Module 2 — Slide Notes

The Eurozone Crisis

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The views expressed are solely those of the author and do not necessarily reflect the positions of the Banque de France, the Eurosystem, or the European Central Bank.

The big question

Why did a monetary union produce a sovereign debt crisis — and why couldn't it stop it?

The lecture builds the answer in three tight steps: a crisis that looks like a sudden stop (section 2) → a crisis that looks self-fulfilling (section 3) → the deadly feedback between banks and sovereigns that amplified both (section 4). Each section has a clear "what it is / was it / how was it resolved" structure.

Introduction (3 slides)

Slide 1 — Title

Slide 2 — Keys and framing Three organising questions: (i) trigger, (ii) propagation, (iii) resolution. Two competing readings: *incomplete monetary union* vs. *lack of discipline*. These resurface at each stage. Monnet: *"Europe will be forged in crises…"*

Slide 3 — Outline and overview The crisis in five phases (build-up → triggers → failed responses → contagion → denouement), sourced from Policy Insight 85. Outline of the three sections.

Part 2 — A Sudden Stop in a Monetary Union? (6 slides)

Part 2 establishes that a sudden stop — normally associated with EM economies and currency crises — did happen inside the Eurozone, but in a mutated form, masked by

the single currency and replaced by public flows.

Slide 4 — The sudden stop concept BoP identity: CA + KA = 0. A sudden stop is a sharp, rapid reversal of capital inflows, typically triggering banking and currency crises together. Classic EM examples: Mexico 1994, SEA 1997, Russia 1998 — listed only, no case study slides. Self-validating dynamics: inflows feed growth → attract more inflows; reversal triggers contraction → triggers further reversal.

Slide 5 — The "impossible in a MU" hypothesis *One Market, One Money* (1990): within a currency zone, nationality doesn't matter — only borrower solvency. No BoP constraint at national level. The Bavarian budget constraint analogy.

Slide 6 — Decomposing the capital account: private vs. public CA figures for PIIGS look smooth. But rewriting the BoP: CA + PKA + T2 + PGM + SMP = 0. Private capital fled; public flows silently replaced it. The currency changed *who* absorbed the shock, not whether it happened.

Slide 7 — Greece: private outflows replaced by public inflows Greece BoP decomposition (figures a/b). The clearest illustration of the substitution mechanism.

Slide 8 — Cluster and contagion The sudden stop spread across the periphery simultaneously — a pattern of clustering and contagion that standard BoP mechanics alone cannot explain. **Key figure**: ssezb (Merler & Pisani-Ferry 2012).

Slide 9 — Why it happened: three structural reasons (i) More a fixed exchange rate regime than an integrated area — redenomination risk made periphery assets "foreign" for core investors. (ii) National banks retreated home: national supervision and guarantees produced national risk appetite. (iii) Erratic political governance: no credible backstop, speculation fed on institutional uncertainty. *Transition*: the sudden stop explains the trigger. But why did spreads keep rising — and could it have been self-fulfilling?

Part 3 — A Self-Fulfilling Debt Crisis? (20 slides)

Part 3 is the intellectual core. The theory is built step by step, applied empirically via three complementary approaches, and resolved through the OMT commitment.

Slide 10 — Motivating evidence: spread behaviour A common factor drives spreads across countries simultaneously — difficult to explain by country-specific fundamentals alone. Two questions: *what is* a self-fulfilling debt crisis? *Was it*

self-fulfilling here?

Slide 11 — Definition: self-fulfilling when... The cartoon diagram. Economic outcomes sensitive to sentiment, not only fundamentals. Optimistic investors → low rate → no default. Pessimistic investors → high rate → default if shocked → pessimism justified. No irrationality required. *Refs*: Calvo 1988; Camous-Cooper.

Slide 12 — The formal model: setup Two-period game. Today: government issues debt b, investors form beliefs P(d) and price it: (1+i)(1–P(d)) = R. Tomorrow: government repays or defaults depending on income shock A and cost $(1+i)b$.

Slide 13 — fig001: government's default decision Default threshold as a function of A and interest cost.

Slide 14 — fig002: investors price debt Investors form beliefs and charge accordingly.

Slide 15 — fig003: rational expectations equilibrium In equilibrium, P(d) = F(Ā) — beliefs are validated by outcomes.

Slide 16 — fig004: multiple equilibria For an intermediate range of fundamentals, both a low-spread and a high-spread equilibrium are consistent with rational expectations.

Slide 17 — fig004b: the sunspot Sunspot s captures investor sentiment. Which equilibrium prevails is determined by expectations alone — not by fundamentals. This is the fragility zone.

Slide 18 — Illiquid vs. insolvent: the policy stakes Two very different policy diagnoses depending on which equilibrium prevails. Draghi in 2012: *"large parts of the euro area in a bad equilibrium."* UK vs. Spain comparison: similar debt and recession trajectories, but the UK has a central bank that can backstop its sovereign — Spain did not. *Ref*: De Grauwe 2014.

Slide 19 — Testing: the identification challenge Three obstacles: (i) sentiment unobservable, (ii) price changes alter fundamentals (endogeneity), (iii) both components can coexist. Roadmap: three approaches — econometric, accounting, structural.

Slide 20 — (1) Econometric: setup Regression of spreads on fundamentals (CA, D/GDP, real exchange rate, growth) with country and time fixed effects, estimated separately for EZ and non-EZ countries. If fundamentals fully explain spreads, no EZ-specific component should appear. *Ref*: De Grauwe & Ji 2013.

Slide 21 — (1) Econometric: results table Fundamentals correlated with spread spikes post-2010 — but the relationship shifts specifically in the EZ.

