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EUROSYSTÈME

Fiscal-monetary interactions in the 21st century
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When the policy mix meets supply shocks

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Good morning,

I am delighted to be here today and I would like to thank the National Bank of Belgium for its invitation.

The question I would like to discuss is a simple one: how should we think about the policy mix in a world where supply shocks have become more frequent, larger, and perhaps more persistent?

For decades, our framework for analysing the interaction between monetary and fiscal policies was largely built around demand shocks. Yet recent experience, from the pandemic to the energy crises, supply-chain disruptions and extreme weather events, suggests that supply shocks are now taking centre stage.

This evolution raises important questions for policymakers. Are our traditional policy frameworks still fit for purpose? How should monetary and fiscal authorities interact when inflation originates on the supply side? And what lessons should we draw for the future?

My central message today is that supply shocks call for a different way of thinking about the policy mix:

- When shocks originate on the demand side, the key challenge is often to avoid policy inconsistency or pro-cyclicality.
- When shocks originate on the supply side, the challenge is different. It is about managing trade-offs, preserving credibility, and reducing vulnerabilities before the shock occurs.

1. From demand shocks to supply shocks

The first part of my talk asks a simple question: why does the rise in supply shocks matter for the policy mix?

Both monetary and fiscal policies primarily affect aggregate demand. This is the very reason why economists speak about a "policy mix".

The objective is to avoid situations where the two policies pull in opposite directions, to recognise circumstances in which they complement each other, and to preserve the credibility of both

instruments. As argued by Bartsch and co-authors in 2020, credibility is a shared asset: if one policy loses credibility, the effectiveness of the other may also suffer.

In Bartsch et al. (2020), we used the image of Tobin's funnel: monetary and fiscal policy can be thought of as two taps feeding aggregate demand. Demand then passes through the funnel and eventually meets supply, generating a combination of output and inflation that splashes out (**slide 1**).

Slide 1 – Monetary and fiscal policies are both demand-sided

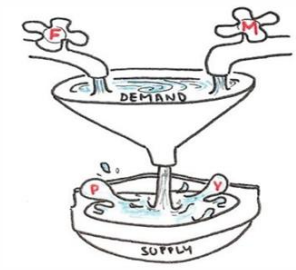
MONETARY AND FISCAL POLICIES ARE BOTH DEMAND-SIDED

This justifies the concept of policy mix

- ✓ Avoiding pulling in opposite directions
- ✓ Recognizing complementarities, notably at the ZLB
- ✓ Safeguarding the credibility of each instrument (Bartsch et al., 2023)

M and F are imperfect substitutes

- ✓ Delays
- ✓ Targetability
- ✓ Constraints



Note: F represents fiscal policy; M represents monetary policy.
Source: Bartsch et al. (2020).

Monetary policy	Fiscal policy
Affects demand indirectly	Affects demand directly and indirectly
Quick decision, slow transmission	Long decision (aside automatic stabilisers), fast transmission
Affects government debt directly (interest rate) and indirectly (nominal GDP)	Affects government debt directly (primary balance) and indirectly (nominal GDP)
General instrument	Can be targeted to specific sectors or households
More powerful in a flexible exchange-rate regime	More powerful in a fixed exchange-rate regime or monetary union
Impact depends on expectations of future inflation and policy rates	Impact depends on expectations of future taxes
May be constrained by effective lower bound	May be constrained by state of public finances, fiscal rules or market pressure

Source: Bénassy-Quéré and Borgy (2026).

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But monetary and fiscal policies are not perfect substitutes:

- Monetary policy can be adjusted quickly, yet it affects the economy with relatively long transmission lags. In contrast, fiscal policy is often slower to decide but once implemented it can have rapid effects.
- Monetary policy is a broad instrument, while fiscal policy can be targeted towards specific households, sectors or regions.
- Finally, monetary and fiscal policies face different constraints. Monetary policy may encounter the effective lower bound. Fiscal policy may be constrained by debt sustainability concerns, fiscal rules or market pressures.

The euro-area institutional framework was largely designed for a world dominated by demand shocks (**Slide 2**).

