<u>Extreme historic uniqueness – the period we are currently in</u>
for clients of Puzzle Financial Advice
9/5/2019

As investors, we are currently facing a quite-long list of historic extremities . This list just illustrates how very historically unique the period we are now. In short:

- Deflationary:
  - Debt bubbles – particularly private debt bubbles
  - Biggest emergence event in history. China and emerging world.
    - Rapid shift in centre of global economic power from the West to Asia.
      - In 2014, in PPP terms, emerging world more than 50% world economy.
      - In 2019, in PPP terms, Asian economy more than 50% world economy.
  - The technology revolution including artificial intelligence and robotics.
- Inflationary
  - Money printing
    - the world has never ever in history seen anything like the amount of money printing that has occurred from the big 3 developed-world central banks since the GFC.
  - Risk of hyperinflation.
    - Modern Monetary Theory
- Stagflation is now
  - a significant probability eg like the 1970s
  - inflation with recession or very low economic growth.
- Asset Price crash
  - Private Debt bubbles – always lead to major crash.
  - If inflation rises quickly, discount factor rises fast, causing assets to fall fast.
  - Asset price bubbles – always lead to major crash.
- Lowest interest rates in 5000 years.
  - History says it won't stay this low forever. Interest rates could take off quickly.

The world has seen these sort of events before, but:-

- This time these are all happening together at the same time AND
- The magnitude of each of these events is huge (typically largest vs history) compared with historical experience.

So I think we have to just watch carefully, listen to experts that know what they are talking about (that eliminates most), listen to the markets and keep on trying to make objectively sensible decisions as we go through this. I think this is going to be very challenging for all of us….. and our "leadership" from Canberra – Federal pollies … and Treasury ……. does not fill me with confidence.

We live in interesting times.

<u>Note: I have highlighted in red, the most important historic extremes – my view.</u>

More Detail.

- **Deflationary:**
  - **Debt bubbles** – particularly private debt bubbles
    - We have seen debt bubbles before … but this one is far bigger than the world has ever seen by a long way…. And we can see from history what usually happens after debt bubbles …..

The US Debt bubbles since 1900

- Private debt bubbles always lead to major asset price crash and usually a very deep recession.
  - http://puzzlefinancialadvice.com.au/2018/Core/Debt_bubble_asset_price_crash_relationship_161019.pdf
- Very tightly link between the Australian house price bubble and Australian household debt bubble.
  - http://puzzlefinancialadvice.com.au/Houseprices_onepager.pdf
  - http://puzzlefinancialadvice.com.au/Houseprices.pdf
- It is widely accepted now that excess debt was the cause of the GFC.
  - One paper related to this is this one http://puzzlefinancialadvice.com.au/Balance_sheet_recessions_explained_140922_02_why_West_with_have_slow_growth.pdf
  - The only reason why Australia and Canada escaped the full wrath of GFC, was because a massive stimulus program in China approx October 2008 boosted demand for commodities, thus boosting GDP in 2 of the major commodity exporters – Australia and Canada. But now household debt in both of these 2 economies now is far far worse than it was in 2007, paving the way for a major asset price crash in Australia.
- Other related papers include:
  - http://puzzlefinancialadvice.com.au/2018/Core/Why_another_major_crash_is_coming_for_Australia_180117_23.pdf
  - http://puzzlefinancialadvice.com.au/Bank_share_price_bubble_in_Australia.pdf
  - http://puzzlefinancialadvice.com.au/2018/AFR2/180907_AFR_Warwick_McKibbin_Why_we_should_be_worried_about_the_next_GFC.pdf

