

Evaluating the Financial Instability Hypothesis



Antoine Camous | Banque de France

Alejandro Van der Ghote | European Central Bank (ECB)

Keywords: Financial instability hypothesis, diagnostic expectations, financial frictions, risk-taking, macroprudential policy

JEL codes: E44, E71, G01

Abstract

This paper studies how non-rational, extrapolative expectations interact with leveraged risk-taking to generate instability in financial markets and in aggregate economic activity. Drawing on Minsky and Kindleberger, we propose a macro-finance model in which investors tend to extrapolate recent events too strongly into the future when forming expectations and must periodically post collateral when borrowing to signal creditworthiness. We show that the combination of extrapolative expectations, pro-cyclical risk-taking by leveraged investors, and forced fire sales of productive assets during episodes of financial distress amplifies economic fluctuations, generating larger economic booms and deeper busts relative to an environment where agents form rational expectations. From a policy perspective, these dynamics justify tighter financial regulation than under rational expectations, regardless of whether regulators themselves share private agents' optimism or pessimism. The analysis highlights how well-designed macroprudential interventions can mitigate instability and improve long-run welfare.

Disclaimer: This policy brief is based on [Working Paper Series no. 1009](#). The views expressed are those of the authors and not necessarily those of the institutions the authors are affiliated with.

Introduction: Revisiting Minsky and Kindleberger

The Financial Instability Hypothesis (FIH), articulated by Hyman Minsky and Charles Kindleberger, describes recurring cycles of optimism, leveraged expansion, and abrupt collapses in economic activity and investor sentiment. During upswings, investors become excessively optimistic relative to what historical data would justify, sharply increase borrowing, and undertake highly risky, heavily leveraged investments. When expectations eventually fail to materialize, investors suffer large losses and must fire-sale highly productive assets at severely dislocated prices to quickly deleverage – to thus meet pressing collateral requirements. The experienced financial turmoil then drives investors toward excessive pessimism, which leaves sound investment opportunities unexploited and delays recovery. Once distress subsides and confidence returns, a new wave of optimism takes hold, sowing the seeds of the next financial crisis.

We formalize these narratives in a compact yet tractable model and ask two central questions:

1. How do extrapolative expectations (the tendency to project recent trends into the future) interact with leveraged risk-taking?
2. What are the implications for financial stability and for the design and timing of financial regulation?

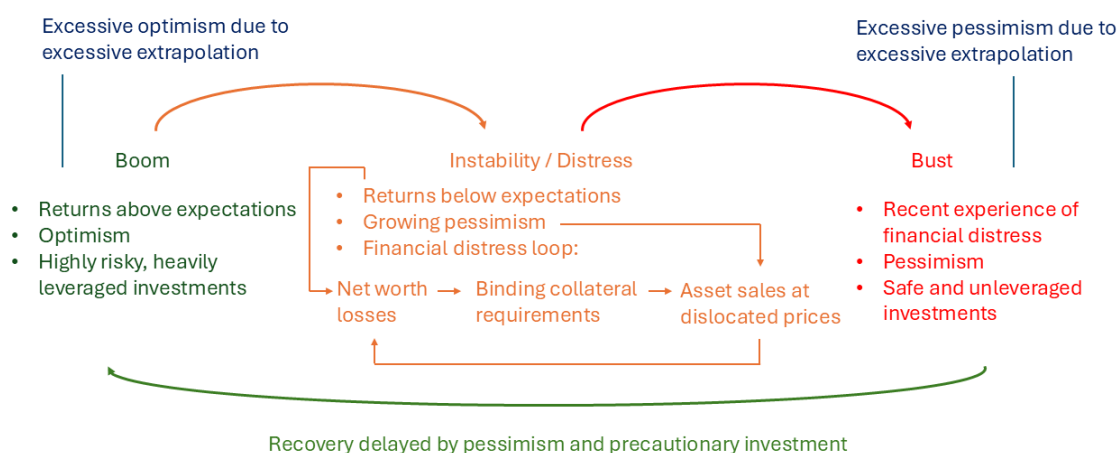
Core Mechanism: When Optimism Meets Leveraged Risk-taking

We consider an economy with two production technologies: a safer, lower-productivity technology, and a riskier, higher-return technology. Expert financiers (banks and other leveraged intermediaries) can leverage and operate the risky technology, but face tight collateral requirements; by contrast, non-expert households can only invest in the safer technology and face no financing constraints. Two frictions drive financial and economic instability:

1. The need to periodically post collateral when borrowing to signal creditworthiness (i.e., financial frictions). This friction intertwines financiers' net worth and asset prices. Notably, declines in net worth may force financiers to sell productive assets at distressed prices (fire sales), which in turn may lead to a vicious cycle of further net worth declines and additional fire sales.
2. A tendency to rely disproportionately on recent economic events when forming expectations about future economic conditions (i.e., diagnostic expectations). These expectations make agents excessively optimistic in booms and overly pessimistic in busts.

