef & Arpels, Richemont has one of the strongest and most profitable brands in the luxury jewelry industry (Jewellery Maisons account for 85% of EBIT). Luxury jewelry has high barriers to entry and applying acquisition multiples of the Tiffany buyout of EV/revenue of 3.7 and EV/EBITDA of 16, and taking an average of the multiples, given substantially higher profitability for Richemont's brands, would result in Jewellery Maisons stand-alone valuation of CHF 40 billion. This is higher than Richemont's total enterprise value of CHF 30 billion, making not only Jewellery Maisons undervalued, but also the other businesses a free option. Around 40% of Richemonts' revenue is from Chinese consumers, and this will likely take a hit, but the situation with new infections and recoveries in China shows stabilization and stores are gradually being reopened across industry players. Although online has disappointed thus far, the business is in an investment phase and one of the market leaders in rapidly growing online luxury (only 10%-12% of luxury items are sold online).

Credit Suisse (Johann Scholtz, CFA)

Narrow-moat Credit Suisse currently trades at a steep discount to our CHF 20 fair value estimate. Credit Suisse has successfully executed restructuring the bank into a wealth manager primarily, reducing the volatility stemming from investment banking and increases profitability. We view Credit Suisse's strength in the Ultra High Net Worth Individuals, or UHNWI, segment favorably. We believe this segment faces much greater switching costs than the more-commoditized high net worth and mass affluent markets that are at risk from digital disruption. UHNWI typically have complex needs for both investing and financing, often tied to firms that it founded. This requires a high level of client engagement and multiple products, that are often bespoke. While near-term earnings will be under pressure, we believe the long-term trend where assets of the wealth grow ahead of nominal GDP will remain in place, which supports long-term revenue growth prospects for Credit Suisse.

Dufry (Jelena Sokolova, CFA)

We project a revenue decline of 13% in 2020 for narrow-moat-rated Dufry and we believe credit risk has increased. However, we believe the recent share price drop is a significant overreaction, and view shares as attractive, trading at a steep discount to our CHF 87 fair value estimate. We expect sales to recover in 2021 to above 2019 levels, but have raised our uncertainty rating to very high, given low near-term demand visibility and concerns over the company tripping its debt covenants. However, with no debt maturing before 2022, undrawn credit facilities of CHF 700 million, and net interest payments of CHF 130 million annually versus adjusted operating cash flow of CHF 956 million in 2019, we think the liquidity risk is low. Although management does not expect the covenant to be breached, we model it in our base assumptions; management claims it could ask for a covenant holiday or pay an additional mark-up if this happens. As it happened in 2009, we think temporary rent reliefs will be introduced given the severity of current events (EBITDA margin was down 120 basis points then versus a 9.5% drop in organic revenue). Dufry's peer Lagardere also mentioned rent renegotiations with the airports, and we estimate roughly 60% of rents to be variable in 2020. Forecasting CHF 100 million in cost reduction, we estimate the company can survive a 23% revenue decline with the dividend payout as a cushion, which is an unlikely scenario.

ING Groep (Johann Scholtz, CFA)

We believe narrow-moat-rated ING currently trades at a steep discount to our EUR 16 fair value estimate. While lower interest rates will continue to exert downward pressure on interest margins, the main concern is banks having to write off more loans as bad debt. We have cautioned for a while that the current, all-time low bad debt ratios for banks are not sustainable, and we anticipate that banks will have to increase their provisions for bad debts materially. This is, however, a cyclical increase in response to a very specific event and we believe that European banks such as ING are much better placed to weather this storm than they were in 2008. Banks are much better capitalized, the quality of the loans that they have granted are better, and banks have scaled back its riskier trading activities. Having said that, we expect share prices to remain under pressure, in line with the current negative news flow, but we urge investors to take a longer-term view.

NN Group (Henry Heathfield, CFA)

No-moat Nationale Nederlanden, or NN, takes around 60% of its operating income from its home country, and only 10% of its earnings from Asia, via Japan. NN is not primarily a margin-driven business that would be deeply affected by the increased rates of mortality across Europe due to the coronavirus. Rather, NN is a long-term savings business with most of its life insurance earnings coming from pensions. We do not view the nonlife operations as exposed to coronavirus risks. In our view, the large disparity between the market price and our EUR 48 fair value estimate comes down to the unit-linked file. We think the maximum penalty that could be imposed on the business is around EUR 3.2 billion, about one and a half years' worth of earnings. While we think it is relatively unlikely this full penalty will be imposed--with clarity on outcomes hopefully arriving in the second half of this year--if it is paid in full by NN over the next few years, we think the business is still worth EUR 31 per share and thus offers a wide margin of safety.

