Market Outlook
Fourth-quarter 2018.

Stock Market Outlook: Left-Behind Communication Services Offers the Most Value Today
► The Morningstar Global Markets Index has risen 4.5% year to date.
► Weighted by market capitalization, our coverage universe looks slightly overvalued.
► Communication services looks cheap, while tech and healthcare are pricey.

CMBS: Liquidity to Support Strong Performance in Near Term, With Risks Growing in Years Ahead
► While we expect the delinquency rate on loans packaged in commercial mortgage-backed securities to remain below 2.5% for the remainder of the year, Morningstar’s growing Watchlist suggests that forward-looking risk is increasing, possibly signaling an inflection point.
► Liquidity in the commercial lending market remains strong, a trend that we expect to continue through the fourth quarter.
► Apartment rent growth has slowed through 2018 amid increased competition. We anticipate continued slowing through year-end and into 2019.
► Pockets of traditional risk warrant monitoring; however, we do not anticipate large systemic issues for some time.

PitchBook: How Our Predictions Are Playing Out
► Venture capital valuations.
► Alternative exits.
► PE investment in software.
► Niche fundraising.
► LP net cash flows.
## Highlighted Companies

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<td>Cameco CCJ</td>
<td>Basic Materials</td>
<td>Narrow</td>
<td>Positive</td>
<td>USD</td>
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Data as of Sept. 26, 2018.
Stock Market Outlook: Left-Behind Communication Services Offers the Most Value Today

Overall, Equity Coverage Is a Little Overvalued

- The Morningstar Global Markets Index has risen 4.5% year to date.
- Weighted by market capitalization, our coverage universe looks slightly overvalued.
- Communication services looks cheap, while tech and healthcare are pricey.

Following a flattish first half, global equities enjoyed a fairly strong third quarter, with the Morningstar Global Markets Index now up 4.5% year to date. In aggregate, our equity coverage of roughly 1,500 stocks, now looks slightly overvalued, trading at a 4.5% premium to fair value on a capitalization-weighted basis.

Scanning for opportunities at the sector level, communication services appears the cheapest, trading at a 13% discount to our fair value on a cap-weighted basis as of Aug. 31. While the sector had a solid third quarter, rising 5.2%, it remains down for the year and has been generally left behind in the global bull market. Our top picks across our global coverage include European telecoms Telefonica and BT Group and U.S.-based Comcast.

Technology and healthcare, which have enjoyed very strong performance in 2018 (global indexes are up 12.1% and 13.1%, respectively) now rank among the most expensive sectors based on our fundamental research, trading at 8.0% and 6.4% premiums to fair value, respectively. Still, we continue to see pockets of value in each. For example, we see considerable upside in leading semiconductor names Intel and Broadcom.
Basic Materials: Our Bearish Metals & Mining Outlook Supports Our View That Broad Sector Is Overvalued

**Sector Is More Overvalued Than Any Other Sector**

- On a market-capitalization-weighted basis, our basic materials coverage trades at a significant premium to our estimate of intrinsic value, remaining the most overvalued sector. Our bearish perspectives on most metals and mining companies are the primary drivers of this outlook.
- Miners and industrial metals companies we cover remain substantially overvalued, reflecting our expectation of a structural change in demand growth from China as its economy matures and makes the transition toward less commodity-intensive and more consumption-driven growth.
- Gold is among the few mined commodities that isn’t directly tied to the fortunes of Chinese fixed-asset investment, but as the U.S. Federal Reserve has continued to pursue rate increases, prices have fallen to roughly $1,200 per ounce from roughly $1,350 earlier this year.
- After unfavorable weather weighed on first-quarter results for many of the ag companies we cover, volumes rebounded in the second quarter. Through the first half of 2018, demand for nearly all crop input categories was roughly even with the first half of 2017. Fertilizer, nitrogen, phosphate, and potash prices all rose sequentially during the second quarter amid lower supply, which has supported higher profits. We expect prices for these commodities to remain elevated through the second half of the year.
- While new home construction has softened during the second and third quarter, our long-term outlook remains positive. Builder confidence remains high and demographic conditions are favorable. However, lumber companies look fairly valued following short-term supply disruptions. We remain optimistic on long-term infrastructure spending, leading to positive outlooks for aggregate and cement companies.

Ongoing concerns about a trade war between the U.S. and China continue to affect valuations for industrial metals companies. We expect near-term U.S. steel prices and the U.S. Midwest aluminum premium to remain elevated, as they have been since a flurry of tariffs were enacted around the world earlier this year. However, we maintain a negative long-term outlook for both industries. Substantial global overcapacity will cause most industrial metals companies to generate ROICs below their cost of capital once the pricing environment weakens. Additionally, with the tariff program now in place, we contend that all near-term positive catalysts have been exhausted. Metal margins remain near multiyear highs, marking a period of unusually favorable market conditions that is unlikely to persist. On the demand side, we maintain a below-consensus forecast for Chinese fixed-asset investment as well as fading benefits from the Chinese stimulus. While some may look hopefully upon India to pick up the slack, we believe India remains several years away from being the next major driver of incremental industrial metals consumption on a global scale.
With few exceptions, we still see mined commodity and miner share prices as overvalued, propped up by the sustained Chinese stimulus. Iron ore’s relative buoyancy since early 2016 is emblematic of most industrial commodities. Recent conditions have been highly favorable for miners, particularly the bulk miners, as exemplified by 2017 adjusted earnings for Rio Tinto, which were up nearly ninefold from 2015 levels. We do not expect this to last. With China’s credit growth slowing, we expect mined commodity prices for products such as copper, iron ore, and alumina to fall materially and for share prices to follow. Accordingly, the miners we cover are substantially overvalued. We expect a structural change in demand growth from China as its economy matures and makes the transition toward less commodity-intensive and more consumption-driven growth. High-cost miners and those with outsize exposure to iron ore and coking coal tend to look the most overvalued. For coal and iron ore miners in particular, we think the market is pricing in unrealistic future margins and expecting unprecedented supply discipline.

Supply discipline likely to be difficult given the low entry barriers, extensive undeveloped resources, ample financial capacity among producers and the industry’s historical record of procyclical investment. Gold is among the few mined commodities that isn’t directly tied to the fortunes of Chinese fixed-asset investment. Amid the Fed’s ongoing rate hikes and balance sheet reduction, gold investment in exchange-traded fund holdings continued to decline through the third quarter. As real yields on U.S. Treasuries and other safe-haven asset prices rise, the opportunity cost of holding gold rises. Prices have now fallen to around $1,200 per ounce, down from $1,300 a quarter ago.

On the back of weak investment demand, we forecast gold prices to remain around $1,200 per ounce by the end of 2018. Nevertheless, gold has a promising future, and we forecast the nominal gold price to recover to $1,300 per ounce by 2020. We expect that, over the long term, Chinese and Indian jewelry demand will fill the gap left by waning investor demand. However, the rise of consumer demand will take time, which points to downside risk in the near term. Although we see limited opportunities in gold miners, we consider Goldcorp undervalued, as we believe execution risk surrounding its 20/20/20 growth plan is overstated given reliance on brownfield expansions over greenfield projects. This plan aims to boost production and reserves while cutting costs by 2021. Newcrest Mining is also somewhat undervalued, with the market underestimating the potential for incremental improvements at its key Lihir and Cadia mines.

Strong global demand for potash should support prices throughout 2018. So far this year, reduced supply has boosted potash prices. In potash, new greenfield mine delays from K+S and EuroChem and lower-than-expected potash production from both Sociedad Quimica Y Minera De Chile and K+S have led to a tighter market. We expect this dynamic to continue into 2019, and we’ve raised our 2019 potash price forecast to $300 per metric ton, up from $270 per metric ton in 2018. 2019 prices have already begun to rise as both China and India agreed to 2018-19 potash contract prices of $290 per metric ton. We expect prices above $300 per metric ton to remain intact after 2019. Our 2025 long-term price forecast for potash is unchanged at $310 per metric ton in nominal terms. From a valuation standpoint, potash producers Nutrien and Mosaic are trading at a larger discount to fair value than the rest of our ag coverage. This is primarily because of our long-term outlook that potash prices will remain flat in the
low-$300 per metric ton range, while we forecast that both Nutrien and Mosaic will reduce potash unit production costs, which should lead to profit growth.

Between April and August, construction softened meaningfully versus the start of the year. Single-family construction remained fairly solid, but multifamily activity slowed down sharply. We expect total starts to climb just over 6% in 2018 to 1.28 million units due to favorable pricing conditions for builders and gradual improvement in household formation. Over the past year, lumber and panel prices have surged because of short-term supply disruptions. Hurricanes in the Southeast, wildfires in the Northwest, and considerable rail congestion throughout Canada have reduced the amount of product coming to market. Although the last quarter has seen declines in both panel and lumber prices, we think they could fall further still in the near-term. Prices remain above what we believe will be sustainable for at least another two years. We see limited upside in wood product companies, given their current valuations, despite our bullish long-term outlook. As these disruptions continue to ease, we expect prices to fall further in 2018.

However, our long-term outlook for housing is bright. In the wake of the Great Recession, adults in their 20s and 30s are living with family to record-setting ages. We expect them to eventually break out on their own as they begin to form families, driving greater demand for homebuilding. A combination of restrictive trade policies implemented by the Trump administration, an already-stretched North American lumber market, and constrained panel capacity will lead product pricing higher in the coming decade, as supply struggles to keep up with rising demand. This will lift cash flows for lumber companies Canfor and West Fraser Timber and panel companies Norbord and Louisiana-Pacific.

Although U.S. nonresidential construction activity has remained strong, U.S.-focused aggregates and concrete share prices declined anywhere between 13% to 40% through mid-September. However, we view the share price performance as unwarranted and we see upside in the sector. We expect strong underlying demand will continue to drive volume gains, price increases, and margin expansion. We see value in Martin Marietta Materials, Vulcan Materials, Summit Materials, and U.S. Concrete as current share prices underestimate the significant profit growth to come.

**Top Picks**

| Cameco (CCJ) | ★★★★★ |
| Economic Moat: Narrow |
| Fair Value Estimate: $17 |
| Fair Value Uncertainty: High |
| 5-Star Price: $10.20 |

We think the market is mispricing narrow-moat uranium miner Cameco. Uranium offers a rare growth opportunity in metals and mining. China’s structural slowdown portends the end of a decade-long boom for most commodities, but not for uranium. China’s modest nuclear reactor fleet uses little uranium today, but that’s set to change in a major way. Beijing is pivoting to nuclear to reduce the country’s heavy reliance on coal. We believe the market overemphasizes the current inventory overhang caused...
by delayed Japanese reactor restarts, and this situation is easing with production cuts announced by Cameco and NAC KazAtomProm. We expect global uranium demand to grow 40% by 2025, a staggering amount for a commodity that saw near-zero demand growth in the past 10 years. Supply will struggle to keep pace. We believe long-term uranium prices will rise from about $31 a pound in August to $65 a pound (constant dollars) by 2021, as higher prices are required to spur new mine investment. As one of the largest and lowest-cost producers globally with expansion potential, Cameco should benefit meaningfully from higher uranium prices.

**Compass Minerals International**  
**CMP**  
Economic Moat: Wide  
Fair Value Estimate: $83  
Fair Value Uncertainty: High  
5-Star Price: $49.80

Compass Minerals produces two primary products: deicing salt and sulfate of potash, a specialty fertilizer. The company has carved out a wide economic moat based on cost advantage, thanks to its massive rock salt mine in Goderich, Ontario, which benefits from geological and geographical advantages. The company also sits toward the low end of the cost curve in specialty potash. While the Goderich mine has experienced some near-term operational challenges, we expect a rebound in Compass' profits over the next couple of years as the mine has been fully restored and the company's cost-reduction plan comes to fruition. We see multiple near-term catalysts that should boost Compass' salt profits and drive share prices higher. Based on our analysis of more than 120 years of weather history, winter weather exhibits mean reversion tendencies over a multiyear period. After a couple of mild winters in Compass' important U.S. Midwest markets, the 2017-18 winter bounced back with above average snowfall and higher salt demand. Historically, harsher winters have led to increased deicing salt prices as local governments need to replenish inventories and this trend will continue as Compass reported deicing salt price increases of roughly 15% for the upcoming winter. This should provide a much-needed profit boost for Compass. Further, we think the market may be under-appreciating the company's ability to control unit costs, as recent capital improvements at Goderich are set to reduce Compass' future salt expenses on a unit production basis.

**MartinMarietta Materials**  
**MLM**  
Economic Moat: Narrow  
Fair Value Estimate: $265  
Fair Value Uncertainty: High  
5-Star Price: $159

Martin Marietta's share price has underwhelmed in 2018 as optimism for a Trump infrastructure plan has waned and rising costs have caused some fear for profit growth. However, we believe this created an attractive entry point. Despite near-term challenges, the outlook for construction activity for residential, nonresidential, and road projects remains strong. As a result, we expect Martin Marietta's EBITDA to more than double by 2022, as strong demand drives higher volume and supports robust price
increases. A recovery in construction activity is still in the early stages, as U.S. aggregates consumption remains below prerecession levels. Moreover, current demand doesn't include the backlog of projects created from the recession and years of underspending on infrastructure. Historically, limited funding has prevented this demand from being unleashed, but we think the money will be there because of medium-term funding through the FAST Act and bipartisan support for infrastructure that should deliver longer-term funding.
Communication Services: The Race to 5G Wireless Is On, at Least for Some

Mergers in the Spotlight

- Overall, communication services valuations have rebounded recently, with a market-cap-weighted price/fair value of 0.87, up from 0.82 the quarter before. The sector still trades at the widest discount to fair value within Morningstar’s coverage.
- In the U.S., all eyes are on the Federal Communications Commission as it evaluates the T-Mobile-Sprint merger. Opponents to the deal have started lining up, filing comments with the regulator.
- In Europe, carriers remain more focused on convergence, with the buildout of fiber and 4G wireless technology, rather than pushing the envelope with 5G.
- On the other hand, carriers in Asia aim to be at the forefront of 5G deployment to meet exploding traffic growth. China Mobile, the world’s largest carrier by customers, aims to deliver mobile 5G services in early 2019.

Stocks across the global telecom industry have generally struggled recently even as market valuations in the U.S. have surged higher. In some cases, this pain has been self-inflicted, with investors taking a dim view of large-scale acquisitions, especially deals that push firms outside of their core telecom businesses. Rising U.S. interest rates have likely hurt valuations more broadly given the high yields many telecom stocks offer, as conventional wisdom holds that higher rates are a negative for dividend-paying stocks. Lastly, the industry isn’t delivering meaningful growth. Most telecom markets today are at or quickly nearing maturity, meaning that even a low-key price war in a given market can easily send revenue lower. The stark contrast between telecom growth and that of the technology firms whose operations rely on telecom networks almost certainly accounts for the relative stock performances of the two groups, especially in this market environment.

Despite these issues, we continue to see value in the communication services industry, with the average stock, on a market-cap-weighted basis, trading at a 13% discount to our fair value estimates. This value gap represents a sizable divergence from the market as a whole. Across Morningstar’s equity coverage, the average stock trades at a 2.3% premium. Consider Verizon, for example, which trades at less than 13 times trailing earnings, down from more than 15 times four years ago despite the strong bull market of the period. Or Comcast trading at less than 17 times trailing earnings, down from more than 20 times. Comcast shares bottomed at 14 times earnings earlier this year before it dropped its bid for Fox. Outside of the U.S., three of our favorite stocks, Telefonica, China Mobile, and BT Group, have all hit five-year lows during 2018, in both their local-currency and U.S.-dollar-denominated shares.
In the U.S., the proposed merger of T-Mobile and Sprint remains the most important near-term development. The firms have begun making their case for regulatory approval directly to the FCC, promising rapid 5G network deployments and continued “maverick” pricing moves to keep Verizon and AT&T honest. The firms have also touted their ability to bring broadband competition to millions of homes, especially in rural areas where few options exist today. On the other hand, several firms, including Dish Network and Altice USA, have filed complaints with the FCC against the deal. Dish needs to build out a wireless network to avoid losing the spectrum licenses it has spent around $20 billion to acquire in recent years. In its opposition, the firm outlined how the merger would further inhibit its ability to enter the wireless business.