Slide 2 – The Maastricht framework

THE MAASTRICHT SETTING ADDRESSES DEMAND SHOCKS

The policy mix in the euro area framework

		Shocks	
		Symmetric	Idiosyncratic
Objectives	Output stabilisation	(Aggregate fiscal stance)	National fiscal stance
	Price stabilisation	Monetary policy	Ø

Source: Bénassy-Quéré and Borgy (2026).

The division of labour is straightforward:

- For symmetric shocks affecting the entire euro area, monetary policy is responsible for price stability;
- For country-specific shocks, fiscal policy remains the main stabilisation instrument.

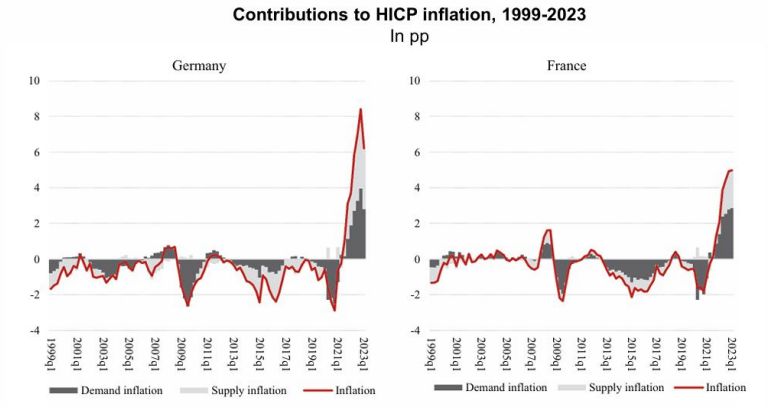
What is striking, however, is that the framework says very little about the use of national instruments to address supply-driven inflationary shocks.

This omission was not particularly problematic when supply shocks were relatively rare. It may become more problematic in the environment we face today.

Recent evidence shows a growing contribution of supply shocks to inflation dynamics in both Germany and France. Here, I show a simple breakdown of HICP inflation into demand-side and supply-side contributions, taken from a Lipnieks et al. (2024) (**Slide 3**).

Slide 3 – The rise of supply shocks

THE RISE OF SUPPLY SHOCKS



- Energy
- Supply chains
- Extreme weather events…

Source: Liepnieks, Staehr & Tkacevs (2024). Bivariate VAR model with two variables, output growth and inflation. Data are quarterly from 1999q1 to 2023q1

The global financial crisis was largely a demand shock. Then, the period of declining oil prices between 2013 and 2016 generated favourable supply shocks. Then came the pandemic, followed by the energy shock after Russia's full-scale invasion of Ukraine.

Looking forward, we should expect supply shocks to become more frequent. Geopolitical fragmentation, energy transitions, supply-chain disruptions and climate-related events all point in this direction.

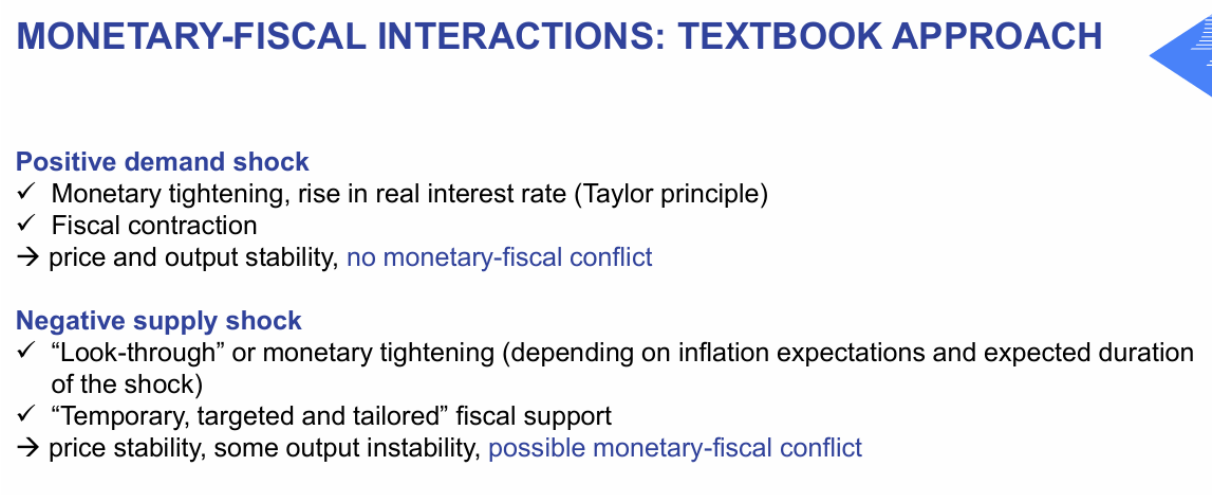
This shift naturally leads us to reconsider the policy mix.

