October 2020

PZENA Investment Management

CATALYSTS FOR CHANGE

How to spot the coming shift from growth to value

Ride the winners. That's the obvious investment strategy favored at the end of a cycle. It's easy, really. Just select the few dominant technology "masters of the universe" that everyone loves, sit back and enjoy the multiple expansion.

It's happening again this cycle. And, true to form, valuation spreads between cheap and expensive stocks have reached all-time highs all over the world. Further, questions about whether value will ever work again, or whether there is a new definition of value, have become commonplace. It is reminiscent of the late 1990s internet bubble when Michael Lewis' 1999 book *The New New Thing* described all you needed to know. Investors then, like investors today, were mesmerized by unfettered growth opportunities.

But value's day is coming. Paying less than the present value of future cash flows remains a winning strategy for long term investment success, and the environment today makes this path even more attractive than normal. We believe that the seeds for unwinding today's extremes have been planted, especially as our COVID-dominated world has led us into a recession that history shows is the key marker for the shift.

Consider the following four possible catalysts that could already be signaling that a shift is upon us:

1 RECESSION

The recession is in place and the path toward economic recovery is becoming clear. We examined recessions in the US over the last 100 years and in Japan over the last 45 and the evidence is compelling. The US experienced 14 recessions during the past century, and looking at the five-year returns from the beginning of the recessions, value outperformed the broad market by an average of 530 basis points per annum[1].

2 INTEREST RATES

Interest rates stop falling, bringing multiple expansion for growth stocks to an end. Interest rates have been in structural decline for the past 40 years. This has led us to a world where one can buy value stocks at P/E's of 10, just like any time in the past 70 years, while average growth stock multiples have doubled from 30 to 60 times. Even if rates don't rise, it's hard for us to see the tailwind enjoyed by growth stocks continuing.

3 GROWTH EXPECTATIONS

(Irrationally) exuberant growth expectations for the technology "masters of the universe" revert to normal. Consider the math using Microsoft as an example. Microsoft's stock price is up 10 fold over the past 10 years, or 25 percent per year, helped by strong growth in cloud technology replacing on-premise hardware demand. During this period, Microsoft's operating income has doubled, growing at an 8% annualized rate. To justify an 8% return starting from today's stock price, operating income would need to grow at 10% for the next 20 years to levels greater than 6x where it is today. Yet market analysts estimate that cloud penetration of data needs has reached 30% – 35%, and that the possible maximum penetration for the cloud will be approximately 70%, therefore, we are about halfway to saturation. So where will that growth come from?

4 DISRUPTION

The conventional wisdom that technological change comes entirely at the detriment of the existing franchises proves to be mistaken. Let's consider the case of electric cars and Tesla versus VW. Conventional wisdom, and stock price, suggest that the answer is obvious — Tesla will win. But even if Tesla grows, does it make sense that VW (and other incumbent auto companies) must shrink? Tesla's stock is one of the darlings, rising over tenfold during the past five years. VW's stock has barely changed in the same period. But there are ultimately only two ways to win in auto manufacturing: (1) charge higher prices — in other words maintain a brand premium, and (2) manufacture at lower costs. It seems inevitable that these truths will apply to electric vehicles, and that VW will succeed in porting their brand strengths (think Porsche and Audi) and scale advantages into the electric vehicle competition. In fact, VW leads all competitors in the number of new electric vehicles that will be introduced over the next several years.

IN UPCOMING WEEKS:

Brief studies of each of these possible catalysts for the turn from a growth to a value cycle.

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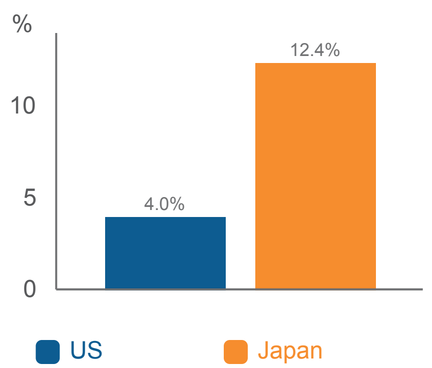
Recession Typically Signals the Start of a Value Cycle

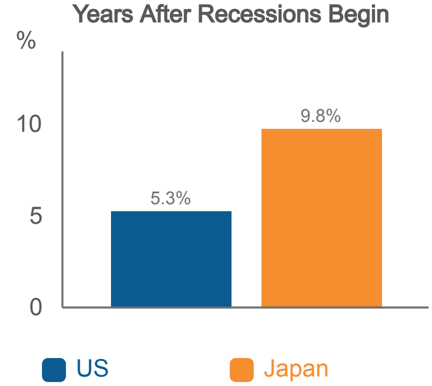
It may seem counterintuitive, but history shows that stocks tend to rise before a recession ends, as investors anticipate a recovery. Further, stocks actually have risen during 9 of the last 12 US recessions. Consider the following:

A clear link exists between value stock performance and economic cycles. We studied a century's worth of data — 14 US recessions dating back to the Great Depression and 8 recessions in Japan since 1975.