Roche Holding (Karen Andersen, CFA)

We think the market underappreciates wide-moat Roche's drug portfolio and industry-leading diagnostics, which conspire to create sustainable competitive advantages. As the market leader in biotech and diagnostics, this Swiss healthcare giant is in a unique position to guide global healthcare into a safer, more personalized, and more cost-effective endeavor. The collaboration between its diagnostics and drug-development groups gives Roche a unique in-house angle on personalized medicine. Also, Roche's biologics constitute three fourths of its pharmaceutical sales; biosimilar competitors have seen development setbacks while Roche's innovative pipeline could make these products less relevant by their launch. Shares are currently trading at a significant discount to our CHF 381 fair value estimate.

Royal Dutch Shell (Allen Good, CFA)

We think narrow-moat Shell's high yield of 14.8% does not reflect its dividend safety. Despite break-even being roughly $50 per barrel, well above current prices under $30 per barrel, Shell is well-positioned compared with peers and trading at a discount to our EUR 30 fair value estimate. First, Shell has ample debt capacity and a relatively manageable net debt/capital ratio of 27.2%. Shell has a 20%-30% target range through the cycle; however, even if oil prices average $40 per barrel over the next two years, 30% won't be exceeded by our estimates. Second, we expect Shell to reduce capital spending. Although near-term flexibility is limited, Shell should be able to reduce capital spending materially by 2021. In the past cycle, 2014-16, we saw reductions of only 7% in the first year but that increased to 30% by year two. However, it might be more difficult to achieve reductions of that magnitude this time. Previous reductions were driven by the cancellation of higher-cost projects and a change in the method of project design, which placed greater emphasis on standardization and simplification, and which will be difficult to replicate. While savings from lower service prices played a smaller role previously, providers have been cutting capacity to support prices, which will somewhat offset the likely reduction in activity. This is all partially offset by integrated oils' increased investment in short-cycle projects like shale and brownfield offshore expansion, which can more quickly be dialed back. Overall, we'd expect greater revisions to 2021 capital spending than 2020, but reductions to be less than what was realized in 2015-16. Finally, in a worst-case scenario Shell can return to issuing a scrip dividend that would save cash while maintaining its total payout. Investors will likely be left disappointed as its plans to repurchase $25 billion in shares during 2019-20 will be put on hold given the decline in commodity prices.

Telefonica (Michael Hodel, CFA)

Narrow-moat Telefonica may see some disruption from COVID-19 but demand for its services should see minimal impact. The firm is leading the European communications market into converged services with its extensive fiber network buildout in Spain. It acquired E-Plus in Germany and GVT in Brazil, which strengthens its position in both countries and provides lots of opportunities for cost savings. We don't believe the market appreciates how well the firm is positioned or its margin expansion opportunities, which has caused its stock to trade at a wide discount to our EUR 12.50 fair value estimate. In addition, the firm's recent revamped strategy promises to unlock significant value as it exits or restructures markets in Latin America, where its position is weaker. For example, the firm recently inked a network deal with AT&T in Mexico that will enable Telefonica to shut down much of its network in the country.

Total (Allen Good, CFA)

With dividend yields at all-time highs, we view the recent sell-off as a buying opportunity to purchase shares in no-moat Total, currently trading at a discount to our EUR 60 fair value estimate. We believe Total is a high-quality operator with the financial wherewithal to weather the storm and provide sufficient dividend safety given its strong free cash flow profile and low debt levels. While we estimate break-even to be slightly above $50 per barrel, well above current prices under $30 per barrel, Total has capacity to increase debt with a net debt/capital ratio of about 20%, ahead of most competitors. The company manages toward a 20%-30% target range through the cycle; however, even if oil prices average $40 per barrel over the next two years, 30% won't be exceeded by our estimates. Second, we expect both to reduce capital spending. We maintain our expectations of greater revisions to 2021 capital spending than 2020, but reductions to be less than what was realized in 2015-16.