2. Implications of supply shocks for the policy mix

Let me now turn to the implications of supply shocks for monetary and fiscal interactions.

With a positive demand shock, the textbook prescription is straightforward (**Slide 4**): both monetary policy and fiscal policy need to tighten, in proportions that depend on circumstances (see **Slide 1**). Inflation and output are stabilised simultaneously, and there is little conflict between the two policies.

Slide 4 – The textbook approach



A negative supply shock is much more challenging:

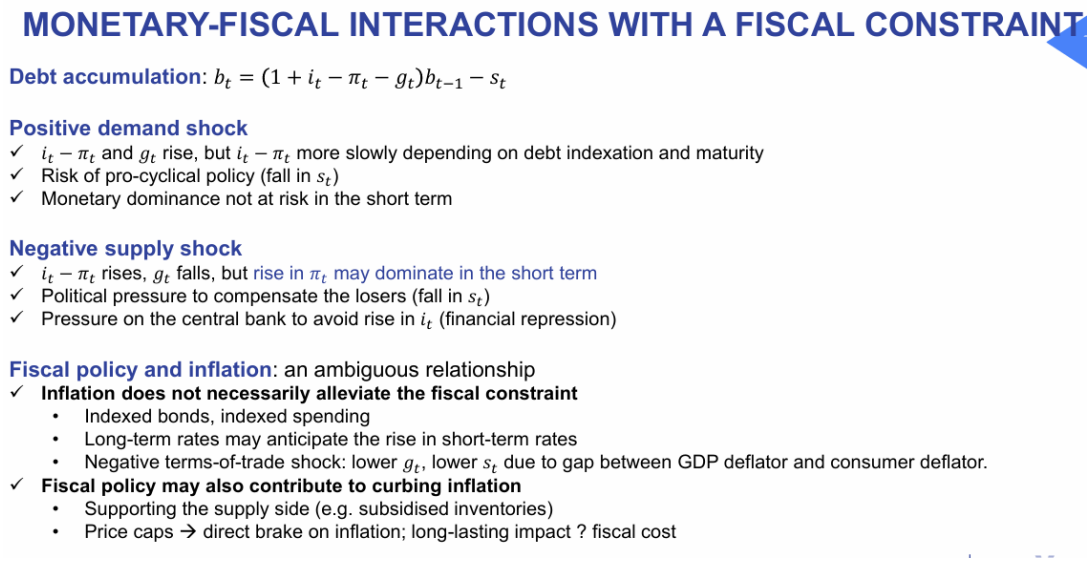
- The central bank must decide whether to "look through" the shock or respond to it, depending on inflation expectations and the expected persistence of inflation.
- At the same time, governments are under pressure to provide support to households and firms. According to the textbook, they should do so in a "temporary, targeted and tailored (or timely)" manner in order not to stimulate aggregate demand.

The potential for monetary-fiscal conflict becomes much greater with supply shocks. Political pressure typically pushes governments toward broader support measures, which may in turn complicate the task of monetary policy.

The picture becomes even more complex when fiscal constraints are taken into account (**Slide 5,** where b_t denotes the debt-to-GDP ratio at the end of year *t*, i_t the nominal interest rate, π_t the inflation rate, g_t the real GDP growth rate and s_t the primary budget surplus of year *t* in percent of GDP).

Following a demand shock, higher inflation and stronger growth may temporarily create the impression of additional fiscal space. Based on real-time data, Gootjes and de Haan (2022) show how fiscal policy ends up being pro-cyclical ex post even though budget plans are generally a-cyclical ex ante. Concerning inflation, history also shows that it may encourage pro-cyclical fiscal decisions beyond a certain threshold (Briodeau and Checherita-Westphal, 2024).