Value's Average Alpha in Recessions



Value's Average Annual Alpha Five Years After Recessions Begin



Source: Cabinet Office of Japan, Federal Reserve Bank of St. Louis, Kenneth R. French, MSCI, Sanford C. Bernstein & Co., Pzena analysis. Please see Further Information on the following page. Past performance is not indicative of future returns. Does not represent any specific Pzena product or service.

The value style has, on average, outperformed both during and subsequent to a recession

- Historically, value stocks have dominated the early stages of a business cycle upturn, resulting in a value advantage over the course of a recession
- In 12 of 14 US recessions and 9 of the last 9, value outperformed 5 years from the start, delivering 530 basis points of annualized alpha
- In Japan, value outperformed in every 5 year period, leading by 980 basis points annually

What goes down, tends to come back up

Value tends to lag in the run-up to a recession as investors flock to companies with recent success. However, they tend to overdo it. Once in a recession, and as the path toward economic recovery clears, investors typically re-focus on fundamentals, recognizing that value stocks are already priced for a recession, limiting the downside, while growth stocks still have exorbitant expectations factored in.

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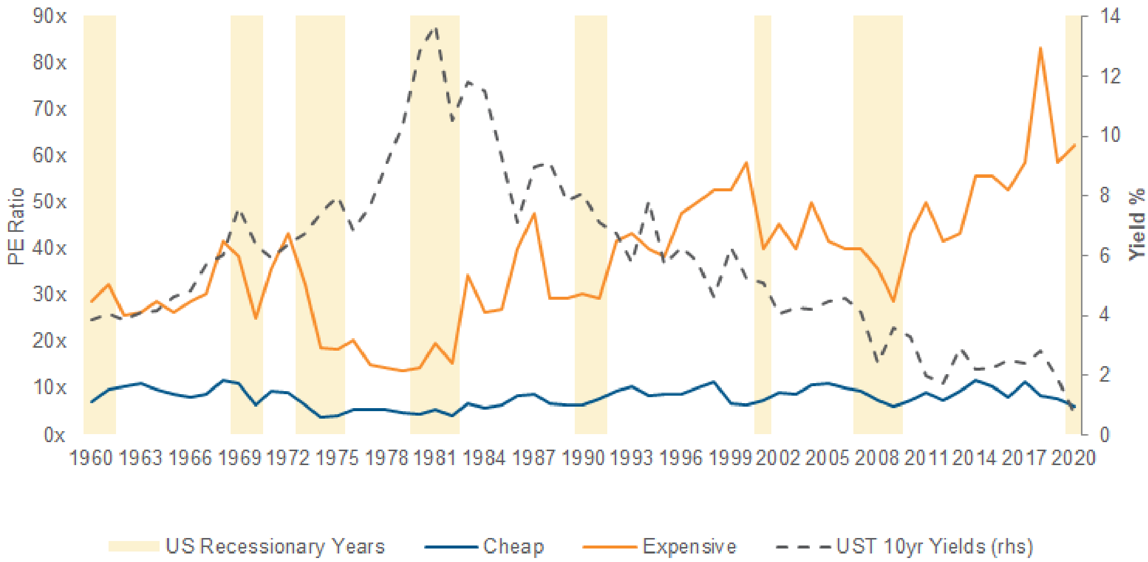
Interest Rates Don't Need to Rise, They Just Need to Stop Falling

NOVEMBER 2020

Growth stocks have been riding high on the long wave of falling bond yields.

THE TIDE MAY BE TURNING...

Interest rates have been declining for 40 years (down 96% in the US since 1981).



Source: Kenneth R. French, National Bureau of Economic Research, Federal Reserve Bank of St. Louis, Pzena analysis. The horizontal lines show the market-cap weighted trailing P/E ratios for the most expensive and cheapest quintiles of the US market. Data from 1951 through June 2020. Universe is all NYSE, AMEX, and NASDAQ stocks defined by Kenneth R. French data library.

Growth's P/E — Has risen to about **60x**, from below 15x in the early 1980s.

Value's P/E — Has stayed relatively constant at about **8 - 10x**.

AND IMAGINE

what could happen when rates stop falling.

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NOVEMBER 2020

Growth Expectations Come Back Down to Earth

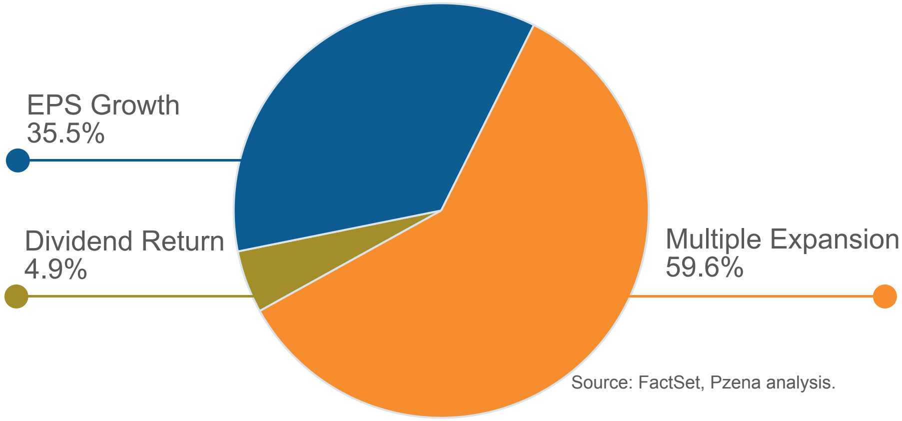
For many of the technology "masters of the universe," growth rate expectations (and stock prices) have been rising much faster than earnings.