Dish’s fear is well-founded, in our view. The wireless industry exhibits several elements of the efficient scale economic moat source, including high capital intensity, mature demand, and a relatively commoditized service offering. Potential new entrants like Dish face years of losses and poor prospects of earning attractive long-term returns on capital. The U.S. wireless business, however, hasn’t benefited from efficient scale recently because of the competitive imbalance in the industry. T-Mobile and Sprint have had little choice but to price services aggressively in an attempt to close the scale gap with AT&T and Verizon. A merged Sprint/T-Mobile would drastically improve the long-term structure of the U.S. wireless industry, at least for carriers, in our view.

At this point in the deliberations, we continue to place the odds of merger approval at 50/50. Predicting the behavior of regulators under the current administration is difficult, at best, considering recent actions. Most notably, regulators have staunchly opposed AT&T’s acquisition of Time Warner while quickly approving Disney’s deal for Fox.

While U.S. carriers are pushing hard with plans to deploy the next generation of wireless technology (5G), carriers in Europe are taking a more measured approach. Instead, European firms remain focused on core network infrastructure, building fiber optics deeper into their networks and rolling out 4G technology to enable converged service offerings. Spain has long been the leader in convergence, with around 80% of broadband customers subscribing to a wireless service from the same company. France and Germany have been pushing convergence but aren’t as far along. Now even the U.K. and Italy, which have been big laggards, are starting to offer converged services. The push to lay fiber is, in part, a response to cable competition and increasing consumer demand for faster speeds.

Europe has been much slower at moving to 4G than the U.S. or Asia, but 4G has really taken off in the past year. The move to 5G will likely similarly lag other regions, though the focus on fiber construction should make 5G easier to deploy down the road. Telia of Sweden is one clear exception to this generalization. The firm was the first in Europe to offer 4G and, until recently, was the only operator discussing a 2019 5G launch of 5G. BT has also jumped on the 2019 launch bandwagon, but that firm has a lot still on its plate as it wrestles with regulators in the U.K. and shores up its global enterprise business.
On the other hand, carriers in Asia are racing ahead with 5G. In China, mobile data usage continues to surge at a torrid pace as wireless devices take a central role in more areas of daily life. Across the country, mobile data traffic has more than tripled year over year each of the past several quarters. To meet growing demand, China Mobile, the largest carrier in the world by customer count, aims to have 5G services up and running in early 2019. Also, Asian carriers have partnered extensively in search of the best technology solutions and to build new applications to take advantage of greater network capacity. China Mobile claims that it has over 500 patents on parts of the 5G standard and already had 5G trials in 17 cities (five for networks and 12 for applications).

In Japan, NTT DoCoMo has partnered with more than 1,500 firms to develop 5G applications. We expect partnerships and joint ventures will be key to the pace of 5G deployment in many countries. Carriers in many developed countries, including the U.S., have spent aggressively on 4G technology over the past decade with little incremental revenue or profit to show for it. We suspect the appetite to build another generation of technology without a clear path to acceptable financial rewards will be limited.

**Top Picks**

**Telefonica**

Economic Moat: Narrow  
Fair Value Estimate: $15  
Fair Value Uncertainty: High  
5-Star Price: $9

Telefonica is leading the European communications market into converged services. Additionally, it is laying extensive amounts of fiber to better compete with cable operators in providing fixed broadband services. 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 and its margin expansion opportunities, which has caused its stock to trade at a wide discount to our fair value estimate.

**BT Group**

Economic Moat: Narrow  
Fair Value Estimate: $23  
Fair Value Uncertainty: High  
5-Star Price: $13.80

While narrow-moat BT Group has had some issues in the past two years that caused its stock to decline, we believe the sell-off is overdone. BT is the incumbent telecom operator in the United Kingdom. In 2016, it acquired EE, the largest wireless telecom operator in the country. The company now has the largest fixed-line telephone, broadband, and wireless telephone subscriber bases in the country. Additionally, it is the only operator in the U.K. that owns both a retail fixed-line and wireless network. We believe this provides BT with an advantage in selling a converged package of these services plus pay TV. The company has been slow to market its converged services, but now that it has reached an
agreement with telecom regulator Ofcom regarding Openreach, its U.K. business that owns its fixed-line network and wholesales access to it to other operators, it has begun a more aggressive marketing push into converged services.

BT has been hurt by the widening underfunding of its pension plan as interest rates have declined in the U.K. We think interest rates have bottomed and they are more likely to increase from here. We believe the benefit on the pension will be greater than the hit on higher interest on its bonds, the reverse of what happened as interest rates declined. We also think the company has dealt with its problems in Italy and will be able to improve its revenue in its global services division. The market appears to believe the problems BT has seen will continue and potentially get worse, whereas we believe business can improve over the next few years. In the meantime, the stock yields 6.7% and the company has increased its dividend for each of the past seven years. Additionally, as it is a U.K.-domiciled company, there is no foreign tax withholding on the dividend.

**Comcast CMCSA | ⭐⭐⭐⭐
Economic Moat: Wide
Fair Value Estimate: $42
Fair Value Uncertainty: Medium
5-Star Price: $29.40**

Like its traditional pay-TV distributor peers, Comcast has suffered from the growth in cord-nevers and cord-shavers, particularly as over-the-top offerings like Sling TV, DirecTV Now, and YouTube TV gain traction. This ongoing deterioration in pay-TV economics has negatively affected the share price of Comcast and its peers. However, the combination of the hostile bid for Sky and the bid for Fox assets has had a larger impact. We believe that a shift in focus toward M&A from returning capital to shareholders has spooked some investors, but we believe the decision to walk away from Fox demonstrates that management will remain disciplined in its approach to capital allocation. After the M&A headlines disappear, we believe Comcast is the best-positioned U.S. communications firm. Irrespective of the challenges faced by traditional pay TV, broadband demand continues to accelerate. We believe Comcast is better situated to benefit from this trend, owing to the faster Internet speeds it can offer versus many of its telco peers. The current regulatory environment is favorable because of the reversal of Title II and net neutrality rules. With the threat of pricing regulation diminished, Comcast can potentially offset deteriorating pay-TV economics with higher broadband prices.
Consumer Cyclical: Solid Economic Fundamentals Drive Discretionary Spending

Companies Offering Experience, Specialization, and Convenience Continue to Succeed

- Consumer cyclical sector valuations remain slightly elevated, with a weighted average price/fair value ratio of 1.05, in line with last quarter's valuation. We attribute this to healthy consumer sentiment, low unemployment rates, and stable asset market valuations.

- We've long held the belief that those companies that offer a combination of experience, specialization, and convenience are best positioned to defend their competitive advantages in an increasingly e-commerce world. While concerns about potential disruption from businesses like Amazon.com linger across many consumer companies, we believe there are certain categories that are better positioned, embracing the aforementioned qualities.

- We continue to have a favorable view of the travel and leisure space, and the increasing share of wallet companies in these categories are capturing. As consumers continue to migrate to experiences over things, subindustries like cruising and lodging should benefit.

- Other consumer product companies that have shown a willingness to invest in convenience, ease of use, and experience — Airbnb and Uber come to mind — continue to grab at market share gains across their user base.

The market continues to favor consumer cyclical names, with the group continuing to trade at a weighted average price/fair value of 1.05, the same ratio the group traded at last quarter. We continue to attribute the bullish market sentiment to a number of factors, including healthy consumer sentiment in the U.S. and many other developed nations, low unemployment rates and wage increases that are helping drive middle-class consumption globally, and equity and housing market conditions that have been conducive to wealth effect spending.

However, we believe market valuations also reflect the fact that consumer cyclical companies are starting to reap the benefits of efforts to cater to the individual demands of consumers. We've long held the belief that those businesses that offer a combination of experience, specialization, and convenience have been best positioned to defend their advantages in an increasingly e-commerce world. While it's not easy for a business to capitalize on each of these qualities, we still believe that companies that can combine experiential environments (Royal Caribbean’s Central Park or hospitality within RH locations, for example), specialized products (like cruise operators, which offer a multitude of onboard experiences), and an integrated, convenient approach to usage (Airbnb, Uber) are the best positioned to defend their current competitive advantages, at least in the immediate future. For these reasons, we believe the
market had previously overreacted on several names across the consumer discretionary sector, discounting those operators that understand how to connect with the evolution of consumer needs and demands. However, we believe that upside in shares of operators across many of these categories could occur given the spending environment, especially those that have embraced experience, specialization, and convenience.

We believe the cruise industry is a perfect example of how specialized products and experiential environments can grab greater market share. In recent years, cruise companies have differentiated their operations by segmenting offerings to cater to specific consumer cohorts rather than a single total addressable global market. We think increased target market segmentation and geographic diversification should alleviate concerns over the supply of cruise capacity set to arrive in the next five years, ensuring that new ships don’t merely cater to the same customer (a factor that has weighed on share performance in recent periods). Further, we contend that cruise operators still have plenty of untapped opportunities to support demand, both domestically and abroad, to cast a wider net and prevent yield erosion. Domestically, we think the industry can tap into new customers by entering markets with limited prior presence to increase penetration rates (Baltimore, for example, which very few ships have used as a home port). Similar efforts in segmentation and new port markets can also be applied abroad, increasing reach in key areas (including Europe and China) and with key consumers, stimulating demand.

Oversupply concerns have echoed through the marketplace in recent months, weighing on cruise operator shares, with both rising fuel prices and foreign exchange headwinds providing incremental pressure. With factors like value-added bundling and market-to-fill strategies more frequently being used across the industry, we think cruise operators are poised to pivot nimbly to capitalize on evolving consumer trends. Of course as the economic cycle lengthens, the risk increases that new hardware could arrive at the same time as a global recession, ultimately constraining pricing, which we've factored into our 2%-3% normalized yield projections for the cruise lines.

Other travel companies also straddle the experience, specialization, and convenience factors we mention above. For example, Expedia continues to grow both its international and vacation rental segments at a healthy clip. However, its shares have underperformed since late 2017, given the market's concern over increasing competition and investment, providing a sufficient margin of safety for investors looking to take a position in the narrow-moat company. The company continues to spend to grab share of these segments, which has dampened near-term profits. However, we see this spending as a strong use of capital, supporting longer-term growth. These investments could also buoy Expedia's leading network of 600 million monthly visits and 2 million properties, as brand awareness rises globally thanks to ease of use and improved visibility.

Furthermore, we continue to contend that other companies outside of traditional travel and leisure businesses that are focused on ease of use and convenience, along with experience, will remain in good favor with its consumer base. A good example of a company that has embraced evolving consumer views on convenience is Airbnb. The company has carved out a leading position in the travel industry
and offers several attractive features when it comes public (anticipated in 2019-20), including a powerful and rare network advantage that should drive continued share gains in a rapidly growing alternative accommodations market; an opportunity to expand its network and addressable market with vertical extension into hotel, experiences, corporate, and transportation; and strong profitability prospects driven by the company’s high consumer awareness that allow it to leverage top-line growth. We believe Airbnb’s IPO should be on the radar screens for investors seeking exposure to a company positioned to gain share in the nearly $700 billion global online travel market that we estimate will grow 9.4% annually on average over the next five years, a rate that implies that it is set to outperform its hotelier peer set.

Overall, we believe that companies that make it easy for customers to work with them will continue to succeed and that a rising percentage of discretionary spending will be allocated to experiences over things, benefiting businesses that focus on individualization of ongoing trends, factors set to bolster the firms we discussed earlier.

**Top Picks**

**Greencross GXL.AU**

Economic Moat: None
Fair Value Estimate: AUD 6
Fair Value Uncertainty: Medium
5-Star Price: AUD 4.20

Despite not having an economic moat, we believe Greencross is attractively valued at the current share price. The company is a leading player in the Australian pet care retailing and veterinary service industry. The industry fundamentals are strong, with increasing humanization of pets and premiumization of pet foods likely to drive continued growth in expenditure per pet.

Greencross is well placed to benefit from these tailwinds, supported by its transition to a one-stop-shop model. Currently, around 22% of its retail stores have a veterinary clinic, although this is rapidly increasing and by fiscal 2023 we estimate almost 50% of the retail network will feature an in-store clinic, along with other services, including grooming, washing, boarding, and adoption.

We expect the integration of services within the retail store network to drive foot traffic, cross-selling opportunities and scale benefits, while also adding some insulation from online competition. This strategy is still in its early stages, and in the initial years the new clinics are margin-dilutive, but we expect margins to improve as the clinics mature, which in our opinion is a likely catalyst for rerating. Early success of this strategy is highlighted by the 8.5% like-for-like sales growth generated by the integrated sites during fiscal 2018, considerably higher than stores without vet clinics.
Hanesbrands HBI | ★★★★★
Economic Moat: Narrow
Fair Value Estimate: $27
Fair Value Uncertainty: Medium
5-Star Price: $18.90

We have a high degree of confidence in the defensibility of Hanesbrands’ competitive position, given advantages that are difficult for competitors to replicate: the efficiency of the firm’s large owned and controlled supply chain, core product positioning in an industry where brand is more important than price, and economies of scale achieved through a growing portfolio of synergistic brands. We think the company is poised to post significant operating margin growth through recognition of synergies ($85 million in 2018 and 2019), $100 million in net cost savings from Project Booster, and $30 million-$40 million in manufacturing efficiencies.

The company operates 50 manufacturing facilities, mostly in Asia, Central America, and the Caribbean Basin. In 2017, more than 70% of units sold were from owned plants or those of dedicated contractors. When Hanesbrands can internalize high-volume styles, we estimate that it saves as much as 15%-20%. Using this manufacturing platform, Hanesbrands has been successful in making acquisitions to drive earnings growth.

Hanesbrands’ top line has come under pressure from secular trends to online sales (only 11% of revenue globally was online in 2017, and retailers were hit with bankruptcies and downsizing). However, Hanesbrands is distribution-channel-agnostic, and we think these trends affect only the near term and create an attractive entry point for investors. The transition to e-commerce is proceeding well, with the online revenue growth rate hitting 22% in the fourth quarter of 2017. As online sales increase as a mix of business (we model penetration reaching the midteens percentage of total sales in 2018), we think total company growth will rebound and see 1% organic revenue growth in 2018 (versus a slight decline in 2017) as well as contributions from acquisitions.

Anta Sports Products 02020:HK | ★★★★★
Economic Moat: Narrow
Fair Value Estimate: HKD 55
Fair Value Uncertainty: Medium
5-Star Price: HKD 38.50

We think Anta’s share price is still recovering from a short-sellers attack two months ago. We continue to stand by our rebuttal to the short-selling report and do not believe the recent material drop in the stock price was warranted. At the same time, Anta’s book of business is looking stronger than ever. Sales of Fila products are on track to deliver a 44% CAGR over the next three years, and the core brand should continue to grow steadily in second- and third-tier Chinese cities.
Additionally, we think the company’s intention to acquire Amer Sports is strategically sound. With potential sales and supply-chain cost synergies between the two businesses, we believe the buyout offer is valuation-neutral. We reiterate our fair value estimate of HKD 55 on Anta Sports and encourage investors to focus on the long-term positives coming out of the acquisition.

Furthermore, we believe the Chinese sportswear market is set to boom over the next 10 years as disposable income rises and sports participation grows. This is coupled with growing acceptance of wearing activewear outside of the sports setting. As the leading domestic sportswear company with a stellar operational track record, Anta is set to benefit. We see Anta shares as significantly undervalued and urge investors to buy shares of the company and capture the potential upside.
Consumer Defensive: Thirst for Growth Has Yet to Be Quenched

Investors Should Keep Competitively Advantaged Names on Their Shopping Lists

- Valuations across the global consumer defensive coverage landscape have ticked up modestly, now trading at just a 2% discount to our fair value estimates on a market-cap-weighted basis, versus a 5% discount three months prior.
- As a means to combat sluggish growth trends that are plaguing operators across the industry, M&A activity has remained robust, with Conagra, Coca-Cola, and PepsiCo all pursuing inorganic growth opportunities to bolster their sales prospects in the past quarter.
- Retailers and consumer product manufacturers alike are working to facilitate further e-commerce penetration.

Relative to last quarter, the consumer defensive sector is now trading at just a 2% discount to our fair value estimates (up from 5% a quarter ago). However, we still maintain that opportunities for long-term investors to build positions in competitively advantaged names remain.