Slide 5 – Fiscal constraints



Following a supply shock, the situation is very different, as inflation rises while GDP growth weakens. Governments face strong pressure to compensate the losers from the shock. At the same time, central banks may face pressure to avoid tightening financial conditions. In extreme cases, this can amount to financial repression.

The relationship between fiscal policy and inflation is in fact more ambiguous than is often assumed (see Bénassy-Quéré, 2022):

- Higher inflation does not necessarily ease fiscal constraints.
- If public expenditures are indexed, or if long-term rates anticipate future monetary tightening, the fiscal benefit of inflation may be limited.

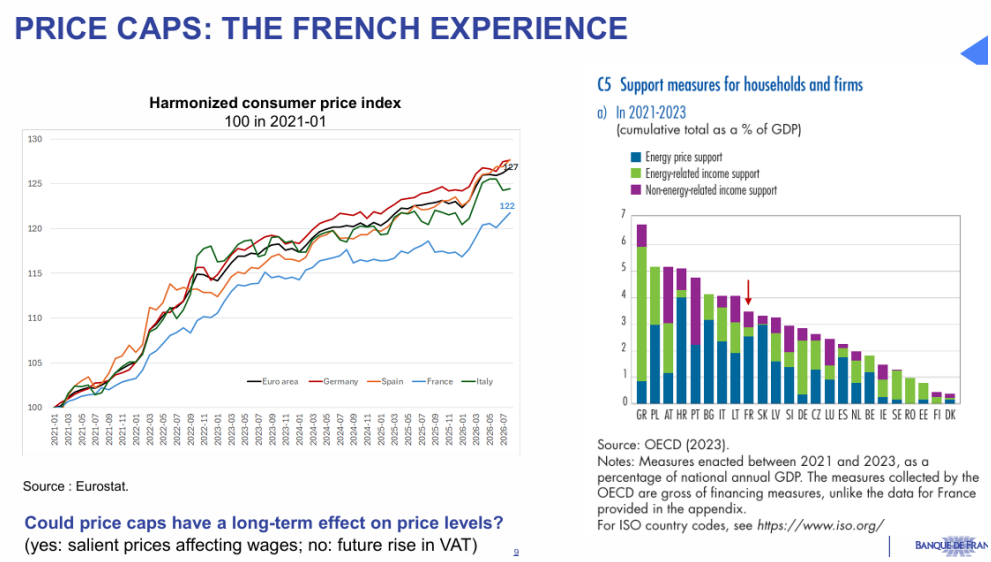
Conversely, a fiscal expansion can sometimes, paradoxically, contribute to reducing inflation. Supporting the supply side, for instance through subsidies for strategic inventories, may alleviate bottlenecks. Price caps can also have a direct effect on measured inflation, although they raise important questions regarding their fiscal cost and longer-term consequences on prices, for

instance if the VAT needs to be raised to match additional interest payments on the accumulated debt

France provides an interesting case study

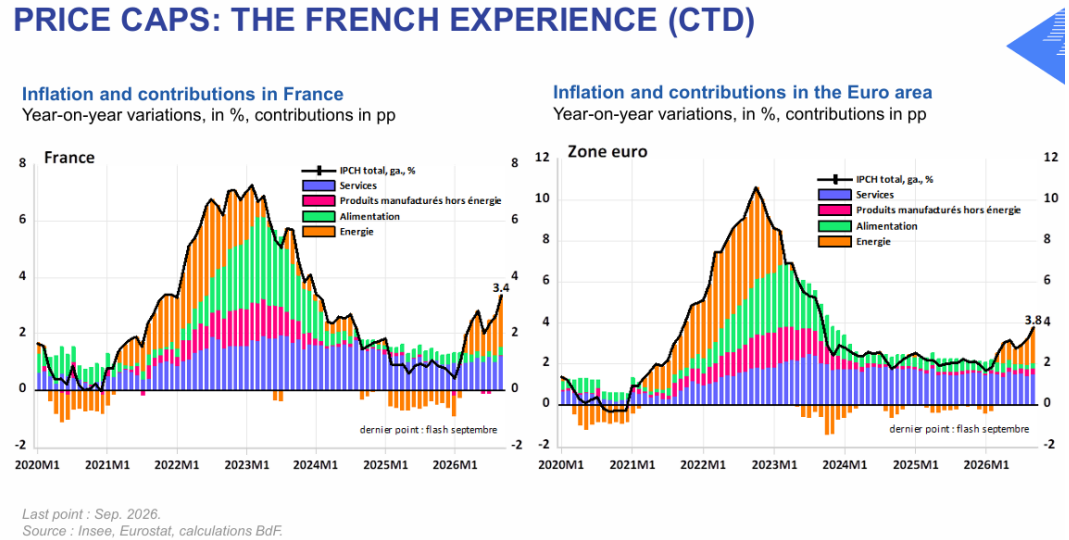
During the 2022-23 energy crisis, support measures represented a roughly 3.5% of GDP cumulated fiscal cost, with a large share devoted to energy price "shields" (**Slide 6**).