        - http://puzzlefinancialadvice.com.au/2018/GFC2/GFC_The_world_is_again_vulnerable_to_a_major_financial_crisis_Prof_Warwick_McKibbin_180907.pdf
        - http://puzzlefinancialadvice.com.au/2018/GFC2/Debt_was_the_primary_cause_of_the_GFC_Gerard_Minack_180918.pdf
        - http://puzzlefinancialadvice.com.au/2018/GFC2/Recession_global_severe_in_2020_says_Roubini_who_forecast_the_2008_2009_Global_Financial_Crisis_180917.pdf
        - http://puzzlefinancialadvice.com.au/2018/GFC2/Household_Debt_Why_So_Important_180917.pdf
        - "There is no means of avoiding the final collapse of a boom brought about by credit expansion. The alternative is only whether the crisis should come sooner as the result of a voluntary abandonment of further credit expansion, or later as a final and total catastrophe of the currency system involved."
          - Ludwig von Mises (Austrian School of Economics).
      - Debt bubbles tend to be deflationary.
  - **Biggest emergence event in history**. China and emerging world.
    - Rapid shift in centre of global economic power from the West to Asia.
      - In 2014, in PPP terms, emerging world more than 50% world economy.
      - In 2019, in PPP terms, Asian economy more than 50% world economy.
      - A factor of significance is that history shows that over time, military power has always been correlated with economic power.
        - And history also shows that over time, trading relationships and defence relationships also have to come into alignment - a factor particularly relevant to Australia now where Australia's major trading partner is China and then Asia/Japan more broadly – whereas our defence relationship is with USA.
          - https://www.austrade.gov.au/news/economic-analysis/australias-two-way-trade-with-the-world-was-up-11-to-763-billion-in-2017
            - "The Asia-Pacific region (Asia and Oceanic region) accounted for 71% of Australia's two-way trade last year (2017)".
              - China – 24% of total Australian trade
              - Japan – 9.4% of total trade
              - USA – 9% of total trade
              - South Korea – 7.2% of total trade
              - India – 3.6% of total trade
        - History also indicates
        - These factors are of course, very important to Australia's future, particularly with the USA trade war with China seemingly the opening salvo in forcing countries to choose between USA and China – rather than having strong open relationships with both.
          - We also need to be aware of the Thucydides Trap – the incumbent superpower quite typically triggering war with the rising superpower.
            - https://foreignpolicy.com/2017/06/09/the-thucydides-trap/
              - "The past 500 years have seen 16 cases in which a rising power threatened to displace a ruling one. Twelve of these ended in war."
            - https://en.wikipedia.org/wiki/Graham_T._Allison#Thucydides's_Trap
            - https://www.theatlantic.com/international/archive/2015/09/united-states-china-war-thucydides-trap/406756/
    - We have seen 2 other great emergence events over the last 200 years (USA from about 1850 over approx 60 years and Japan from about 1950 over approx 20 years)

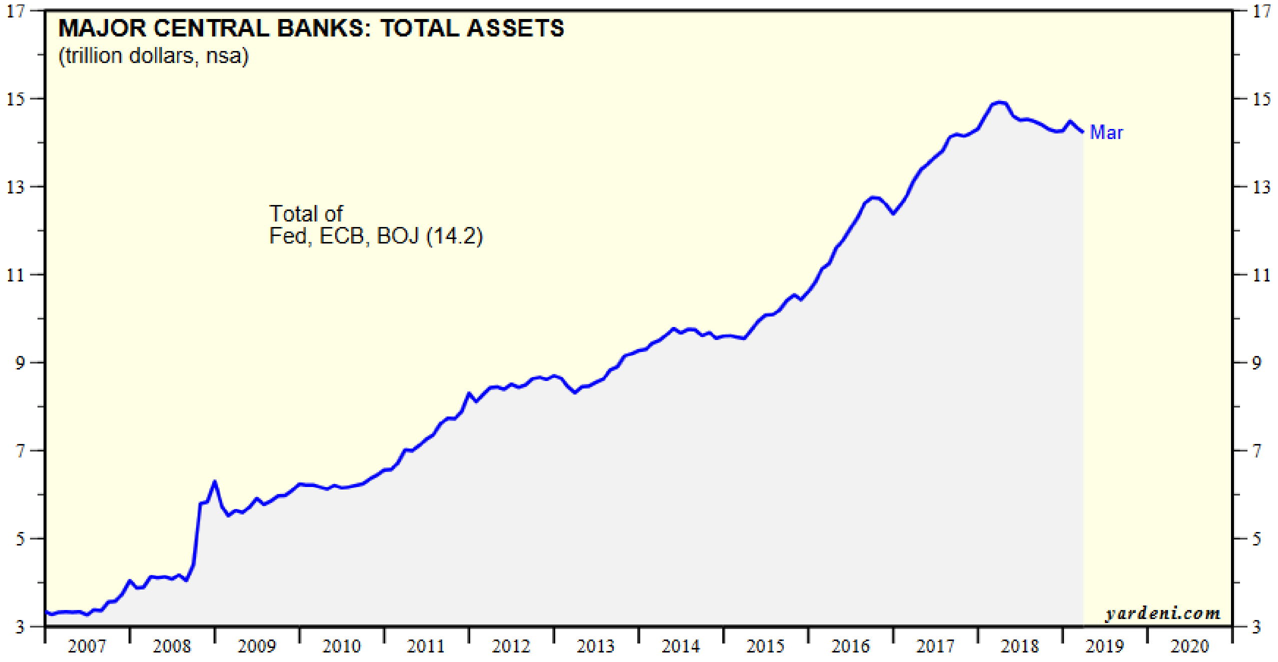
…. But nothing of the scale of the current emergence event with 3 billion period in the emerging world moving into comparative middle income from poverty

