



2020 Annual Outlook

Rebound!

At the end of 2018, sharp market declines were causing investors anxiety. One year later, capital markets have rebounded sharply and investors are feeling quite buoyant. Unfortunately, the rebound was based on a reversal of U.S. Federal Reserve policy that allowed markets to climb a wall of worries, and was not based on support from underlying fundamentals. This leaves many markets in an elevated position with respect to valuations that should dampen investors' future return expectations, particularly in the U.S. and some other developed markets.

Is inflation dead? Central bank policy certainly suggests that few policy makers are worried and most want to do even more to encourage prices to rise. We argue that the Phillips curve – the relationship between labor markets and prices – is not broken, but merely shifted, and that the release valve for these pressures appears to be reducing smaller company margins.

We take a deeper dive into value stocks and why they have trailed growth stocks to the largest degree in 70 years. Many traditionalist value investors suggest that investors should simply wait for the reversion that has always occurred after a period of divergence. We explain why we believe there are larger, structural forces at work that won't encourage the gap to close.

For well over a decade, Gresham has allocated significant capital to Chinese venture capital investments. We explore the superior performance of these investments relative to the strong performance of U.S. venture investments and what the future might hold as Chinese venture investors experience "winter" for the first time.

Markets in Review

What a difference a year makes! The market declines of late 2018 hammered investors with the worst equity market losses since 1931, eclipsing the 20% peak-to-trough decline that defines a bear market. Additionally, as we mentioned in last year's *Annual Outlook*, the breadth of the 2018 declines was nearly unprecedented. Not for over half a century had we witnessed equity, credit and safe-haven government bonds all underperform cash such that even the most conservative investors were not spared losses. Investors worried that market declines would evolve into a rout and sentiment was particularly dour.

In 2019, nearly every asset class rose. Investor sentiment is buoyant after a year in which world equity markets were up over 27%, delivering the best year since 2013. The year was filled with stair-step achievement of successive record highs. What great news was the market responding to? Gains were driven more by what did not go wrong rather than what went right. Slowing economic growth, weak corporate earnings and the China trade war brinksmanship dominated headlines, but nothing bubbled over into a real problem. As a result, equity gains were driven primarily by multiple expansion, rather than improving fundamentals, to the second largest degree in over 30 years. These now lofty valuations are once again putting pressure on future stock earnings to support equity prices at current levels.

As part of this 2019 reversal, as shown in **Chart 1**, U.S. equity markets increased 31.5%, with the tech-heavy NASDAQ 100 index increasing nearly 40% and the S&P Information Technology index increasing 50%. Relatedly, the disparity of performance between value stocks and growth stocks reached the widest level since the Tech Bubble. The dispersion was particularly acute for small-cap value stocks relative to large-cap growth stocks that include tech behemoths such as Google, Facebook and Netflix.

Chart 1. Capital Market Performance

Market	Index	2019	Performance		Valuations	
			3 Year	5 Year	Dec 2019	Dec 2018
World Equity	MSCI World	27.7%	12.6%	8.7%	16.9x	13.5x
U.S. Equity	S&P 500	31.5%	15.3%	11.7%	18.2x	14.3x
International Equity	MSCI AC World ex U.S.	21.5%	9.9%	5.5%	14.1x	13.8x
Europe Equity	MSCI Europe	24.6%	10.5%	5.7%	14.6x	11.9x
Emerging Market Equity	MSCI Emerging Markets	18.4%	11.6%	5.6%	12.9x	10.4x
China Equity	MSCI China	23.5%	15.6%	7.5%	12.3x	10.0x
India Equity	MSCI India	7.6%	11.4%	5.1%	19.1x	17.4x
Frontier Market Equity	MSCI Frontier Markets	18.0%	9.2%	2.7%	10.1x	9.9x
Spreads vs. Treasuries						
10-Year Treasury	Citi Treasury Benchmark 10-Year	8.9%	3.6%	2.3%	-	-
Municipal Bonds	Barclays Mgd Money Short/Int	5.8%	3.5%	2.6%	53bps	55bps
U.S. High-Yield Bonds	Barclays High-Yield Corporate Bond	14.3%	6.4%	6.1%	336bps	526bps
Emerging Market Bonds	J.P. Morgan Emerging Market Bond	14.4%	6.1%	5.9%	303bps	343bps
Hedge Funds	HFRI Fund Weighted	10.4%	4.5%	3.6%		
Conservative Hedge Funds	HFRI FOF Conservative	6.6%	3.2%	2.4%		
Commodities	Bloomberg Commodity Index	7.7%	-0.9%	-3.9%		
Gold	Spot Price of Gold	18.3%	9.6%	5.1%		

Source: Bloomberg, MSCI, FactSet, Hedge Fund Research, Inc.

Typically, years with value/growth performance gaps of this magnitude have preceded market turning points, such as 1998 and 1999 prior to the Tech Bubble and again in 2007 prior to the Great Financial Crisis (“GFC”). We discuss this market dynamic later in greater detail and explain why it might (or might not) presage a turning point.

Emerging market equities also posted a strong performance for the year, increasing over 18%. However, the dispersion among various countries within emerging markets remains quite high, exemplifying the challenges of investing in these markets. On one end, Argentina fell 20% on the dashed hopes of reformer Mauricio Macri’s failed reelection bid, which when combined with the 50% loss in 2018 more than offsets the 70% rise in 2017. On the other hand, Greece rebounded over 40% after falling nearly 40% in 2018, as financial reforms finally gained traction nearly a decade after the GFC and the Greeks rejected a failed populist government. Even Chinese A-share equities, which were among the worst performing markets in 2018, rebounded with one of the best performances of the year, up over 37%, despite facing the headwinds of trade war rhetoric for most of the year.

Equity markets were not alone in their rebound from the late-2018 panic, as fixed income markets also provided robust appreciation for investors, with core fixed income indices increasing over 8%. These gains were fostered by Federal Reserve (“Fed”) interest rate cuts, causing sharp gains in Treasury markets. Long-dated Treasuries increased 16.4%, as the yield on the 30-year Treasury bond fell from 3.01% to 2.39%. Municipal bonds also performed well, as strong demand outstripped reduced supply and created a favorable environment. It was truly a year of reversals.

As we approach calendar milestones, such as the turning of the decade, it’s always tempting to take a longer-term view to provide context to recent performance. During the decade of the 2010s, the S&P 500 increased 257%, annualizing at 13.6%. While this seems like an extraordinary decade, it ranks as only the fourth best of the last nine since the Great Depression in 1929. In contrast, during the prior decade of the 2000s, the S&P 500 index experienced a cumulative 9% loss. So, the decade of the 2010s was a rebound decade as well.

Is Inflation Dead?

The historic length of the current economic expansion causes the question of inflation, or better said the lack of inflation, to continue to puzzle investors and economists, while affording central bankers the luxury of keeping monetary conditions easy and supportive of capital markets. Beginning in the 1960s, inflation became the scourge of the world economy and the bane of several American presidents. President Nixon ordered a freeze on “all wages and prices throughout the United States,” an action that would seem draconian today. His successor, President Ford, distributed WIN (“Whip Inflation Now”) buttons and Ronald Reagan, who ran for office four years later, declared “inflation is as violent as a mugger, as frightening as an armed robber and as deadly as a hit man.”

But today, this evil villain is seemingly nowhere to be found despite more than a decade of economic expansion and zero interest rate policies from the world’s central banks. Low inflation is particularly vexing in the current environment given

the decade-long U.S. economic expansion in which labor markets appear incredibly tight, unemployment recently reached a 50-year low of 3.5% and capacity utilization is high by every measure. Is inflation dead?

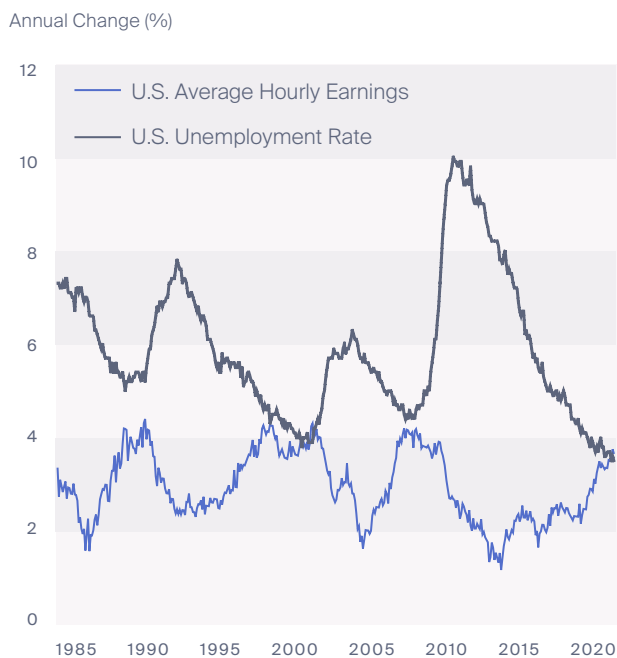
Is the Phillips Curve Broken?

Some economists have described the Phillips curve as the single most important macroeconomic relationship. In 1958, William Phillips wrote a paper detailing the relationship in the U.K. between the unemployment rate and the rate of change in wages. In 1960, Paul Samuelson and Robert Solow took Phillips' work and made explicit the link between inflation and unemployment: When unemployment was low, inflation was high and vice versa.

At their core, many of the modern-day central bank price-stability policy setting mechanisms are based on this concept. Today, the Phillips curve concept is coming under attack as global central banks have failed to reach their inflation targets even as unemployment reaches historic lows. According to *The Economist*, by GDP, 91% of the inflation-targeting central banks have inflation in the bottom half of or even below their targeted range despite their persistent efforts to raise general inflation levels. This includes nearly all the advanced economies of the world.

Is the Phillips curve dead? The answer is “no”, but inflation isn't behaving quite how economists expect. **Chart 2** shows that the inverse relationship between unemployment and wage growth appears solidly intact. However, the Fed is behaving as if inflation is completely dead by reducing interest rates to levels below that of their inflation target, essentially pushing real interest rates to zero once again. In the Fed's defense, its favorite deflation gauge, the core Personal Consumption Expenditures (“PCE”) index, remains stubbornly below 2%, as shown in **Chart 3**, allowing the Fed to continue with

Chart 2. Inverse Relationship between Unemployment and Inflation



Source: BCA Research

Chart 3. Inflation Remains Stubbornly Low



Source: Bureau of Labor Statistics and BEA
PCE: Personal Consumption Expenditures

easy money policies designed to encourage economic growth and capital market appreciation.

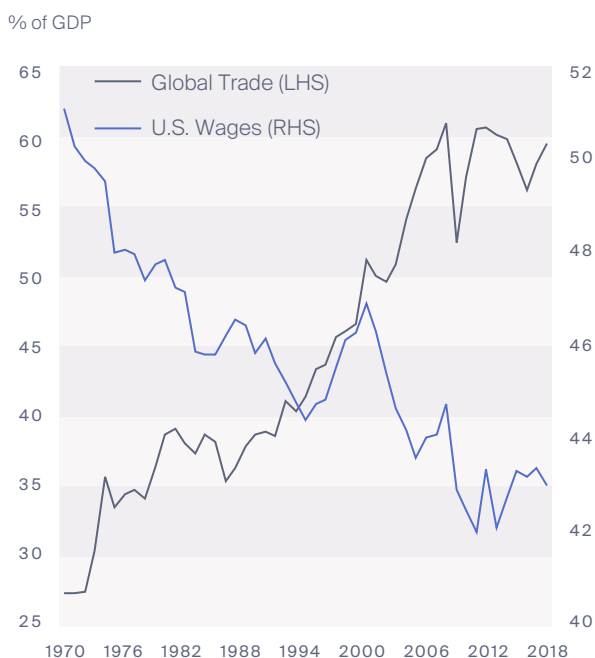
So, why does generalized inflation remain stubbornly absent from the economy? And, why do we care? The answer to the first question is unclear, but there are several possibilities that might give us a clue. Most importantly, these answers might provide important insight on future Fed behavior.

Globalization and the Gig Economy

Some economists believe that in today's global economy, tight labor markets are alleviated by outsourcing work to other countries, where the supply of labor is plentiful and wages are generally lower. This has been true up to a certain point, as shown in **Chart 4**. As global trade increased during the 1990s, through NAFTA and other free-trade initiatives, U.S. wages began to decline by many metrics, as cheaper labor could be found in other countries. This offshoring of labor is no longer a U.S. phenomenon, as the percentage of OECD countries whose labor markets have tightened spiked from below 50% to nearly 90% over the last few years, as shown in **Chart 5**. These countries are also experiencing similar stubbornness in their inflation rates.

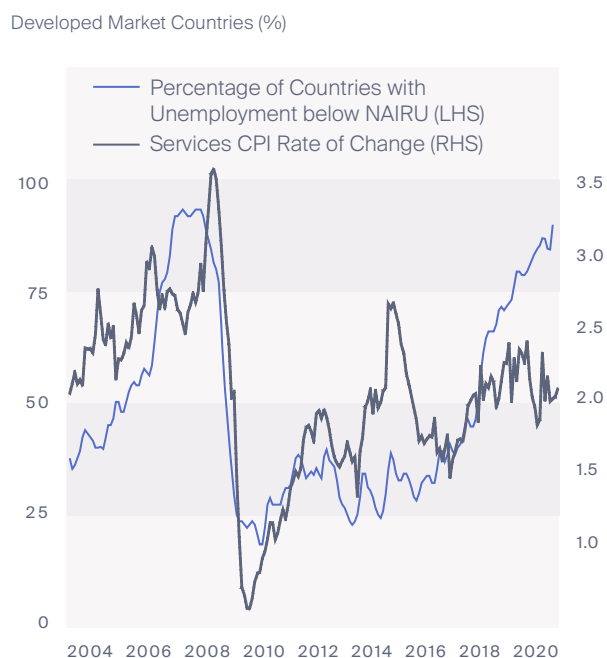
Perhaps the nature of employment itself is changing? How people live and work has changed dramatically over the past decade. Mobile computing has become pervasive with the near-universal adoption of smartphones. This has opened new ways for people to connect to everything, including employment. Picking up a “gig” or temporary work engagement has become nearly as easy as making a dinner reservation, hailing a ride or finding a date. For a corporation, it is easier and far less expensive to hire a contractor instead of a permanent employee with costly benefits.