Given tepid growth prospects persist across the industry, we aren’t surprised that leading players in the category are continuing to opt for inorganic opportunities to accelerate their sales trajectory. For one, Conagra finally quelled persistent rumors and added Pinnacle Foods to its mix. From a strategic perspective, we can appreciate the rationale behind the deal, which will make Conagra the number two player in the domestic frozen food category. We contend Conagra enjoys entrenched relationships with retailers that depend on its brands to fuel store traffic and expect the addition of billion-dollar label Birds Eye to enhance its existing portfolio (which already includes a billion-dollar entry in the frozen category in Marie Callender’s).

Consolidation also ensued among the leading nonalcoholic beverage manufacturers, with Pepsi adding SodaStream and Coca-Cola adding Costa to its respective portfolios. We portend Pepsi’s tie-up aligns with recent efforts to build out its water portfolio, including the launch of its Bubly brand sparkling water earlier this year. We appreciate SodaStream’s leading position within the sparkling water category, which we surmise is poised for further growth as consumers increasingly opt for lower-calorie, more natural products. Further, the inclusion of Costa should bolster Coca-Cola’s presence in the fast-growing coffee category, particularly in the U.K., where Costa holds more than a one third share of coffee houses.
One reason for the continued interest in acquisitions is that organic growth remains sluggish for both retailers and manufacturers (in many instances amounting to a low-single-digit clip or less), with volumes soft relative to historical levels and price/mix still under pressure. The growth of the hard discounters in Europe, Australia, and increasingly in the U.S., as well as the emergence of the e-commerce channel, are lowering barriers to entry in the consumer defensive space and intensifying price competition.

In this vein, questions have surfaced as to whether the relationships between retailers and consumer product manufacturers will hold the same clout online, particularly in snacking, where impulse purchases are commonplace and small, niche startups are also vying for share. While e-commerce sales are relatively negligible at this point, representing just a low- to mid-single-digit percentage of industry revenue, our forecasts suggest that online consumer product sales will account for a mid- to high-single-digit percentage of the market over the next five years. But as a means to take advantage of this growth, operators will need to launch packaging innovation to appeal to an online shopper, with a focus on ensuring product and quantity are clearly visible. Rather than compressing prices, Hershey’s management recently suggested that these efforts have bolstered averaging selling prices online, which now stand at 1.2-3.5 times the level Hershey derives across its portfolio in brick-and-mortar outlets.

Beyond top-line growth aspirations, we aren’t blind to the fixed and variable costs associated with a higher penetration of e-commerce sales. As retailers invest in technology and add the extra cost to fulfill shipments online, defensive retailers have seen operating profits pressured to the lowest levels in the past decade. And in light of intense competitive angst, we don’t anticipate these headwinds will subside but believe that those with significant resources (both financial and personnel) stand to win out.

**Top Picks**

**Imperial Brands IMB:GB | ★★★★★
Economic Moat: Wide
Fair Value Estimate: GBP 37
Fair Value Uncertainty: Low
5-Star Price: GBP 29.60

Tobacco stocks are out of favor, with the four large caps under our coverage falling by an average of almost 20%, year to date. Our pick of the group on valuation is Imperial Tobacco, which has derated slightly less than the group after having not fully benefited from the group’s rerating last year. Although we regard Imperial as being one of the lowest quality of the large cap tobacco manufacturers, primarily because of its more price-sensitive consumer base and its position as a price taker in many markets, we still believe it has a wide moat because of the low price elasticity of demand and room for price increases in many markets. Although investors have been focused on heated tobacco for the next leg of earnings growth in this space, we think Imperial’s wait-and-see approach is sensible, and we believe the value of the first mover advantage is being overestimated by the market. Trading at less than 10 times next year’s earnings, the sell-off of Imperial looks overdone, and we think the stock offers an attractive entry point. Absent an acquisition, however, which we think is a low-probability event, the rerating in
Imperial may be a slow burn, given the deflated expectations around emerging categories and the rising interest rate environment, but with a comfortably covered dividend yield of around 7%, investors will be paid to wait.

Anheuser-Busch InBev BUD | ★★★★★
Economic Moat: Wide
Fair Value Estimate: $124
Fair Value Uncertainty: Low
5-Star Price: $99.20

Investors have loved to hate AB InBev in recent months, as the world’s largest brewer has been battling headwinds on a number of fronts. We believe these headwinds are primarily short term in nature, however, and we think the stock offers material upside to its current market valuation. One of the market’s concerns relates to AB InBev’s balance sheet. It is highly leveraged at just under 5 times net debt/forward EBITDA following the SABMiller acquisition. Although we believe the dividend (currently yielding 4.5%) is safe the payback period on the acquisition debt will be fairly long. Other headwinds include a loss of share to craft in the U.S., volatility in Brazil, and more recently, a slowdown in South Africa. Given the very favorable underlying demographic trends in emerging markets, however, we believe the issues in Brazil and South Africa will prove fleeting, and that AB InBev’s cost advantage will ensure the company maintains or grows share in these markets. In the U.S., craft continues to grow and we expect the larger brands (such as AB InBev’s Goose Island) to ultimately come out on top. It seems unlikely that the reversal of AB InBev’s recent troubles will occur in the short term, so investors may have to be patient for the upside to be unlocked. The above average dividend yield means investors will be paid to wait for AB InBev’s turnaround.

Philip Morris International PM | ★★★★★
Economic Moat: Wide
Fair Value Estimate: $102
Fair Value Uncertainty: Low
5-Star Price: $81.60

Our wide-moat rating stems from Philip Morris’ brand equity and regulatory barriers to entry in the tobacco industry. The value drivers in the tobacco business are sales growth (composed of volume growth, pricing, and increasingly since the advent of NGPs, mix) and margins, which in turn are affected by mix, operating leverage, and the efficiency of investments made in brand equity and physical infrastructure. As Philip Morris was the first mover and remains the most advanced NGP supplier, NGPs already command almost 13% of the company’s top line, and we think this can expand to the high-20s by 2022. This has a knock-on effect on margins, as devices are a component of that revenue and are margin-dilutive. We forecast an average annual drag of 30 basis points on the EBIT margin from unfavorable mix, the largest such assumption in the group. However, the current market value is 15 times forward earnings—a slight premium to competitors, which we think is appropriate, but 2.5 turns below the five-year historical average multiple. We view shares as attractive.
Energy: Oil Prices Remain Unsustainably High, With U.S. Shale Growth Still Looming

Despite Our Pessimism on Long-Term Oil Prices, We See Pockets of Opportunity in Oil and Gas

► Crude fundamentals continue to look healthy despite OPEC's June decision to increase production by 600,000 barrels a day beginning in the third quarter of 2018. OPEC's cuts have largely served their purpose, with oil inventories having shrunk considerably in the past several quarters. We had always projected that OPEC and its partners would eventually turn the spigots back on, given OPEC's lack of history sustaining longer-term production cuts.

► Helping OPEC's efforts are geopolitical supply disruptions coupled with temporary Permian pipeline shortages. Venezuela remains in crisis, and its oil production has slumped further after an initial plunge in the fourth quarter of 2017. U.S. President Donald Trump's decision to abandon the Iran nuclear accord is likely to widen this year's crude oil supply-demand imbalance, accelerating the decline of global inventories and potentially leaving the market with fewer days of supply on hand by year-end than it has had at any point in the past eight years.

► However, we believe the market continues to underestimate the capacity of the shale industry to eventually throw oil markets back into oversupply. U.S. production reached a new high-water mark in June and should keep hitting new records, though that may come in fits and starts due to temporary Permian pipeline shortages.

► Crude prices have largely held above $65 per barrel for West Texas Intermediate in 2018, which provides attractive economics for many U.S. producers. Eventually, we expect pain for oil prices as growing U.S. production serves as the primary weight to tip oil markets back into oversupply. Our midcycle forecast for WTI is still $55/bbl. We think oil bulls are failing to recognize the potential for further productivity gains from U.S. producers and are unduly worried about prime shale acreage running out more quickly than it really will.

► Despite our bearish outlook for long-term oil prices, we see pockets of opportunity in the oil and gas space. The energy sector currently trades at an average price/fair value estimate of 0.99, with more opportunity in industries like midstream that depend less on the oil price level and more overvaluation in industries like oilfield services that have a much higher oil price beta.

We previously viewed the late 2017 decline in global crude stockpiles as a temporary respite, to be derailed by the shale surge that grew ever more inevitable due to the positive impact high oil prices have on oil production. However, economic malaise in Venezuela has triggered precipitous output declines, and it isn't clear how quickly this can be rectified, if at all. The likelihood of hefty outages in Iran has soared now that Trump abandoned the Iran nuclear accord. All this creates a supply vacuum
this year that can easily offset U.S. growth, however strong, and prolong the illusion that shale isn’t a threat. Regardless, oil prices must pare back eventually to prevent catastrophic growth from U.S. shale. What’s obvious by now is that current oil prices provide economics that are very attractive to the major U.S. shale producers. This has created the conditions that will allow tight oil to grow rapidly, and is a reality that even forthcoming cost inflation and temporary Permian pipeline bottlenecks will not change. Unless shale producers become more disciplined or OPEC resigns itself to permanently ceding market share to U.S. producers, oil markets have major problems looming on the horizon. Neither is likely to occur.

Geopolitical disruptions have always been a feature of global oil markets, and such disruptions can have a lasting impact. The shortages faced this year by Venezuela and Iran may take months or even years to overcome. But neither affects our long-term outlook. We already believe that the growth trajectory of U.S. shale will cause problems for oil markets eventually. Adding rigs and accelerating drilling operations further will only fan the flames. Yet that is the likely response if WTI crude remains near $65/bbl.

The U.S. light tight oil rig count has spiked above 650, which is well above the “Goldilocks” level that keeps the market balanced in the long run, setting up a shale surge that could overwhelm the market after 2018. But the industry hasn’t recognized the danger. Because of the long lag between adding rigs and seeing a production response, the impact of the most recent additions hasn’t been felt yet. And to make matters worse, temporary equipment bottlenecks and labor shortages are still slowing completions and masking shale’s growth potential (only 70% of Permian Basin wells drilled in 2017 were completed). When these are resolved, the shale industry will find itself rapidly overheating unless producers start slowing down, and only a drop in oil prices can persuade them to do that.

Looking past the near term, we expect a midcycle price of $55/bbl WTI. This estimate is based on our cost outlook for U.S. shale production, which we expect to be the marginal source of global supply. Sustainably lower shale break-evens mean the era of low-cost oil is here to stay. Our view on lower shale costs is driven in large part by our expectations for minimal inflation in proppant and pressure pumping costs.

**Top Picks**

**Enbridge ENB | ★★★★★**

Economic Moat: Wide

Fair Value Estimate: $49 (CAD 64)

Fair Value Uncertainty: Medium

5-Star Price: $34.30 (CAD 44.80)

Wide-moat Enbridge represents our Best Idea for investors in the Canadian midstream sector. We see 40% upside in the stock, while on average the Canadian midstream sector looks fairly valued. We believe the market doesn’t realize the full potential of the company’s growth portfolio, which is highlighted by the Line 3 replacement project (Canadian Mainline pipeline expansion). Line 3 received its
final approval in June, which we expected. Accordingly, we expect Enbridge to generate significant free cash flow, allowing the company to increase its dividend at approximately 10% annually over the next three years. The company is currently yielding approximately 6%.

**Enterprise Products Partners EPD | ★★★★**

Economic Moat: Wide
Fair Value Estimate: $35.50
Fair Value Uncertainty: Low
5-Star Price: $28.40

Enterprise Products Partners is one of the cheapest wide-moat partnerships in our midstream coverage. It has an Exemplary stewardship rating, and we view it as one of the industry’s highest-quality names. With the removal of the overhang from the Federal Energy Regulatory Commission’s rulemaking effort related to the disallowance of a recovery of income taxes, we think investor perception toward master limited partnerships is improving. To be clear, we don’t believe the FERC ruling had any material impact on Enterprise because it primarily uses negotiated rates for its pipelines. However, we think the focus has now shifted back toward Enterprise fundamentals, and particularly NGLs. The volume growth outlook for U.S. hydrocarbons remains very healthy, as does Enterprise’s leading position as the exporter of the incremental hydrocarbon whether it be liquefied petroleum gas, oil, or ethane. Further, we continue to believe Enterprise Products Partners is well positioned for the master limited partnership investor base transition, as the industry shifts toward a total-return-based approach versus focusing solely on dividend/distribution growth. Enterprise eliminated its incentive distribution rights years ago and has consistently maintained a healthy coverage ratio above 1.2 times. The partnership is now seeking to fully self-fund $1.5 billion of its $3.0 billion 2019 capital spending program, which has historically been funded with equity. By using its retained cash flows, we believe this is achievable, further differentiating it from peers.

**Cenovus Energy CVE | ★★★★**

Economic Moat: None
Fair Value Estimate: $16 (CAD 21)
Fair Value Uncertainty: Very High
5-Star Price: $8 (CAD 10.50)

Cenovus Energy represents one of our Best Ideas for investors in the Canadian energy sector. The stock is currently trading around a 60% discount to our fair value estimate, while on average the industry looks fairly valued. We believe the market is overlooking the immense growth potential in the company’s oil sands reserves that can be brought on line with low-cost solvent-aided process technology. Consequently, we believe that the stock presents an attractive opportunity for long-term investors. Investors appear to be skeptical that the company can improve its balance sheet and undertake economic growth. We believe the company can bring on its production at under $50 per barrel WTI with its solvent-assisted technology.
Financial Services: U.S.A. Investment Services
Competition Is Heating Up

We’re Starting to See Value in Australian, Chinese, and European Banks
▶ We assess the global financial-services sector as approximately fairly valued. It has recently traded at a market-cap-weighted price/fair value estimate ratio of 0.96—a 4% discount to what our analysts believe the sector is worth.
▶ While the economy remains relatively strong, increased competition among banks shown in rising funding costs are slowing net interest margin growth, and uncertainty regarding credit costs is increasing.
▶ There is a general easing of financial regulation in the United States, but signs of tightening in China, Australia, and Europe.
▶ Strategic moves in the United States’ investment services industry heated up in the third quarter.

Americas Financials Update
By Brett Horn, Eric Compton, Greggory Warren, and Michael Wong

U.S. Asset and Wealth Management Firms
There were multiple interesting announcements in the third quarter with strategic implications for the asset and wealth management firms in the United States. Fidelity announced its line of Zero index funds with 0.00% net expense ratios that are available on Fidelity.com. Vanguard announced that it is expanding its no-transaction-fee platform for ETFs to include 1,800 ETFs, which is the largest offering among brokerage platforms.

Meanwhile, JPMorgan Chase announced it is offering 100 free equity and ETF trades for the first year, with the potential for additional free trades every year based on the amount of a client’s assets, for those signing up for its You Invest online brokerage platform.

We initially see these announcements as tying into themes of financial institutions competing for market share by consolidating household assets that may be dispersed across multiple financial institutions and the increasingly diverse strategies firms are using to monetize clients. No financial services are truly free, and firms are trying various mixes of transaction, investment product, advisory, or other fees to appeal to customers and maximize profits. For a detailed look at how robo-advisors — new challengers in the investment services industry — generate revenue and why we’ve developed a more positive opinion on their evolving business model, please read our special report Robo-Advisor Upgrade! Installing a

Looking more closely at the U.S.-based asset managers, we expect the following trends to have an impact on the industry in the near to medium term:

- A more limited regulatory environment in the U.S., with a heightened focus in global markets on fee transparency, fiduciary duty and investor-covered costs (such as investment research).
- A continuation of the retail-advised distribution channel disruption, which has led to shrinking product platforms at major broker/dealers and advisory networks.
- The ongoing migration from higher-fee active funds to lower-fee passive products.
- A greater focus on relative and absolute investment performance and management fees.
- Industry consolidation (both internally as funds merge within an organization and externally as asset manager look to add scale to their existing operations).

On the consolidation front, our general take has been that consolidation is inevitable for the industry. Active asset managers, and even some passive managers, have a need to add scale to offset a lower fee and higher cost environment as the U.S. and other developed markets continue to experience a secular shift of investors capital into lower-cost options—primarily index funds and ETFs—at the expense of actively managed products. We expect fund companies that cater to retail customers to consolidate their funds not only internally, by merging some funds and eliminating underperforming offerings, but externally as well, with midsize to large asset managers pursuing deals that will increase the scale and/or product breadth of their operations.