Slide 6 – The French experience with price caps



As a result, inflation followed a different profile from that observed in much of the euro area (**Slide 7**). Where the euro area experienced a pronounced inflation peak followed by a rapid decline, France experienced a lower and flatter inflation profile.

Slide 7 – The French experience with price caps (ctd)



Research by the Banque de France estimates that the tariff shields reduced inflation by around 2.6 percentage points in 2022. This effect was partly reversed over subsequent years, but not completely (Slide 8).

Slide 6 (*supra*) shows that, between January 2021 and July 2026, cumulated HICP inflation was 22% in France, compared to 27% in the euro area.

Slide 8 – The French experience with price caps (ctd)

PRICE CAPS: THE FRENCH EXPERIENCE (CTD)

Fiscal support during the energy crisis had a negative impact on inflation:

Lemoine, Petrovich and Zhutova (2024) for France: -2.6 pp in 2022, followed by a cumulative impact of +2.2 pp over 2023-2025.

Large fiscal cost:

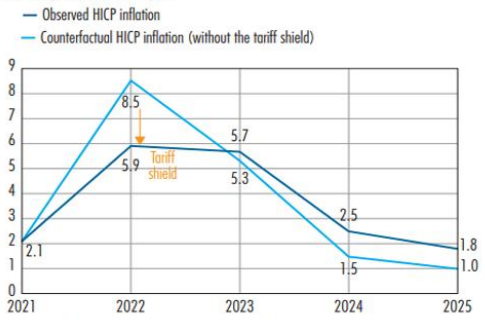
≈ 1.1% of GDP in 2022 and in 2023.

≈ +3pp in VAT rates during 2 years...

3x annual subsidies to house renovation + purchases of electric cars

C2 Impact of the tariff shield on HICP inflation in France

(year-on-year % change)



Sources: INSEE data for 2021 and 2022, Banque de France *Macroeconomic projections – France*, December 2023 for 2023 onwards.
Notes: HICP, Harmonised Index of Consumer Prices. Counterfactual HICP inflation is calculated using the FR-BDF model.