Chart 4. Global Trade Depressed U.S. Wages



Source: St. Louis Federal Reserve

Chart 5. Low Inflation and Unemployment are Global



Source: OECD and BCA Research
NAIRU: Non-Accelerating Inflation Rate of Unemployment

Why should a company worry about paying payroll taxes or offering vacation and sick days when it could save money by hiring a contractor?

It is trendy to glamorize the gig economy for its flexibility, freedom and fulfillment, but the reality is the trend has become so pervasive it is likely dampening wage growth. A recent Fed paper, *The Survey of Household Economics and Decision-Making*, found that 31% of adults, roughly 78 million people, participated in the gig economy. The questions “What is your job?” and “Who is your employer?” often don’t have clear or lasting answers anymore. We – and particularly policy-setting bodies like the Fed – need new ways of asking these questions in order to accurately measure workforce participation.

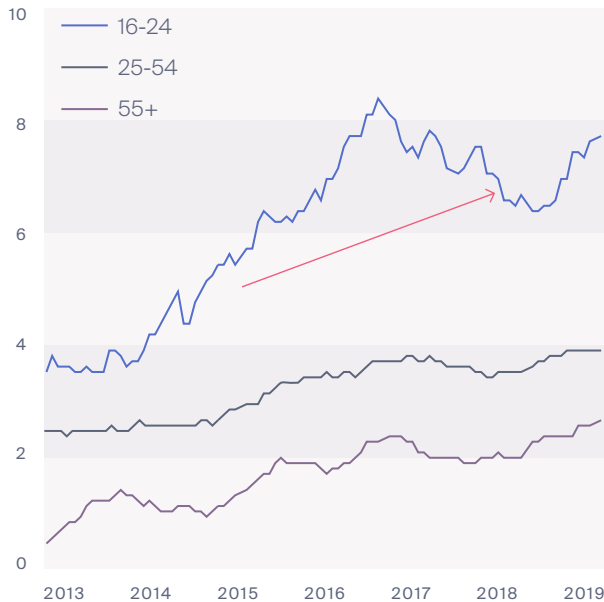
While the gig economy may have permanently lowered the non-accelerating inflation rate of unemployment (“NAIRU”) and forestalled wage increases, it has not broken the linkage. And, in fact, wage growth has been persistently rising over the last few years. Even though Millennials are leading the way in this regard – 47% say they freelance – wage inflation is now growing across all age groups, particularly younger employees, as shown in **Chart 6**. Additionally, wage growth for the low-skill worker, often a significant percentage of the gig labor force, is now accelerating at rates near those of mid- and high-skill employees, as shown in **Chart 7**. The evidence is getting clearer that the Phillips curve, at least as it relates to wage inflation, is still very much alive.

The Broken Link

So why does higher wage growth not translate into higher prices and inflation? The Amazon effect has been an increasingly powerful disinflationary wind blowing through American retail for several decades, as shown in **Chart 8**. The prices of household furnishings and consumer goods have remained essentially flat, which is astounding

Chart 6. Wage Growth Strongest among Young

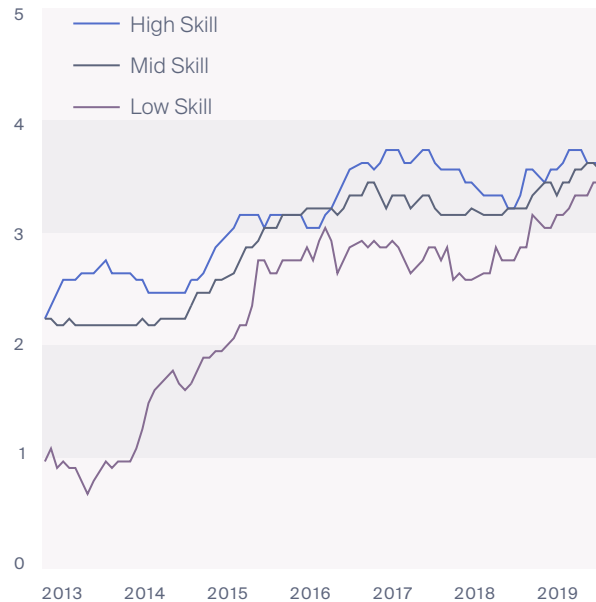
Median Wage Growth by Age Groups (%)



Source: Federal Reserve Bank of Atlanta

Chart 7. Wage Growth Increasing for Low Skill Workers

Median Wage Growth by Occupation Skill Level (%)



Source: Federal Reserve Bank of Atlanta

considering the enhanced functionality – think TVs, smartphones, automobiles – that consumers have received. Pricing pressure started in the 1990s when big-box retailers such as Walmart and Target ruthlessly sourced cheaper goods and optimized supply chains to place perpetual downward pressure on prices.

As a result, few corporations – especially smaller, consumer goods firms – have the ability to raise prices and many are now stuck between a lack of pricing power and increasing wage pressure. This situation is beginning to cause profit squeeze and places corporate earnings under increasing pressure. Over the last few years, investors have marveled at the increasing margins of U.S. companies. However, when we look a bit deeper, the story is not so clear. **Chart 9** shows that while the largest public companies, led by stalwarts such as Amazon, Google and Facebook, have been able to drive their own margins higher, smaller companies have been struggling to maintain margins and profitability.

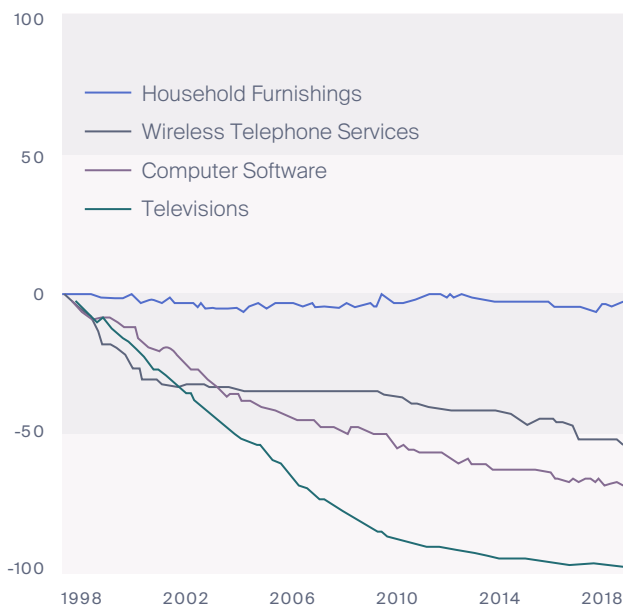
The Fed's Reversal

After four interest rate hikes during the first three quarters of 2018 and expectations for three more hikes in 2019, the U.S. appeared to be leading the world out of an era of experimental monetary policy. This caused us to declare in our past *Annual Outlook* that we had passed the point of “peak central bank” and warned of the volatility-elevating impacts that such a withdrawal of liquidity was likely to have on capital markets. We witnessed these expected sharp market declines in the fourth quarter of 2018.

When combined with softening economic data, some of which was caused by the impact of China trade policy, sentiment shifted quickly. Fed policy expectations reversed from their path of continued interest rate hikes to an easier monetary posture, as shown in **Chart 10**. In 2019, the Fed lowered short-term interest rates three times,

Chart 8. Retail Deflation

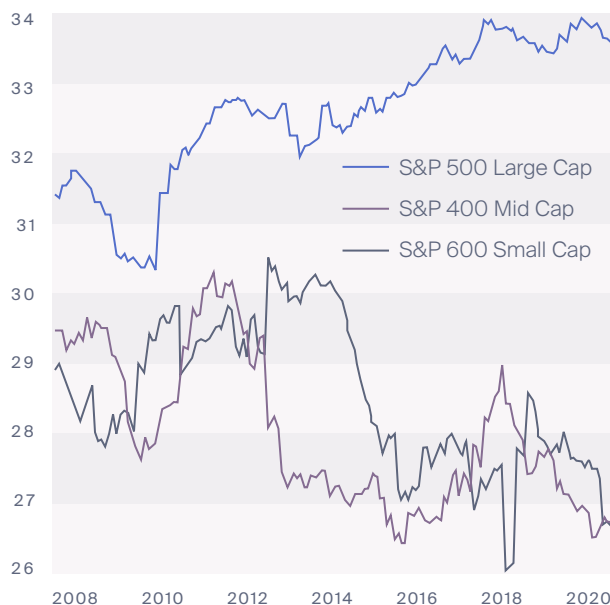
Change in Retail Prices (%)



Source: Bureau of Labor Statistics and howmuch.net

Chart 9. Small Company Margins Decline

U.S. Public Company Gross Margins (%)



Source: Bloomberg LP

which is unprecedented this late in an economic cycle, particularly on the heels of massive fiscal stimulus in the form of corporate and individual tax cuts.

A month ago, Fed Chairman Jerome Powell stated that “in order to move rates up, I would want to see inflation that’s persistent.” According to BCA, the U.S. yield curve is still discounting a slight rate decline, but not another full 25bps decrease, in short-term interest rates this year. Perhaps this is correct. Perhaps economies have changed in ways that are not yet fully understood and monetary policy must aggressively adapt to the new reality. However, even if the Phillips curve isn’t dead, but the inflation linkage is simply slower to react than in the past, the market is still likely leaning in the wrong direction.

We believe labor markets will continue to tighten and inflation will likely retain its slow-moving progression, all of which is normal late in an economic cycle. As a result, Fed rate hikes will be needed – it’s simply a matter of when, not if – but we expect inflation’s creep will remain slow so that rate hikes will not be needed soon and possibly not until after 2020.

Global Growth and Key Risks

Our view that global growth is likely to accelerate in 2020, after a mid-cycle slowdown in 2019, rests on several important factors:

- The dovish pivot by the Fed last year will tend to benefit the economy with somewhat of a lag.
- Related lower interest rates are likely to help the mortgage and housing markets.
- Ongoing tight labor markets and (slowly) rising wages will benefit consumer spending, which represents 70% of the U.S. economy.
- Presidential election-year policies will be designed to improve President Trump’s re-election chances.
- China’s economy appears to be improving in response to stimulus efforts and sentiment, and it is likely to improve further after the easing of trade tensions with the U.S.
- The coronavirus outbreak in China is contained and its negative economic impact will be limited to the first half of the year and likely mitigated through Chinese government stimulus.

Historically, most recessions occur due to Fed tightening in response to rising wages or prices or an unexpected shock to the financial system. The Fed recently eased three times and the probability of a quick reversal to a tighter monetary policy appears remote with inflation unlikely to spike suddenly. As a result, the primary risk to the economy appears to be in the form of unexpected shocks, which by definition are unpredictable, but we offer a few candidates for consideration.

Trade Tensions Flare

The recent signing of a “trade truce” between the U.S. and China has, for the moment, reduced tensions. All parties are saying nice things, but we expect trade tension to continue indefinitely. The Thucydides Trap describes the theory that when one great power threatens to displace another, war is almost always the result. The great historian Thucydides wrote that “It was the rise of Athens and the fear that this instilled in Sparta

that made war inevitable.” Today, the irresistible force of a rising China is on course to collide with an immovable America. This will be a decades-long transition and is very likely to result in continued conflict for years or possibly decades to come. Investors will learn to live with this tension, as they did with the Cold War, but episodic flareups or worse will occur and cause disruptions to capital markets.

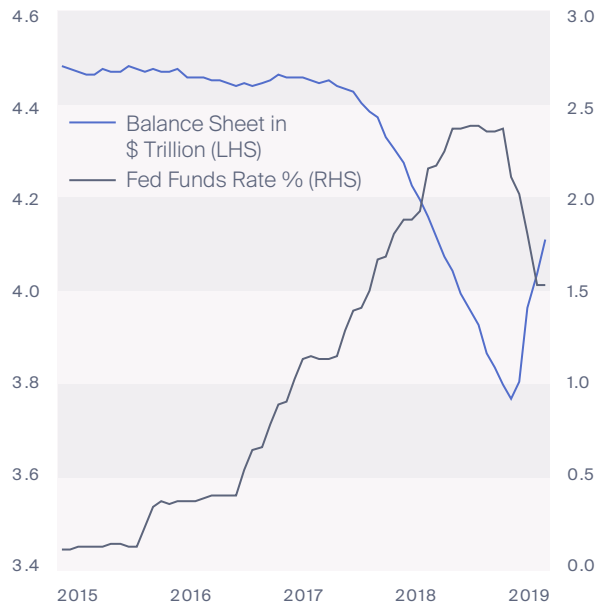
Regulatory Ramp

There are two regulatory or policy concerns investors should consider. The first concern is whether the government will determine that today’s ubiquitous tech giants are adversely affecting consumers or systematically stifling competition. Some preliminary investigations are already underway and the impact could be substantial. These large tech leaders have been disproportionately concentrated drivers of the S&P 500 performance over the last decade, and they have been enormous drivers of underlying index fundamentals, such as revenue and earnings growth. Quite simply, regulations targeting these companies and their business practices would significantly reshape the U.S. stock market’s future return potential as measured by traditional indices.

The second concern relates to a progressive overhaul of the U.S. economy. While the election is not until late in the year, a strong showing by a very progressive candidate, such as Elizabeth Warren or Bernie Sanders, could have a chilling effect on capital markets and the overall economy. Even though the likelihood various progressive policies they espouse will be enacted as proposed might be small, the impact of those policies would be significant. J.P. Morgan recently compared the tax collection results of President Roosevelt’s New Deal legislation with projections for the existing Warren proposals, as shown in **Chart 11**. According to J.P. Morgan, the effects of Warren’s tax increase proposals are projected to be 2.5 times larger than the results of FDR’s

Chart 10. The Fed Reverses Course

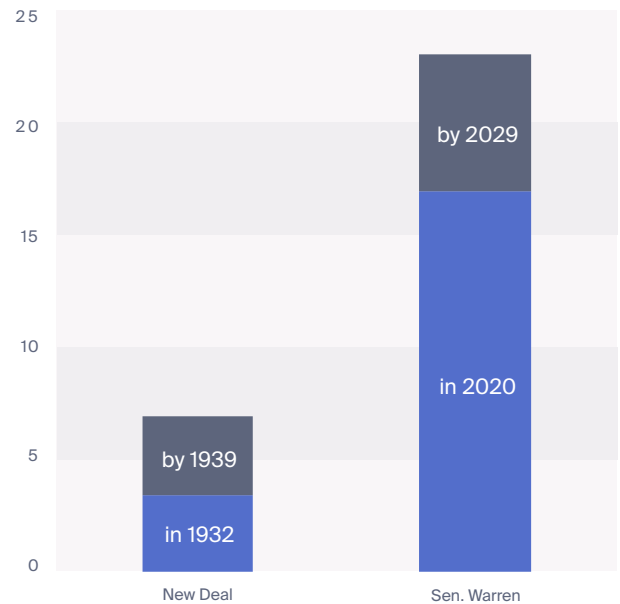
U.S. Federal Reserve Monetary Policy



Source: Federal Reserve Bank of St. Louis

Chart 11. Progressive Tax Proposals in Context

Annual Federal Tax as a % of GDP



Source: JPMAM, Federal Reserve Bank of St. Louis, NTU CRFB and CBO

New Deal, which some regard as the greatest expansion of the U.S. government into the private sector in American history. Additionally, proposed restrictions on share buybacks and other free-market mechanisms by these candidates could have a significant negative effect on markets if polling numbers start trending in their direction.