Top 10 AU Ideas

Exhibit 31 Morningstar's Australian-Listed High Conviction Undervalued Stocks, With Little Exposure to, or Overstated Long-Term Implications from, COVID-19

Ticker	Company	Morningstar Rating	Price/FVE	Moat	Industry
BHP	BHP Group Ltd	★★★	0.94	None	Metals & Mining
BKL	Blackmores Ltd	★★★★	0.81	Narrow	Consumer Packaged Goods
NAB	National Australia Bank Ltd	★★★★★	0.60	Wide	Banks
PMV	Premier Investments Ltd	★★★★	0.77	None	Retail - Cyclical
SUL	Super Retail Group Ltd	★★★★★	0.45	None	Retail - Cyclical
TLS	Telstra Corp Ltd	★★★★	0.74	Narrow	Telecommunication Services
URW	Unibail-Rodamco-Westfield	★★★★★	0.39	Narrow	REITs
VEA	Viva Energy Group Ltd	★★★★★	0.42	None	Oil & Gas
WBC	Westpac Banking Corp	★★★★★	0.58	Wide	Banks
WPL	Woodside Petroleum Ltd	★★★★★	0.36	None	Oil & Gas

Source: Morningstar. Ratings as of March 19, 2020.

BHP Group (Mathew Hodge, CFA)

We recently reduced our fair value estimate for no-moat BHP Group by 6% to AUD 29 per share given the weaker near-term outlook for earnings, driven primarily by the rapid decline in oil prices. However, the shares have sold off much more, down more than 30% since the recent January 2020 peak, and we now see value emerge in BHP after several years of overvaluation. BHP is one of the highest-quality global miners, underpinned by low-cost production, particularly for iron ore and coking coal, and a strong balance sheet.

The share price now factors in some downside from our base case, which we think reflects near-term coronavirus-driven uncertainty. This is despite our earnings forecasts generally factoring in lower long-term commodity prices. Relative to our midcycle earnings forecast of $1.19 per share in fiscal 2024, BHP now trades on a prospective midcycle price/earnings multiple of less than 14 and a dividend yield of more than 5%.

After factoring in lower near-term earnings, we still think BHP is in strong financial shape, both in an absolute sense and relative to peers. Net debt at the end of December 2019 was just $12.5 billion, and we forecast net debt/EBITDA at 0.4 for fiscal 2020 and improving modestly through to fiscal 2024. If the economic downturn deepens and commodity prices fall further, we see lower dividends as the natural outlet for BHP to reduce cash outflows and maintain a solid financial position. We forecast dividend payments to average just over $6 billion per year to fiscal 2024.

Blackmores (Nicolette Quinn, CFA)

Our top Australian healthcare pick coming out of the coronavirus sell-down is vitamin company Blackmores. The company's strong brand earns it the largest market share in vitamins and dietary supplements in Australia, and a narrow moat. While supply chain disruption and travel bans are challenging short-term profits, an estimated 5%-10% of products are purchased in Australia and carried cross-border into China. We believe the heightened awareness of health and immunity will underpin long-term demand both domestically and in offshore markets. Blackmores' newly appointed management team is in the process of turning the company around and we believe, based on the strategy communicated, that it will be successful. Looking beyond the poor profit guided by management for fiscal 2020, we forecast five-year EPS compound growth of 14.2% forward to fiscal 2024. Based on our AUD 81 fair value estimate, shares are currently undervalued by the market.

National Australia Bank (Nathan Zaia)

Wide-moat National Australia Bank, or NAB, is the market leader in business lending in Australia, a position we expect it to retain despite continued competition both from its major bank peers and smaller niche bank and nonbank lenders. The cost advantages and switching costs across both NAB's business and retail customers underpin our positive view for the bank long-term. Shares currently trade at a sizable discount to our AUD 28 fair value estimate.

However, the likelihood of earnings coming under pressure in the short term has risen in recent months, and we expect this to make it highly likely the bank again must rebase dividends lower. We believe extremely low levels of bad debts in Australia coming to an end, coupled with record low cash rates, will see NAB reduce dividends by 10% to AUD 1.50 in fiscal 2021, still implying a relatively high payout ratio of 85%. With NAB's share price down roughly 40% over the past few weeks, the bank trades on a fiscal 2021 dividend yield of more than 8%. Even in our downside scenario, which assumes even lower net interest margins, and bad debts as a percentage of gross loans averaging 60 basis points in fiscal 2020 and 2021, similar to the average over fiscal 2009 and 2010 during the GFC, we estimate the dividend would fall to around AUD 1 per share. At current prices that is still a dividend yield over 5.5%.