We expect most of the U.S. firms we cover to consolidate internally where it makes sense, increasing the scale of individual funds under the direction of solid active managers that are more likely to provide them with the best chance to keep fee cuts to a minimum while still gaining access to third-party platforms. This can be a double-edged sword, though, as funds tend to underperform the larger they get, so managing that differential will be critical to long-term success. As for external consolidation, we view most of our U.S.-based asset manager coverage as buyers rather than sellers, and unlike past rounds of consolidation that involved buying up managers to either fill in product sets or expand distribution reach, we expect future deals to be done more for the purpose of increasing scale than anything else.

In these types of deals, we envision midtier asset managers (those with $250 billion-$750 billion in AUM) acquiring small to midsize firms (those with $25 billion-$250 billion in AUM), understanding that they could lose a fair amount of AUM as they consolidate the acquired company’s funds into their own. Although there are plenty of firms out there that fall well below the threshold of a small firm, we don’t expect much buying activity of these types of firms for scale. If anything, we could see deals of that size done to fill product holes or as product-enhancement moves.
At this point, we're still in the early phases of the expected consolidation wave, with the deals that have been done so far—such as the merger between U.S.-based Janus Capital Group and U.K.-based Henderson Group (announced in October 2016)—being much more selective, with the firms involved looking to fill product set, distribution and geographic holes. That said, we should also point out Invesco's acquisition of the ETF operations at Source and Guggenheim this past year, which, in our view, was done more for scale enhancement, with the company picking up $26 billion and $38 billion, respectively, with these deals, increasing its total ETF AUM by some 50% and allowing it to take some pricing action in parts of its ETF operations the past several months.

And if the rumors are to be believed, Invesco's $5 billion bid for OppenheimerFunds (which was reported near the end of the third quarter) would also be all about scale, as the deal would increase Invesco's total AUM by 25%, as well as more than double its long-term open-end fund assets. This should allow the combined firms to offset some of the fee compression and expense pressures we see affecting the industry over the next five to 10 years. That said, it would also increase Invesco's exposure to active equities and the retail channel, the two areas of the market we expect to be pressured more by an increased focus on fees and investment performance. Given these pressures, we'd expect a scale-driven deal like this to be done at a slight discount to deals done over the past several years, but based on the reported price tag we view this deal with a fair amount of suspicion.

U.S. Insurers
The property and casualty insurance industry was buffeted by a flurry of natural catastrophes in 2017, with multiple hurricanes and wildfires hitting companies' bottom lines. Typically, industry pricing firms up after large catastrophes, and that appears to be the case again. However, the increases look modest, and lower than what we've seen in the past, as the industry remains well-capitalized. In our view, this adds up to an underwriting environment where moaty firms need to be careful in order to maintain excess returns, and the most well-managed franchises, in our view, have been cautious in terms of growth in recent quarters. We think Hurricane Florence is a manageable event for the industry, and by itself will not push the industry to outsize catastrophe losses for the year, but hurricane season is not yet over. Looking across the main areas of P&C insurance, we see some divergence. Personal lines, particularly auto, are currently enjoying strong pricing increases, which in most cases is more than offsetting a recent rise in claims and leading to strong profitability. The outlook in commercial lines is much more mixed, and it is questionable if pricing increases are keeping pace with claims increases. We remain most concerned about reinsurance lines, however, as we see catastrophe bonds as a growing source of capital, and believe structural overcapacity could leave pricing inadequate even if prices rise modestly in 2018.

U.S. Banks
The near-term outlook for bank performance is positive with tax cuts signed into law, solid expectations of more economic growth, regulatory relief already playing out, and a normalizing rate environment. Overall, bank stock market values today are much higher than they were a year ago. We think this is warranted to some degree, as we now believe returns for banking will continue to improve and will end
up roughly in between precrisis return levels and the returns seen in the past 10 years since the crisis. However, this also means that bargains within the U.S. regional banks are few and far between. For U.S. banking in general, we believe four key themes will play out in 2018. First, we see higher loan growth in the later half of 2018 as uncertainty surrounding tax reform abates and companies are incentivized to invest given increased capital expenditure deductibility during the next five years.

Second, we see more room for expense savings as banks continue to automate more functionality, embrace more technological change, and decrease or better optimize branch footprints. Over time, we think this trend favors the largest banks, which have the most scale and the most money to spend on new technology. Scale and technology should only increase in importance, and this should be a major factor in determining the winners and losers within banking over the next decade. Third, we believe regulatory spending likely peaked in 2017, and we expect the explicit regulatory spending burden to be flat to down in 2018, and the burden from holding excess capital on the balance sheet should only decline over the medium term. Finally, we see continued but measured federal-funds rate hikes in 2018. We also see increasing deposit betas offsetting the benefits of higher asset yields, as banks are forced to begin giving back more of each rate hike to their clients.

We think the U.S. Federal Reserve’s cautious approach to raising interest rates is the correct one given the state of the economy. In our view, the Federal Reserve is walking a fine line as it attempts to normalize rates. Returning to a “normal” interest-rate environment would give the central bank more ability to fight a recession, and the combination of low unemployment rates and solid economic growth arguably shows the economy is ready for higher rates. However, tightening too quickly—before inflation data proves the need for higher rates—could cut short a long and fragile recovery. We continue to expect a slow and steady normalization, in line with the Fed’s commentary.

In June, the Federal Open Market Committee raised its target for the federal-funds rate to 1.75%-2%. Current expectations are for the target rate to be 2.25%-2.50% by the end of 2018. We think the advantages of a sticky retail deposit base are likely to shine through as rates rise. Comerica, Zions Bancorp, and Cullen/Frost have the highest percentage of non-interest-bearing deposits, all above 40%. Regions and M&T are also well-positioned, as they have had some of the lowest deposit betas in the second quarter of 2018. Unfortunately, we are not finding any screaming bargains among the regionals today, but still think Wells Fargo and Capital One look attractive at today’s prices.

**Asian Financials Update**

*By Iris Tan, Jay Lee, and Michael Wu*

**China Banks**

As for the Chinese banks, there are five industry trends worthy of attention in 2018. First, bank lending rates will continue to climb because of tighter credit availability and the squeeze-out effects of tighter shadow bank controls. The average lending rate has increased 64 basis points to 6.08% as of mid-2018 from the trough in end-2016, though we believe further increases will be limited given the slowing economy and modest easing in market liquidity.
Second, deposit costs face greater pressures in 2018 as June M2 growth further slowed to a record low level of 8.0% over the past three decades, versus the average of 12.8% during 2011-17. This was also exacerbated by mounting threats from deposit substitutes including money market funds and savings-type insurance products, while banks’ wealth management products become less attractive as they no longer carry implicit guarantees and yield lower returns as their investment in shadow credits are banned.

Third, bank loans will maintain their steady growth at around 13% in 2018 on strong credit demands to partially make up for the unfilled financing gap left by ongoing shadow banking curbs. Contrary to market belief, we do not think the banks are able to shift a majority of their off-balance-sheet shadow banking exposure into their books, given stringent regulations including requirements on capital, provisioning, and loan quotas for specific industries. Fourth, there is a higher level of credit costs uncertainty due to stricter rules in bad debt recognition in 2018 and rising internal and external economic uncertainties.

Finally, fee income growth will temporarily be dragged lower by ongoing regulations in wealth management products. Despite the tweak toward softening as shown through explanatory notes being announced recently, the tone of tightening regulations remained intact. We expect wealth management products will shrink in scale as both supply and demand for shadow bank credits are subject to strict controls.

Chinese banks’ H-shares under our coverage are trading at a price/fair value of about 0.82. The current valuation level implies 0.5-0.8 times 2018 price/book value for the Chinese banks we cover with China Merchants Bank the exception. This is the lowest level over the past three years due to the market’s renewed credit quality concerns amid rising refinancing risks for the corporate sector and elevated trade war fears. As financial deleveraging has become one of the government’s top priorities, we believe this trend will continue in the near term, while the marginal impact on banks will gradually mitigate. We are more optimistic than the general market about large banks, including Agricultural Bank of China and Industrial and Commercial Bank of China. We believe large banks will steer through the challenges better than peers thanks to their strong funding cost advantage, prudent operations, and limited exposure to shadow bank credits. Tighter regulations and ongoing reform should benefit both the industries and wider economy in the long run, as it marks an important step by the government to derisk the financial sector and a push for more rational pricing for credits.

Hong Kong Banks
A pullback in Hong Kong equities resulted in some value emerging for Hong Kong banks. However, none is trading at significant discount to our respective fair value estimates and our 2- and 3-star ratings are largely unchanged. Net interest margin improvements and loan growth remain the key in the second half of fiscal 2018. There is no change to our view that net interest margins will rise steadily in the medium term as stronger economic conditions underpin the normalization of interest rates globally. The Hong Kong Interbank Offer Rates, or Hibor, edged higher in the first half as liquidity exited Hong Kong. The latter saw the Hong Kong Monetary Authority intervening in the foreign currency market to maintain
the Hong Kong dollar peg. The higher Hibor should underpin rising net interest margins but partially offset by competition. As noted previously, the Hong Kong banks saw pressure on lending spreads for both corporate and commercial loans in the first half. In our view, competition could ease as rising interbank rates increase funding costs across the industry, particularly banks without a large deposit franchise. We believe narrow-moat BOC Hong Kong and Hang Seng Bank will fare better than peers given their large Hong Kong dollar deposit base, as funding costs for their low-cost, sticky current and savings account deposits should rise at a slower pace.

The strong system loan growth continued in the first half and remains a key positive. However, loan growth may be more restrained in the second half of fiscal 2018 on rising trade tensions. July loan growth was lower though year-to-July system loan growth remains at 5%, or 8.8% on an annualized basis. Demand for offshore loans was one key driver as Chinese corporates expanded regionally. A decline in the Chinese economy at a controlled pace and reasonable strength in global economic conditions will sustain moderate loan growth for the remainder of fiscal 2018.

Japan Banks
We maintain our preference for Mitsubishi UFJ Financial Group among the three megabanks as Mitsubishi is trading at the largest discount to fair value at 20%. After a sharp appreciation of the bank’s share price close to our fair value estimate in early 2018, its share price declined in line with global equity markets in the first half. The decline accelerated post the bank's fourth-quarter fiscal 2018 result, which we attribute to a smaller-than-expected buyback and dividend, as well as a fairly soft profit guidance. Our forecasts conservatively factored in slightly higher than guidance credit cost.

Credit cost was benign for the Japanese banks in the first-quarter result, largely in line with last year. We expect credit cost to remain low this year but assumed higher provisioning thereafter as Mitsubishi has a larger exposure to international loans, which we deem slightly riskier. However, we believe the risk is priced into the current share price. Mizuho Financial Group and Sumitomo Mitsui Financial Group both have lower levels of international exposure, with Mizuho in particular having a conservative loan portfolio concentrated in high-quality domestic corporates.

We do not expect a significant increase in nonperforming assets in the medium term and credit cost should remain low for the remainder of 2018. Interest rates are expected to remain low in Japan as inflation growth remains weak. While the low interest rate should result in a lower level of credit cost, net interest margin will continue to be pressured. This is further compounded by weak loan demand domestically and we expect net interest income to remain largely steady.

Singapore Banks
The Singapore banks' share prices softened in line with the wider market in the first half. We see better value in Oversea-Chinese Banking, trading at a 19% discount to our fair value, relative to 8% and 14% for peers United Overseas Bank and DBS Group, respectively. While we reiterate our view that DBS Group will benefit the most from a rising interest-rate environment, given its larger than peer Singapore
deposit market base and a larger proportion of lower-cost current and savings deposits, the upside is currently priced in.

All three banks reported solid second-quarter results, reflecting the still favorable operating environment. Higher net interest income was driven by both improving net interest margins and stronger loan growth, while favorable capital markets saw rising demand for investment products and wealth management, underpinning increases in fee and commission income. Credit costs remained low, which also benefited from the write-down of their oil and gas nonperforming assets last year. With rising trade tensions, the three banks provided a more cautious outlook for the remainder of fiscal 2018. Domestically in Singapore, more restrictive measures on the residential property sector will likely result in slower mortgage growth. Overall, we expect loan growth of midsingle digits for the three banks.

**Australian Financials Update**  
*By David Ellis*

Solid operating conditions for the Australian major banks are being completely overshadowed by the negative sentiment and damaging revelations raised to date at the Royal Commission into misconduct in the banking, superannuation, and financial-services industry. The commission is due to release an interim report by the end of September with the final report due in February 2019. We expect the interim report to focus on residential lending standards, vertical integration of wealth businesses, grandfathered commissions in the wealth industry, a review of mortgage broker commissions, and potentially the retail superannuation sector. Recommendations covering the insurance sector will likely be included in the final report.

Despite an outlook for tighter regulatory and compliance requirements, the biggest risk for the major banks is the potential for a credit squeeze triggering an economic downturn as borrower demand softens at the same time as stricter lending criteria bites. But the Australian banks continue to be well-supported by strong economic fundamentals as global and domestic economic conditions improve. Australian GDP for the June quarter came in at a respectable 3.4% year-on-year growth rate, with strong employment growth, record high export volumes and values, continued positive net immigration, solid credit growth of around 4.5% and record high infrastructure investment. House prices have retraced slightly, and we expect further modest house prices weakness in the year ahead.

Despite solid fundamentals, the sector is suffering from elevated uncertainty, particularly around pricing risk, credit risk, and operating risk. In response to mounting regulatory pressure, the banks are investing to improve reporting and risk management systems at a cost to underlying profitability. There is a risk the Royal Commission recommendations could be tougher than expected, and combined with weakening house prices, slowing credit growth, increasing trade tensions and further economic slowdown in China, bank share prices could face further short-term pressure. Major bank share prices are all down from 12-month highs with Australia and New Zealand Banking Group down 9%, Commonwealth Bank of Australia down 15%, National Australia Bank down 15% and Westpac Banking down 18%.
At current prices, Westpac Bank and National Australia Bank are most undervalued, trading 20% and 14%, respectively, below our valuations. Commonwealth Bank and ANZ Bank are trading 13% and 5%, respectively, below our valuations. We are comfortable with our modest earnings forecasts, with EPS expected to grow an average of 2.4% per year to fiscal 2022, and near-term catalysts to drive share prices materially higher are difficult to find.

It was comforting to see three of the four major banks (ANZ Bank, Commonwealth Bank and Westpac Bank) increase variable home loan rates (14-16 basis points) in late August/early September without too much regulatory, political, and media heat. Short-term wholesale funding costs increased several months ago and remain elevated, exerting pressure on net interest margins. We are surprised with National Australia Bank’s decision to hold interest rates steady as pressure on margins is meaningful. Major bank pricing power remains undiminished, despite intense negative scrutiny from the Royal Commission, politicians, and media.

As always, there are plenty of risks to earnings and stock prices for the major banks, not the least being unfavorable Royal Commission outcomes, a tougher regulatory environment, slowing economic conditions in Australia, the long-running fear of an economic correction in China, and, of course, major banks’ exposure to expensive housing. Global tightening of liquidity could raise Australian bank wholesale funding costs further. In these circumstances, bank net interest margins could contract if borrowing rates are not increased for Australian corporate, commercial, and housing loans.

Political and regulatory risks are increasing, with a range of issues unfolding. A potential change of government could have an impact on the Australian housing market and the major bank oligopoly. All eyes are on the next election scheduled by May 2019 and a likely change of government. Current government opposition Australian Labor Party policies on negative gearing residential property, capital gains tax discounts, and tax treatment of trusts are all indirectly negative to bank earnings. Potential changes to bank compliance requirements, regulatory framework, and the current 0.06% bank levy are all creating uncertainty.

Despite the political and regulatory risks, we expect improved productivity and benign credit quality to support future fully franked dividends delivering attractive dividend yields of 6%-7%. We forecast average annual dividend growth of just 1.4% to fiscal 2022, with average payouts forecast to decline to 72% in fiscal 2022 from 76% in fiscal 2017. Major bank forward price/earnings ratios have contracted to an average around 11 times from 13 times a year ago and are below longer-term averages around 12 times. Returns on equity are expected to average above 14% during the next five years, with Commonwealth Bank to stand out at around 15.5%. Political uncertainty is not helping business confidence, while weak wages growth is a drag on consumption and the Reserve Bank of Australia inflation target. The most damaging negative risk to bank earnings is the potential for an exogenous shock triggering a global downturn that drags the Australian economy into recession, but this is not our base case.
European Financials Update
By Johann Scholtz and Henry Heathfield

European Banks
The European banks that we cover are starting to offer value, on average they are now trading at 0.85 times our fair value estimate. A 9.5 times average forward P/E is hardly demanding and a 4.3% dividend yield is attractive to dividend investors.

