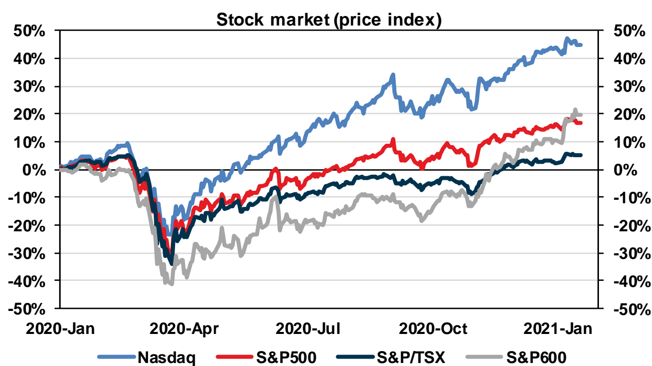
Shiller CAPE ratio higher than in 1929: Are we in a bubble?

Introduction

In 2020, despite the raging pandemic, equity markets managed to eke out returns that were not only positive, but significantly above expectations (**Chart 1**).

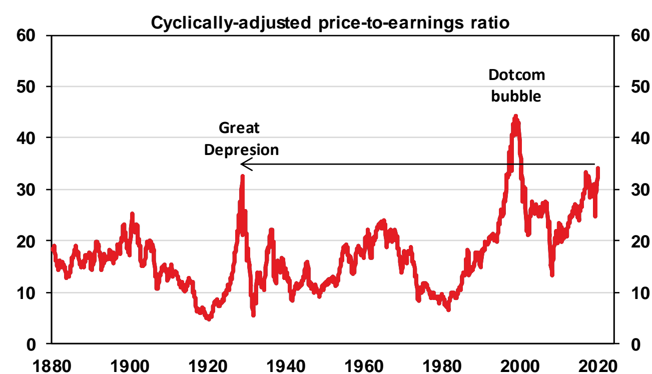
1 Better-than-expected "Pandemics" returns



CIO Office (data via Refinitiv)

However, with no earnings growth to show for it, many are questioning the sustainability of such price appreciation, pointing to current lofty valuations.

2 The CAPE ratio higher than the mythical 1929 level



CIO Office (data via Shiller)

Case in point: at the end of last year, Shiller's[1] famous cyclically-adjusted price-to-earnings ratio (CAPE) rose above the mythical peak of 1929 to reach its highest level since 1997 (**Chart 2**), giving its disciples an indication that we might be in a bubble.

To make matters worse, Jeremy Grantham – the legendary investor from GMO who has called the shots (admittedly too quickly) in previous market corrections – said early on in 2021 that we were indeed in a bubble.[2]

While some single securities do appear to be under the spell of speculation, the purpose of this report is to show that the overall condition of the market may be better than at first glance.

Our intent is not to be complacent nor to say "this time is different," but rather to show that everything is a matter of perspective: valuations are rarely a good timing tool.

To be sure, we look at trends in multiples, recent price appreciation, and the current level of interest rates.

Historical average vs…

Let's start by going over the CAPE Index itself, which smooths out the volatility of earnings by taking a ten-year average.[3] Applying this method to the U.S. large cap equity index (S&P 500), we get a multiple of more than 33 times earnings, nearly double that of the historical average.

This certainly gives investors good reason to be worried, as similar sky-high valuations were precursors to market corrections of more than 80% during the Great Depression and 50% during the dotcom bubble. The NASDAQ Index went down even further, collapsing by 82% from peak to trough during the latter period.

[1] Robert J. Shiller is a Yale University economist whose index helped predict the market crash of 2000 and 2007
[2] https://www.gmo.com/americas/research-library/waiting-for-the-last-dance/

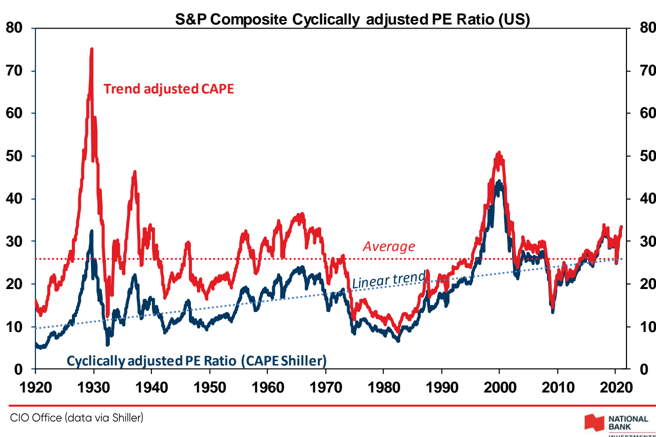
[3] The ten-year average is arbitrary but tends to overlap at least one full business cycle. According to Campbell and Shiller (1988), a long moving average of real earnings helps to forecast future real dividends.