Premier Investments (Johannes Faul, CFA)

Shares in no-moat Premier are trading at a material discount to our AUD 15.50 fair value estimate, despite our cautious outlook on the group's core apparel brands, where it faces intense competition in Australia. Current prices imply a much more severe and prolonged downturn. We expect that a relatively quick recovery in global economic activity would eventuate, and unlikely to be material to our long-term estimates.

Even before recent global economic woes, we had expected spending across discretionary retailing categories, including fashion, to remain cyclically weak in fiscal 2020. Beyond 2020, we anticipate fierce competition from international chains in the brick-and-mortar and online channels is unlikely to abate. In fiscal 2019, Uniqlo continued its store rollout, and fast fashion retailer H&M intends to launch a transactional website by year-end 2020. Yet, we anticipate Amazon to be the largest disruptor in the medium term, which we see increasing its gross merchandise value by a CAGR of around 70% over the next five years. In fiscal 2024, we estimate Amazon to capture about 20% of all Australian online fashion sales. In our special report examining Australia's 1991 recession, we estimated a similar downturn in Australia would reduce our fair value estimate of Premier by a low-single digit. However, the core Smiggle brand has significant international exposure, insulating it from an Australia-centric recession.

For detail, please refer to our special report, "The Morningstar Time Machine Revisits Australia's Last Recession" published May 20, 2019.

Super Retail (Johannes Faul, CFA)

No-moat Super Retail screens as attractive after an extremely challenging start to 2020. Its shares are now trading at a significant discount to our AUD 7.90 fair value due to one-off, short-term events. Super Retail owns leading retailing brands in auto parts, sporting goods and outdoor. The first headwind was the impact of the severe Australian bushfires on sales in Super Retail's outdoor segment. Hot on the heels of the fires came the coronavirus outbreak, which is likely to impact near-term sales and may cause supply chain delays and stocking issues. However, we anticipate this to be transitory and we don't expect a long-lasting effect on consumer spending or product sourcing costs. In our special report examining Australia's 1991 recession, we estimated that a similar downturn would reduce our fair value of Super Retail by less than 5%, even in a more prolonged U-shaped recovery. For details, please refer to our special report, "The Morningstar Time Machine Revisits Australia's Last Recession" published May 20, 2019.

We anticipate the auto parts segment, which generates about half of Super Retail's earnings, to be relatively defensive because of the less discretionary nature of auto part demand. More solitary activities such as camping, hiking, and fishing could also prove to be less affected by social distancing than other discretionary retail spending. We expect the sporting goods segment, about 40% of group EBIT, to be exposed to the potential cancelling of amateur sporting events and the potential shutdown of sporting venues such as pools and gyms. Although Super Retail sources much of its products from China, only factories supplying its outdoor segment are in Wuhan, and as of February 2020, product availability hasn't been affected materially. Lower-than-expected capital expenditures provide upside to our base case, in which we forecast Super Retail to spend capital at a greater rate from fiscal 2021, to constantly improve and update its digital and data capabilities while maintaining an appealing store network. However, were capital expenditures lower, at current depreciation rates of 3.2% of sales, our valuation would increase to AUD 8.55.

Telstra Corp (Brian Han)

In the Australian telecom sector, we see narrow-moat Telstra as meeting the three important criteria to be considered as an investment in this uncertain environment. First, Telstra has the financial strength to weather the current malaise, with net debt/EBITDA of 1.7, a diverse funding base, and a staggered, long-dated maturity profile. Second, its earnings are defensive, further fortifying its financial position and equipping the group to realize its longer-term intrinsic value. Third, our fair value estimate of AUD 4.40 per share is over 40% above the current depressed stock price, implying sufficient margin of safety. Fundamentally, competitive tension in the mobile market is easing, and the AUD 2.5 billion cost-out program is progressing well and likely to largely mitigate National Broadband Network's margin-crunching impact on the fixed-line business.

Unibail-Rodamco-Westfield (Alexander Prineas)

We expect narrow-moat Unibail to lose substantial revenue from the coronavirus-driven social distancing requirements around the world. The potential negative spillover impact on global consumer confidence and discretionary spending also cannot be ignored. Most of the group's income is contractual, but a lease is only as strong as the tenant paying the rent. We expect Unibail to face a variety of headwinds for the remainder of 2020, from difficulties in leasing vacant space, substantially reduced footfall, lower ancillary income from advertising and car parking, and lower rent on leases that are linked to turnover or other productivity metrics. Unibail will also likely be unable to resist intense pressure to provide rental abatements, at least for some tenants.