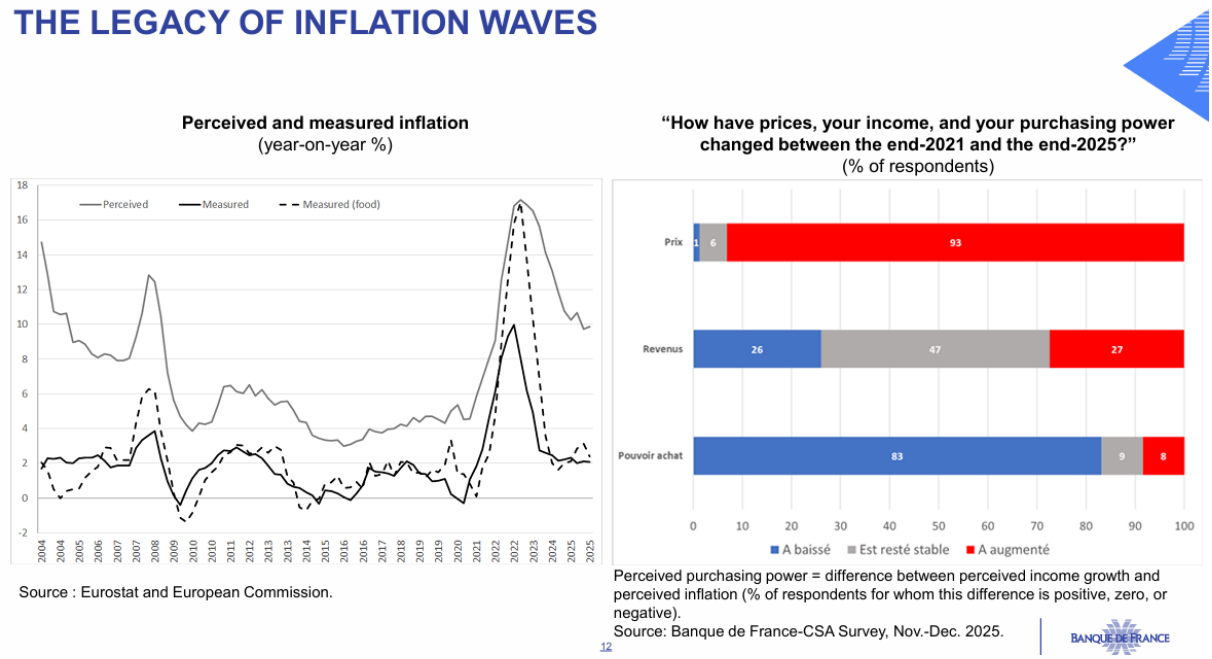
Source: Lemoine, Petronevich and Zhutova (2024)

The French experience raises an interesting research question: can price caps leave a lasting imprint on inflation dynamics through their effects on expectations and wage formation? The answer remains uncertain.

- On the one hand, salient prices such as energy prices may influence inflation perceptions and therefore wage negotiations. To the extent that saliency is asymmetric (e.g. households tend to disregard declines in energy prices), price caps could be non-neutral for cumulated inflation even in the face of temporary shocks.
- On the other hand, the fiscal cost must eventually be financed, which may itself generate future price pressures.

The issue deserves further research. A key fact is that households do not perceive inflation in the same way economists measure it. Survey evidence shows that inflation perceptions remain much higher than measured inflation even after inflation has fallen back significantly, and that the perception of inflation is tightly connected to the evolution of energy and food inflation (**Slide 9**).

Slide 9 – The legacy of inflation waves



Even more strikingly, a large majority of households correctly acknowledge that prices have risen between end-2021 and end-2025 but do not perceive a corresponding increase in their own nominal income. This is the case also for groups whose incomes have in fact been indexed (pensioners, minimum wage-earners).

This gap between measured developments and perceived purchasing power may help explain the persistence of high saving rates and subdued consumption.

From a macroeconomic perspective, the perception of inflation can therefore influence aggregate demand and amplify the effects of supply shocks for the real economy, while limiting their impacts on inflation.

3. Supply shocks may trigger demand shocks

This brings me to my last point: supply shocks do not always remain mere supply shocks. They can generate demand shocks of their own.

The pandemic offers a clear example (**Slide 10**).

When restaurants close, affected workers lose income and reduce their spending. More importantly, though, demand declines in sectors that are complementary to restaurants, such as transport services. The initial supply disruption may therefore create an even larger decline in aggregate demand. This is what Guerrieri and co-authors (2022) called a "Keynesian supply shock".

Slide 10 – A pandemic as a Keynesian supply shock

EXAMPLE 1: A PANDEMIC (Guerrieri et al., 2022)

Keynesian supply shock: a supply shock that triggers changes in aggregate demand that are larger than the supply shock itself

→ supply shock ex ante but demand shock ex post (e.g. a lockdown)
→ impossible in a 1-sector economy

2 sectors, one of which is shut down:

- Workers lose their income, hence they reduce their spending.
- If the elasticity of substitution between the 2 goods is not too high (e.g. restaurant and taxi), then aggregate demand may fall more than aggregate supply (only restaurants are closed, but demand falls for both restaurants and taxis).

Implications for stabilization policy:

- Fiscal multiplier is low due to weak second-round effects (e.g. subsidizing the demand for taxi rides has limited impact on aggregate output)
- Monetary policy is relatively powerful through preventing firm exits

In such circumstances, traditional stabilisation mechanisms behave differently. Fiscal multipliers may be weaker than usual. In practice, subsidising the demand for taxi rides may not succeed lifting the demand. Conversely, monetary policy can play an important role by mitigating firm exits and preserving financial conditions.