Capital Market Valuations and Implications

World equity markets, up over 27% in 2019, enjoyed their best year since 2013. While this is a great outcome for investors, performance was not driven by the “right” factors. Instead of improving underlying fundamentals, such as earnings growth, gains were driven by the removal of negatives, such as receding trade tensions, diminished risks of a hard Brexit, reduced odds of a victory for Elizabeth Warren in the U.S. presidential election and a sharp reversal of Fed interest rate tightening. As a result, equity market valuations have once again reached very high levels, putting pressure on future earnings growth to support markets going forward.

Investment Flows

Somewhat surprisingly, these equity market gains came without broad retail support. According to Lipper, equity-oriented mutual funds and ETFs suffered net redemptions of \$180 billion – the worst year ever recorded by Lipper and far exceeding the \$113 billion of net outflows in 2016. The primary support for equity markets now comes from corporate buyback programs as we will discuss in greater detail.

On the other hand, flows into money market funds and bond funds are at record levels – net inflows exceeded \$950 billion during 2019 – and potentially causing even greater valuation problems in those markets. This shift from equity funds to bond funds has become gargantuan. According to the Investment Company Institute, over the last three decades the percentage of fund flows into bond funds and ETFs increased from 10%, to 26%, to 74% of total inflows.

Similarly, the inflow to municipal bond funds surpassed the previous annual record, set in 2009, by more than 40%. One-eighth of all the assets held by municipal-bond funds arrived in the past year alone. That’s remarkable, considering that muni funds have been around since 1976. According to Morningstar, Vanguard’s Tax-Exempt Bond fund took in \$2.7 billion – growing by more than two-thirds in a single year. Some of this ballooning demand likely relates to the 2017 federal tax overhaul that capped the state and local tax deduction and made tax-exempt municipals one of the few remaining areas for investors to shelter income.

Corporate Earnings

Rising corporate earnings are the most dependable fuel for market gains. Unfortunately, 2019 provided very little of this fuel. While earnings releases are not yet complete, the latest estimates for Q4 S&P 500 earnings is -0.3%. If true, this would bring full calendar year earnings growth to roughly zero on revenue growth of a rather modest 4%. Further, this would mark the fourth straight quarter of year-over-year earnings declines, which would be the first time this has occurred since 2015-2016.

The good news is that analysts currently forecast positive earnings growth for 2020, the first two quarters of which are likely to be modest, in the mid-single-digit range, with some acceleration in the second half of the year. As a result, earnings growth is expected to reach nearly 10% for calendar year 2020. Unfortunately, analysts are a

notoriously optimistic bunch and it is a time-honored tradition for estimates to decline as we get closer, as shown in **Chart 12**. For example, on September 30th of last year, analysts estimated that fourth quarter earnings would grow by 2.5%, nearly three percentage points higher than where they are likely to finish.

While earnings numbers are likely to be revised downward, we believe 2020's overall positive earnings outlook and improving global economic growth will remain supportive of capital markets. Central bank easing, as we experienced in 2019, typically leads to an uptick in general economic activity with a lag of six to 12 months. Additionally, we are seeing accelerating economic activity around the globe with European earnings expected to rise by nearly 7% in 2020 and Asia ex-Japan earnings expected to increase by 13%. However, the recent coronavirus concerns may dent this optimism for a short period, particularly in emerging markets. On the positive side, emerging markets inflation has reached a record low of under 4%, which should allow emerging markets central banks to remain accommodative to ensure that growth stays strong without concern of rising prices.

Valuations

The ratio of the price of the S&P 500 to its forward four-quarter earnings estimates ("PE ratio") has now climbed to 18.6x, as shown in **Chart 13**, well above its ten-year average of 15x. This is the second highest mark in history behind only the Tech Bubble. Not surprisingly, the most elevated PE valuations continue to be found in the technology sector (22.7x), where we see the strongest earnings growth, and the consumer discretionary sector (22.5x).

When stock gains outstrip earnings growth, it can be a cause for alarm. Monitoring this relationship can help investors understand if the market is getting ahead of itself.

Chart 12. S&P 500 Earnings Downward Revisions

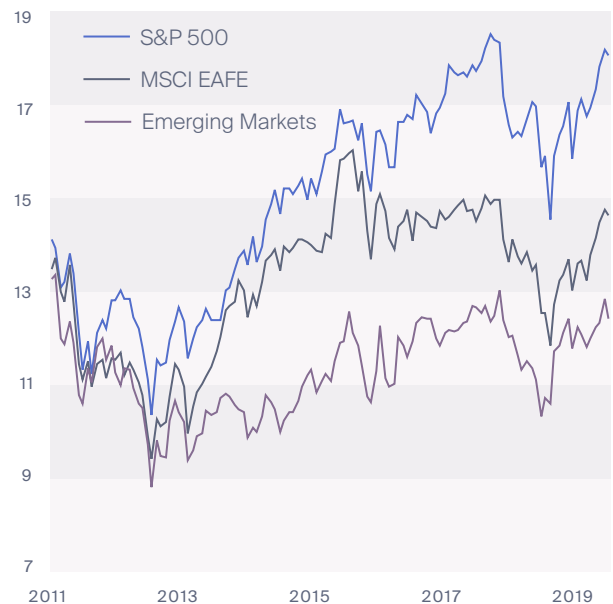
Analysts' Estimate, S&P 500 Operating EPS



Source: Yardeni Research Inc. and Refinitiv

Chart 13. Markets Outpaced Earnings

Forward Price/Earnings



Source: FactSet

Recent gains led some to suggest equity markets are dramatically out over their skis due to the recent earnings-less climb, but a longer perspective might provide some measure of comfort. Since December of 2017, S&P 500 earnings have grown 25%, while the index has gained only 21%, which leaves equity markets in roughly the same expensive position as two years ago. We are not in uncharted territory, but U.S. equity markets are not cheap.

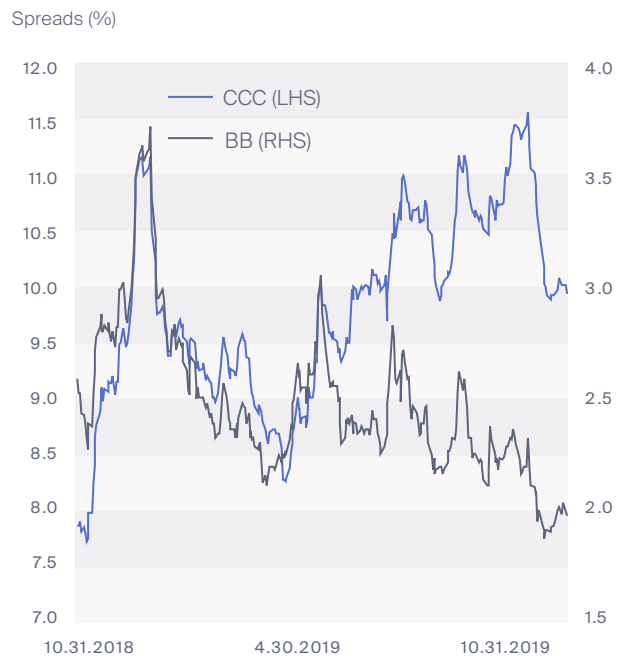
The good news for investors is that higher valuations aren't necessarily a precursor to a market correction. History has shown that we typically need some other catalyst to trigger a decline. However, there is a strong correlation between high valuations and lower expected future returns. Relatedly, the consequences for investors in a correction are typically exacerbated by a larger fall from these lofty perches.

Market Cracks

While overall volatility is muted, investors are becoming more discerning about fundamentals. As we discuss in greater detail later in our section on venture capital, public market investors are beginning to punish unprofitable VC-backed companies through poor post-IPO support, and in some cases even denying these companies access to the public markets. These cracks are not isolated to the equity markets and may be even more concerning in the debt markets.

In our *Annual Outlook* last year, we warned that the lack of liquidity in debt markets could create larger-than-expected losses for investors, as even modest selling would meet with insufficient liquidity to clear the market in an orderly fashion. While high-yield debt is trading well, the cracks are beginning to show at the lowest-quality end of the corporate credit market. **Chart 14** shows the rapid expansion of the spread between BB-rated debt (the highest quality, high-yield debt) and CCC-rated debt (the

Chart 14. Investor Discernment Increasing in Debt Markets



Source: Federal Reserve Bank of St. Louis
Option Adjusted Spread vs. Spot Treasury Curve



Investor discernment is increasing ... for the moment ... putting inferior assets at risk.



lowest-quality high-yield debt). Some of this is related to specific concerns in the energy markets, but increasing investor discernment leaves little room for mistakes in a highly valued market environment.

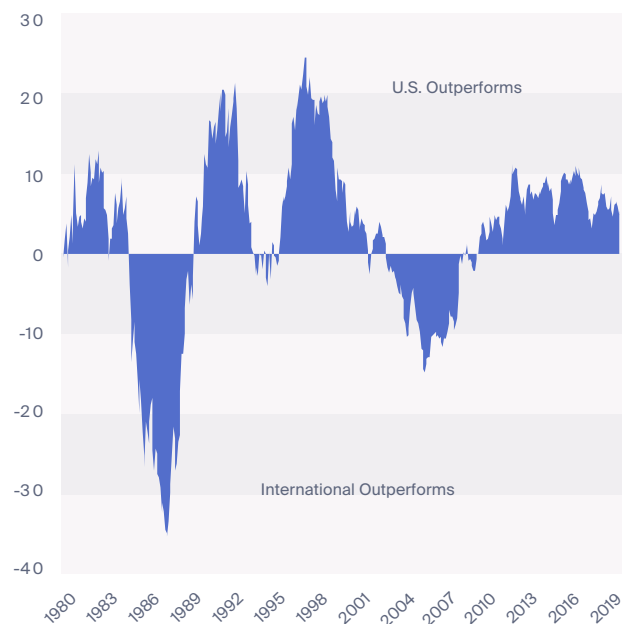
U.S. vs. International Stocks

Non-U.S. stocks appear to be much cheaper than their U.S. peers. The U.S. market trades at 18.6x, while the rest of the world trades at 14.3x, as shown earlier in **Chart 13**. Other measures, such as price-to-sales and price-to-book, reveal even larger valuation disparities. Some of this relative cheapness results from the underperformance since the GFC in 2008 of non-U.S. stocks, including emerging market and frontier market stocks. U.S. outperformance and underperformance historically have run in long cycles. For comparison, international stocks outperformed U.S. stocks for the decade prior to the GFC, as shown in **Chart 15**. These periods of alternating performance leadership between the U.S. and international stocks have shown persistence but are also prone to strong reversals.

There are several causes of U.S. outperformance during the most recent cycle beyond simply increasing valuations (i.e., PE ratios). A portion of the U.S. relative outperformance can be explained by the disproportionately large benchmark-weighting of a few U.S. tech companies that have appreciated significantly, such as the noted FAANG stocks: Facebook, Amazon, Apple, Netflix and Google. The technology sector of the S&P 500 comprises nearly 30% of the index compared with less than 10% in Europe. Another contributor to U.S. outperformance is more rapidly improving company fundamentals, such as the faster growth in sales-per-share and earnings-per-share, but this may be a bit misleading.

Chart 15. U.S. vs. International Performance

S&P 500 vs. MSCI EAFE Rolling 3 Yr. Ann. Excess Performance (%)



Source: Bloomberg



U.S. stocks have outperformed international stocks, but this has historically been a cyclical phenomenon.



Share Buybacks

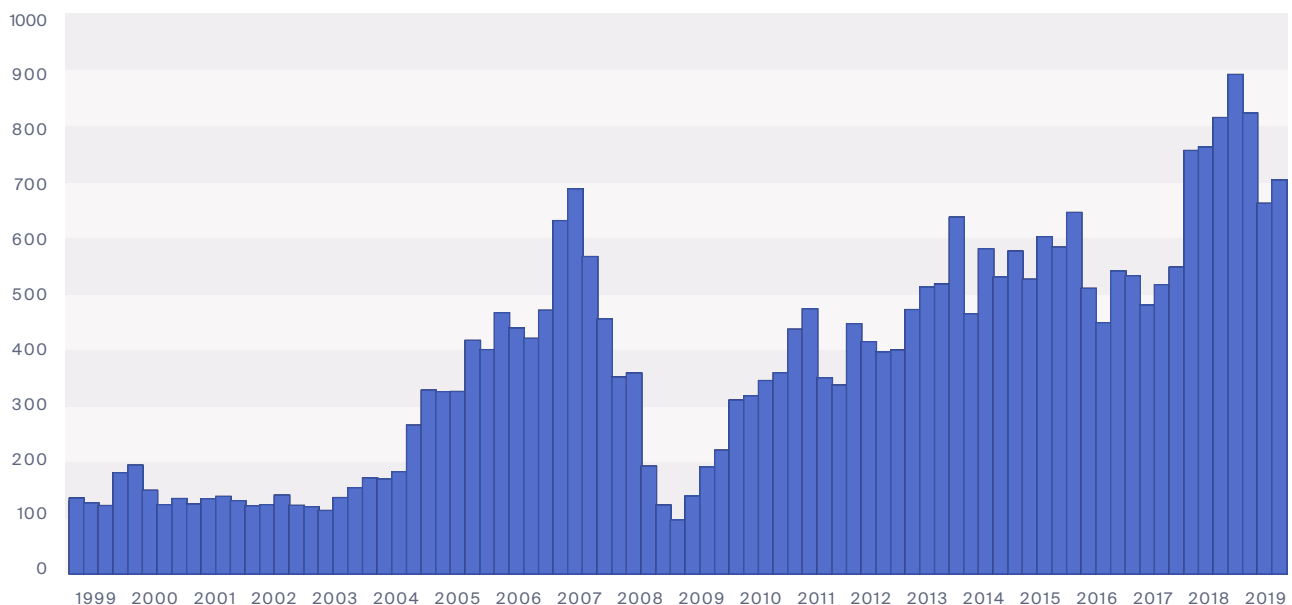
A share buyback is the re-acquisition by a company of its own stock. Many companies in the U.S. over the last few years have accelerated their buyback activity, as shown in **Chart 16**. Companies have favored buybacks over dividends given their greater flexibility. Meanwhile, some skeptics suggest that executive compensation is typically tied more closely to per-share metrics, such as earnings-per-share and share price appreciation, and that buybacks more directly impact these metrics. In either case, 2019 corporate buybacks from S&P 500 companies will hit their second highest total on record, approaching \$800 billion, after exceeding \$830 billion in 2018. This is roughly double the amount of current dividend payments from these same companies.