The group also has a high debt load, reporting a loan/value ratio of 37% at December 2019 on a pro forma basis, but this ratio could increase should asset values come under pressure. Unibail has been able to service this level of borrowing because of an exceptionally low average cost of debt of 1.6% that has a weighted average maturity of eight years. While the hit in 2020 could be substantial, and a possibility Unibail will be forced to cut dividends or into a dilutive rights issue, we believe Unibail will weather the storm. We expect consumers will return as they have after past crises, and with the share price dropping over 60% year to date, we view current levels as an opportunity for long-term investors and shares to be undervalued.

Viva Energy (Mark Taylor)

Refined fuel retailer Viva Energy currently trades at a significant 60% discount to our AUD 3.00 fair value estimate. Along with other fuel refiners/retailers, no-moat Viva was already being hit by historically weak regional refiner margins and a hypercompetitive fuel retail landscape. The coronavirus and the Saudi/Russia oil impasse now compound that, but we continue to view earnings potential as attractive. Improvement in regional refiner margins to longer-term averages within two years and advances on restoring Coles Express Alliance volumes and margins are likely key catalysts for share price appreciation to fair value. While current margins continue at lower-than-average levels with tough economic conditions and intensified competition among petrol stations, we still project recovery in real terms to AUD 6.0 cents per liter, leveraging off Viva's strong infrastructure base and assuming Alliance efforts bear fruit and growth from the premium diesel offering is recognized. This supports our five-year EBITDA CAGR forecast of 11.8% to AUD 970 million by 2024, from a challenged AUD 555 million 2019 base year.

Westpac Banking Corp (Nathan Zaia)

Trading at a sizable discount to our AUD 28 fair value estimate, wide-moat Westpac Banking is our preferred Australian major bank. Even before markets tumbled, sentiment toward Westpac was already battered. Customer remediation costs and the likelihood of a hefty penalty due to breaches of anti-money-laundering laws created additional uncertainty in a sector facing earnings headwinds. We acknowledge the reputational risk and have allowed for a penalty of AUD 1 billion and forecast an uplift in compliance-related costs, but we do not expect the bank to suffer materially enough where loan growth and pricing are negatively affected over the long term.

Despite best efforts of governments, we do not believe fiscal stimulus will be enough to prevent businesses and homeowners coming under pressure in the near term, and as such assume bad debts will rise from extremely low levels. Bad debts as a percentage of gross loans for Westpac averaged just 13 basis points over the past five years, which we expect will rise toward 20 basis points over the next two years, with our midcycle of around 18 basis points unchanged. A larger-than-expected penalty and an increase in unemployment are risks to our earnings, dividend, and capital forecasts, but we believe the market has overreacted to the potential downside.

Westpac remains one of the largest mortgage and business lenders in Australia and New Zealand, benefiting from 70% of funding from low-cost and sticky customer deposits. The Reserve Bank of Australia lowering the cash rate to 0.5% in March and another expected cut in coming months will put further pressure on margins in the short term, but nonbank lenders reliant on wholesale funding markets and securitization markets may well find tighter availability and high costs of funding in more uncertain economic conditions. Westpac is also among the world's most cost-efficient banks with little sign of stress in credit quality in recent years. All these positives underpin our confidence in solid returns on equity over the long term.

Woodside Petroleum (Mark Taylor)
No-moat Woodside is a standout opportunity, trading at less than half our assessed fair value of AUD 44.60. We think the market has assumed that current unsustainably low oil prices will persist and is insufficiently pricing for liquefied natural gas growth potential. We estimate Woodside's free cash flow break-even at around just $20 per barrel, and its balance sheet is only modestly leveraged at net debt/equity of 9.3%.