European banks’ share prices have declined by 11% over the past year and 5% over the past three months, reflecting concerns first around banks with emerging market exposure and the impact on global trade of the escalating tariff war. Therefore, banks with a strong global and emerging-market presence have been under the most pressure. Developments in Italy have taken a back seat for the time being, but to our mind populist policies from the coalition government could be a risk, not only to Italian banks but also the whole eurozone. Danske Bank and ING have been punished severely by the market as regulators dished out heavy fines for failure on their part to pick up on money laundering.

We prefer to look through the shorter-term cyclical issues that concern the market and focus on long-term secular drivers. Our main concern is the low midcycle level of profitability we foresee for the European banks. Return on equity ratios in double digits have become the exception and the bulk of the banks in Europe will not generate returns ahead of their cost of capital consistently. While we concede that net interest margins stand to benefit from a future normalization of monetary policy, we do caution that investors should not expect a return to margins as they were before the 2008 financial crisis, because most banks now have much lower risk appetite hence lower credit spreads have become the norm. Loan loss provisions are close to all-time lows and they will increase going forward. The new accounting standard dealing with impairments of financial instruments, IFRS9, has yet to be tested during a downturn in the credit cycle, and it adds to the high level of uncertainty as to what constitutes a midcycle level of impairments for European banks. Banks have been successful in driving down their cost/income ratios until now but the visibility of future efficiency gains are less clear to us.

We do not believe that the average European bank will be able to increase its revenue in line with nominal GDP consistently. Credit penetration in most of Europe is high already and competition from technology and telecommunication firms are expected to increase. We do note that the initial impact of the opening up of the European payment landscape under the PSDII directive has been less pronounced than anticipated. Banks with strong wealth management franchises, especially in the high net worth space, have greater earnings visibility to us, although competition is increasing.

European Insurance
European insurance as it pertains to our coverage remains slightly undervalued in quarter three 2018, trading at 0.96 times price/fair value.

Corporate action has been fast and furious this year and AXA has finally completed its acquisition of XL on Sept. 12. This accelerates AXA’s growth into the specialty and corporate property and casualty
insurance. We remain reticent about the future direction of AXA as proposed by this buyout. Admittedly, we thought any corporate action would focus on bolstering up its slightly ailing asset management division. Clearly, in our view, AXA is positioning itself as a Zurich. We remain concerned about these U.S. corporate accounts and lines. Zurich has had problems here. However, the sale of its European Variable Annuities book will reduce the overall business portfolio. And we maintain the stock still looks cheap at 0.7 times book value and that any reserve strengthening should not be as severe as the discount the market is pricing.

Prudential is the second large European listed insurer going through significant corporate activity with the proposed divestment of its United Kingdom, European, and asset management operations. We still think this plan for separation highlights a number of key trends occurring in the European life insurance space. First, the lines between life insurance savings and asset management have been substantially blurred with the rise of unit-linked products. Second, we see a bifurcation occurring within the market. Premium operators like Prudential rely on good quality advice to retain and attract policyholders, as well as reputation on service, payments, and investment returns. Whereas lower down the spectrum of individual wealth, scale is becoming the name of the game, attracting assets onto platform and focusing on retention through digital experience, service, guidance and advice, as well as the requisite reputation on service, payments, and investment returns. This is what we see the likes of Aegon and Aviva focusing on. However, we do believe these latter operators are using platforms to increase and improve control environments and service that accompanies this. We think Prudential is fairly valued, having dropped in value from GBX 1,780 at time of initiation to just below our current fair value estimate that has included purely time-value-of-money adjustments.

The rough timeline for this demerger is completion by end of 2019 and while there have also been talks in the market for smaller life operators such as Aegon following a U.S. and European separation suit, we think for Aegon the strategy does not make sense.

Outside of this corporate activity, but still largely on our radar, is Assicurazioni Generali. Hit substantially by the Italian political uncertainty we maintain our EUR 17.30 fair value estimate. In our view, the League already has had its wings partially clipped, with court rulings threatening EUR 50 million in asset seizures, with the Italian legal system having a reputation for a bark worse than their bite. Our European Insurance opinion is that this political uncertainty will right itself and Italy will drag itself out of the trenches. However, the 0.9 times book value of current share price at EUR 15.1 offers a less appetizing discount and inherently higher risk than our other European insurance picks with our EUR 17.3 fair value estimate at 1.0 times book value.
Top Picks

American International Group AIG | ★★★★
Economic Moat: None
Fair Value Estimate: $76
Fair Value Uncertainty: Medium
5-Star Price: $53.20

In May 2017, American International Group announced that Brian Duperreault would become CEO. We believe his background is a good fit in terms of solving AIG's main operational issue—improving commercial property-casualty insurance underwriting. However, the market remains unimpressed with his tenure, with the company's stock down about 10% since AIG announced his appointment. While the company has not shown a lot of tangible progress in improving underwriting results so far, we appreciate that it will take some time to solve its issues.

The company, in our view, does not need to see a dramatic improvement to stop destroying shareholder value; it only needs to move from a negative outlier to merely subpar. We estimate that, all else equal, AIG would only need to improve its commercial P&C combined ratio to 97% (a level that would still be worse than its peer group range) to be able to generate a 10% adjusted ROE. Given that we see no structural issues in its core operations, we believe that the company gradually trending toward peer results is a realistic assumption. Using peer price/book multiples, we estimate that there could be over 50% upside from the current trading level if AIG were to reach this mark.

Credit Suisse Group CSGN | ★★★★
Economic Moat: Narrow
Fair Value Estimate: $23
Fair Value Uncertainty: High
5-Star Price: $13.80

The profitability of Credit Suisse's core businesses comfortably exceeds its cost of capital; we estimate a midcycle return on equity of 13% compared with our cost of capital estimate of 10%. A few issues have concealed the company's true profitability. As part of the process of derisking the business away from volatile sales and trading, Credit Suisse has run down a massive noncore book of EUR 126 billion-EUR 45 billion over the past four years, incurring cumulative before-tax losses of EUR 16 billion in the process. To add insult to injury, Credit Suisse has incurred legal expenses of CHF 7 billion over the past four years. Credit Suisse has often been criticized that it was behind UBS Group in adapting its strategy to the new requirements for Swiss private banks. The market has hounded Credit Suisse to reduce its exposure to risky sales and trading and replicate UBS' business mix, where wealth management dominates.

However, there are many more similarities between Credit Suisse and UBS than there are differences. We believe that losses booked out of the noncore portfolio have led investors to overestimate the importance of sales and trading to Credit Suisse. Sales and trading contributed 27% to Credit Suisse's revenue in 2017, compared with 23% of UBS' revenue generated by sales and trading.
BlackRock BLK | ★★★☆☆
Economic Moat: Wide
Fair Value Estimate: $570
Fair Value Uncertainty: Medium
5-Star Price: $399

While there are a handful of U.S.-based asset managers trading at steep discounts to our fair value estimates, wide-moat BlackRock remains our top pick among the group. With $6.3 trillion in total assets under management at the end of June, BlackRock is the largest asset manager in the world. The company is at its core a passive investor. Through its iShares exchange-traded fund platform and institutional index fund offerings, BlackRock sources close to two thirds of its managed assets (and nearly half its annual revenue) from passive products.

In an environment where investors and the advisors that serve them are expected to seek out providers of passive products, as well as active asset managers that have greater scale, established brands, solid long-term performance, and reasonable fees, BlackRock is well-positioned. The biggest differentiators for the firm are its scale, ability to offer both passive and active products, greater focus on institutional investors, strong brands, and reasonable fees. We believe that the iShares ETF platform as well as technology that provides risk management and product/portfolio construction tools directly to end users, which makes them stickier in the long run, should allow BlackRock to generate higher and more stable levels of organic growth than its publicly traded peers the next five years.

The market tends to reward organic growth and operating profits in the U.S.-based asset managers, and BlackRock scores well on both measures. Unlike many of its peers, the firm is currently generating solid organic growth with its operations, with its iShares platform, which is the leading domestic and global provider of ETFs, riding a secular trend toward passively managed products that began more than two decades ago. This helped the company maintain average annual organic growth of 4%-5% the past several years despite the increased size and scale of its operations.

As we expect the headwinds for the asset managers to be stiffer as we move forward (even incorporating a major equity market decline midway through our five-year forecast), we envision BlackRock generating 3%-5% average annual organic AUM growth, with slightly better levels of revenue growth but relatively flattish margins (of around 40% on average) during 2018-22 (well above the industry average of 30%).
Healthcare: Valuations Improve as Concerns Over Drug Pricing Pressures Begin to Abate

**Innovation and a Clearing Regulatory Picture Should Continue for Healthcare Stocks**

- Overall, healthcare valuations have slightly risen to a price/fair value of 1.07, up from 0.98 at the end of the second quarter and 1.04 at the start of the year, but the differences in industry valuations continue to suggest drug, biotech, and drug supply chain industries are the most undervalued areas. Within these industries, our top picks are Cardinal Health, McKesson, and Roche Holding.
- Innovative new drug launches combined with strong advancements in drug pipelines are supporting a steady growth outlook for the drug and biotech industries.
- Concerns around U.S. governmental reforms addressing drug pricing appear to be easing on the valuations for drug manufacturers with the majority of reform concerns still surrounding potential changes to the drug supply chain.
- Corporate restructuring and redeployment of capital represent key strategy decisions within the healthcare sector as noncore assets are increasingly divested and strong cash flows are supporting continued acquisitions both within the healthcare supply chain and within the drug and biotech industries.

Within the healthcare's largest industry of drug and biotech companies (by market capitalization), we expect the recent strong launches of innovative new drugs and pipeline advancements to reinforce the economic moats in the industry and support steady growth. We expect several recently launched drugs to continue to gain market share and grow not dependent on pricing, but on strong efficacy data that will displace older drugs. In immuno-oncology, several recently launched drugs exemplify this trend. The immuno-oncology drugs offer some patients a near cure over older drugs that typically just delay progression of certain cancer types. In addition to tracking well with the initial indications, these immuno-oncology drugs are also posting excellent data in new indications, setting up a strong outlook for future growth. Beyond immuno-oncology, advancements in other therapeutic areas, such as immunology and cardiology, are also supporting major innovative advancements that are driving strong sales growth.

While innovation remains strong, concerns regarding the U.S. government's rhetoric on bringing drug pricing down has weighed on the group, but we believe these pressures are beginning to dissipate. With the U.S. market representing the largest drug market in the world, the potential changes to U.S. drug pricing have global implications. However, with the Trump administration increasing its focus on improving the drug supply chain, increasing generic drug competition, slightly strengthening Medicare

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drug price negotiations, and providing more information to help patients lower out-of-pocket costs, we expect only a mild impact on branded U.S. drug prices.

Within the entire healthcare sector, corporate restructuring and redeployment of capital will likely continue to be critical drivers of strategy with the U.S. healthcare supply chain likely to continue to consolidate while the global drug and biotech markets continue to focus on core strengths. Within the healthcare supply chain, Cigna's purchase of Express Scripts and CVS Health's acquisition of Aetna remain on track and should create more scale in efforts to lower costs. Within the drug and biotech industries, the announced divestiture of the eyecare business Alcon by Novartis as well as Eli Lilly's decision to spin off the animal healthcare business Elanco show a continuation of major drug firms focusing on the core human branded drug businesses. Further, we expect the large cash flow generation at both drug companies and device companies to continue to be redeployed through healthy dividends and acquisitions of smaller firms with emerging innovative technology.

Top Picks
Cardinal Health CAH | ★★★★★
Economic Moat: Wide
Fair Value Estimate: $82
Fair Value Uncertainty: Medium
5-Star Price: $57.40

Although there may be some material changes over the next several years to how the various parts of the U.S. pharmaceutical market operate, the need to source and deliver drugs in a cost-effective and efficient manner will not change. We believe this fundamental factor has formed a strong foundation for Cardinal, as its core drug wholesaling operations will be needed by both drug manufacturers and retail pharmacies. Further, we have remained unenthusiastic about Cardinal's push into medical equipment manufacturing/distribution and believe the previous management team's efforts to expand into this business was a strategic misstep. We expect new management to place a greater focus on optimizing its drug wholesaling operations and expansion of specialty pharmaceutical operations, which should yield stronger overall results.

McKesson MCK | ★★★★★
Economic Moat: Wide
Fair Value Estimate: $210
Fair Value Uncertainty: Medium
5-Star Price: $147

Despite major near-term headwinds, McKesson should remain an essential link in the pharmaceutical supply chain. Several headwinds have pressured the firm's operations and stock. The loss of material volume as a result of customer consolidation, slowing branded drug price inflation, a mix shift toward specialty drug products that are costlier to distribute, and increased competition for small/independent pharmacy market share have formed a confluence of negative variables that have built in significant
near-term uncertainty for the drug distributor. However, we believe these are near-term issues, and McKesson will be able to power through the recent volatility, as it is a critical partner to both retail pharmacy clients and drug suppliers. While there are some remaining headwinds associated with a changing pharmaceutical supply chain, we believe McKesson will be able to effectively offset this issue, win its share of contracts in the future, and thrive long term. McKesson is in the process of better positioning itself as a critical player in the lucrative specialty pharmaceutical market niche, which will eventually bolster its wide economic moat.

Roche Holding (RHHBY) | ★★★★★
Economic Moat: Wide
Fair Value Estimate: $42
Fair Value Uncertainty: Low
5-Star Price: $33.60

We think the market underappreciates Roche's drug portfolio and industry-leading diagnostics, which conspire to create sustainable competitive advantages. As the market leader in both biotech and diagnostics, this Swiss healthcare giant is in a unique position to guide global healthcare into a safer, more personalized, 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.
Industrials: Automation and Autonomous Vehicles in a Tight Labor Market Bodes Well for the Sector

Overall, Sector Remains Slightly Overvalued

- Prices in our industrials sector remain slightly overvalued on average, with a mean market-cap-weighted price/fair value estimate of 1.04, with a few notable values outlined below.
- Interest in industrial automation and autonomous vehicles continued to accelerate during the quarter, as CEOs are faced with tight labor markets and stressed supply chains. Extending solutions beyond repetitive tasks on the factory floor, research and investment has ventured into increasingly complex territory such as autonomous agricultural and mining equipment.
- The Internet of Things, or IoT, is gaining penetration in the industrials sector for its own productivity goals, increasing the prospects of margin expansion. As early adopters of this technology, industrials stand to disproportionately benefit.
- Compelling automation and autonomous vehicle technologies are likely to foster new company formation and M&A. A raft of startups is gaining visibility with large corporations and venture investors alike.

With an unemployment rate of 3.9%, U.S.-based companies are forced to seek new pathways to enhance labor productivity. In the trucking sector, the problem is particularly acute, given a shortage of over 50,000 truckers, while the average age of existing truckers is 55. Likewise, 39% of Boeing technicians are aged 50 and up. During a recent meeting with management, Boeing touted the benefits of automation, which include higher quality (improvements of 50%), improved throughput (2 times faster on 737 wings), and decreased manual labor (80% manual on wings to 80% automation). Similarly, FedEx recently discussed the limited deployment of fully autonomous forklifts in its highly automated sortation hubs.

The pain of present-day labor shortages has led various parties to accelerate efforts to explore fully autonomous applications. Wide-moat industrial firms like Caterpillar are further extending their leads by investing in technologies that address high labor costs in the mining sector. After many years of successful operation of autonomous Caterpillar above-ground mining trucks, the firm has made recent advancements in autonomous excavators and underground mining equipment. Despite significant investments in such technology, Caterpillar’s board has authorized 10 billion dollars in share repurchases.
During the third quarter, we launched coverage of Swedish vehicle technology vendor Veoneer. The firm designs, develops, and makes safety electronics for the global automotive industry. These include passive products such as sensors, as well as active devices such as advanced driver assistance devices. While we currently consider Veoneer shares to be overvalued, we believe firms like this will pioneer advancements that usher in autonomous vehicles.

**Top Picks**

**Kion Group KGX:DE | ★★★★★**

Economic Moat: Narrow
Fair Value Estimate: EUR 90
Fair Value Uncertainty: Medium
5-Star Price: EUR 63.00

As a market leader in forklift manufacturing, Kion is already well positioned to benefit from growing e-commerce. With the addition of its Dematic acquisition, we think the company will offer attractive long-term revenue growth and increasing returns. Despite rapid growth, e-commerce still accounts for only a small portion of global retail sales, just 12% in the United States and nearly 14% in China. The low penetration levels suggest a long runway for growth, as we believe forklift sales will naturally follow the expansion of warehouses needed to support an e-commerce supply chain.