Share buybacks have become by far the most dominant source of net equity demand for U.S. companies and have been a strong contributor to recent U.S. equity performance. Share buybacks keep equity demand high and reduce the number of outstanding shares so that even stagnant revenue and earnings appear to be improving on a per-share basis. For the last few years, the total of equity buybacks and dividend payments has reached and at times exceeded the level of operating earnings of the S&P 500, as shown in **Chart 17**. It seems that most corporate executives and boards believe that they are better rewarded for improvements to per-share metrics rather than long-term investment in research and development. In fact, just 38 of the companies in the S&P 500 recorded 75% of the R&D spending of all 500 companies.

Buyback activity outside the U.S. has been more limited, which explains some of the relative performance advantage for U.S. stocks over the last ten years. **Chart 18** shows that European buybacks amounted to a fraction of U.S. activity, given European investors' historical preference for dividends, but appears to be on the rise since the GFC. Additionally, emerging markets companies' buyback activity is accelerating

Chart 16. Record Buybacks Drive Stock Demand

\$ Billion, Annualized



Source: Yardeni Research, Inc. and Standard & Poor's

noticeably, albeit from a low base. For example, Chinese buybacks are up nine-fold over the last two years, as regulations were recently relaxed. Additionally, analysts expect to see U.S. stock buyback activity continue to decline in 2020 since equity markets have become more expensive.

Why does this matter? According to J.P. Morgan, the earnings-per-share for the median S&P 500 company have increased 2.6 percentage points per year faster than overall earnings growth over the last two decades. Additionally, they estimated that the performance of “high-buyback” companies, regardless of geography, outperformed by over 4% per annum. Coincidentally, U.S. stocks have outperformed global stocks by roughly 4% per year over the last five years. With this buyback gap closing, investors should expect this performance relationship to revert to some degree.

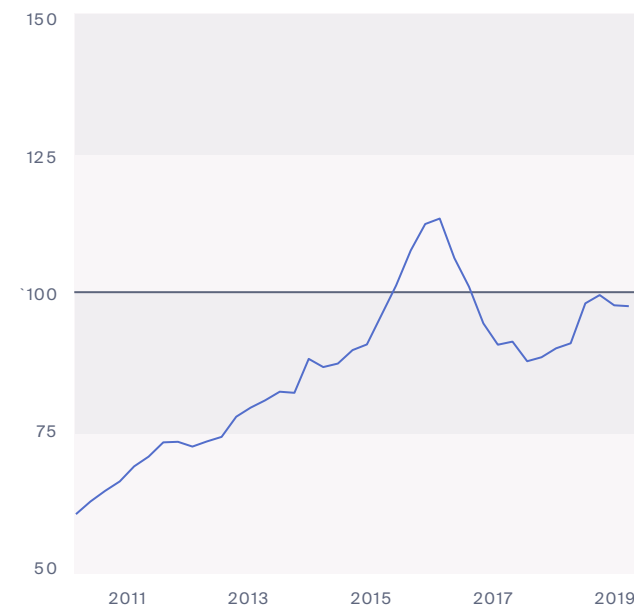
Emerging and Frontier Markets

Any discussion of emerging and frontier markets should begin with a discussion of trade wars, which had a disproportionate effect on the performance of these markets relative to the U.S., as shown on the right side of **Chart 19**. Coinciding with the increasing trade rhetoric at the beginning of 2018, emerging markets equities began another period of underperformance relative to developed markets. Much of this can be attributed to deteriorating earnings in China, Korea and Taiwan, which account for over 55% of the MSCI Emerging Markets Index and to the vast majority of downward earnings revisions over this period. As a result, emerging markets continue to trade at a discount to U.S. markets – valuation multiples remain 25-30% cheaper – similar to its range over the last few years.

If emerging markets feel like they have failed to “emerge” over the last few years, they are positively radiant compared with frontier markets, which have been completely

Chart 17. Buybacks + Dividends Drive Performance

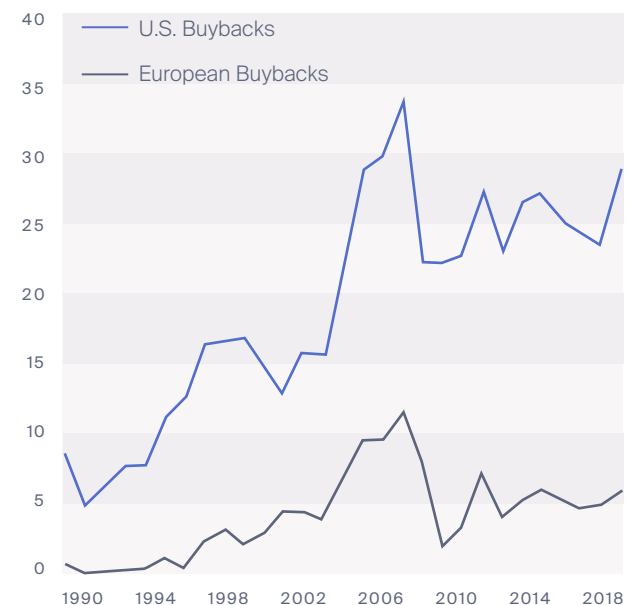
Buybacks and Dividends as a % of Operating Earnings



Source: Yardeni Research, Inc. and Standard & Poor's

Chart 18. But Not Outside the U.S.

U.S. and European Stock Buybacks as a % of Cash Dividends



Source: Goldman Sachs Global Investment Research

forgotten by global investors. Six of the largest actively managed frontier market funds have seen their combined AUM drop from \$6.6 billion to \$1.6 billion over last five years. Unlike other areas of global capital markets, this has not been driven by a shift to passive investments, as the assets of the iShares FM ETF have been roughly flat at ~\$500 million over this same period. It appears that investors simply don't care, even though the MSCI Frontier Markets Index is trading around 8.5x forward earnings.

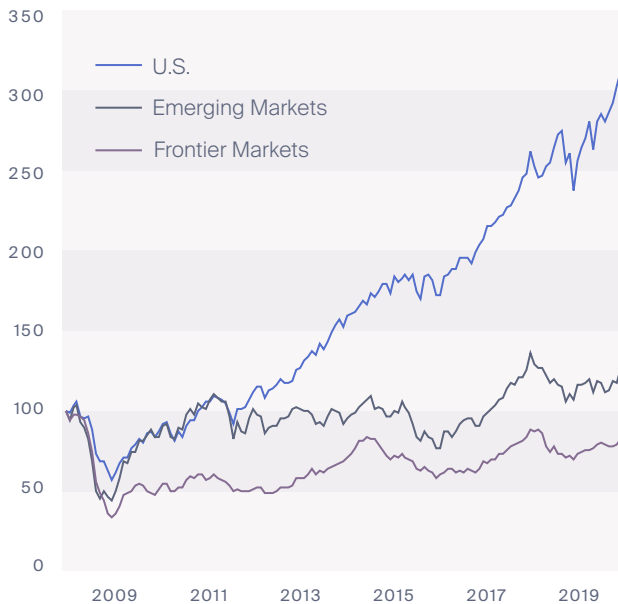
Performance has followed flows, as shown in **Chart 19**. Since the beginning of the GFC, the S&P 500 has outperformed the MSCI Frontier Markets Index by about four times. Even emerging markets are about 50% higher than frontier markets despite their similar lack of investor support over this period. However, just as with emerging markets, investors should be cautious about drawing conclusions from frontier market benchmark performance, which is particularly poorly constructed. For example, 28% of the index is in Kuwait and over 80% of this exposure is to three banks, two of which are merging. These banks trade at 18x PE and 2.5x book value – expensive even by developed world standards. Further, MSCI recently announced that Kuwait will be moved from its Frontier Markets Index to its Emerging Markets Index on June 1st of this year. Even though these companies constitute a large percentage of the index, the PE ratio of frontier markets reached a post-GFC low, which should drop even further with the removal of these companies from the index. Cheapness isn't everything, but it does improve long-term expected returns. With a total market capitalization of just over \$400 billion, less than one-third of Apple's market capitalization, even the slightest reversion toward modest net inflows could have a dramatic effect on performance.

Fixed Income

While equities have become expensive, bond markets can make a claim of being even more overvalued. With the recent Fed easing, the yield on the U.S. 10-year Treasury

Chart 19. U.S. Performance Gap

Cumulative Performance (%)



Source: Bloomberg

Chart 20. Negative-Yielding Debt Has Ballooned

Global Negative-Yielding Debt Levels (\$ Trillion)



Source: Bloomberg

note declined to well under 2% and recently touched a low of 1.60%, meaningfully less than even the anemic dividend yield on the S&P 500. Municipal bonds, whose yields loosely track government bond yields, offer similarly muted return possibilities. However, these assets provide an important diversifying and principal protection role in portfolios.

Bond markets remain anchored to inflation expectations, which in the U.S. remains below 2% despite the Fed’s best efforts, leaving real (inflation adjusted) interest rates close to zero. Real rates at these levels are well below historical norms. We appear to be living in a world of excess global savings brought about by aging populations that will likely keep downward pressure on real interest rates. We do not expect these low real yield conditions to change in the near future, and bonds are likely to remain an uninspiring choice for investors.

This phenomenon is not isolated to the U.S. and, in fact, negative real rates are more pronounced overseas. Today the yield on 10-year government debt has declined to -0.39% for Germany, -0.18% for France and -0.04% for Japan and the total amount of government debt globally trading at negative yields reached new highs in 2019 and now exceeds \$14 trillion, as shown in **Chart 20**.

High-yield debt currently offers similarly low return possibilities for investors. Not only are these instruments traded relative to the low yields of government bonds, but their relative spreads above government bond yields remain near historic lows, as shown in **Chart 21**. Further, underwriting standards continue to deteriorate – covenants that provide bondholder protections are disappearing and leverage levels are now well beyond levels from the GFC – and we continue to have concerns about the lack of

Chart 21. Nearing Pre-Financial Crisis Lows

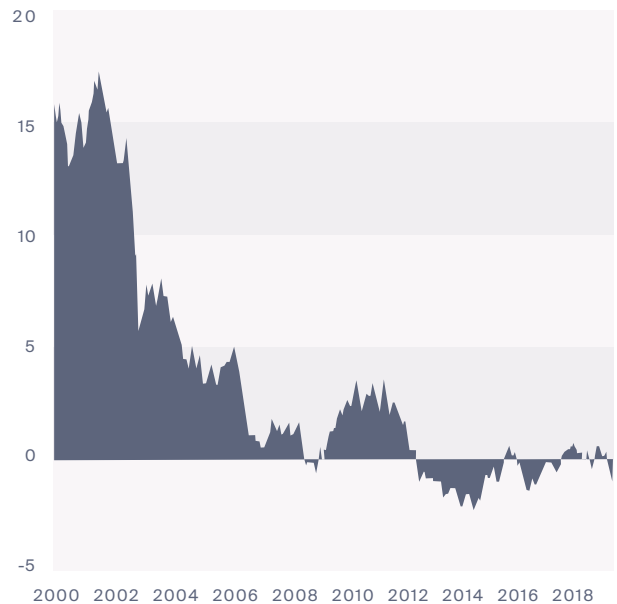
High-Yield Spreads (%)



Source: St. Louis Federal Reserve
Option Adjusted Spread vs. Spot Treasury Curve

Chart 22. Hedge Fund Performance Remains Muted

36-Month Annualized Equity Long/Short Strategy Alpha (%)



Source: Hedge Fund Research, Inc., Barclays, MSCI and Bloomberg

liquidity in the debt markets as described earlier. Low yields, low spreads, slipping credit standards and limited liquidity – what’s not to like?

Hedge Funds

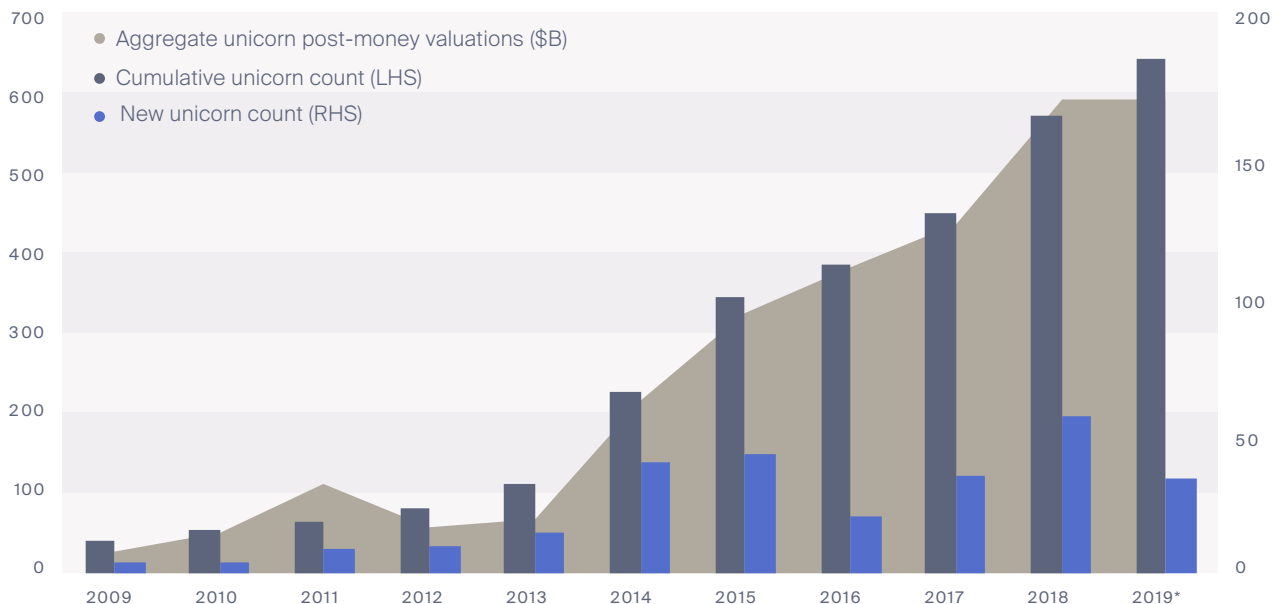
Hedge fund performance was strong in absolute terms in 2019, but on a relative basis they were unable to capture as much of the market upside as in years past. Fundamental long-short equity hedge funds continue to face headwinds from central banks’ policies that suppress idiosyncratic stock price movements, and from growing quant fund clout that swings stock prices on non-fundamental information. As a result, hedge fund after-fee alpha remains near zero as shown in **Chart 22**, and the industry remains under pressure. According to Hedge Fund Research, Inc., the number of new hedge fund launches in 2019 reached its lowest level since the fourth quarter of 2008 during the GFC. Additionally, fund closures have now exceeded fund launches for five straight years and hedge fund management fees are now at their lowest recorded level.