- Historically emergence events lead to price convergence - including wages - and so this heralds at the very least, a comparative fall in living standards in the West compared to the East.
- Emergence events tend to be deflationary in the developed countries.
- Some evidence and discussion:
  - https://www.puzzlefinancialadvice.com/largest-emergence-event
  - http://puzzlefinancialadvice.com.au/2019/Core/030507_Russell_Napier_paper_c9980406_Inflation_through_Deflation.pdf
  - http://puzzlefinancialadvice.com.au/2019/AFR/190401_AFR_Its_now_official_the_Asian_century_is_set_to_begin.pdf

- **The technology revolution including artificial intelligence and robotics**.
  - And we have seen technological revolutions before but the current technological change (particularly with Robotics and AI) will cause far more profound changes in our society than any other previous technological revolution ….
    - Tech revolutions tend to be deflationary - and can cause major social change and dislocation.
    - I think this tech revolution will lead to mass unemployment - and I suspect the downfall in democracy - probably over the next 20 years. Really profound change.
    - Some references:-
      - Tony Sheba on disruption April 2018 https://www.youtube.com/watch?v=duWFnukFJhQ
      - https://www.puzzlefinancialadvice.com/disruption
      - https://www.puzzlefinancialadvice.com/technology-change

- **Inflationary**
  - Money printing
    - https://www.economicshelp.org/blog/797/economics/why-printing-money-causes-inflation/
    - Over the period from about October 2008 towards the end of 2018, we have seen a period of money printing by the major central banks, far exceeding the largest money printing episodes at any previous time in history EVER.
    - The amount of money printing that has occurred is approximately the amount to which the major central bank balance sheets have grown since October 2008.

Figure 2.