At current levels, the 2020 dividend equates to a modest fully franked yield of roughly 4%, but in a company with no shortage of healthy growth prospects. Woodside's production target of 100 million barrels of oil equivalent, or mmboe, for 2020 is in line with our own, an 11% increase on 2018's 90/mmboe, before forecast growth to 130/mmboe from 2027, with a second Pluto LNG train contributing. Our 2022 yield forecast is also a healthier 7.8% on a nominal basis, assuming Brent price improvement. Our group fair value estimate equates to a 2029 enterprise value/EBITDA of 9.5, crediting a 10-year EBITDA compound annual growth rate of 5.3% to $5.7 billion based on our midcycle Brent oil price forecast of $60 per barrel. M

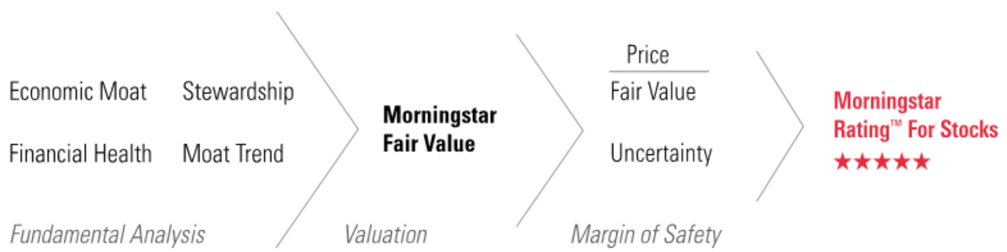
Research Methodology for Valuing Companies

Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. Moreover, we think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (for example, mines), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term approach.

Morningstar's equity research group ("we," "our") believes that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth.

Morningstar Research Methodology



Source: Morningstar.

Four key components drive the Morningstar rating: 1) our assessment of the firm's economic moat, 2) our estimate of the stock's fair value, 3) our uncertainty around that fair value estimate and 4) the current market price. This process ultimately culminates in our single-point star rating.

Economic Moat

The concept of an economic moat plays a vital role not only in our qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of our fair value estimates. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low-quality, no-moat companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

To assess the sustainability of excess profits, analysts perform ongoing assessments of the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

Estimated Fair Value

Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than the returns of narrow-moat firms, and both will fade slower than no-moat firms, increasing our estimate of their intrinsic value.

Our model is divided into three distinct stages:

Stage I: Explicit Forecast
In this stage, which can last five to 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in working-capital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes, or EBI, and the net new investment, or NNI, to derive our annual free cash flow forecast.

Stage II: Fade
The second stage of our model is the period it will take the company's return on new invested capital—the return on capital of the next dollar invested, or RONIC—to decline (or rise) to its cost of capital. During the Stage II period, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company's economic moat. We forecast this period to last anywhere from one year (for companies with no economic moat) to 10–15 years or more (for wide-moat companies). During this period, cash flows are forecast using four assumptions: an average growth rate for EBI over the period, a normalized investment rate, average return on new invested capital (RONIC), and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until a perpetuity value is calculated. In the case of firms that do not earn their cost of capital, we assume marginal ROICs rise to the firm's cost of capital (usually attributable to less reinvestment), and we may truncate the second stage.

Stage III: Perpetuity
Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.

Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return to all capital providers—we discount future cash flows using the WACC, which is a weighted average of the costs of equity, debt, and preferred stock (and any other funding sources), using expected future proportionate long-term market-value weights.

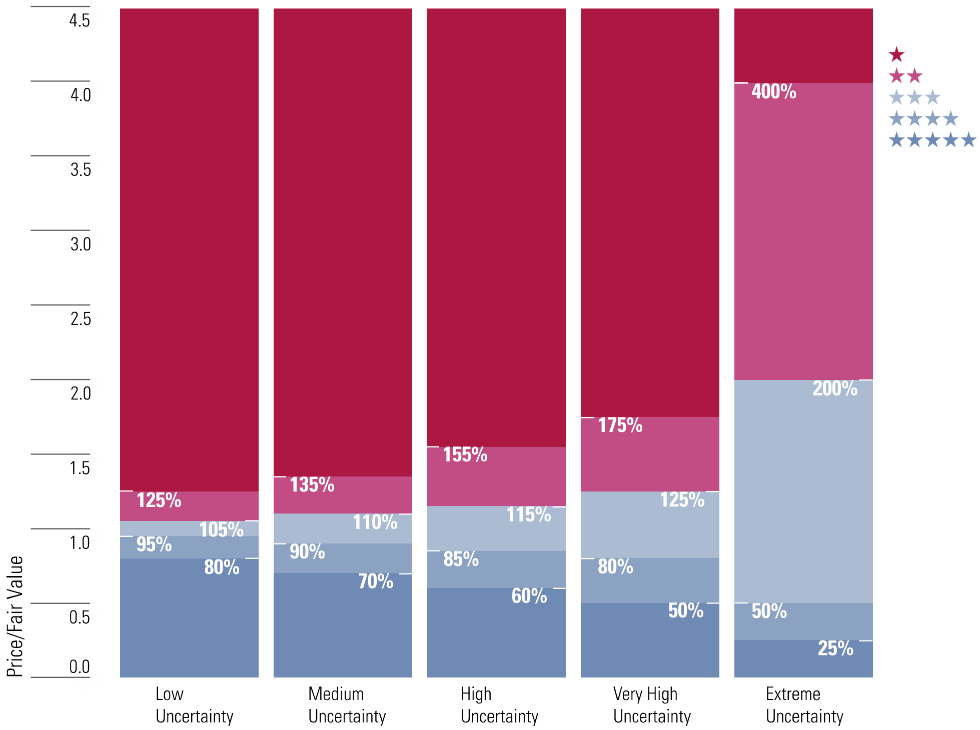
Uncertainty Around That Fair Value Estimate
Morningstar's Uncertainty Rating captures a range of likely potential intrinsic values for a company and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the Fair Value Estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, and other company-specific factors.