Most investors now understand that unless they can get to the very best managers, hedge funds are not a productive allocation. We continue to find managers who can add significant value, but it has required us to move further away from the well known branded managers. We continue to find opportunities in sector and geographic specialists that have unique insights into their areas of expertise, allowing them to generate strong long-short spreads. Additionally, smaller funds continue to demonstrate the potential to generate better results. Manager selection has always been important in hedge funds, but it is now more important than ever.

Venture Capital

The last decade transformed the U.S. venture capital market by introducing mega-rounds and mega-funds to the market while demystifying unicorns – VC-backed firms whose valuations now exceed \$1 billion – through sheer frequency, as shown

Chart 23. Exploding Number of Unicorns



Source: PitchBook Data, Inc.
*As of June 30, 2019

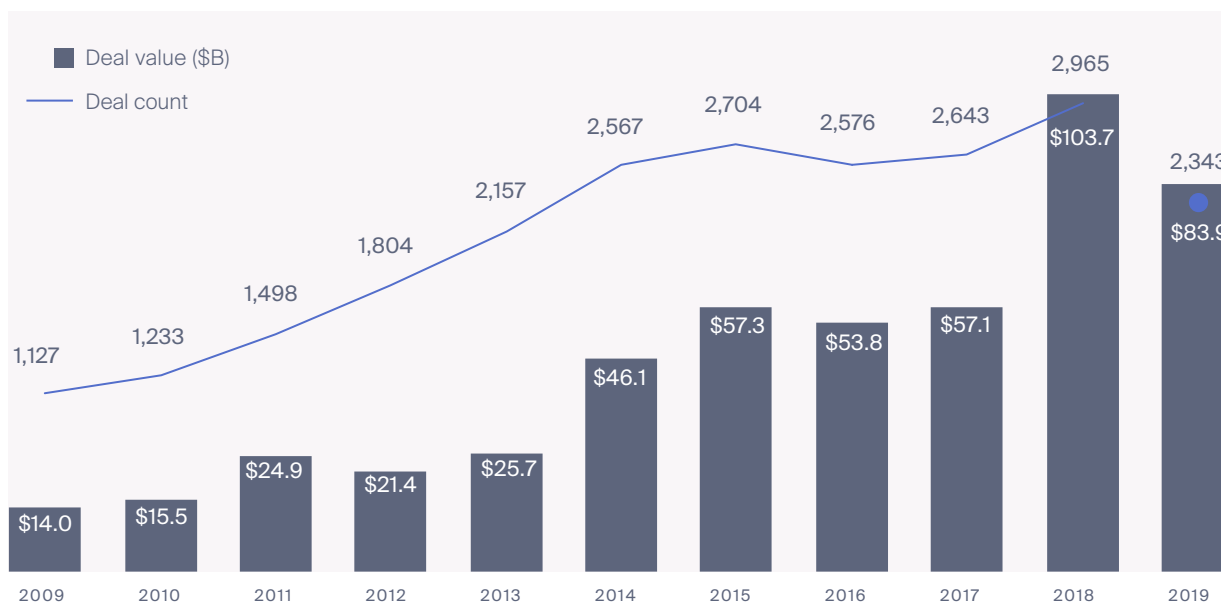
in **Chart 23**. The size of fundraising and investment dollars set new records and attracted non-traditional participants to later-stage investment rounds. Twenty-one “mega-funds” launched last year (defined as raising more than \$500 million) and that was actually below the numbers in 2018.

Non-traditional VC investors are exacerbating the investment flows by contributing to a record number of VC deals, which amounted to over \$100 billion in 2018 and comprised 81.5% of total U.S. VC deal value, as shown in **Chart 24**. These non-traditional firms consist of corporations, mutual funds, hedge funds and sovereign wealth funds among others and, most importantly, have very large asset bases. According to PitchBook, to understand the potential size of these capital bases, if just Fidelity were to simply invest 15% of its total mutual fund assets under management, it would amount to over \$375 billion, which is roughly three times the annual VC deal flow.

These “tourist” investors have tended to invest in late-stage companies that are easier to evaluate, having more similarity to their traditional investment activity. This wall of non-traditional capital has increased valuations, particularly in later-stage rounds, and the effect has begun to trickle back into earlier rounds, as shown in **Chart 25**. The positive spin to this is that companies are remaining private longer and traditional VCs alone could not meet their capital raising needs. Alternatively, some analysts are once again warning of bubbles, harkening back to the late 1990s era of “clicks and eyeballs.” We share their caution, but we are not suggesting that the VC market is about to suffer a similar collapse, as many of today’s unicorns are generating strong revenue. However, we can learn lessons from the earlier period that echo through today’s market. As Mark Twain may have once said, “history doesn’t repeat itself, but it often rhymes.”

Chart 24. VC “Tourists” Dominate Later-Stage Investment

VC Deal Activity with Global Nontraditional Investor Participation



Source: PitchBook Data, Inc.
*As of October 31, 2019

Late in the 1990s, when we last experienced a period of large fundraising and high valuations, the consequences for venture investors and returns were starkly negative for nearly a decade. **Chart 26** shows that as fundraising peaked into the year 2000, the result of this wall of money pouring into the VC market was a period where median manager returns were negative or modestly positive for nearly an entire decade.

Clicks and Eyeballs

Back in the 1990s, the promise of the internet was blinding investors to the underlying economic reality of businesses like Pets.com and internet delivery services like Webvan which raced into the public markets at huge valuations, despite having generated no profits and often little or no revenue. In their euphoria, investment banks invented metrics such as “clicks and eyeballs” to justify ludicrous valuations. Investors failed to realize, until it was too late, that those website clicks would never translate to revenue or profits.

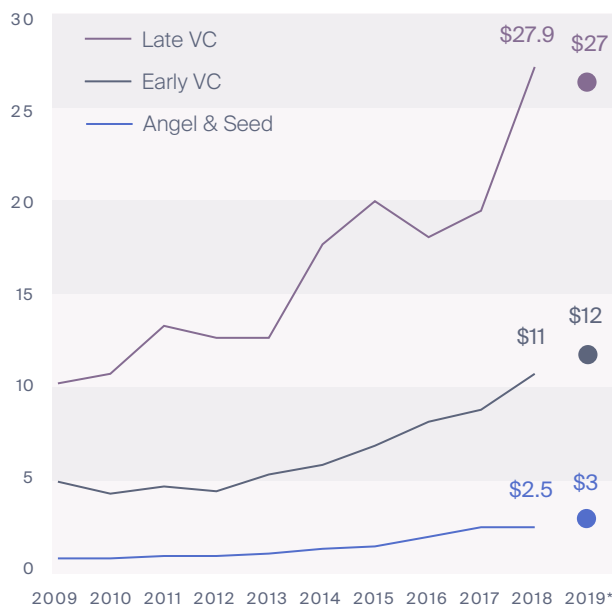
Today’s VC environment is different. At the peak of the mania, the Nasdaq was valued at more than 100 times forward earnings, compared with a more reasonable 25.6x. Further, today’s biggest tech companies like Facebook, Apple, Google and Netflix, many of which were funded during this prior era, are making money hand over fist. However, the lessons of focusing on the unit economics and scalability of a business might have gotten a bit fuzzy...until very recently.

Unicorn Cracks?

According to J.P. Morgan, private company funding directed toward unprofitable companies has reached its highest level since the Technology Bubble 20 years ago. Similarly, public market investors have been willing to pay the highest price-to-sales ratio for technology IPOs since the late 1990s. However, it is the IPO that didn’t happen – WeWork’s high-profile collapse – that appears to have shifted investor behavior and

Chart 25. Late Stage is Getting Expensive

Median VC Deal Size (\$ Million)



Source: PitchBook Data, Inc.
*As of June 30, 2019



Public market investors have crossed over to private markets. These ‘tourists’ have elevated valuations, particularly in later-stage VC investments.



perhaps memories of 1990s lessons have returned. As shown in **Chart 27**, of the 39 technology companies that went public on the Nasdaq and NYSE in 2019, 24 saw their stock price slide afterwards by an average of 30%, while the Nasdaq Composite rose 37% over the course of the year. Investors appear to have rediscovered the importance of profitability and scalability.

The U.S. unicorn IPO queue is quite full and it remains to be seen whether investors' discipline will wane. According to PitchBook data, over 215 unicorns are still embedded within many VC portfolios that are marked at large gains. Many of these companies are also getting long in the tooth, and investors may be anxious for liquidity. Of those 215 companies, 26 are valued at over \$5 billion and are over 12 years old and investors will be pushing for liquidity.

While there have been some hiccups for large VC-backed exits toward the end of 2019, we believe that the long-term factors driving this historic shift of capital to the late-stage private markets will remain in place, but perhaps with a bit more discipline.

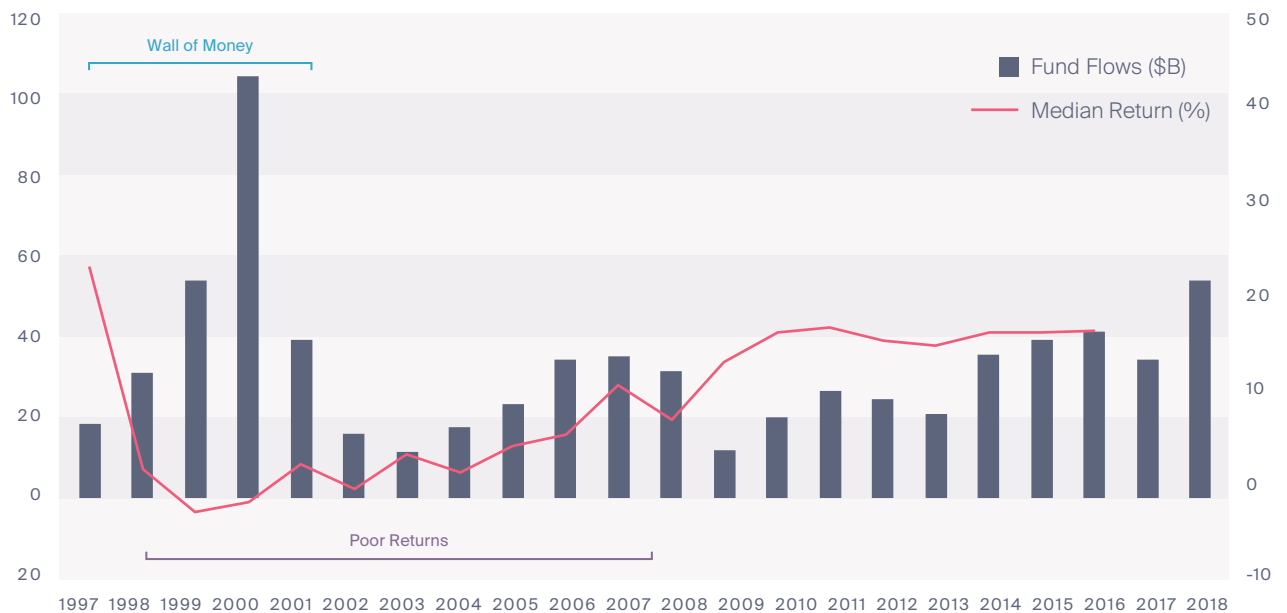
Spotlight: The Death of Value?

For decades, value strategies have dominated investing. They are the backbone approach for legendary investors Ben Graham and Warren Buffet. The mantra of “buy low and sell high” is practically synonymous with investing, but since 2010 high-priced stocks have outperformed value stocks by one of the widest margins in history and the value/growth relationship has suffered its worst stretch of relative performance in 70 years.

This underperformance has been particularly acute over the last few years. Since the beginning of 2017, the Russell 1000 Pure Growth Index has surpassed the Russell 1000

Chart 26. Tech Bubble Funding Levels Created a Decade of Poor Returns

U.S. VC IRR and Fundraising



Source: PitchBook Data, Inc. and Cambridge Associates

Pure Value Index by 21.7% per year, as shown in **Chart 28**. And the trend continued in January of this year with growth outperforming value by nearly five percentage points. As a result, we are seeing the widest dispersion between the expensiveness of growth stocks and the cheapness of value stocks since the Tech Bubble 20 years ago, as shown in **Chart 29**.

Historically, the value/growth relationship has been mean-reverting and a wide divergence in the relationship between these factors has historically been a precursor to value's outperformance. In other words, when value gets too cheap – or growth gets too expensive – investors eventually get enticed or scared enough to shift their capital back to the other side of the boat. Market traditionalists argue that value investors must simply wait for their time to come. But is there something else going on here?

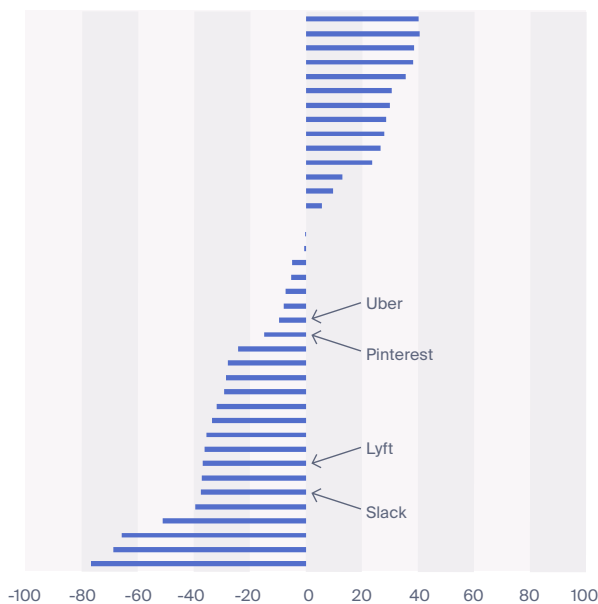
Traditional Value Metrics

Value investors have historically relied on a few tried-and-true metrics on which to base their investment decisions. Price-to-Book (“PB”) and Price-to-Earnings (“PE”) have been the central tools to divine cheapness. The lower these ratios, the more likely it becomes that investors will invest in these underpriced stocks, thereby causing share prices to appreciate and create profits for investors.