Slide 22 — (1) Time fixed effect β_t The common EZ-specific component: spread movements not accounted for by fundamentals — evidence of a sentiment or contagion factor.

Slide 23 — (2) Accounting: framework Debt dynamics equation: $\Delta(d/y) = (i/(1+\gamma))\cdot d - (\pi/(1+\gamma))\cdot d - (g/(1+g))\cdot d + p$. How much of the rise in D/GDP is explained by the interest rate channel — the component most directly linked to self-fulfilling dynamics? Ireland vs. Greece.

Slide 24 — (2) Accounting: Ireland and Greece Ireland: debt explosion driven by bank bailout (SFA). Greece: the interest cost channel appears non-negligible — a self-fulfilling component may have contributed, though disentangling it from fundamentals remains difficult.

Slide 25 — (3) Structural: identification via debt maturity Bocola & Dovis (2016). Fundamental risk → shorter maturity (rollover risk). Belief risk → longer maturity (buffer against panic). Maturity choice cleanly separates the two sources.

Slide 26 — (3) Structural: application to Italy 2008–2012 Model fit and decomposition — a significant share of the 2011–12 spread spike attributed to the belief component.

Slide 27 — Resolution: whatever-it-takes Draghi, July 2012. ECB commits to unlimited OMT purchases. Never needs to implement it — the commitment alone eliminates the bad equilibrium. Theory predicts exactly this.

Slide 28 — Whatever-it-takes (image) Dedicated visual slide.

Part 4 — The Diabolic Loop (7 slides)

Part 4 explains why the bank-sovereign nexus amplified both the sudden stop and the self-fulfilling dynamics — why Spain was not like the UK, and why contagion was so severe.

Slide 29 — Opening: the deadly embrace Lagarde and Farhi-Tirole quotes. Core idea: weak banks hurt sovereigns (bailout costs) and weak sovereigns hurt banks (asset impairment). Vicious cycle in both directions.

Slide 30 — Evidence: CDS correlation Bank-sovereign CDS correlation Jan 2011–Feb 2012. Near-zero before; strongly positive during the crisis. Causality runs both ways.

Slide 31 — Channel 1: banks hurting sovereigns (bailout channel) Ireland September 2008. Bank credit risk ↑ → bailout probability ↑ → sovereign credit risk ↑. *Ref*: Acharya, Drechsler & Schnabl 2012.

Slide 32 — Channel 2: sovereigns hurting banks (domestic holdings) Home bias in sovereign bond holdings + Spain: exposure *increased* during the crisis. Four hypotheses: financial repression, financial dominance, creditor discrimination, risk shifting.

Slide 33 — Transmission to the real economy ECB WP 1969. In stressed countries, rising sovereign exposure crowded out lending to non-financial corporations. The loop produced the real recession.

Slide 34 — Resolution: banking union The loop exists because banks and sovereigns are national. Fix: Europeanise the banking system. Three pillars: SSM, SRM (bail-in), DGS. From national banks to European banks.

Wrap-up (2 slides)

Slide 35 — Key takeaways 1. A sudden stop occurred inside the euro area — the currency changed its *form*, not its *nature*. 2. Self-fulfilling dynamics were quantitatively important in 2011–12. No lender of last resort for sovereigns made the bad equilibrium viable. 3. OMT worked because it changed the game — not purchases, but credible commitment. 4. The diabolic loop explains why incomplete monetary union amplified every shock. 5. Banking union is the structural fix for the missing integration.

Slide 36 — References *(scriptsize to fit on one page)*

What is cut from the original slides

Original content	Decision	Reason
Tequila / SEA / Russia case study slides (3 slides)	**Cut**	Digressions — EM examples listed verbally only
Obstfeld (1996) currency crisis model slide	**Cut**	Covered in Lecture 02
“Erratic decision process 2011” (euroz figure)	**Cut**	Anecdote — absorbed into “why it happened” prose
Sudden stop identification figure (ssgrident)	**Cut**	Replaced by cluster and contagion (ssezb)
PIIGS four-panel BoP figures	**Cut**	Evidence presented through Greece decomposition only
Self-defeating fiscal policy bridge slide	**Cut**	Dropped per editorial review
OMT controversy slide (detailed)	**Cut**	Kept as brief contextual note in resolution slide
“Developments to watch” (2016 vintage)	**Cut**	Outdated
Banking union newspaper images (DB, MP)	**Cut**	2016 vintage, no longer illustrative
bilanBU figure	**Cut**	Banking union slide now text-only
Everything after `\end{document}` in original	**Already excluded**	Legacy material from older course version

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References

- Policy Insight 85 (CEPR) — consensus narrative
- Merler & Pisani-Ferry 2012 (Bruegel) — sudden stop, BoP decomposition
- Calvo, Izquierdo & Mejia 2004 — sudden stop empirics
- Calvo 1988 — self-fulfilling debt crisis

- Camous & Cooper — monetary policy and debt fragility
- De Grauwe & Ji 2013 — econometric test
- De Grauwe 2014 (VoxEU) — UK vs Spain
- Bocola & Dovis 2016 — structural identification
- Aldama 2021 (OFCE) — debt decomposition
- Acharya, Drechsler & Schnabl 2012 — bailout channel
- Broner, Erce, Martin & Ventura 2014 — domestic holdings
- ECB WP 1969 — real economy transmission
- Farhi & Tirole 2014 — diabolic loop framing
- Veron 2015 (Bruegel) — banking union
- Eichengreen & Wyplosz (VoxEU) — resolution of the euro crisis