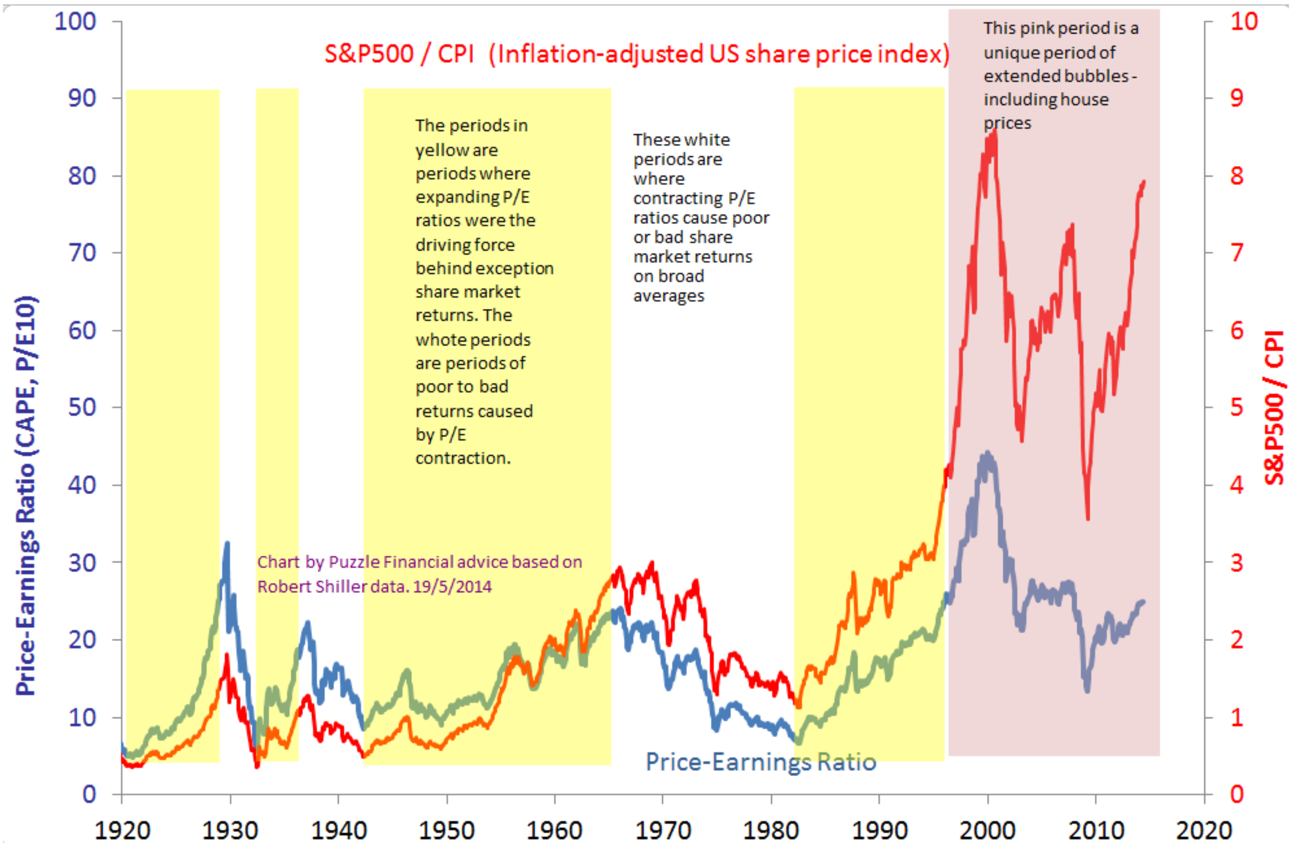
Source: Haver Analytics.

    - We have seen money printing before (not in Australia …. But in the Weimar republic in the 1920s … Zimbabwe over recent decades .. Venezuela even more recently) … and we know what usually happens as a result of that ….. but the money printing over the last 10 years is far more extreme than in any other time in history
    - And because they have got away with it, over the last 10 years, a lot of economist are starting to believe that “this time is different” and that they can keep on getting away with it. Scary.
    - Usually massive money printing creates **hyper-inflation.**
      - http://puzzlefinancialadvice.com.au/2019/AFR/190313_AFR_McKibbin_The_theory_thats_too_good_to_be_true_Is_money_printing_good_economic_policy.pdf
        - https://en.wikipedia.org/wiki/Hyperinflation_in_the_Weimar_Republic
      - Probably because all the money printing so far since the Global Financial Crisis, has not yet caused any significant inflation (at least as measured by the official Consumer Price Index in the USA), growing numbers of the US political elite are starting to push to print money to pay for growing fiscal deficits.
        - They are labelling this ‘new economics’ Modern Monetary Theory.
          - https://en.wikipedia.org/wiki/Modern_Monetary_Theory
            - https://www.cnbc.com/2019/05/02/ray-dalio-says-the-coming-of-modern-monetary-theory-favored-by-far-left-is-inevitable.html

        - http://puzzlefinancialadvice.com.au/2019/Core/190505_Ray_Dalio_on_Monetary_Policy_3_MP3_and_Modern_Monetary_Theory_MMT_02.pdf **Key paper**.
            - Clearly Ray Dalio seems a high risk of poorly designed MMT implementation causing hyperinflation.