Many investors have long seen the decreasing importance of PB as a measure. Leading companies today have evolved from the manufacturing titans of several decade ago. Historically these companies could measure their future earnings power by their investment in tangible assets, such as property, plant and equipment, which would be capitalized and amortized in a company’s book value. Today’s leaders and their investment in the future tend to follow “asset-light” models that don’t require investment in machinery, but rather software and brand. Book value as a metric is

Chart 27. Unicorn Cracks

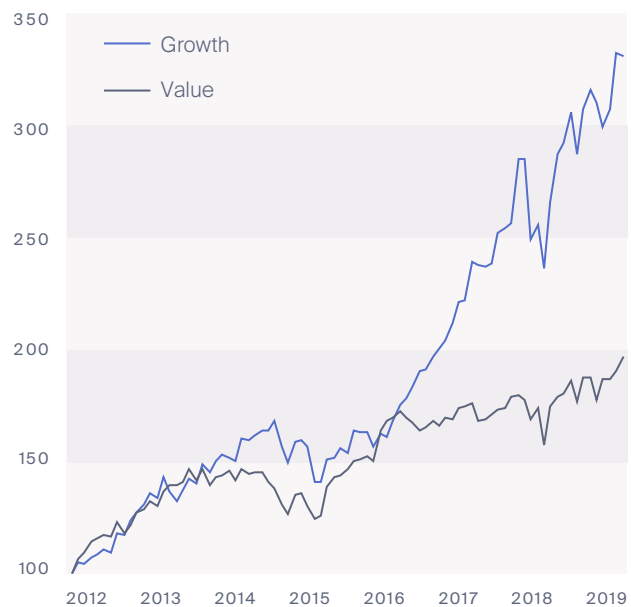
Tech Company % Return Distribution, IPO Date through Year-End



Source: FactSet
Technology companies to IPO on NASDAQ and NYSE in 2019

Chart 28. Growth vs. Value Performance Cap

Cumulative Performance (%)



Source: FTSE Russell Pure Style Indexes

becoming less relevant, but still today PB and PE are two of the three metrics (along with dividend yield) that major index providers, such as MSCI, use to determine the composition of their value and growth indices.

Intangible Assets

Over the last few decades, investments in tangible assets have given way to investments in intangible assets, as shown in **Chart 30**. Since 1977, tangible asset investment as a percent of gross value added was cut almost in half – falling from 16% to near 8% – while intangible asset investment has nearly doubled – rising from 8% to 15%. One analyst recently estimated that intangible assets now comprise 84% of the market capitalization of the S&P 500 Index compared with only 32% in 1985. According to *Explaining the Recent Failures of Value Investing*, a recent whitepaper by Baruch Lev and Anup Srivastava, annual U.S. intangible investment surpassed \$2 trillion in 2017. Companies in other countries lag the U.S. considerably in intangible investment, but surprisingly China is second and closing the gap at around \$700 billion annually, which is important when we evaluate our considerable investment in Chinese venture capital.

Deficiency of Accounting Rules

The intangible asset investment blind spot is structurally embedded into our accounting standards. Most companies follow the Generally Accepted Accounting Principles (“GAAP”), which have become the industry standard for corporate accounting and are required for public companies. Under GAAP rules, intangible assets developed in-house (think Google, Facebook or Uber software) are immediately expensed through the income statement, thereby reducing reported earnings while adding nothing to their balance sheet. However, if this same company instead acquired the manufacturer of that same software, the cost of that acquisition could be capitalized and amortized on the balance sheet. This treatment also assigns no balance sheet value to internal product development, brand-building or cutting-edge software development.

Chart 29. Growth Appears Relatively Expensive



Source: J.P. Morgan Asset Management

Chart 30. Tangible vs. Intangible Assets Investment



Source: Corrado and Hulten (2010), updated
Investment Relative to Private Industry Gross Value Added

Ironically, expensing these items actually depresses the company's earnings. As a result, not only are book values likely to understate future earnings potential, but companies' current earnings are also likely systematically understated. Conversely, companies that don't invest in intangible assets today may be relatively over-earning and their traditional, tangible-asset heavy business models are more susceptible to disruption from new competitors.

In their whitepaper, Lev and Srivastava attempt to normalize these effects by capitalizing and amortizing the companies' annual R&D expense and a small portion of the Sales, General & Administrative expense associated with brand and intangible investments. They further adjust a company's earnings by removing these expense items from the income statement. These adjustments created a significant change to constituents of the value and growth universes. In fact, roughly 50%(!!) of companies were reclassified either into or out of the top and bottom cohorts of the value/growth universe by making these adjustments.

Additionally, running a simple value strategy on these adjusted company metrics showed an improvement in 34 of the past 39 years for the strategy. Over the last decade, when value investing was supposedly dead, Lev and Srivastava's adjusted value strategy results were once again positive, albeit not to the degree of the strategy's historical performance.

The Strong Get Stronger

The so-called glamour companies of today also enjoy some structural benefits that contribute to their strong recent performance. Some leading businesses today are entirely based on scalable intangibles. These companies tend to be in the software, pharma, biotech, electronics and consumer sectors. These companies have created first-mover advantages, virtuous networks and their business success has, in many cases, allowed them to continue to further invest in moat creating or enhancing intangibles. These businesses are now well represented in indices and their weight in the indices continues to rise.

The massive investor shift from actively managed to passively managed funds is well documented. As investors pile money into these funds, capital simply flows into the stocks in relation to their index weight regardless of price. In most cases, these indices are constructed by market capitalization – the bigger stocks get a higher weight. As a result, their share prices rise even further, which then gives them an even larger weight in the index. These companies are now flush with cash and their equity value continues to get bid up, providing easy access to capital markets and providing a valuable currency with which to make strategic acquisitions.

The five largest stocks currently in the S&P 500 are Apple, Microsoft, Amazon, Facebook and Google, all of which are classified as growth stocks by traditional definitions. Today, the concentration in the largest five stocks in the S&P 500 has reached an all-time high, surpassing even the distorted Tech Bubble period, as shown in **Chart 31**. The flows into passive indices show no signs of abating, as the relative performance of most traditional actively managed strategies continues to disappoint investors.

Value Companies Can Emerge

Lev and Srivastava also found some interesting facts regarding value companies that were able to break out and distinguish themselves from the value traps that were left behind. These observations fit our intuitions. Companies that could reinvest in intangible or even tangible investment could escape the value trap. Additionally, firms that could recapitalize by reducing their equity base through share buybacks, which as we mentioned earlier is a powerful driver of per-share return equity performance, could also breakout. These companies were more likely suffering some form of temporary setback that pushed them into value territory, but still had a strong business and access to cash that allowed them to invest their way out of trouble.

Investment Implications

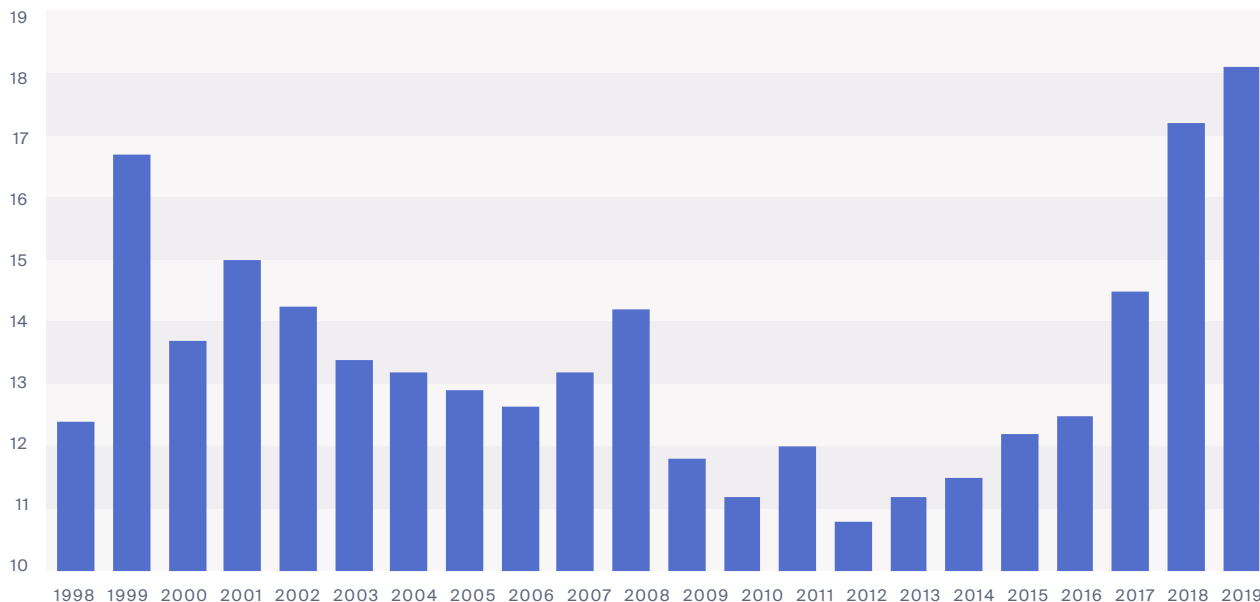
What should investors do? It is possible that the value/growth relationship reverts to some degree. We witnessed a minor break in September of last year, where value stocks sharply outperformed growth stocks. Value investors were hailing this as a precursor of things to come. However, if intangible asset investment is driving business value creation in our modern economy, we should not expect this dynamic to change. This is particularly true in the U.S. and will become increasingly true in other parts of the world.

Additionally, if the current GAAP accounting rules do not change to adequately incorporate intangible investment, traditional accounting metrics will not properly capture current and future business value. Historically, it has been very difficult to gain consensus on changing something as complicated as our accounting rules, and we should not expect them to change anytime soon.

As a result, “dumb” value investing – hoping for mean reverting tendencies based on conventional accounting measures with traditional metrics such as PB and PE –

Chart 31. Market Cap of Top Five S&P 500 Stocks Reaches Record Levels

Share of Total Market Cap (%)



Source: Bloomberg

is likely dead. This approach will continue to identify and invest in a high number of value traps in which cheap investments simply become cheaper. Investors should eliminate dumb value investments from their portfolio, and this is particularly true for value-based passive or semi-active strategies. This is especially true in the U.S. and other geographies and sectors where intangible investment is high and not accurately captured by current accounting standards.

Investors should also consider that the value/growth disparity might narrow due to performance considerations for growth investments rather than a rebound of traditional value stocks. As we mentioned earlier, discussions of regulating the technology monopolies and duopolies in the U.S. are beginning to accelerate. These companies control much of the information about our online activity and even how we access the internet and many people are actively discussing regulations, which at the extreme would have some of these companies serve as a public utility. This would dramatically reduce their future profit potential and growth prospects. As a result, investors in these stocks would likely suffer considerable losses, while investors in value stocks would be spared, therefore causing the appearance of reversion in the value/growth relationship.

Buying low and selling high will always matter. Yet how one measures high and low matters even more in today's changing landscape. Moving forward, low valuation investors increasingly need a catalyst to break out of the value trap, whether it is an external event, such as an acquisition, or an internal investment activity. In this sense, value investing will always remain alive. As the economy evolves, a small number of truly insightful investors can see through these antiquated accounting metrics and anticipate events. As Wayne Gretzky famously said, "skate to where the puck is going, not to where it has been."

Spotlight: Chinese Venture Capital

For more than a decade, Gresham has allocated significant capital to Chinese venture capital investments. And our clients have been well rewarded, as these investments have been a powerful driver of their investment performance. Many investors have eschewed this area as too risky or too esoteric, but in the last ten years China has arguably become the second most important venture capital market in the world. Chinese VC investments have soared during the most recent decade and now rival those of the U.S., as shown in **Chart 32**. Some now believe that it is just a matter of time before China becomes the largest and possibly the most important venture market in the world.

We continue to believe that Chinese VC will be a productive investment, but similarly lofty returns will be more difficult to achieve and manager selection will matter even more. What has driven Chinese VC growth and its superior investment return for investors? How do we expect this to change in the future?

China Denominator Effect

At a very basic level, a powerful denominator effect is driving Chinese venture capital and, at a broad level, consumer spending and GDP growth. According to the IMF, China's GDP is expected to top \$15.5 trillion in 2020, second only to U.S. GDP. Further, China's 1.4 billion consumers form a population base that is roughly three

times larger than the U.S., creating a foundation for incredible consumption potential. This potential is being realized as GDP per capita and the associated number of middle-class consumers in China have grown dramatically over the last few decades. Several studies have shown that when a growing nation's GDP per capita increases from \$5,000 to over \$10,000, consumption patterns change dramatically. Spending begins to shift from basic needs, such as food, shelter and clothing, toward education, banking, healthcare and travel.

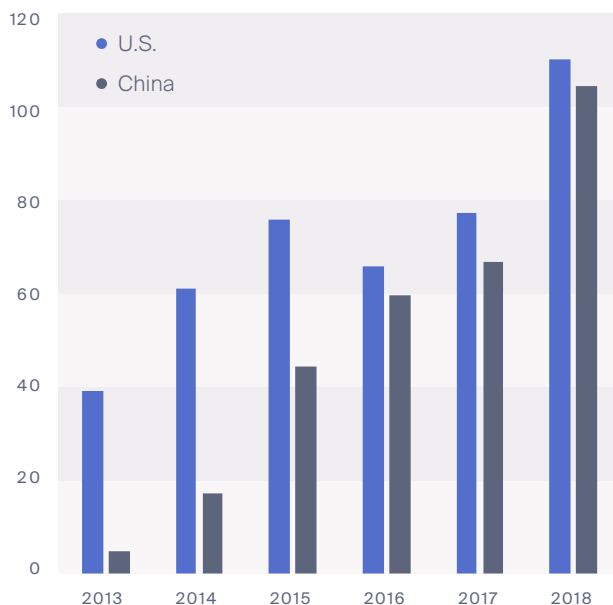
As shown in **Chart 33**, China's GDP per capita began to inflect strongly upward in the early 2000s. By 2010, it surpassed the \$5,000 per capita level and only a decade later it doubled yet again. Relatedly, Chinese middle-class and high-net-worth consumers comprised only 10% (~140 million people) of the population in 2010, and only a decade later that number exceeds 60%, as shown in **Chart 34**. For context, this is roughly double the size of the entire U.S. population.

