# Financial crises’ root causes and most common spreading mechanisms have been deeply documented by several economists (1/2)

## Root causes

| *Economists* | *Date* | *Theory* | |
|---|---|---|---|
| E.P. Davis | 1992 | Shocks resulting from financial regime changes (e.g., end of fixed exchange rate system in 1971, monetary policy tightening in 1979, computer trading introduction in 1986) | **Shifts in monetary policies** |
| N. Roubini | 2018 | Central Banks interest rate hike policies (ECB, FED) | |
| B. Conerly | 2019 | FED hiking policies | |
| J. Frankel | 2018 | Interest rates hike policies to counter inflation | |
| L. Piegza | 2018 | Decades of low interest rates leading to excessive borrowing (consumers, companies) | |
| R. Shiller | 2019 | Continued low interest rates | |
| P. Krugman | 1979 | Macroeconomic shock or choice of an unsustainable economic regime (1st and 2nd currency crises) | **Unsustainable Government policies** |
| M. Mussa | 2002 | Irresponsible management of public spending (Argentinian economic crisis in 2002) | |
| L. Piegza | 2018 | Government debt (US) | |
| R. Shiller | 2019 | US budget deficit | |
| J.A. Frankel / A.K. Rose | 1996 | Bank credit boom as a main driver for crises over the 1971 – 1992 period and currency crises | **Rising bubbles** |
| J. Sachs / A. Tornell / A. Velasco | 1996 | Bank credit boom as a main driver for Mexican economic crisis in 1994 | |
| G. Kaminsky / C. Reinhart | 1999 | Financial crises (particularly currency crises) are often preceded by bank credit booms | |
| R. Shiller | 2000 | Equity market extreme liquidity promotes over-investment (e.g., in information technologies) and stock market overvaluation | |
| B. Eichengreen / C. Arteta | 2001 | Bank / credit and financial crises dynamics are synchronized | |
| C. Borio / P. Lowe | 2002 | Crisis probability does not depend on credit growth rate but on the deviation level from its reference value (credit gap = credit/PIB – trend) | |
| R. Shiller | 2019 | Housing and stock markets | |
| D. Diamond | 1984 | Loan transfers reduce a bank's incentive to select and monitor borrowers | **Harmful banking practices** |
| E.P. Davis | 1995 | Main innovations have led to financial fragility | |
| G. Kaminsky / C. Reinhart | 1998 | Financial crises have often been preceded by financial liberalization (18 out of the 26 crises analyzed) | |
| A. Demirgüç-Kunt / E. Detragiache | 1998 | Rate liberalization triggers instability and increases the risk of crisis | |
| M. Scholes | 2000 | New risk assessment models increase the risk of crisis (abuse of financial derivatives leading to financial fragility) | |
| J. Kiff | 2003 | The introduction of Credit Risk Transfer markets could exacerbate information asymmetry between lenders & borrowers | |
| R. Rajan / L. Zingales | 2003 | Excessive risk-taking, as it is poorly assessed due to labor division between financial actors / Market liquidity encourages the emergence of bubbles and poor capital allocation | |
| E. Prasad / K. Rogoff / S.J. Wei / A.K. Rose | 2003 | Access to international financial markets exacerbates the magnitude of consumption fluctuations within emerging countries | |
| J. Stiglitz | 2009 | Securitization and risk diversification | |
| M. Brunnermeier / J. Geanakoplos / G. Gorton / R.M. Stulz | 2009 | Financial innovations such as leverage and credit default swaps (CDS) at the root of subprime crisis | |
| P. Ramskogler | 2014 | Shadow banking sector expansion, allowing direct exposure to mortgages and similar assets | |
| D. Rosenberg | 2019 | High corporate debt and bad quality corporate bonds (high risk and speculative) | |

# Financial crises’ root causes and most common spreading mechanisms have been deeply documented by several economists (2/2)