Kion’s and Dematic’s respective leading market share positions in forklifts and warehouse automation secure dominance in a complementary product set that could increase the combined company’s importance to customers over time. Eventually, we think Kion and Dematic will offer a one-stop software-driven solution that combines the management of forklifts with automation systems. Given that warehouse automation is still in its early stages, we think Kion has an opportunity to gain critical early-mover ground with the addition of Dematic’s solutions. This could offer upside to our current revenue growth outlook.

**G4S GFS:GB | ★★★★★**

Economic Moat: None
Fair Value Estimate: GBX 337
Fair Value Uncertainty: Medium
5-Star Price: GBX 235.90

G4S is the largest security provider in the world, with estimated market share of around 12% in a highly fragmented market. Its primary business activities center around providing manned and mobile guarding, security systems, and cash-management services. The company also provides outsourcing services for governments, such as back-office systems for police services, employment support services, and the management of entire prisons.

Having spent several years at the beginning of the decade overextending itself into areas removed from its core competencies, G4S now focuses on its primary businesses and driving revenue and margin...
growth by upselling clients and providing more value-added services. Examples of this can be seen in “Cash 360,” a program in which G4S effectively assumes back-office functions for retailers, recycling cash within their business, and reducing the need for external collection and counting services, as well as working-capital requirements. Other value-added services include risk consulting, where G4S analyzes companies’ current setups and advises on and provides solutions to companies’ operational risks. These activities not only allow G4S to enhance margins above those from basic services, but also enable it to differentiate itself from smaller peers with inferior capabilities.

Anixter International AXE | ★★★★★
Economic Moat: Narrow
Fair Value Estimate: $107
Fair Value Uncertainty: Medium
5-Star Price: $74.90

In 2014 and 2015, Anixter completed three transactions that have bolstered the company’s market presence, growth potential, and operating flexibility. After acquiring Tri-Ed in 2014, selling its capital-intensive OEM Supply - Fasteners business in 2015, and purchasing HD Supply’s utility distribution business in 2015, Anixter is now the global leader in network and security distribution, a top player in global electrical and electronic solutions, and the leading utility power solutions distributor in North America. Anixter’s focus on value-added technical and supply-chain services across a global platform differentiates the company from competitors that rely on product pricing and availability to drive business. In many cases, Anixter is not the low-cost leader, but the firm’s value-added services can provide its customers with the lowest cost of ownership.

We see key growth drivers for each of Anixter’s segments over the next five years. With the addition of Tri-Ed, Anixter’s network and security solutions, or NSS, segment is set to gain share with midsized system integrators and in residential end markets. This segment should also benefit from cross-selling security products to utility customers as they invest in security solutions to comply with regulatory standards. Growth in wireless and cloud-related products should also augment NSS growth. Anixter’s electrical and electronic solutions, or EES, business has suffered from industrial end-market weakness, and has been generating depressed EBITDA margins. As industrial end markets recover, we expect this segment to return to growth and normalized profitability. After the acquisition of HD Supply’s power solutions business, the utility power solutions segment boasts industry-leading scale and should benefit from market share gains and improving utility capital spending.
Real Estate: Fundamentals Show Solid Growth Amid Rising Interest Rates and Slowing Construction Starts

Underlying Performance Has Been Healthy Overall

- Morningstar’s real estate coverage appears fairly valued at current levels. It is trading at a market-cap-weighted price/fair value of 0.98, only a 2% discount to what we believe the stocks in the sector are worth.
- We view themes in commercial real estate as generally defensive in nature, with lingering concerns about increasing bond yields associated with future rate hikes.
- Despite these concerns, we continue to focus on underlying performance, which has remained healthy overall, as real estate investment trusts have been focused on repositioning and strengthening their portfolios, deleveraging, and capital recycling.
- Construction of new property continues as companies look for higher returns, though supply may have peaked in many markets and sectors. Rising construction costs may lead to slowing supply growth over the next few years.
- At current price levels, we see attractive investment opportunities scattered across various asset classes within our REIT coverage.

U.S. Real Estate Outlook

By Kevin Brown

The U.S. real estate market increased slightly in the third quarter, performing relatively in line with the broader U.S. market. The 10-year U.S. Treasury yield increased rapidly at the start of the year but has stayed near 2.9% since mid-February, bringing relative stability to real estate stocks. Given the circumstances, many investors wonder whether we are near the peak of the commercial real estate cycle—higher interest rates could pressure growth rates, cap rates, return expectations, and ultimately asset prices. Also, to the extent that low interest rates have steered investors searching for higher yield and capital preservation toward REITs, the same funds could flow out of REITs if interest rates rise, further pressuring commercial real estate valuations.

However, rising interest rates also signal that the economy is healthy enough to support a rising-interest-rate environment. Continued economic growth will support the fundamentals of all commercial real estate. Real estate companies will benefit from the continued stabilization and growth of the acquisitions and developments they completed this cycle. Higher interest rates will make financing more expensive, not only reducing the return potential on new acquisitions and developments but also
reducing the number of construction starts. REITs strengthened their balance sheets in the low-interest-rate environment, reducing near-term maturities and locking in low rates on long-term debt. There is still a shrinking but significant spread between real estate cap rates and interest rates, which combined with growing net operating income supports current real estate prices. Future interest-rate increases should be more gradual, and the growth of the underlying fundamentals should support current valuations.

The Trump administration could have an impact on several real estate sectors. Policies such as infrastructure spending, tax reform, general deregulation, and many other matters have extended the length of the current economic cycle. Additionally, several economic signals, including unemployment levels, wage growth, and GDP growth, support the case for positive momentum as we enter the back half of the year. However, the potential for a trade war with China could have an impact on several real estate sectors, particularly retail and industrials. Tariffs will increase costs on goods produced in China, reducing imports that drive traffic to warehouses owned by industrial companies and increasing costs of goods sold by retail tenants. Rising prices on steel and lumber would increase construction costs, making accretive development more difficult and reduce the number of construction starts for all sectors. Finally, intensified immigration enforcement could raise labor costs, increasing expenses for industries that rely on immigrant labor, such as the lodging industry.

Much of our U.S. REIT coverage still enjoys healthy underlying operating performance. Historically high levels of occupancy and durable balance sheets characterize most portfolios. Although growth has slowed from elevated levels seen in recent years, we believe the market has been expecting this slowdown and has priced it into the sector. Supply has peaked and started to decelerate for sectors like apartments, industrials, and senior housing. Higher construction costs and tighter construction lending should reduce supply growth further even as demand continues to support fundamental growth through the cycle. Many firms have also continued to recycle capital, trading out of weaker, more vulnerable assets into stronger assets with better long-term growth prospects and risk profiles. Although near-term uncertainty has affected leasing and transaction volume, private-market asset values have largely stayed intact and should continue to serve as an anchor for public-market valuations. Given that our real estate coverage is fairly valued as a whole, investors should enter the sector with caution. Our preferred investment vehicles are reasonably leveraged companies with solid prospects for long-term growth that can weather the natural cyclicality of the real estate markets.

**Australian and New Zealand Property Outlook**

*By Tony Sherlock*

Australian and New Zealand property stocks mostly screen as overvalued. The two that trade at meaningful discounts to fair value are retirement village operator Aveo Group with a 4-star rating and Stockland with a 3-star rating. Outside these, we see numerous attractions and potential earnings catalysts ahead for vertically integrated industrial heavyweight Goodman Group, but the company screens as fairly valued at current levels.
Aveo's reputation took a hit following negative media attention in June 2017, and the company still has work ahead to fully recover from the reputational damage. Management is taking action, implementing more flexible contracts and permitting residents to exit after six months at negligible cost. It is also progressing a stock buyback and in August engaged an investment bank to develop capital-management strategies to narrow the gap between the AUD 2.10 stock price and the net tangible asset per security of AUD 3.92. The Australian retirement living industry has very favorable underpinnings of limited supply and sharply increasing demand over the next five years. Aveo is well positioned to benefit from this trend as it has a geographically diverse portfolio of villages, with upside from building additional units in existing villages. Aveo stands to benefit from high redevelopment gains as it upgrades and then resells units in older villages. Both of these development activities generate very high returns on equity. Aveo is not without risks, as the costs to stay at its villages are higher than most peers and the company and broader industry may be forced to trim prices if Australian dwelling prices retrace further.

Stockland is a diversified Australian property group with earnings derived from passive rental income from retail malls and warehouses and active income from residential land subdivision and development. The stock trades around AUD 4.20 versus our fair value estimate of AUD 4.45 and offers a dividend yield of 6.5%. The stock price has fallen from a high of AUD 4.80 in February, triggered by slowing retail sales and a small decline in Australian dwelling prices following five years of very strong gains. Stockland seems oversold, as it has substantial land inventory acquired well below market rates, and this embedded value in the residential division will be released over the next five years. We are not forecasting a major rebound in retail sales, but the mall division continues to generate rental growth, with long-term upside from redevelopment.

Global demand for industrial property exposure is perhaps the strongest it has ever been as wholesale investors clamor to increase weightings to this previously out-of-favor subsector. The escalation in demand for industrial property is being driven by institutions' rotation away from Internet-affected retail shopping centers toward modern logistics facilities serving high-growth Internet retailers like Amazon and JD.com.

Goodman Group is particularly well placed to benefit from the heightened interest in industrial property assets as it focuses on owning high-quality warehouses in strategically important locations. Demand for these is robust as they enable logistics companies to steal a lead on competitors in speed of delivery and cost. Goodman is already reaping rewards from its focus on premium logistics assets, with the portfolio having very low vacancy and superior rent growth. Goodman also has a series of potential earnings catalysts ahead, which include an acceleration in the volume of development work as it becomes more active in North America and Brazil. As most of the company's developed assets will be acquired by Goodman-managed funds, we foresee strong uplift in fund management earnings from an expanding asset base and also an acceleration in performance fees. The company's property management platform has a total balance of undrawn debt and equity in excess of AUD 11 billion, providing ample capacity to fund new developments or acquire quality assets should there be a retracement in property values.
Office rental rates troughed in the first half of 2017 and continued to recover into the second quarter of 2018, with average monthly rental for Grade A office space increasing 13% to SGD 10.10 per square foot in the second quarter of 2018 compared with SGD 8.95 per square foot in the first half of 2017. We expect the worst to be over for office rentals as new office supply is slowly digested by the market and there is limited new office supply from 2018 to 2021. We expect the office rental recovery to continue for the next few years. However, this will not flow through to the rental reversions for CapitaLand Commercial Trust, the main office REIT under our coverage, and negative rental reversion is expected this year as average expiring rents in 2018 are above the current average market rent for Grade A office space. We remain positive on the Singapore office property sector in the long term and expect strong regional growth to underpin office demand from multinational corporations, absorbing the new office supply, which we view largely as a timing issue. There could be some downside risks to rental rates in 2022 as a huge supply of 1.8 million square feet is expected to be completed then.

The trusts under our coverage have been actively managing their portfolios, and some of them have made acquisitions recently in Singapore and foreign markets. CapitaLand Commercial Trust made its first foray into overseas markets by acquiring a 94.9% stake in Galileo, a Grade A freehold commercial property in Germany, while Ascendas Real Estate Investment Trust made its first venture into Europe by acquiring a portfolio of 12 logistics properties in the United Kingdom, and there could be more to come. CapitaLand Mall Trust has also acquired the remaining 70% stake it does not own in Westgate, a retail mall at Jurong East. We view all of these transactions positively and think the trusts’ active portfolio management and overseas diversification are the right strategies as they will help to drive growth for the trusts.

In our Singapore REIT coverage, we continue to prefer CapitaLand Mall Trust, given that it is trading at the largest discount to our fair value estimate with a price/fair value of 0.89 times. We believe that active portfolio management, ongoing asset-enhancement initiatives, adapting to technology advancement, and redevelopment of its properties will continue to generate long-term growth for its unitholders. In the medium term, growth will be supported by the redevelopment of Funan. With residential property prices in Singapore appreciating strongly over the past year, the government has acted decisively in lifting Additional Buyer's Stamp Duty rates and lowering loan/value on residential property in July. Shares in the real estate sector reacted sharply lower to the unexpected announcement. While the cooling measures will dent short-term sentiment, resulting in a lower level of residential property transactions and prices and in turn limiting any share price performance in the near term, we believe the decline in the share prices of CapitaLand, City Developments, and Keppel presents an opportunity for long-term investors to accumulate the stocks. City Developments benefited more from a recovery in the residential property market, and as such, its share price reacted more severely to the news and is trading at a 36% discount to our fair value estimate. While CapitaLand is trading at a narrower 21% discount, we believe is better quality, given its recurring income is supported by its
portfolio of malls in Singapore and China, Grade A offices, and a more geographically diversified operation.

**Hong Kong and China Real Estate Outlook**

*By Phillip Zhong*

In Hong Kong, the physical property market edged higher during the third quarter, with the Centaline Leading Index up 3%. This is on top of a rise of 14% in 2017 and 10% in the first half of 2018. The number of transactions slowed during the half, especially in the primary market. However, the implementation of a vacancy tax in July resulted in more project launches and a small rebound in primary market transactions.

With the base rate hike in mid-June, the Hong Kong Interbank Offer Rate rose during the first half but remained steady during the quarter. However, continued liquidity outflow saw the Hong Kong Monetary Authority intervening in the foreign currency market several times in August to maintain the Hong Kong dollar peg, resulting in aggregate balance—a measure of interbank liquidity—falling below HKD 100 billion, a decade low. Further, many banks began to raise deposit rates. We maintain our view that stronger U.S. economic conditions underpin the normalization of interest rates, translating into higher interbank rates for Hong Kong. We expect the tightening liquidity will be a headwind to the Hong Kong property market.

Property developers continue to exercise prudence. During the quarter, we saw continued opportunistic asset disposals, investments in higher-yield non-real estate assets, and share buybacks. Limited land banking activities took place, but with clear preference for land conversions to minimize market risk, as well as greater emphasis for nonresidential projects.

The Chinese property sector remain subdued under the weight of government policy, with year-to-August sales volume up 4% year on year, compared with 10% a year ago. Sales by values are up 16%, compared with 14% a year ago, indicating continued price growth driven by a still declining inventory level. The 70-city price index from the National Bureau of Statistics showed faster and broader price growth in August, with smaller cities gaining the most. This is likely to lead to more tightening measures from the government. However, this risk is somewhat tempered by growing concern about an escalating trade war.

Listed developers are still seeing strong sales growth thanks to continuing consolidation trend, albeit at a slower rate than before. We expect the tightening policy to persist, capping volume and price growth, maintaining the current headwind for the sector. Growth is likely to be modest compared with a year ago, especially for mass residential developers. We favor the quality names with operational focus in higher-tier cities that typically have more constrained supplies and solid demand. Major Chinese developer shares spiked higher in January along with the market before retreating. Some quality names are reasonably priced, including China Vanke, China Overseas Land & Investment, and China Resources Land.
Top Picks

**Welltower WELL | ★★★**

Economic Moat: None  
Fair Value Estimate: $74  
Fair Value Uncertainty: High  
5-Star Price: $44.40

Welltower currently trades at roughly an 11% discount to our $74 fair value estimate. After trading off at the end of 2017 and the first quarter of 2018, the shares have somewhat recovered over the past six months, though we still think there is upside. Longer term, we believe the top healthcare real estate stands to disproportionately benefit from the Affordable Care Act, as there is an increased focus on higher-quality care in lower-cost settings. The best owners and operators in the industry, which can provide better outcomes while driving greater efficiencies, should see demand funneled to them from the best healthcare systems. Additionally, the baby boomer generation is starting to enter its senior years, and the 80-and-older population, which spends more than 4 times the national average on healthcare per capita, should almost double over the next 10 years. While shares of healthcare REITs have underperformed due to expectations of lower senior housing growth in 2018 from high supply and a severe flu season, growth should pick up in the next few years as supply growth falls off and demand picks up significantly. Additionally, fundamentals in the first half of 2018 came in above expectations, suggesting that the near-term weakness may not be as bad as previously feared.