Chinese Technology Leadership

Given most readers' western view of China's communist history, many will be surprised to realize that the Chinese government has actively fostered an environment of entrepreneurialism and a venture capital ecosystem for several decades. The Chinese government, indirectly through government agencies and regional entities, has created and fostered many Science and Technology Industrial Parks and Technology Business Incubators, and it has launched numerous other programs to support this venture environment. These programs have been quite successful and have spawned the Chinese free-market technology leaders of today, such as Baidu, Alibaba, Tencent and Huawei.

Chart 32. China's VC Boom Rivals the U.S.

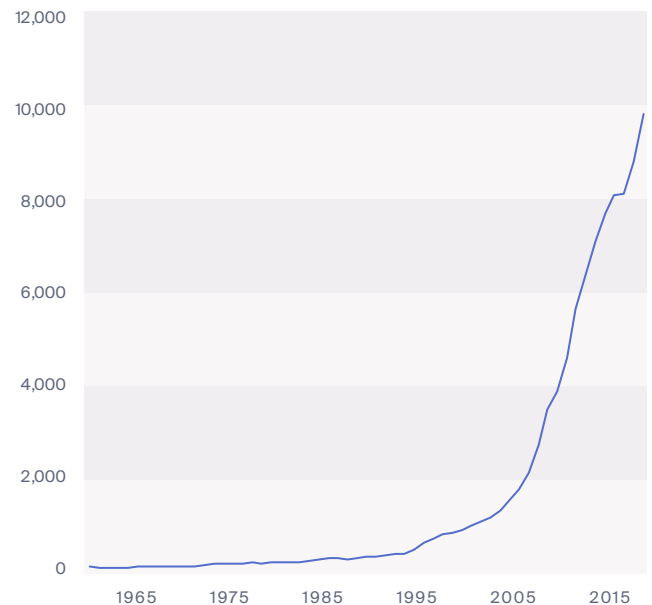
Venture Capital Deals (\$ Billion)



Source: Preqin

Chart 33. Chinese Consumer Demand Rockets Upward

China GDP Per Capita in Current \$



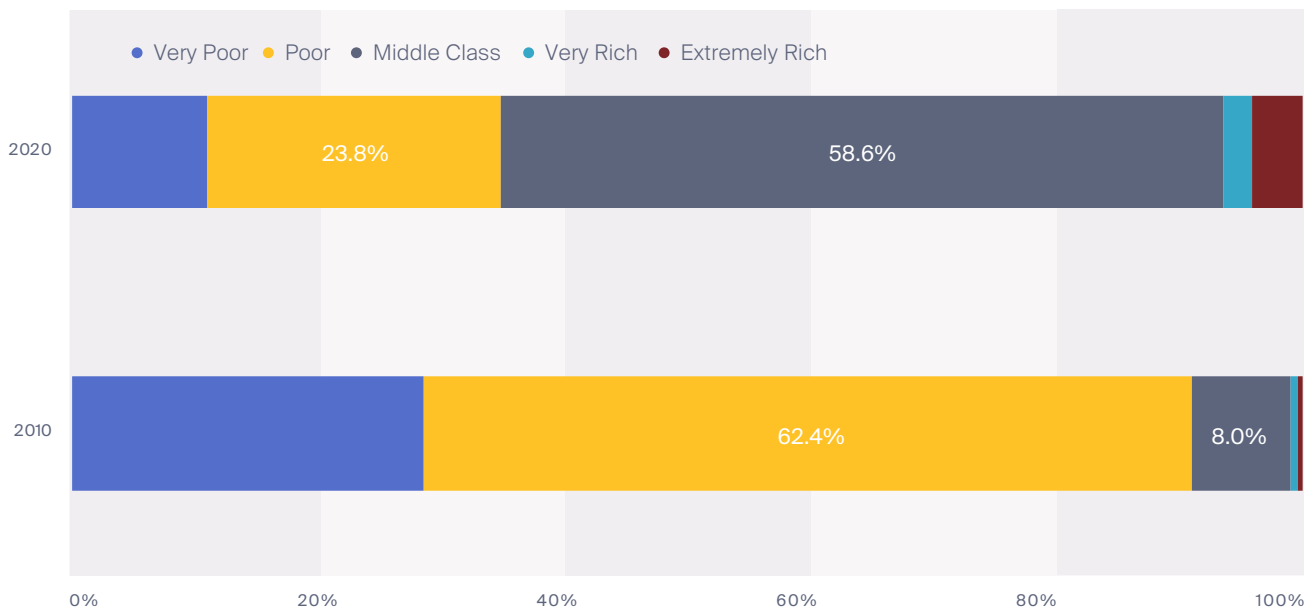
Source: The World Bank

China's goal of becoming a global superpower requires that it also become a technology superpower. In many ways, China has already arrived. Currently, China is well ahead of the western world in some technologies and that lead will likely grow in the coming years. For example, China largely bypassed the era of desktop computers and went straight to mobile computing. The China Internet Network Information Center estimates that 99% of China's internet users, or roughly 850 million people, use a smartphone to get online. Similarly, China skipped credit cards and moved directly to mobile payments and it is well ahead of the U.S. and the rest of the developed world in this area. China is also a clear leader in mobile shopping, gaming and social media. As a result, China's online retail market has become the largest in the world. The McKinsey Global Institute estimates that in 2019 the value of Chinese online transactions exceeded \$1.5 trillion. For comparison, the U.S. online retail market is estimated to be only \$600 billion. In fact, China's online market is larger than the next ten markets combined, as shown in **Chart 35**. Further, with a compound annual growth rate over the last three years of 24%, nearly double that of the U.S., China's online retail market is larger and getting even larger at a faster rate. Already, 25% of retail Chinese purchases occur online, compared with only 11% of U.S. transactions, and many of these transactions are mobile.

In addition to government technological support driving these developments, China is home to the largest education system in the world. The number of college graduates in China is expected to exceed eight million in 2019, which is roughly twice the number in the U.S. Additionally, China continues to produce more STEM graduates than all western countries combined. While China was once a copy-cat country, "borrowing" technology from other nations, it is beginning to join the ranks of the global technology leaders.

Chart 34. Middle Class has Grown Dramatically

Wealth Segments in China



Source: The Economist
Estimate for 2020

National Champions

In the U.S., we have witnessed the emergence of a few technology behemoths, such as Google, Apple, Amazon and Facebook. A decade ago, Google dominated search, Apple developed a new phone, Amazon solved e-commerce logistics and pricing, and Facebook was emerging as the dominant social media platform. Today, these four companies own monopolies or duopolies in their core markets and are using the power of those market positions to extend their reach into adjacent markets, albeit with somewhat mixed results. They dominate data collection about our online activity and control many of our important access channels to the online world. They capture nearly 70% of the existing online ad revenue and it is estimated they will collect over 100% of the net online revenue growth in the coming years. They have become so powerful that the conversation in the U.S. has shifted away from growth and consumer benefits to regulatory containment. What society does about this situation stands as possibly the most important issue facing western-world technology.

China has its own family of technology giants that includes Baidu, Alibaba and Tencent (“BATs”). Baidu started as a popular search engine in China, Alibaba as a B2B e-commerce marketplace and Tencent as a gaming and messaging platform. Many in the west who don’t follow China or technology developments may not have heard of these companies, but they are global-sized giants, even if they do not have fully global footprints yet. While Apple and Google still have larger market capitalization, the market caps of Alibaba and Tencent are now at or above that of Facebook. Further, strong revenue and earnings growth will continue to close the gap. For example, Alibaba’s revenue growth has doubled that of Google over the last year and is nearly three times larger over the last three years. The net incomes of Alibaba and Tencent both exceed Amazon’s net income and are approaching the levels of Apple, Google and Facebook. While Facebook and Google are blocked in China, Amazon simply

Chart 35. China Dominates Online Retail

Online Retail Transactions

	Transaction Value (\$ Billion)	Percent of Total Retail (%)
China	1500	25%
U.S.	600	11%
U.K.	135	22%
Japan	115	9%
Korea	90	22%
Germany	80	9%
France	65	10%
Canada	55	11%
India	40	3%
Russia	30	5%
Brazil	30	4%
Indonesia	15	4%
Argentina	7	3%

Source: McKinsey Global Institute



China e-commerce dwarfs the rest of the world – with most of it coming from mobile transactions.



gave up in August of last year owing to an environment that favors local champions and is fiercely competitive.

Importantly, the BAT companies have developed pervasive platforms, with tacit or even explicit government support, which extend into every sector of the internet. These companies dominate Chinese screen time and e-commerce spending to the same degree as their U.S. counterparts and combined have over \$1 trillion in market cap. So explicit is the government support, that these national champions have been charged with developing their country's efforts in autonomous driving, smart cities and computer vision in a truly powerful public/private partnership.

The importance of the role these national champions play in the Chinese venture capital ecosystem cannot be overstated. Many analysts focus on the organic growth of these businesses, but their future growth may also rely importantly on their inorganic activity – through investment and acquisition – that doesn't appear in their current revenue and profitability metrics. These companies are creating platforms of services that provide a one-stop experience for their customers' entertainment, shopping, finance and other needs. According to the *Financial Times*, the BATs have made over 1,000 combined VC investments and have backed or control more than 25% of the Chinese unicorns.

Dollar and RMB Funding

Some investors express concern about getting their capital out of China following a company sale. While it may seem complicated to those unfamiliar with Chinese investments and structures, in reality there have been very few issues. Early private equity and venture capital investors making dollar-based investments in China were limited by the government as to what sectors were allowable for investment. These restrictions have been slowly relaxed and offshore capital now flows strongly into the important technology and healthcare sectors. Companies backed by offshore investments are not allowed to list on mainland Chinese exchanges, typically opting instead for Hong Kong or the U.S. Historically, this wasn't a problem, as most founders preferred to list in Hong Kong, given its better reputation and regulatory environment, while remaining close to home and allowing them to move their wealth offshore.

Alternatively, local renminbi ("RMB") VC funding allows founders to exit through an IPO on a local stock exchange, which some might view as a benefit because local markets can often trade at premiums to the offshore markets. However, much of the RMB capital comes indirectly from the government and a small number of legitimate local investors, both of whom tend to have short investment horizons. As a result, RMB funds have adopted shorter structural investment horizons of five to eight years or less, compared to U.S. funds that typically span more than a decade. As a result, RMB funding has been viewed as a less stable and less desirable capital base for founders. Today, the RMB market is maturing and founders are more willing to take capital from both offshore and onshore sources. Further, the fungibility of companies listed on different exchanges is increasing as China's Exchange Connect programs, which give investors easy access to publicly listed stocks across the Chinese border in both directions, continue to gather momentum. However, RMB funding, which dominated

fundraising over the last few years, appears to be declining and contributing to the current “winter” in Chinese VC that we discuss below.

Chinese Venture Performance

By every measure, Chinese VC results over the last decade have been very strong. Return data for Chinese VC is not nearly as extensive as that of the U.S., but we can draw some conclusions from the data that are available, and Gresham’s own investment results tell a similar positive story.

In a general sense, Chinese VC returns have far surpassed those of U.S. VC investments with similar vintage years. During the 2000s, in the years for which robust data from Cambridge Associates exist, the capital-weighted average return was 18.9% for Chinese VC versus 10.3% for U.S. VC. Some would argue that the U.S. was suffering a dotcom bubble-bursting hangover during that decade, but the decade of the 2010s tells a similarly impressive relative return story for Chinese VC. For vintage years from 2011 – 2016, although the investments are early and still developing, average Chinese VC returns are 27%, while average U.S. VC returns are just a bit over 21%.

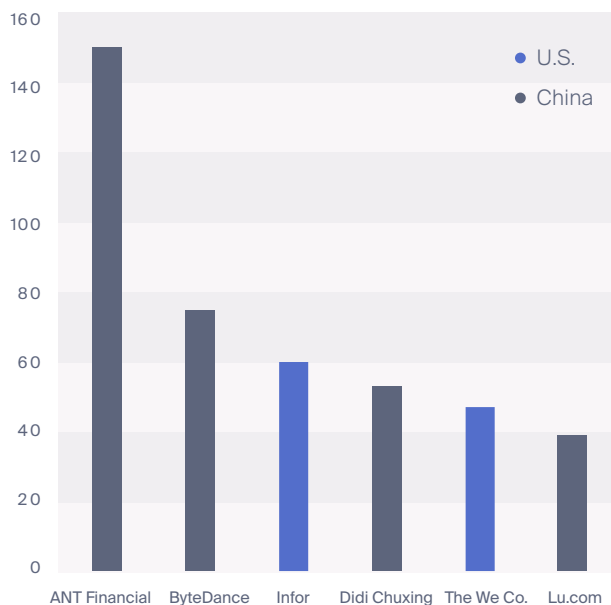
Perhaps even more impressive is the fact that the bottom quartile of Chinese VC managers has produced average returns of over 13% during this period. As an investor, simply owning the Chinese VC asset class was likely to generate a positive outcome regardless of one’s ability to select a top-quartile manager. After two decades of pervasively strong performance, many of the world’s largest private companies are Chinese VC-backed businesses, as shown in **Chart 36**.