## Spreading mechanisms

| *Economists* | *Date* | *Theory* | |
|---|---|---|---|
| J.B. Chatelain<br>N. Kiyotaki / J. Moore<br>B. Bernanke / M. Gertler / S. Gilchrist | 1993<br>1997<br>1999 | • Access to bank credit is essential as significant part of production is provided by small and medium-sized companies<br>• Assets serve as collateral for credit and credit allows the acquisition of productive asset<br>• Capital flows from abroad (especially if short term) can aggravate the illiquidity of banks | Banking crisis ↔ Investment |
| B. Bernanke / M. Gertler / S. Gilchrist | 1999 | • Loans depend on net assets via a risk premium that decreases with the volume of net assets | Bonds crisis → Banking crisis |
| H.J. Chang / A. Velasco<br>O. Jeanne / Zettelmeyer | 2000<br>2002 | • The risk of bank failure does not depend only on domestic withdrawals but also on international creditors’ behavior<br>• The anticipation of the exchange rate determines the ability to repay, and vice versa | FOREX ↔ Banking crisis |
| D. Diamond / P.H. Dybvig<br>G. Gorton | 1983<br>2014 | • Bank run<br>• Financial panic | Banking crisis ↔ Banking crisis |
| R. Hausmann / A. Velasco | 2002 | • Interdependence between debt valuation and exchange rate developments (e.g., Argentinian dilemma between debt and external balance) | Sovereign debt ↔ FOREX |
| P. Ramskogler | 2014 | • Interest rates on securitized bonds dropped more sharply than those on treasuries, resulting in a shift in investor preference towards bonds and thus the development of a bonds bubble | Monetary policies → Bonds crisis |
| M. Greene | 2019 | • Leveraged loans, which are extended to corporate borrowers with relatively high debt levels, carry more risk and pay more interest as Central Banks raise rates | Monetary policies → Harmful banking |
| L. Piegza | 2018 | • Rock-bottom interest rates led to overborrowing for buying houses, triggering subprime crisis in 2008 | Monetary policies → Real Estate |
| A. Blinder<br>D. Rosenberg | 1998<br>2019 | • Interdependence between stock market and monetary policies<br>• Easing monetary policies lead to a ballooning of the stock market not reflected by the economy | Stocks burst ↔ Monetary policies |
| O. Jeanne | 2003 | • High costs of bank bailouts often financed by State loans, triggering a sovereign debt crisis | Banking crisis → Sovereign debt |
| A. Kirman<br>J. Geanakoplos | 2010<br>2010 | • Toxic mortgage securities were distributed among banks worldwide, leading to a freezing of the interbank market and thus resulting in a liquidity crisis<br>• When the housing market went into decline, the way in which derivatives had been constructed made it very difficult for the lenders to restructure their loans in a way which would have been advantageous for both banks and borrowers, which led to banking system crisis | Harmful banking → Banking crisis |
| J.B. Chatelain<br>N. Kiyotaki / J. Moore<br>B. Bernanke / M. Gertler / S. Gilchrist | 1993<br>1997<br>1999 | • Access to bank credit is essential as significant part of production is provided by small and medium-sized companies<br>• Assets serve as collateral for credit and credit allows the acquisition of productive asset<br>• Capital flows from abroad (especially if short term) can aggravate the illiquidity of banks | → Crisis propagation → |

# In addition to the well documented causes of financial crisis, we also identified non financial potential triggers for a future recession

***Financial***

### 1 Central banks / Government policies

- **Shifts in monetary / central bank policies** (tightening or over-stimulus)
- **Unsustainable governmental policies (economic, fiscal, ...)** : fiscal harsh policies, running public deficits, …

### 2 Rising bubbles exacerbated by harmful practices

- **Sovereign debt**
- **Stocks**
- **Bonds**
- **Real Estate**
- **Others** (student loans, health expenses, pensions liabilities, …)

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- **Harmful practices**
  – Shadow banking
  – Leveraged loans
  – …

***Non financial***

### 3 Detrimental political environment

- **Trade disputes and protectionism** (e.g., US/China, tariff increases, ...)
- **Political upheavals** (e.g., Islamic revolution, risk of "Hard" Brexit)
- **International conflicts** (e.g., Middle East, Ukraine, ...)
- **Economic sanctions** (e.g., Venezuela, Russia, ...)
- **Commodities and O&G movements** (e.g., oil shocks, ...)
- **...**

### 4 Unpredictable hazards

- **Various hazards :**
  – **Natural disasters**
  – **Ecological**
  – **Humanitarian crisis / epidemics**
  – **Terrorist attacks** (e.g., 9/11)
- **Cyber attacks**
- …

# Almost all recessions of the past 50 years find their origins in one of our 4 root causes