**Boston Properties BXP | ★★★★★**

Economic Moat: None  
Fair Value Estimate: $143  
Fair Value Uncertainty: Medium  
5-Star Price: $100.10

We still like high-end Class A office providers such as Boston Properties, which is currently trading at a 13% discount to our $143 fair value estimate. The company operates its portfolio of office buildings across five key geographic markets: Boston, Washington, D.C., New York, San Francisco, and Los Angeles. It has a large, multi-billion-dollar development pipeline that is creating new office properties and spaces that are attractive to young professional talent and should be increasingly filled by technology and life science companies. While Boston Properties' portfolio has become increasingly focused on the suburbs, where there are fewer barriers to entry and new supply can easily enter the market, we think the life science and healthcare industries are attractive industries to partner with from a leasing perspective. Management has been prudent in recycling capital over the years, maintaining a modern portfolio of assets that continue to meet tenant demand in an evolving labor market.
Technology: Sector Appears Overvalued Despite Birth of First Trillion-Dollar-Market-Cap Stock in Apple

Cloud Computing, Trade Wars, and M&A Remain Hot Topics in Tech

- We view the technology sector as overvalued overall at a market-cap-weighted price/fair value of 1.075.
- Enterprise cloud computing remains the most important story in tech.
- The U.S.-China trade war continues to add risk to tech investments.
- Semis and software are still sectors to watch on the M&A front.

We view the technology sector as slightly overvalued overall at a market-cap-weighted price/fair value of 1.075 as of Aug. 31, versus 1.02 at the end of May, 1.05 at the end of February, and 1.08 at the end of November 2017. The Nasdaq index has risen about 3% from mid-June to mid-September and is up about 16% year to date as of mid-September. We can’t look at market capitalizations in technology without noting the birth of the first trillion-dollar-market-cap company as Apple crossed the barrier this quarter.

The single most important trend in technology remains the ongoing shift toward cloud computing, as enterprises move their computing workloads to pay-as-you-go business models that lead to greater flexibility, security, and cost savings. The shift has ramifications for dozens of stocks across our coverage. Although the tech sector is overvalued today, we see a couple of undervalued names that are strong beneficiaries of cloud computing, such as Salesforce.com and ServiceNow. Independent of valuation, we still see winners among infrastructure-as-a-service vendors, such as Amazon.com Web Services, Microsoft Azure, and Google. Software-as-a-service vendors are seeing tremendous growth while legacy IT vendors face ongoing headwinds. In SaaS, Adobe Systems and Microsoft have been especially adept at transitioning to the SaaS model, as selling subscription software, rather than charging for up-front licenses, has expanded their customer bases. Oracle has been relatively slower to pivot, in our view, albeit with some signs of optimism at times.

The U.S.-China trade war continues to add risk to technology investments; although companies have not been hit hard by tariffs just yet, we see many tech leaders assessing the current political situation and hoping for a satisfactory outcome. Apple's popular gadgets, such as the iPhone and Apple Watch, are believed to be exempt from the trade war for now, which we suspect is a relief to the technology supply chain as the vast majority of Apple's devices are assembled in China. Any tariffs slapped on Apple products could have negative ramifications for dozens of technology stocks under our coverage, as lower demand for iPhones could weigh on revenue from many component suppliers that count on the smartphone titan as a large customer.
We continue to see M&A as a key theme in technology. We see no signs of enterprise software deals slowing, with deals such as Adobe-Magento, Microsoft-GitHub, and Salesforce-MuleSoft occurring in 2018. Adobe-Marketo was also recently rumored among large-cap software names. We anticipate more software deals in the years ahead, as leading vendors like Adobe, Microsoft, Salesforce, Oracle, Workday, and others branch out from their core product lines and tack on adjacent opportunities. Similarly, nontraditional software vendors like Cisco Systems and Amazon may make software-related deals as well, as software is becoming a more important portion of their enterprise offerings.

We might be in the later stages of a wave of semiconductor M&A, but we still think deals will occur in the months and years ahead, the latest of which is Renesas’ bid for Integrated Device Technology. 2018 deals include Microchip Technology's bid for Microsemi, Marvell Technology's acquisition of Cavium, and KLA-Tencor's deal for Orbotech. We still anticipate consolidation in the semiconductor industry as larger players seek scale and diversification while being able to strip out excess costs and drive operating leverage.

**Top Picks**

Intel INTC | ★★★★★
Economic Moat: Wide
Fair Value Estimate: $65
Fair Value Uncertainty: Medium
5-Star Price: $45.50

Wide-moat Intel trades at an attractive discount to our $65 fair value estimate. The chip titan's comprehensive product portfolio tailored to computers from the data center to the edge gives us confidence in the company's long-term growth prospects, despite a declining PC market. We applaud Intel's scattershot approach to address challenges in computing (artificial intelligence and cloud), connectivity (5G), and memory (3D NAND and 3D XPoint).

This data-centric strategy is rooted in a swath of products that attempt to support data creation, transfer, storage, and analysis. Intel's string of acquisitions (Altera, Mobileye, Nervana, and Movidius) has unlocked new growth vectors to tackle while augmenting the capabilities of its old guard in client computing and data centers. One of the chipmaker's most recent large acquisitions, Mobileye, benefits from incumbency in countless advanced driver-assistance systems programs and a robust pipeline of design wins. Now coupled with Intel's technological and financial resources, the combination will be a formidable player in the race to self-driving cars, in our opinion. Additionally, we view Mobileye's approach to autonomous driving very favorably, as it looks to incrementally build upon existing products to enable full autonomy. We estimate a $7 billion 2025 opportunity for Intel's autonomous platform solution, with the company capturing a meaningful portion of this addressable market.
Microchip Technology MCHP | ★★★★
Economic Moat: Wide
Fair Value Estimate: $112
Fair Value Uncertainty: Medium
5-Star Price: $78.40

We view wide-moat Microchip Technology as one of the highest-quality companies under our semiconductor coverage. Microchip remains a leading supplier of the “brains” needed for a variety of smart devices categorized as the Internet of Things. We find Microchip under the hood (figuratively and often literally) of the latest cars with the most advanced electronics and think it is poised to profit from rising chip content per vehicle. We’re confident in Microchip’s wide moat rating, thanks to high customer switching costs associated with electronics redesigns, intangible assets associated with the company’s proprietary chip designs, and decades of expertise and reliability. Revenue growth is understandably decelerating after a stellar 2017 for Microchip and others, but we see business conditions in 2018 reverting toward the mean of what we consider a normalized growth environment in the mid- to high-single-digit range. Longer term, Microchip’s exemplary management team has made shrewd mergers in the past and believes its recent acquisition of Microsemi will be another hit.

Broadcom AVGO | ★★★★
Economic Moat: Narrow
Fair Value Estimate: $300
Fair Value Uncertainty: Medium
5-Star Price: $210.00

Broadcom is the product of a bevy of mergers and acquisitions in the semiconductor space. Most prominent is the combination of Avago Technologies and Broadcom, which was consummated in 2016. The company’s latest deal to acquire CA Technologies led to an overly punitive sell-off by the market, which we see as a potential buying opportunity for long-term investors. While CA’s growth profile is admittedly unappealing, we remain positive on the financial benefits of the deal (modest premium, high profitability, and solid cash generation). As we look at Broadcom’s core semiconductor businesses, the former Avago’s expertise in radio frequency filters for smartphones and legacy Broadcom’s dominance in networking, broadband, and wireless connectivity have created a broad and profitable semiconductor behemoth. Longer term, we think Broadcom is part of the heavyweight class of chip leaders and boasts intangible assets around the design of products that go into a multitude of end markets. Near term, healthy spending by cloud vendors and enterprise IT should drive growth in wired and storage. Broadcom has been aiding cloud providers to design custom chips for offloading compute applications, such as Google’s TPU for artificial intelligence inferencing tasks. Consequently, this subsegment of wired has outgrown the broader wired business and should persist as demand for these types of chips increases. We remain positive on Broadcom’s powerhouse networking, RF filter, and connectivity portfolios and believe the inclusion of CA’s mission-critical products should bolster the company’s cash generation potential to fuel future accretive acquisitions.
Utilities: Running in Place, but Hurdles Ahead

Utilities Trade Near Fair Value, With Only a Few High-Quality Dividend Payers at Attractive Prices

► On a global basis, utilities now trade mostly in line with our fair value estimates at a 1.0 price/fair value ratio, the same as last quarter. In the U.S., utilities are slightly overvalued as a group, but most of the high-quality firms trade at 15%-20% premiums to fair value.
► Most utilities across our coverage continue investing heavily in infrastructure, ranging from renewable energy to local energy distribution. As long as energy prices remain stable, we expect 5%-7% annual earnings and dividend growth across the sector during the next few years.
► U.S. utilities’ 3.45% sector dividend yield is just 40 basis points higher than the 10-year U.S. Treasury yield after the recent falloff in bond prices. This is among the smallest premiums since bond yields fell below the utilities dividend yield in 2008. We think the valuation tailwind that utilities have enjoyed from this yield premium could be easing.
► M&A has slowed in 2018 after its blistering pace in 2015-17. The worldwide pool of midsize utilities that would be good targets is shrinking. Most utilities have enough internal investment opportunities to sustain earnings growth without M&A. Reshuffling continues among some large European utilities, most notably recent speculation that giant Electricite de France could split up.
► Hurricane Florence, California wildfires, and the Boston-area gas pipeline explosion in the U.S. illustrate the unplanned operational risks that can hurt utilities investors’ returns.

Utilities appear to have hit a valuation plateau, but we still think downside risks outweigh upside catalysts. After reaching peak valuations in November 2017, U.S. utilities have underperformed the S&P 500 by 17 percentage points. Since the sector reached our fair value midyear, performance stalled. But regulated U.S. utilities still trade at 19 price/earnings, 13% higher than their 10-year average.

We think utilities could be stuck in a Goldilocks pattern—not too hot and not too cold. Equally strong tailwinds and headwinds could keep the sector at a standstill for the foreseeable future. On the positive side, utilities’ fundamentals remain strong, dividend yields remain attractive relative to fixed-income alternatives, and near-term earnings growth is virtually locked in. But we think regulatory and financial risks threaten to derail any upside momentum in the coming years.

Utilities are facing more regulatory scrutiny as they try to raise customer rates to pay for the heavy investment cycle underway. U.K. utilities have been on edge this year anticipating a cut in regulatory allowed returns to keep customer bills in check. In the U.S., utilities are still growing earnings and
keeping customer bills flat due to low energy prices and U.S. tax reform. But regulators are cutting allowed returns, which will slow earnings growth.

Financial risks are building as rising interest rates and plateauing stock prices make investment less attractive. Most utilities have enough financial power from years of ultralow financing costs that they can continue growing 5%-7% for the next few years. But as regulatory returns come down and financing costs rise, net new investment will slow. Utilities will be forced to rely more heavily on public policy support to sustain their current growth rates.

Value investors might like the attractive risk/reward trade-offs that we think utilities like Scana, PPL, and PG&E offer. But we think income investors should hold off until valuations come in for high-quality picks like Xcel Energy, Alliant Energy, New Jersey Resources, and CMS Energy. We still think utilities investors should demand at least a 3% yield before considering a buying opportunity.

Top Picks

**Scana**

*Economic Moat: Narrow*
*Fair Value Estimate: $56*
*Fair Value Uncertainty: Medium*
*5-Star Price: $39.20*

In January, Dominion Energy stepped in as a potential savior for Scana investors who have been punished since management abandoned its new nuclear project in mid-2017. The market remains skeptical that Dominion and Scana have the charm to win over South Carolina politicians, regulators and customers despite what Dominion called the largest proposed financial giveaway to utility customers in U.S. history. We think the companies have a 75% chance of winning support for the all-stock deal, but we estimate the market is giving the deal just a 5% likelihood of closing. Scana trades at a 26% discount to the implied acquisition value as of late September. The alternative is a long legal and regulatory morass as Scana tries to recover some $5 billion of sunk capital and avoid potential bankruptcy if regulators and politicians deny cost recovery and force refunds. We don’t think regulators will go that far and we like Scana’s core business, so we think this is a good risk/reward trade-off for investors.

**PPL**

*Economic Moat: Narrow*
*Fair Value Estimate: $35*
*Fair Value Uncertainty: Low*
*5-Star Price: $28*

PPL has attractive regulated growth opportunities that could produce 6% annual rate base growth through 2022, supported by PPL’s operations in constructive regulatory jurisdictions. Some 70% of PPL’s planned capital expenditures will have little or no regulatory lag. During the next five years, PPL plans to spend $15.4 billion at its regulated utilities and on additional transmission opportunities, supporting our
projected 5.5% annual earnings growth through 2022. The U.K. distribution utility continues to be the focus of investor concern. U.K. politicians are pressuring regulators to reduce the region’s high power prices. Much of the political focus has been around the electric suppliers to which PPL has no exposure. Ultimately, we think the U.K. regulatory environment remains constructive, albeit with lower allowed returns.

Dominion Energy  | ★★★★★
Economic Moat: Wide
Fair Value Estimate: $84
Fair Value Uncertainty: Low
5-Star Price: $67.20

Dominion Energy’s investments in energy infrastructure projects in the eastern United States should result in wide-moat businesses generating approximately 50% of operating earnings by 2021, up from about 30% in 2016. The remaining earnings are primarily from narrow-moat regulated gas and electric utilities in states with long histories of constructive regulatory frameworks, industry-leading sales growth, and high-return investment opportunities. In addition, the 2016 Questar acquisition added a 2,700-mile pipeline network in Utah, Wyoming, and Colorado that we believe will offer wide-moat investment opportunities into the next decade. These opportunities and the earnings power of its core businesses should allow Dominion to increase its dividend 10% in 2019 and in line with earnings through the next decade. Dominion’s wide moat, secure and growing dividend, and long-term earnings growth outlook have the potential to deliver double-digit total annual returns for conservative investors for the next five years.
CMBS: Liquidity to Support Strong Performance in Near Term, With Risks Growing in Years Ahead

No Anticipation of Large Systemic Issues

 ► While we expect the delinquency rate on loans packaged in commercial mortgage-backed securities to remain below 2.5% for the remainder of the year, Morningstar’s growing Watchlist suggests that forward-looking risk is increasing, possibly signaling an inflection point.

 ► Liquidity in the commercial lending market remains strong, a trend that we expect to continue through the fourth quarter.

 ► Apartment rent growth has slowed through 2018 amid increased competition. We anticipate continued slowing through year-end and into 2019.

 ► Pockets of traditional risk warrant monitoring; however, we do not anticipate large systemic issues for some time.

The August 2018 CMBS delinquency rate hit a postcrisis low of 1.94%, and we expect this level to hold or possibly tick lower by year-end given the ongoing liquidations of legacy loans and steady new origination volume. Precrisis loans account for the majority, or 84%, of the total delinquent loans, suggesting that continued loan workouts and resolutions will put downward pressure on the overall delinquency rate. Additionally, new origination volume is stable and will continually inflate the denominator, keeping the overall delinquency rate in check through year-end.

Longer-term, we expect the delinquency rate to gradually increase as postcrisis deals season. Since peaking at 8.5% in May 2012, the delinquency rate steadily declined; however, we believe the rate will reach an inflection point in 2019 or 2020. The burning off of legacy loans has been a significant factor in the steady decline in recent years, though its impact will fizzle, with the legacy balance representing just 4% of the universe today and declining rapidly.

Simultaneously, postcrisis deals will become more exposed to credit events, such as competition from new construction, vacating tenants, and general changes in market demand, as they season. With issuance volumes surging in 2014 and 2015, a large percentage of postcrisis deals are progressing further along the seasonality curve, exposing loans to risks that were not prevalent at issuance, including new supply/increased competition and changing space requirements spurred by technology disruptors across all major property types.
One way that we analyze risk is by examining the Morningstar Watchlist, a forward-looking credit performance gauge. The Morningstar Watchlist sits at $25.4 billion in September 2018, up from a postcrisis low of $17.3 billion in November 2017, a 47% growth rate. Digging deeper, we find that of the newly added loans, 48% were issued in 2014 and 2015. While origination levels also peaked in 2014 and 2015, these vintages make up a proportionally smaller percentage of postcrisis deals at just 33%, signaling that perceived risk is higher for 2014- and 2015-originated deals as loans season. The delinquency rate for postcrisis loans remains subdued at 0.35% as of August 2018, up minimally from 0.11% in January 2017; however, we anticipate an increase as postcrisis deals season further in 2019 and 2020.
High Market Liquidity

We expect the real estate lending market to remain robust through year-end, as the appetite for risk is strong with no signs of slowing down. Spreads on new issuance CMBS bonds suggest that investors are increasingly risk-tolerant and reaching further down the capital stack for yield, according to Commercial Mortgage Alert. Spreads on 10-year AAA rated conduit bonds were 77 basis points over swaps as of Sept. 12, relatively unchanged from the 52-week average of 78 basis points. However, spreads on 10-year BBB-rated conduit bonds were 283 basis points over swaps during the same period, substantially tighter than the 52-week average of 326 basis points.