One can certainly understand investors feeling trepidatious in the face of such dangerous precedents. However, while equities do seem to be richly priced currently, it doesn't necessarily mean that future returns will be negative. The main reason is that CAPEs have been on a slightly upward trend historically, reflecting the transformation of the U.S. economy throughout the 20th century, i.e. from a very industrial basis (**lower multiples**) up until the early 30s to a service-led technology-supported basis (**higher multiples**) from the 80s onward.

… trend-adjusted multiples

Therefore, based on our prior work[4] we find that making an adjustment for this trend yields interesting conclusions. For one, the all-time-high CAPE level recorded during the dotcom bubble is now second to what the valuations were during the speculative era of the late 20s that led to the Great Depression (**Chart 3**).

3 The trend-adjusted 1929 level is much higher

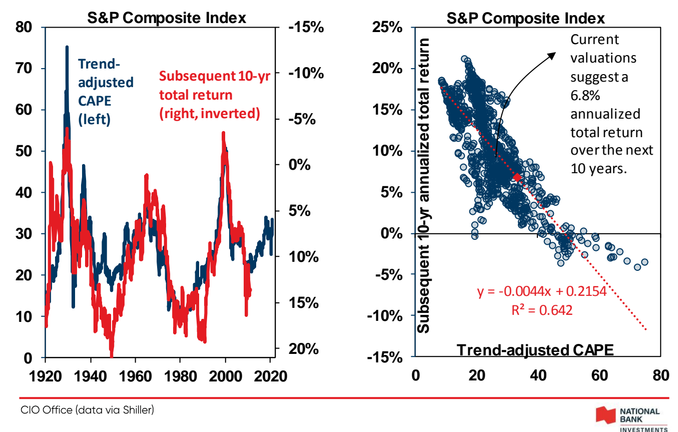


CIO Office (data via Shiller)

Working from this development, we map the downward pattern of high PEs and lower future equity returns in a scatter plot (**Chart 4**). With the CAPE level currently sitting 23% above trend, the regression line suggests that equity returns over the next ten years should average close to 7%.

Obviously, in and of itself, that finding is not enough to prevent an equity market correction early in the cycle, nor at any point. A pullback in the first year could easily

4 The current level points to decent gains on average



CIO Office (data via Shiller)

be offset in the following years just to end up flat on average.

However, the reverse is also true. The years of "irrational exuberance"[5] are good reminders that what may seem expensive today may well get much pricier tomorrow. In 1997, the earnings multiple went on from a level of 32.5 (the peak of 1929) to a high of 44 at market top in 2000, leaving the S&P 500 price index to increase by a further 60% during that period.

Recent price appreciation

This brings us to our second point of analysis, the notions of "pace" and "sustainability."

In hindsight, the burst of performance of the late 1990s is a revelation that greed, the fear of missing out, and speculative forces tend to overshadow good judgment in the worst of times.

So, how can we make sure that the pace of appreciation is not too fast or unsustainable? One way is to look at cumulative market returns over different periods of time. We find that anything above 200% over a five-year timeframe is "a recipe for disaster."

While that may seem excessive, it is precisely the type of price action that has led to the market crashes of 1929, 1937, 1987 and 2000 (**Chart 5** next page).

In comparison, while some securities such as Tesla or Bitcoin[6] currently exhibit "frothiness" and may be perceived as bubbles, the general condition of the

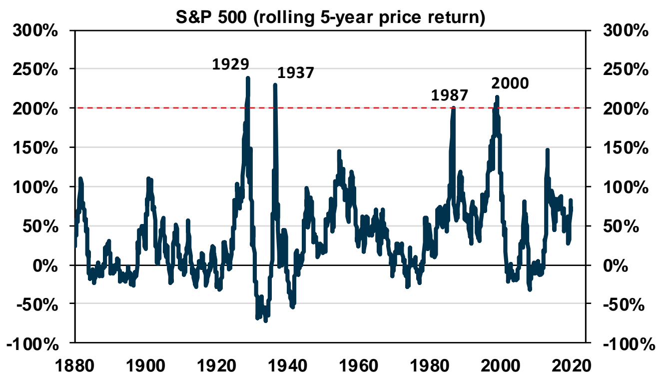
[4] Long-term Market Expectations 2017: Coping with rising yields and higher equity valuations.

[5] The term was coined by Alan Greenspan, Federal Reserve President, in a 1996 speech.

[6] Bitcoins or other cryptocurrencies are not part of equity indices.

equity market suggests that the recent pace of price appreciation appears sustainable.

5 No frothiness on aggregate



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Record low interest rates

Finally, we need to consider the type of economic and financial environments we evolve in.

