Increasing incidence of asset bubbles and financial crisis since the 1980s. A common link?

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“The monetary history .... has been replete with financial crises. The pattern was that the rate of growth of credit increased and economic growth accelerated, and ..... individuals began to invest for short-term capital gains ....”

Charles Kindleberger
Increasing incidence of financial crisis and asset bubbles since the end of Bretton-Woods

**Share of countries in crisis since 1900**

- **DM**: G7, Australia, Sweden, Norway, Denmark, Spain; **EM**: BRICS, Turkey, Poland, Hungary, Turkey, Israel, Kuwait, Hong Kong, Singapore, Thailand, Philippines, Indonesia, Korea, Malaysia, Mexico, Argentina, Chile; grey bars: 1914 WW1 related end of gold standard; 1925: UK returns to gold standard; early 1930s: UK and US off gold standard; 1944 Bretton Woods; 1971 collapse of Bretton Woods

**Source:** AllianzGI, Datastream. M. Schularick and A. Taylor (2009): Credit Booms Gone Bust: Monetary Policy, Leverage Cycles and Financial Crisis, 1870-2008; L. Laeven and F. Valencia; IMF WP/08/224 Systemic Banking Crisis Database; definition of crisis years according to Schularick/Taylor (1900-2010) and Laeven/Valencia (1970-2008); own estimates for years since 2008 DM: G7; Australia, Sweden, Norway, Denmark, Spain; EM: BRICS, Turkey, Poland, Hungary, Turkey, Israel, Kuwait, Hong Kong, Singapore, Thailand, Philippines, Indonesia, Korea, Malaysia, Mexico, Argentina, Chile; grey bars: 1914 WW1 related end of gold standard; 1925: UK returns to gold standard; early 1930s: UK and US off gold standard; 1944 Bretton Woods; 1971 collapse of Bretton Woods.
Has the world economy been too good to be true?
Volatility of macro data and market prices has decreased since WW2, ...

Standard deviation of US CPI (yoy) IP (yoy)

S&P 500 ex-post volatility

Source: St.Louis Fed, Allianz GI, data as at 2015
Source: Rob Shiller, Allianz GI, data as at 2015
...so has the dispersion of economists‘ estimates since the 1980s.

Source: Consensus Economics, Allianz GI, data as at q1 2016
Inflation rates have declined since 1980. Central banks have lived up to their mandate of price stability.

US CPI (yoy)
Monetary policy has tended to be too loose since the mid 1980s, starting with the „Greenspan-Put“

Estimate of Fed policy stance vs US and global developed economies CPI (yoy)

Source: Thomson Reuters Datastream, AllianzGI Economics & Strategy 22/04/2016

Source: St.Louis Fed, Allianz GI, data as at q1 2016
Easy monetary policy has been exported to the rest of the world and...

Chinn-Ito Index of capital account openness

US gross international capital flows in % of GDP

Source: Chinn-Ito, Allianz GI
Legend: DM: G7, Australia, Switzerland; EM: BRICS, Hungary, Poland, Mexico, Saudi Arabia, Israel, Indonesia, Thailand, Korea, Singapore, Hong Kong; simple averages

Source: Thomson Reuters Datastream, AllianzGI Economics & Strategy 22/04/2016
...has been conducive to a sharp rise in leverage globally.

**US debt/GDP in %**

- **US total**
- **US private sector (incl.financials)**
- **US government**

**World non-financial public and private debt/GDP in %**

- **DM**
- **World**
- **EM**

Source: Allianz GI, St.Louis Fed, BIS, data as at Q3 2015

DM: G7, Australia, EM: BRICS, Turkey, Indonesia, Mexico, Argentina, Saudi Arabia
Credit gaps in % of GDP on the eve of a crisis since the 1980s

Global Financial Crisis (2007/08)

Asian/ EM crisis 1997/98

Nordic countries (late 1980s/early 1990s)

Other crisis in 1980s and 1990s

Source: Allianz GI, World Bank for countries with domestic debt only, BIS for all others; Legend: credit gap = private non-financial sector debt/GDP relative to trend; data refer to year before crisis started; *based on domestic credit only
Credit gaps are wide in many countries also today

**Private sector credit gap in % of GDP**

**Leverage US non-fin. corporate sector (2010=100)**

Source: BIS, AllianzGI. Trend calculation based on data starting in 1980 or later, depending on data availability; data as of Q3 2015, except for China (Q1 2016)

Legend: DM countries in dark blue, EM in light blue

Source: Thomson Reuters Datastream, AllianzGI Economics & Strategy 22/04/2016
Booming real estate markets explain the recent rise in leverage in many countries

Change in real estate prices between 2010 and 2015

Legend:
Change in real estate prices
- > +50%
- +25% to +50%
- +0% to +25%
- +0% to +25%
- <0%

Source: BIS, Datastream, Allianz GI.
The Minsky/Kindleberger framework for asset price booms/busts

- Displacement
- Boom/Expansion
- Leverage
- Euphoria
- Profit Taking
- Liquidation
- Revulsion
- Finale

Risk appetite

Valuation of risky assets:
- "new era perception"
- fair/attractive
- expensive
- massively overvalued
- peaking
- falling
- low
- very undervalued

Investor sentiment:
- positive
- high
- euphoric
- sceptical
- fear
- panic
- confidence building

Macro backdrop:
- loose monetary policy
- improving eco. cycle
- easy access to credit
- excessive leverage
- growth fading
- bankruptcies, bank failures
- credit crunch
- lender of last resort

Source: Ch. Kindleberger, H. Minsky, Allianz GI
Several asset markets are (red) hot again

Asset classes in a Minsky/ Kindleberger framework

- **Boom**
- **Leverage**
- **Euphoria**
- **Profit Taking**
- **Liquidation**
- **Revulsion**
- **Finale**

**Risk appetite**

- **Equities**
  - MSCI EUR
  - S&P 500
  - TOPIX
  - China A
  - MSCI EM
  - Greece

- **Bonds**
  - Eur and US IG, HY
  - EMBI+
  - EM LC bonds
  - UST Gilts
  - Bunds
  - JGB

- **FX**
  - GBP, Euro
  - USD
  - Yen
  - EM FX

- **Alternatives**
  - Real Estate: USA, GER, SPA, ITA, SWI
  - Gold: GBR, BEL, IRE, FRA, SWE, DEK, CAN, SGP, BRA, CHN
  - Real Estate: HKG, AUS, NZ, TUR, ISR, BEL major cities globally
  - oil
  - Real Estate: Russia, Japan; industrial metals

Source: Allianz GI, C. Kindleberger, H. Minsky, The Economist
Understand. Act.

- Increasing incidence of financial crisis, credit and asset bubbles since the end of BW

- Easy monetary policy, financial market deregulation, low vola in macro data and „displacements“ are at the roots of the crisis

- Rapid increase in private sector leverage – especially in combination with a booming real estate market - is an early warning signal for crisis

- Currently, we identify again excess private sector credit and expensive asset markets around the world

- Price stability and financial stability are interlinked

- „Leaning against the wind“ and policy coordination may reduce the risk of crisis. Is macropru sufficient?
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