The commercial lending market continues to be highly competitive, and loan credit spreads remain tight in the borrower’s favor. Capitalization rates are stable, and liquidity is high within the market, a condition that we believe will continue through the fourth quarter of 2018.

Per Commercial Mortgage Alert, CMBS issuance totaled $58.1 billion as of Sept. 14, 2018, up slightly from $54.2 billion for the same period in 2017. We anticipate that the pipeline will remain steady with a continued emphasis on single-borrower activity, as investors favor their ease of re-underwriting, better credit enhancement, and the high quality of assets backing the deals. Single-borrower deals accounted for 48% of third-quarter issuance, up from 40% for the first half of 2018.
High liquidity and strong risk appetite played a substantial role in the resolution of several marquee assets in recent months, a trend that we expect to continue through year-end 2018. Sears Holdings Corp.’s real estate spinoff, Seritage Growth Properties, sponsors a 2015-issued portfolio loan backed by 235 big-box retail assets primarily occupied by Sears.

The portfolio loan relied heavily on Seritage’s business plan to renovate and retenant the struggling Sears boxes with more experiential tenants before the July 2019 maturity. However, Seritage was selling properties amid a struggle to raise capital, and it appeared that the recapture pace was slower than anticipated at issuance, putting pressure on the business plan. Despite the mounting concerns, an affiliate of Warren Buffett’s Berkshire Hathaway Inc. provided Seritage with a $2 billion loan facility in July 2018, allowing the sponsor to pay off its outstanding CMBS debt.

The 666 Fifth Avenue building, a 41-story office tower with a prime New York City location near Rockefeller Center, operated in distress since its loan modification in December 2011. With a February 2019 maturity approaching and opposing strategy perspectives among partners Kushner Companies and Vornado Realty Trust, default appeared imminent. However, in August, Brookfield Asset Management announced that it reached a deal to lease the asset for 99 years and did not disclose the financial terms of the transaction. Citing anonymous sources, multiple news outlets reported that Brookfield paid all rent up front and planned to inject $700 million of additional capital into the asset. This capital investment will allow the sponsor to pay off the loan.

Even within the retail arena, where online competition has served as a disruptor, opportunists persist. Toys ‘R’ Us stores continue to sell off after the company’s September 2017 bankruptcy and liquidation announcement in March. Per a mid-August auction, 115 of the 123 stores from the TRU 2016-TOYS transaction received third-party bids, suggesting that interest for the individual retail boxes other than the trust, who ultimately won all 123 properties in the auction, was widespread.

In fact, according to the auction-related court docket, at least 46 separate entities placed a bid, including the trust. While the ultimate bid prices were not disclosed for the majority of assets, we believe this level of activity suggests that liquidity within the retail market remains high. Interested parties included retailers like Ollie’s Bargain Outlet (via OBO Ventures Inc.), Best Buy Stores, L.P., Raymour & Flanigan (via Raymours Furniture Company, Inc.), and Aldi, Inc.

Lesser known retailers like Scandinavian Designs Inc., a home furnishings retailer primarily located in California, purchased a number of stores, including its first location in Ohio. Despite waning concerns about brick-and-mortar retail, interest in retail space remains prevalent, and we believe it’s a testament to a well-capitalized market environment.

**Falling Multifamily Rents**

The multifamily sector performed well throughout this real estate cycle; however, we’re starting to see slower growth late in the cycle as the effects of booming new supply are evident. Construction activity
was robust in response to large rent gains since 2012, though increased competition is starting to take its toll on rental rates, particularly for markets where new construction was vigorous.

Between 2012 and 2018, national apartment inventory grew by 9.9%, according to CBRE Econometric Advisors, while markets like Denver, Seattle, and Austin, Texas, grew by 20.3%, 18.2%, and 28.6%, respectively, over the same period. National average apartment rent growth was 3.5% annually between 2010 and 2017 but is forecast to slow to just 1.1% between 2019 and 2023. According to data from Zillow, Seattle’s median rent growth was stagnant in July 2018 compared with a 5% annual increase in 2017 and 10% in 2016. Similarly, rental rates have started to decline in areas like Nashville, Tennessee; Portland, Oregon; New York, and San Francisco.

With the onslaught of new supply, landlords are forced to offer concessions and cut asking rent to maintain a competitive occupancy level. We believe the combination of slowing rent growth and increased competition will put pressure on marginally performing multifamily assets for the remainder of 2018 and though 2019.

Near-Term Risk Is Low, Long-Term Maturity Risk Is Elevated

Despite some weakness in the multifamily markets via a rental rate slowdown, we expect overall fundamentals to remain stable through year-end with only pockets of traditional risk present. Risks include online retail sales and consolidation within the grocery and apparel sectors, the late-stage corporate credit cycle and its impact on office demand, and the effect of technology disruptors on various asset types. We believe that strong economic growth will buoy demand across most sectors, and we see minimal systemic risk in the near-term.

Longer-term, we’re concerned about the state of the refinancing environment in 2023 and 2024, when a large percentage of the outstanding postcrisis universe begins maturing. Maturity concerns were prevalent in the years leading up to 2017 and 2018; however, interest rates were favorable and lending conditions were ideal, helping to maintain strong payoff rates.

Although, in the future, we’re concerned that the combination of a higher interest-rate environment and prevalence of maturing loans with little or no amortization could squeeze borrowers at maturity. The Federal Reserve has initiated interest rate hikes since 2015 and has made it clear that future hikes are necessary if inflation climbs too high. Given today’s market conditions and the Fed’s current monetary policy, it seems likely that interest rates will climb higher by 2023.

Adding to the risk is the prevalence of interest-only loans, creating a notably riskier refinancing environment. Full-term interest-only exposure, which serves as a gauge of long-term balloon risk, represented 73% of all loans originated for the nine months ended September 2018, up from 68% in 2017 and 52% in 2016, per Trepp, LLC data. In fact, the percentage of full-term interest-only loans increased every year since 2010, surpassing the previous peak of 60% in 2007.
While loan/value ratios for newly originated loans have remained stable between 56% and 61% since 2010, according to Trepp, the underlying appraised value is based on market value, so the LTV is vulnerable to shifts in market demand and valuation dynamics. Should market values fall or performance weaken, either of which could be spurred by a higher interest-rate environment, borrowers will need to inject substantial amounts of equity to successfully refinance in future years.

Source: Trepp, LLC
PitchBook Venture Capital Outlook: Late-Stage Valuations Rise, Spotify Sets an Example

How Our Predictions Played Out

In January 2018, PitchBook’s venture capital research analysts provided a list of predictions and themes to keep an eye on throughout the year. Below, we look at how two of our predictions have begun to play out.

Prediction: VC valuations will continue to bifurcate, with late-stage pricing remaining elevated, while angel and seed funding will pull back.

Rationale: Following a period of exponential expansion, deal activity in the angel and seed market has pulled back from its peak, which should start to alleviate the upward pressure on valuations. Concurrently, the large pool of capital available—including funds recently raised for late-stage deals—should translate to continued strong competition for deals.

Caveat: Companies receiving angel and seed funding may continue to raise their initial institutional capital later in their life cycle and command higher valuations as a result. Late-stage companies are more susceptible to broad market or economic shocks, which would reverse the trend in late-stage valuations. At the current stage of the business cycle, we think the risk of these types of shocks has increased.

Update: Angel and seed valuations have moved against our predictions, continuing a multiyear trend upward. Since 2015, deal counts have shrunk while round sizes have steadily increased. This is true across all investment stages. In second-quarter 2018, the number of seed-stage deals under $1 million decreased, but deals sized $1 million to $25 million increased this year versus last year. Valuations and deal sizes have crept higher due to a rise in available capital and competitiveness among investors. At the beginning of the year, we anticipated that the angel and seed market would evolve and that small investors would return to the market as larger investors moved to earlier or later stages with less inflated valuations. As of the second quarter, however, deal sizes and valuations have continued to climb, albeit at a slower rate. We continue to believe that the angel and seed market will equalize, and that valuations will return to the $3 million to $4 million range of 2010 to 2012.

With respect to late-stage valuations, second-quarter data is in line with our prediction. Late-stage premoney valuations increased sharply from $260 million to $350 million. In our original prediction, we
expected year-over-year valuation growth to revert toward an average of 22% seen from 2010 to 2015. In fact, the 2018 median premoney valuation for late-stage deals has grown 22.9% year to date, reaching an all-time high of $350 million. This record-breaking performance can be attributed to a move by VC firms to raise larger funds as well as increased interest and participation from nontraditional VCs such as sovereign wealth funds and corporate venture arms. We expect that rising interest in the venture space will continue to propel valuations and deal value to new highs.

Exhibit 1 Valuations Continue to Climb
Median U.S. premoney valuation ($M) by series

Source: PitchBook

Prediction: Alternative exits will become less alternative.

Rationale: Lengthening exit timelines have driven investors to seek out more creative ways to find liquidity besides strategic acquisitions — traditionally the most prevalent exit route. To that end, alternative ways of accessing the public markets, such as special purpose acquisition companies and direct listings, should continue to gain popularity. Furthermore, the access ramps (e.g. exchanges and brokerages) to the direct secondary markets have increased as of late, which will help both investors and employees achieve liquidity even without a full exit.

Caveat: Strategic acquirers could resume a more acquisitive attitude toward VC-backed companies, resulting in a return toward the heightened acquisition volumes of 2012-16. Additionally, the new and relatively uncertain alternative IPO options currently being tested could prove unsuccessful and discourage others to follow suit. Finally, stock market performance could weaken, putting pressure on the IPO window and further delaying companies poised to go public.

Update: Spotify was the most significant alternative exit of the second quarter. The firm’s direct listing opened to public markets at $165.90 on April 3, 2018. The stock has outperformed many analysts’ expectations and has experienced minimal volatility compared to other high-profile tech IPOs. On day
one of the direct listing, the stock jumped as high as $169.00 and fell as low as $148.26, but this 14% spread is low in terms of volatility for a tech IPO. Since then the stock has risen undramatically to a high of $198.99. This was surprising to some analysts, and even Spotify itself, which expected high volatility due to the direct listing approach. The minimal volatility adds evidence to VC-backed firms that direct listings are a viable exit approach. We continue to expect an uptick in direct listings in the near future, with the caveat that a direct listing may make sense only for public-facing firms that are able to garner excitement without traditional pre-IPO roadshows.

One key development that led to the success of Spotify's direct listing was a series of direct secondaries prior to exit. Secondary transactions allowed exiting investors to achieve liquidity by selling shares to new investors. These transactions also assisted in the price discovery process, giving Spotify and its bankers a strong sense of potential valuation on the public market. This helped Spotify set an accurate price, garnered significant investor interest and reduced volatility during the initial days of trading. We've seen a number of secondary transactions since Spotify went public. Uber, a privately held unicorn, is overdue to be taken public. That firm facilitated a secondary transaction of $500 million in May 2018. In the second quarter, there were 17 private secondary transactions, a 55% increase from the first quarter. We expect to see a continued uptick in private secondary transactions of VC-backed firms as exit times continue to lengthen, leading investors to seek out alternative exit opportunities.
PitchBook Private Equity Outlook: Software Receives More Interest; Niche Vehicles Garner Commitments

How Our Predictions Played Out

In late 2017, PitchBook’s private equity research analysts provided a list of predictions and themes to keep an eye on throughout the year. Below, we look at how a few of our predictions have begun to play out.

Prediction: PE investment in software will proliferate further

Rationale: Fast-growing software firms, particularly those with the recurring revenue typical of a SaaS business model, can provide a much-needed source of growth for financial sponsors—both in terms of portfolio company earnings and the pool of investable companies.

Caveat: Given the fast-moving and innovative nature of software companies, operational improvements may prove too difficult, while sky-high valuations may scare away potential suitors.

Update: The momentous rise in software’s proportion of dealmaking is altering the PE landscape. The trend of PE firms buying more VC-backed companies is amplifying software’s growth in dealmaking. As these two private market practitioners interact more, software is poised to further lift its share of buyouts. VC-backed companies accounted for 3.7% of PE buyouts at the midway point in 2018.

Within VC, software represents 43.0% of the number of deals through the first half of 2018. Within PE, software represented 11.9% of buyouts in 1H 2018 compared to just 10.2% in 2017, 8.3% in 2016 and 7.0% in 2015. PE will look to more VC-backed companies as they seek to deploy record levels of capital through buyouts and growth rounds, such as KKR’s recent announcement to provide $400.0 million in growth equity to VC-backed AppLovin.
Exhibit 1 The Proportion of PE Deals Sourced From VC Portfolios Swells
VC-backed companies as a proportion of U.S. PE buyouts

Source: PitchBook

Prediction: Niche fundraising will continue its rise

Rationale: Due to the rising competition in traditional realms of PE, it will likely be easier for more niche strategies to identify opportunities to deliver alpha.

Caveat: Appetite for private market exposure might be so strong that some LPs can realistically meet their commitment targets only by committing large sums to traditional buyout funds.

Update: Through the first half of the year, activity and fundraising within niche PE spaces has remained resilient. In particular, fundraising and deal activity within the general partner stakes category is flourishing, with dealmaking in 2018 already matching annual records. Vigorous fundraising for the GP stakes strategy illustrates the success these niche players are having.

To note, Dyal is raising its fourth fund and AlpInvest is in the market for its first fund—attempting to raise $500.0 million. As LPs get more comfortable with PE and raise allocations — such as The University of Texas/Texas A&M Investment Management Company, which recently elevated its PE allocation from 17.5% to 25.0%, a 43.0% increase — they often want exposure to the more niche areas within PE, offering comparable risk-reward but not just the plain vanilla leveraged buyout. Along with GP stakes, the fundraising environment within real estate and secondaries is rapidly developing.
Exhibit 2 Fundraising in GP Stakes Burgeons
Open GP stakes first-time funds

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<thead>
<tr>
<th>Fund Name</th>
<th>Target amount ($M)</th>
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<tr>
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Source: PitchBook

Prediction: LP net cash flows continue to fall

Rationale: After steadily climbing from 2009 through 2013, LP net cash flows plateaued before dipping in 2016; looking at investment and exit activity year to date in 2017, the data suggests that this downturn is likely to hold throughout 2017, as exit activity remains lackluster and PE firms continue to write bigger equity checks with buyout multiples hovering near all-time highs.

Caveat: PE firms have been utilizing more creative—and harder to track—ways to realize value without fully exiting their investments, which could provide an unanticipated boost to distribution figures.

Update: PE net cash flows through 2017 came in at $132.7 billion, increasing for the first time since 2014. The downward trend—which began after the 2014 peak in net cash flows—has been broken. Distributions from PE firms hit a record $426.6 billion, eclipsing the previous peak in 2015 of $421.0 billion. To note, even though the exit activity has been less vivacious than the peak years, PE firms are using recaps and other means to distribute LP capital without the need for a full exit. Cash flows are cyclical.

This environment of continued heightened exit activity—as PE firms sell to capture high multiples at a time that many feel is “late in the cycle”—has caused distributions to swell. In addition, capital calls reached record levels in 2017. We will need to watch the trend unfold over the next couple of years before determining whether this is a shorter-term blip in the downtrend or a true reversal; however, at this point it looks as though our original prediction has not held up.
Exhibit 3  The Downward-Sloping Trend in PE Net Cash Flow Stabilizes

Global PE cash flows

Source: PitchBook
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 (e.g., 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

<table>
<thead>
<tr>
<th>Economic Moat</th>
<th>Stewardship</th>
<th>Morningstar Fair Value</th>
<th>Price Fair Value</th>
<th>Uncertainty</th>
<th>Morningstar Rating™ For Stocks</th>
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<td>Moat Trend</td>
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<td></td>
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</table>

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 (EBIT) and the net new investment (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 ("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 EBIT 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.
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).

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★★★★★ 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.

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