Together these frictions interact through a real risk-taking channel: changes in sentiment and in financiers' net worth mechanically alter the allocation of the economy's productive asset between safe and risky technologies. Specifically, in expansions, rising optimism and wealth encourage greater risk-taking; in contractions, pessimism and weakened balance sheets sharply reduce risk-taking. Relative to a rational-expectations benchmark, diagnostic expectations:

- Increase volatility of output and asset prices.
- Raise downside risks — i.e., the distribution of outcomes becomes left-skewed with thicker (fatter) left tails, meaning large negative shocks occur more often than under rational expectations.
- Lower average long-run growth and consumption.

Figure 1. Cyclical implications of financial frictions and diagnostics expectations

In short, financial and economic cycles become more unstable, more asymmetric, depress economic activity. In a standard calibration the additional instability induced by diagnostic expectations is quantitatively meaningful.

Table 1. Quantitative Implications of Diagnostic Expectations to Financial Instability

	Av.	Median.	Std. Dev.
Asset prices	+4.45%	+4.34%	+8.81%
Financial conditions	-6.18%	-7.14%	-2.79%
Leverage	+1.16%	+0.00%	+1.13%
Output	-1.45%	-2.22%	+8.93%
Growth	-0.003 p.p.	-0.02 p.p.	+0.02 p.p.

Notes: The table reports changes in the average (Av.), median, and standard deviation (Std. Dev.) of key variables relative to a benchmark with rational expectations.

Policy Implications: Why Regulation Matters

The model features a motive for policy intervention due to the presence of a pecuniary externality: private investment decisions influence asset prices and financial stability in ways not internalized by individual agents. This externality creates scope for macroprudential policy.

We study the policy interventions of two archetypal planners:

- A benevolent planner shares the private sector's diagnostic beliefs and therefore tends to restrict risk-taking after busts to support financial recapitalization and economic recovery.
- A paternalistic planner holds rational expectations -- whereas private agents hold diagnostic expectations and therefore tends to tighten leverage restrictions during booms to prevent excessive risk-taking and reduce the likelihood of crises.

Both intervention types raise long-run welfare by mitigating financial amplification. However, paternalistic regulation typically achieves a higher average consumption level combined with lower consumption volatility.

Table 2. Policy Trade-Offs under Different Regulators

Planner Type	Timing of Restrictions	Effect on Stability
Benevolent	After busts	Supports recovery
Paternalistic	During booms	Reduces likelihood and severity of crashes

Historical and Empirical Relevance

Our positive results align with historical accounts of financial and economic crises — notably the Global Financial Crisis, where extrapolative optimism in housing fed excessive leverage and was followed by fire-sale dynamics and a severe downturn. Empirical studies (e.g., Mian and Sufi 2011; Dell’Ariccia et al. 2012) document pro-cyclical risk-taking patterns consistent with the mechanism we propose.

Conclusion

Diagnostic (extrapolative) expectations and leveraged risk-taking jointly amplify financial instability, consistent with the Financial Instability Hypothesis. Importantly, optimal regulation must be tighter than under rational expectations, and the timing of macroprudential interventions depends on the expectation formation of the regulator. Our framework thus connects classical crisis narratives to modern macro-finance models, providing a positive account of cyclical dynamics and clear normative guidance for macroprudential policy.

About the author(s)

Antoine Camous is a Research Economist at Banque de France, in the Financial Research Division. Prior to joining Banque de France, he was an Assistant Professor at the University of Mannheim and holds a PhD in Economics from the European University Institute. His research focuses on macroeconomic issues related to the conduct of monetary and fiscal policy, central bank communication, financial stability, and the functioning of monetary unions.

Alejandro Van der Ghote is a Principal Economist in the Monetary Policy Research Division of the European Central Bank. He holds a PhD in Economics from Princeton University. His research focuses on monetary policy, financial stability, and international finance and macroeconomics. His work has been published in journals such as the *Review of Economic Studies*, the *American Economic Journal: Macroeconomics*, and the *Journal of Monetary Economics*.

SUERF Policy Notes and Briefs disseminate SUERF Members' economic research, policy-oriented analyses, and views. They analyze relevant developments, address challenges and propose solutions to current monetary, financial and macroeconomic themes. The style is analytical yet non-technical, facilitating interaction and the exchange of ideas between researchers, policy makers and financial practitioners.

SUERF Policy Notes and Briefs are accessible to the public free of charge at <https://www.suerf.org/publications/suerf-policy-notes-and-briefs/>.

The views expressed are those of the authors and not necessarily those of the institutions the authors are affiliated with.

© SUERF – The European Money and Finance Forum. Reproduction or translation for educational and non-commercial purposes is permitted provided that the source is acknowledged.

Editorial Board: Ernest Gnan, David T. Llewellyn, Donato Masciandaro, Natacha Valla

Designed by the Information Management and Services Division of the Oesterreichische Nationalbank (OeNB)

SUERF Secretariat

c/o OeNB, Otto-Wagner-Platz 3A-1090 Vienna, Austria

Phone: +43 1 40 420 7206

E-Mail: suerf@oenb.at

Website: <https://www.suerf.org/>