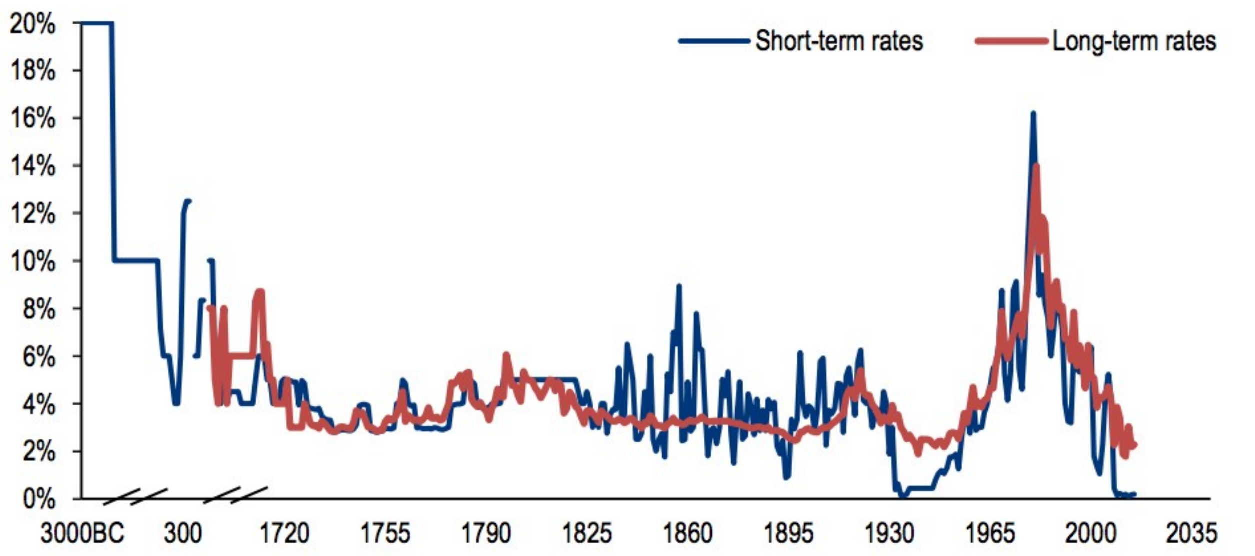
- **Stagflation is now a significant probability** eg like the 1970s
    - inflation with recession/very low
        - http://puzzlefinancialadvice.com.au/2019/Core/190504_Jon_Pain_Weekly_reminds_us_stagflation_probably_ahead_INFLATION_has_been_low__for_globalisation_n_tech_PMI_nasty.pdf

- **Asset Price crash**
    - Private Debt bubbles – always lead to major crash.
        - http://puzzlefinancialadvice.com.au/2018/Core/Debt_bubble_asset_price_crash_relationship_161019.pdf
    - If inflation rises quickly, discount factor rises fast, causing assets to fall fast.
        - Jon Pain (at 7/5/2019) has for some months now been pointing to risking US inflationary pressures. Eg through growth in US wage inflation.
    - Asset price bubbles – always lead to major crash.
        - We have seen asset price bubbles before ….. and we know what usual after that … and we have some very big asset price bubbles now
        - Asset price bubbles always lead to a major asset price crash - but recognising the bubble tells you nothing about timing of any crash.
            - http://puzzlefinancialadvice.com.au/Papers/Shiller_CAPE_PE10_as_a_guide_to_future_performance_130726.pdf
            - You can see from the chart below that extremes of CAPE are followed by major falls on the share market.



- **Lowest interest rates in 5000 years.**
  - History says it won’t stay this low forever. Interest rates could take off quickly.
  - https://www.businessinsider.com.au/interest-rates-5000-year-history-2017-9

Chart 1: Still the lowest interest rates in 5000 years!



Sources: Bank of England, Global Financial Data, Homer and Sylla "A History of Interest Rates"
Note: the intervals on the x-axis change through time up to 1700. From 1700 onwards they are annual intervals. Full methodology available upon request

  - http://puzzlefinancialadvice.com.au/2019/AFR/190409_AFR_Martin_Wold_How_our_low_inflation_low_intereset_rate_world_was_made.pdf
    - “Prior to 2009, the Bank of England never lent to banks at a short-term rate below 2 per cent. That had been low enough to cope with the Napoleonic wars, two world wars and the Depression. Yet, for a decade its rate has been close to zero.”