Chinese VC “Winter”

Unlike in the U.S., the Chinese government has explicitly supported investment activity through various channels. These state-sponsored programs have almost ensured that

Chart 36. Dominant VC-Backed Private Companies

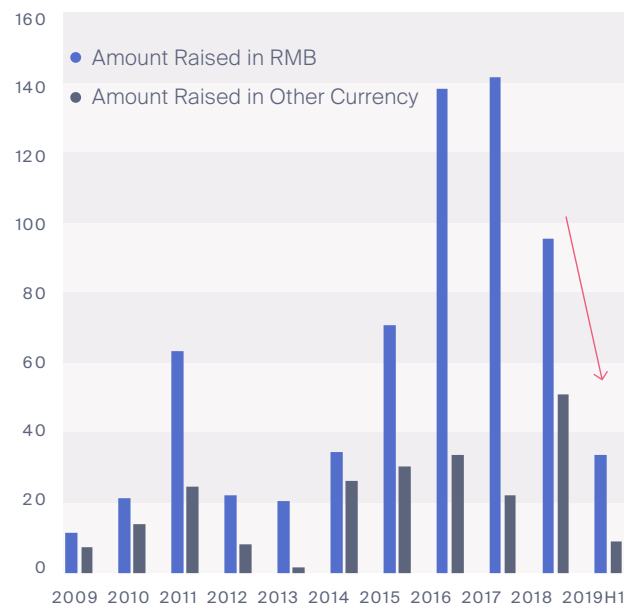
Post-Money Valuations (\$ Billion)



Source: Crunchbase
As of Dec. 2019, based on recent valuation

Chart 37. China RMB VC Fundraising has Collapsed

China VC Fundraising (\$ Billion)



Source: McKinsey Global Institute

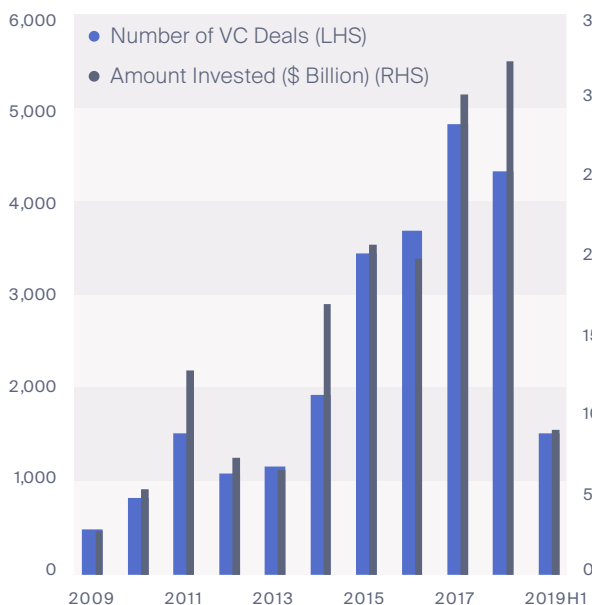
tech startups would receive follow-on funding during their early days. Many of these programs continued for decades and over 70% of program-sponsored companies in the 1990s received follow-on funding rounds for expansion. While many of these businesses eventually failed, leaving many banks with bad debts (a story for a different time), some of these companies – by the sheer force of successive capital raises that created their own moats – turned into the leaders of today. This state-sponsored support created relatively low failure rates – in stark contrast to the higher failure rate of U.S. VC-backed companies – and helps explain why even the lowest-quartile Chinese VC funds still generated strong returns for investors.

By the later part of the 2010s, RMB fundraising declined significantly, as shown in **Chart 37**. An earlier wall of fundraising contributed to the accelerating deal activity shown earlier. However, as this massive store of investment dry powder has been spent without further support, investment activity appears to have slowed significantly during the early part of 2019, as shown in **Chart 38**. While it is dangerous to extrapolate from a small sample size in the second quarter of 2019 the value of venture deals in China declined 77% and the number of deals roughly halved, leading to the current Chinese VC “winter.” For comparison, venture deals in the second quarter rose 15% in the U.S. and over 30% in Europe.

As part of this Chinese VC winter, we are also seeing declining exits for VC-backed companies, as shown in **Chart 39**. While the data are a bit opaque, there is a clear connection between the end of the RMB investment surge, as shown in **Chart 37**, and the reduction in exits with an expected lag. While both IPO and acquisition exit avenues appear to have declined, we expect support for both types of exits to exist in the future. First, IPO exits have historically been cyclical. Both the recent trade-war

Chart 38. Chinese VC “Winter” Arrives

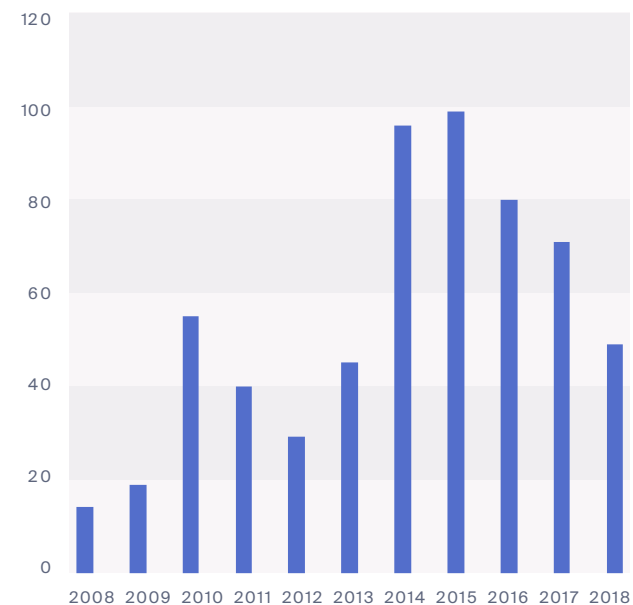
Venture Capital Deals and Funding Amounts



Source: Zero2IPO
Excludes deals from foreign investors

Chart 39. Chinese VC Exits Also Declining

Number of Chinese VC Exits



Source: PitchBook Data, Inc.

rhetoric and a mid-cycle economic slowdown likely contributed to reduced IPO support. On the acquisition front, reduced funding to later-stage investors likely contributed to a decline in exits. However, the BATs will likely continue to be active investors and acquirors in the venture space and they have reached sufficient size such that we feel confident that domestic activity will reach a supportive floor level. While the slowing of exits has had a notable chilling effect on VC investing as companies' exit paths seem less certain, we are seeing more attractive pricing in early- and mid-stage investment rounds, producing a realistic belief that future returns could be even stronger over the next few years.

China has never gone through a widespread bust like the U.S. experienced at the end of the dotcom-bubble era. Whether this period of Chinese winter becomes a longer ice age or a relatively short cold snap will depend on how VCs, investors and regulators navigate this new terrain. While no one can predict the length or severity of this investment soft-patch, historically these periods have often been the best time to plant the seeds of future VC investments.

The Increasing Importance of Manager Selection

Gresham's VC managers on the ground in China corroborate this emerging winter environment. As a result, the performance of recent VC investments may suffer relative to the ebullient performance of the prior decade, as we are likely to witness delayed exits and reduced valuations of existing VC-backed companies. At the extreme, we may also see increasing company failure rates that could approach "normalized" U.S. failure rates. We believe this period will ultimately be healthy for the Chinese VC ecosystem by eliminating many weaker participants that pushed valuations higher. This positive development may be especially true for U.S. dollar-oriented managers, like those used by Gresham, whose companies tend to be higher quality and with funding sources that are considerably more stable. We can already see that strong Chinese VC managers remain in high demand from long-term, sophisticated investors like Gresham and select endowments and foundations.

We believe that the importance of manager selection will continue to increase in China, possibly approaching the importance of VC manager selection in the U.S. As we have seen in the U.S., VC managers in China tend to exhibit serial correlation, where the best performing managers tend to produce the best returns in the future. While this relationship has weakly existed in the past, we expect to see a clearer pattern emerge in China, which means maintaining access to existing top managers and obtaining access to emerging top managers will be critical to future success.

Market Predictions

Everyone wants a market prediction. It's the time of year when so-called investment professionals, many of whom are quite intelligent, feel compelled to make them. Our prediction – and we can say this with a high degree of confidence – is that their predictions will be wrong. Warren Buffett famously once said that "the only value of stock forecasters is to make fortune tellers look good." We do not forecast future market returns. We have no ability to do it. And, quite frankly, neither does anyone else.

Market experts feel they need to make predictions because that's what their clients are asking for. How do they fare? Bespoke Investment Group recently studied the

history of Wall Street consensus forecasts with a few uninspiring conclusions. Over the last 20 years, the consensus forecast was that the S&P would be higher one year later every single year. Their annual predictions suggested that equities would rise on average just under 10% per year, yet markets produced only a little more than half of that.

We know that the market fell in six of these 20 years. These forecasters predicted positive years in each of these six years, including 2008 when U.S. equity markets fell nearly 40%. This ratio of down years is consistent with history, which tells us that the market goes up about two-thirds of the time. It goes up roughly two-thirds of the time when a Republican is President and when a Democrat is President, in even years and in odd years, in leap years, after a down year and after an up year, and on and on. The direction of the market, in any given year, is truly a random walk.

A cynic might suggest that there is another reason for these ever-optimistic Wall Street forecasts. Warren Buffett also said that “forecasts may tell you a great deal about the forecaster; they tell you nothing about the future.” Have you ever seen a negative forecast from someone who works on Wall Street? Of course, it’s possible but they aren’t paid to persuade clients to go hide cash in their mattress.

Portfolio Construction

John Kenneth Galbraith piles on the forecasters by adding that “there are two kinds of forecasters: those who don’t know, and those who don’t know they don’t know.” Starting with the understanding that we know that we don’t know is very helpful. We can construct portfolios to deal with uncertainty.

The primary tool in building a portfolio is diversification, which most investors do without thought as to why. We do this, not to increase returns, but to buttress our portfolio against excessive losses. If anyone could forecast with any accuracy, no one would diversify. The resulting long-term asset allocations are very specific to each individual and are designed to ensure that we take only as much risk as we can tolerate. If investors’ discomfort forces them to sell during a market decline, then portfolio construction was misguided.

When considering portfolio diversification, it is important to remember that in a world where investment professionals gravitate toward statistical simplification, most portfolios are constructed with an “illusion of diversification” based on backward-looking statistics. It is even more important to understand how assets perform during difficult periods – when diversification is truly needed.

Lastly, while market return predictions are not helpful, we can determine to some degree the relative attractiveness of asset classes and strategies. From these views, we create investment themes that allow our clients to overweight or underweight certain asset classes consistent with each investor’s long-term allocation. These are presented below.

Investment Themes

As we have for the last few years, we continue to recommend holding slightly higher cash balances as equity and interest rate markets have moved full circle over the last

Cash	two years from expensive to fairly valued and back to expensive again. Relative to last year, returns on cash are lower since the Fed lowered interest rates several times in 2019, whereas capital market valuations are higher, giving increasing importance to this pool of dry powder. Timing markets is very difficult and a practice we don't advocate. But having reserves available for cash needs and capital calls, to avoid selling portfolio assets at depressed prices in the event of a correction, remains prudent.
Fixed Income	Interest rates have moved sharply lower with the Fed's policy reversal and yield declines have been exacerbated recently with fear of coronavirus contagion. While equity market valuations may be high by historical standards, most analysts agree that interest rates and bond markets are relatively less attractive. As a result, we continue to recommend underweighting traditional fixed income strategies as well as high-yield strategies on both valuation and liquidity concerns. Cash is quite simply a better way to reduce risk in a portfolio than through traditional fixed income exposure.
Equity Markets	The significant re-rating of U.S. equities during 2019 leaves investors once again in a difficult position. Future expected returns are rightfully reduced given current valuations, but do not necessarily foretell a crash. It will likely take an exogenous event, and the return to central bank policy tightening, to create a catalyst for declines. In fact, with corporate earnings likely to reaccelerate in the coming year and with central banks remaining supportive, the most likely case remains a "muddle through" period for equities. Non-U.S. developed equity markets are less expensive, but questions remain on earnings growth and these markets generally deserve some discount. As a result, portfolio allocations should remain globally oriented considering the strong recent run of U.S. equity markets.
Emerging and Frontier Markets	Over the last few years, emerging markets equities have trailed U.S. equities despite lower starting valuations and, in theory, higher growth prospects. A stronger U.S. dollar environment, despite increased resilience in many emerging markets economies, created headwinds for investors that were intensified by trade war concerns. Investors, in response to weak headlines, have largely shunned this riskier allocation, which has led to poor support and relative underperformance compared with the U.S. Headline earnings and performance of the major emerging markets indices have been weak, primarily due to poor index construction, but some of the better-managed and faster-growing companies are now garnering more interest from investors. We continue to believe that investors should allocate to this area given the long-term potential of these markets. The slow inclusion of local Chinese markets will continue to tilt these markets and investments in this direction and future returns will become increasingly China-centric, until China graduates into a developed market, likely sometime this decade.
Hedge Funds	Investors are right to be skeptical of allocations to this space as after-fee alpha generation for the industry in aggregate remains close to zero as it has for the last few years. Last year was one of the best years for hedge funds in absolute terms, but the capture rate of 2019's strong equity returns was disappointing by historical hedge fund standards.

Manager selection remains critical, as the best managers continue to demonstrate that they can provide excess risk-adjusted returns to make this an accretive allocation within investors' portfolios. These managers are not typically the well known hedge funds found on broker-dealer and trust company platforms. Rather, they tend to be smaller and nimbler, having a deep sector or geographic specialty and focus their investments in less efficient areas of the capital markets outside of U.S. large-cap stocks.

Private Equity and Venture Capital

Many analysts warn about the massive amount of dry powder in the hands of private equity managers, but this tends to be concentrated into a small number of mega-funds. At the same time, distributions have largely kept pace with fund raising, such that while the net amount of investment capital has grown, it hasn't been at the alarming pace that some analysts fear. Venture capital has undergone a tremendous transition over the last decade since the GFC, but we remain positive on the industry's ability to create disruptive businesses. This remains true in China despite the current venture "winter." Public market investors are demonstrating discipline and pushing back on flawed, uneconomic business models, which, we hope, will have a ripple effect through the industry and on company valuations.

Private Real Assets

While this *Annual Outlook* does not provide an in-depth view on private real assets, we continue to allocate capital cautiously to this area. Real estate investment remains challenging, as low-cap rates, high valuations and increasing efficiency continue to suppress potential future returns although niche opportunities remain. Energy is a sector undergoing tremendous transition and this is calling into question the very nature of equity investments in this area. As a result, very little capital is flowing into the area, a stark contrast from a few years ago, which is leaving open attractive off-the-run opportunities.

About Gresham

Gresham Partners is an independent investment and wealth management firm that has been serving select families and family offices as a multi-family office and an outsourced chief investment officer since 1997. Today, we manage or advise on approximately \$6 billion for about 105 clients located nationally.

We are committed to providing superior investment performance by utilizing select, difficult-to-access managers that are located globally in a full range of asset classes and are not affiliated with Gresham. We make these managers available to our clients in a flexible format well suited to achieving a broad spectrum of investor goals. We integrate this investment approach with comprehensive wealth planning and management services to address the full range of each client's financial needs, often avoiding the need for them to maintain a family office.

Gresham is wholly owned by its senior professionals, client fees are its sole source of compensation, it avoids conflicts of interest that affect many other firms and it acts as a fiduciary dedicated to serving its clients' best interests.

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