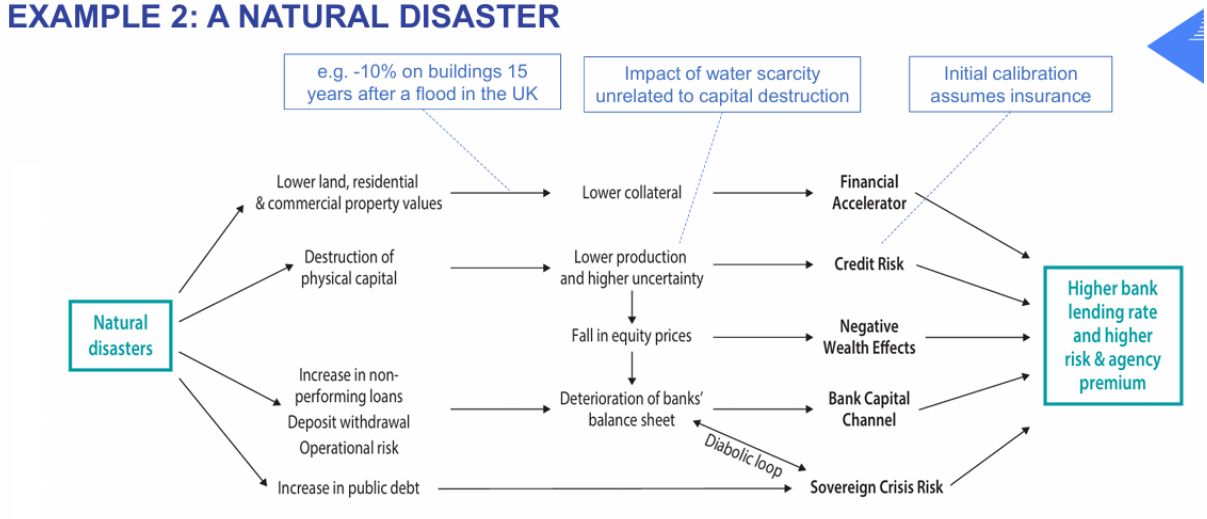
Natural disasters provide another example of supply shocks triggering demand shocks (NGFS, 2026).

An extreme weather event initially destroys productive capacity or reduces productivity. But it may then trigger broader effects through financial channels: lower collateral values, higher credit risk, government deficit, wealth effects and adverse feedback loops in the financial sector can transform a supply shock into a macroeconomic demand shock (**Slide 11**).

This interaction further reinforces the need to think beyond a short-term stabilisation framework.

Slide 11 – Natural disasters

EXAMPLE 2: A NATURAL DISASTER



Source: Avril et al. (2022).

Source: NGFS (2024), Acute physical impacts from climate change and monetary policy | Network for Greening the Financial System

Conclusion

Let me conclude with three messages.

First, we should place greater emphasis on reducing vulnerabilities before shocks occur. Climate adaptation, financial regulation and supervision, stress testing, diversification of supply chains, strategic inventories, electricity interconnections and decarbonisation policies all contribute to macroeconomic resilience.

Second, to smooth the effect of supply shocks, fiscal policy could be conceived as an insurance mechanism rather than purely a discretionary stabilisation tool. This means developing affordable insurance solutions, public guarantees where appropriate, and supply-side automatic stabilisers such as contracts for difference in energy markets.

Third, supply shocks call for a medium-term perspective. For fiscal policy, this means stronger automatic stabilisers, better targeting and preserving fiscal sustainability. For monetary policy, it means preserving high credibility through clear communication and a predictable reaction function. And for prudential policy, it means creating the financial resilience that gives both fiscal and monetary authorities more room to manoeuvre when the next shock arrives.

In short, when demand shocks dominate, the main danger is pro-cyclicality. When supply shocks dominate, the main challenge is resilience.

That is why the policy mix of the future should be designed not only to react to shocks, but also to prepare the economy for them.

Thank you very much for your attention.

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