Investors should wonder: *Where will that growth come from?*

EXAMPLE: MICROSOFT

Performance Drivers[1] for the Five Years Ended September 30, 2020

Earnings and dividends explain only 40% of the stock's total return over the past five years.



The remainder is a bet on future growth, yet cloud penetration is already about halfway to saturation[2].

Source: FactSet, Pzena analysis.

Multiple expansion is not a sustainable source of return.

Confronting Saturation

As a company becomes bigger, it runs out of market share to take. The law of large numbers is immutable.

To justify many growth stock valuations today, one must believe:

- A company's revenues will far exceed what's visible today as an addressable market, OR
- That it can continuously expand beyond its core business, which rarely happens.

Any disappointment in the growth rate can translate into multiple contraction.

Sustained high earnings growth is rare.

Over the past 25 years, only 9.7% of companies[3] in the Russell 1000® Index delivered more than 5 consecutive years of 10% or better EPS growth, and fewer than 2%[3] achieved it for 10 consecutive years.

Source: FactSet, Pzena analysis.

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DECEMBER 2020

Disruption Isn't Just for Start-ups: The Adaptability of the Incumbents

When new technology arises, many investors often respond with a sweeping assumption that it comes at the expense of incumbents. **Yet strong incumbents adapt.**

Established businesses often have brand strength, scale, relationships, competitive cost positions, and strong distribution channels. These are **powerful advantages** that shouldn't be overlooked.

Consider the following value opportunities.

In both cases many incumbents are poised to navigate industry inflection as they roll out, partner with, or acquire new technology, enhancing business models by creating compelling and more competitive new offerings.

They know how to engineer vehicles profitably, and have embedded advantages. Consider VW, which has:

- Luxury brands — higher price point allowing to better recoup costs
- Scale — it makes close to 11 million units
- Leading market share in Western Europe and China — where emissions standards are ambitious
- An already established dedicated EV platform

Tesla should be respected. It has a brand and a lead in EV manufacturing. But ultimately, with incumbents catching up, it faces a long, hard-fought battle with bigger adaptable competitors.

Consider JP Morgan Chase. It has an $11 billion annual technology budget to build and maintain a massive digital experience that can win with the empowered digital customer. It also has:

- Long-term client relationships / High engagement
- Reach — physical and virtual
- Immense amounts of data
- Scale — breadth of product offerings
- Trust — compliance infrastructure, data security
- Client service — couple fintech with a human touch

Global banks are using their tremendous capital resources to amass the technology to further solidify their market dominance.

FURTHER INFORMATION

Re Page 1 – "How to Spot the Coming Shift from Growth to Value"
[1]Source: Cabinet Office of Japan, Federal Reserve Bank of St. Louis, Kenneth R. French, MSCI, Sanford C. Bernstein & Co., Pzena analysis. Data use 14 US recessions from 1929 - 2009 and eight Japan recessions from 1977 - 2012. The US universe is all NYSE, AMEX, and NASDAQ stocks defined by Kenneth R. French data library and excluding the smallest 30% of companies based on market capitalization to replicate our investable universe. The Japan universe is the MSCI Japan Index. Value is defined as the cheapest quintile of stocks on a price-to-book basis for each respective universe. All returns equally weighted in US dollars. Past performance is not indicative of future returns. Does not represent any specific Pzena product or service

Re Page 2 – "Recessions"
Charts use 14 US recessions from 1929 through 2009 and eight Japan recessions from 1977–2012. The overall US universe is based on the top 70% of companies based on market capitalization (ex- small- and micro-cap companies). The Japan universe is based on the MSCI Japan Index. Deep value stocks are represented above by the cheapest quintile of stocks on a price-to-book (P/B) basis. We do not believe P/B is ideal for assessing valuations, but it's a useful proxy for comparing value stocks because of its availability across markets and history. At Pzena, our preferred valuation metric is price-to-normalized earnings. All returns are equally weighted in US dollars.

Re Page 4 – "Growth Expectations"
[1]Data as of September 30, 2020. Dividend and total return assumes dividends received and not reinvested. EPS growth is calculated using forward 12-month consensus estimates per FactSet for both starting and ending dates. As of September 30, 2020, Microsoft is not held in any of our strategy composites. Past performance is not indicative of future returns. [2]Market analysts estimate that cloud penetration of data needs has reached 30% – 35%, and that the possible maximum penetration for the cloud will be approximately 70%, therefore, we are about halfway to saturation. [3]Based on companies that were in the Russell 1000® index for a minimum of five consecutive years, and 10 consecutive years respectively.

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