Analysts consider at least two scenarios in addition to their base case: a bull case and a bear case. Assumptions are chosen such that the analyst believes there is a 25% probability that the company will perform better than the bull case, and a 25% probability that the company will perform worse than the bear case. The distance between the bull and bear cases is an important indicator of the uncertainty underlying the fair value estimate.

Our recommended margin of safety widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the estimated value of the equity, the greater the discount we require relative to our estimate of the value of the firm before we would recommend the purchase of the shares. In addition, the uncertainty rating provides guidance in portfolio construction based on risk tolerance.

Our uncertainty ratings for our qualitative analysis are low, medium, high, very high, and extreme.
- Low–margin of safety for 5-star rating is a 20% discount and for 1-star rating is 25% premium.
- Medium–margin of safety for 5-star rating is a 30% discount and for 1-star rating is 35% premium.
- High–margin of safety for 5-star rating is a 40% discount and for 1-star rating is 55% premium.
- Very High–margin of safety for 5-star rating is a 50% discount and for 1-star rating is 75% premium.
- Extreme– margin of safety for 5-star rating is a 75% discount and for 1-star rating is 300% premium.

Morningstar Equity Research Star Rating Methodology



Market Price

The market prices used in this analysis and noted in the report come from exchange on which the stock is listed which we believe is a reliable source.

For more details about our methodology, please go to https://shareholders.morningstar.com.

Morningstar Star Rating for Stocks

Once we determine the fair value estimate of a stock, we compare it with the stock's current market price on a daily basis, and the star rating is automatically re-calculated at the market close on every day the market on which the stock is listed is open. Our analysts keep close tabs on the companies they follow, and, based on thorough and ongoing analysis, raise or lower their fair value estimates as warranted.

Please note, there is no predefined distribution of stars. That is, the percentage of stocks that earn 5 stars can fluctuate daily, so the star ratings, in the aggregate, can serve as a gauge of the broader market's valuation. When there are many 5-star stocks, the stock market as a whole is more undervalued, in our opinion, than when very few companies garner our highest rating.

We expect that if our base-case assumptions are true the market price will converge on our fair value estimate over time, generally within three years (although it is impossible to predict the exact time frame in which market prices may adjust).

Our star ratings are guideposts to a broad audience and individuals must consider their own specific investment goals, risk tolerance, tax situation, time horizon, income needs, and complete investment portfolio, among other factors.

The Morningstar Star Ratings for stocks are defined below:

★★★★★ We believe appreciation beyond a fair risk-adjusted return is highly likely over a multiyear time frame. Scenario analysis developed by our analysts indicates that the current market price represents an excessively pessimistic outlook, limiting downside risk and maximizing upside potential.

★★★★ We believe appreciation beyond a fair risk-adjusted return is likely.

★★★ Indicates our belief that investors are likely to receive a fair risk-adjusted return (approximately cost of equity).

★★ We believe investors are likely to receive a less than fair risk-adjusted return.

★ Indicates a high probability of undesirable risk-adjusted returns from the current market price over a multiyear time frame, based on our analysis. Scenario analysis by our analysts indicates that the market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

Risk Warning
Please note that investments in securities are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in future and is no indication of future performance. A security investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost. A security's current investment performance may be lower or higher than the investment performance noted within the report. Morningstar's Uncertainty Rating serves as a useful data point with respect to sensitivity analysis of the assumptions used in our determining a fair value price.

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