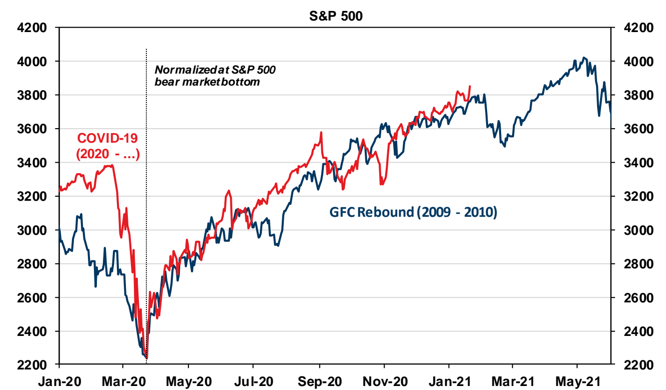
Although the pandemic continues, unprecedented efforts were put in at every level of government authority to limit the economic impact, and the sharp rebound in activity in the second half of 2020 suggests that we are probably at the beginning of a new business cycle.

As such, while equities were quick off the starting block following the March 23, 2020 market trough, it is reassuring to see it is very similar to that of the 2009 recovery period (**Chart 6**).

For many investors, this may seem surprising, as the 2009-2020 bull market started from a lower PE ratio. However, as we have pointed out previously,[7] when we adjust this same measure for interest rates and inflation (i.e. the equity risk premium[8]), we find we are roughly at the same valuation level as 11 years earlier owing to historical low interest rates (**Chart 7**).

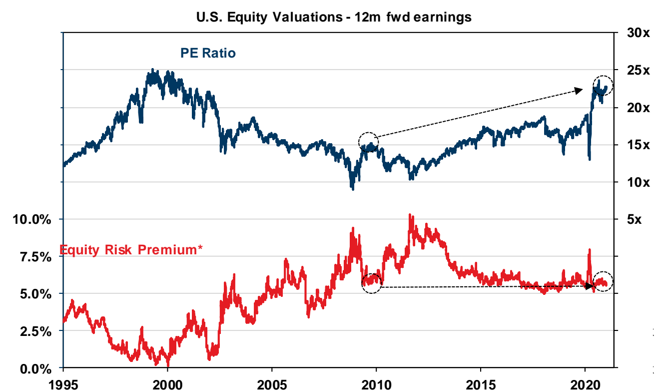
This finding is as important now as it was in the past: the level of interest rates matters. While fixed income is a poor alternative to equities today because of the record low level of yields, the equity risk premium turned negative at similar CAPE ratios in 1929 and 2000 because of higher interest rates (**Chart 8**).

6 A recovery with a certain sense of déjà vu!



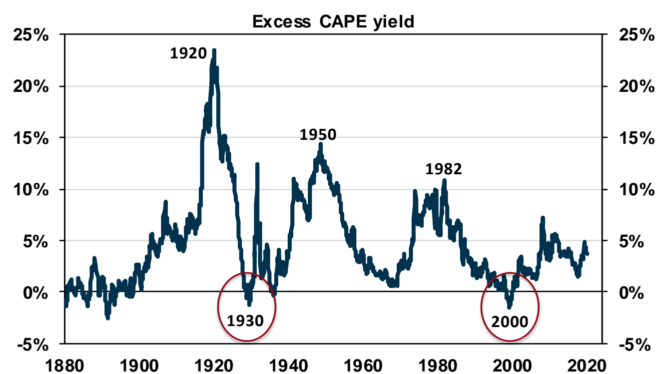
CIO Office (data via Refinitiv).

7 Forward PEs are high but the ERP is too...



CIO Office (data via Refinitiv). *Spread between the S&P 500 foward ernings yield (1/PE) and U.S. 10-year real yields (U.S. 10-year treasury yields deflated with 10-year CPI swap rates, and actual CPI before June 2007).

8 ... while it turned negative in 1930 and 2000



CIO Office (data via Shiller)

In the end, if investors can't be adequately compensated for taking more risk, why would they?

[7] Asset Allocation Strategy: Great recessions, great rebounds, now what? July 2020

[8] Equity risk premium = Earnings yield – Real 10-year notes yield

Conclusion

On a historical basis, equity valuations are lofty and bear close monitoring. However, taking account of the composition of sector activity, the recent pace of price index appreciation and the interest rate level, suggests that equities, on aggregate, may have more in store.

Although the pandemic proliferates by the day in disturbing proportions, inoculation of the population suggests that the end is in sight. With the help of generous fiscal plans and extremely accommodative monetary policies, we believe the economy will keep growing, company earnings will improve, and the stock market will continue to thrive.

While there will always be flavour-of-the-day securities to remind us that we should never be complacent, the late John Maynard Keynes reminds us that “markets can stay irrational much longer than investors can stay solvent.”

In the end, one must always remember that investing in equities bears risks. Investors should always respect their risk profiles, diversify their portfolio exposure through different asset classes and geographic regions, and mitigate volatility by playing the long game.

CIO Office
CIO-Office@bnc.ca

Martin Lefebvre
CIO and Strategist
martin.lefebvre@nbc.ca

Simon-Carl Dunberry
Chief Advisor
simon-carl.dunberry@nbc.ca

Louis Lajoie
Investment Strategist
louis.lajoie@nbc.ca

Nicolas Charlton
Analyst
nicolas.charlton@nbc.ca

General

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