The Slow Death of Monetary Policy

Jon Smirl

2026-03-01

The Fed's Disappearing Tricks

Central banks have three main tricks beyond setting interest rates. Forward guidance — telling markets what you plan to do. Quantitative easing — buying bonds to push investors into riskier assets. Financial repression — keeping rates below inflation so the government borrows cheaply from captive savers. These tools all depend on frictions: delays in processing information, slowness in arbitrage, and barriers that prevent savers from finding alternatives.

Now imagine those frictions disappearing. Not all at once, but in order, as distributed AI agents — a "mesh" of autonomous software participants — enter financial markets. The mesh does not need to take over. It just needs to get fast enough and widespread enough to erode the specific frictions each tool depends on. When it does, monetary policy does not collapse suddenly. It dies in stages, following a sequence that is mathematically determined by which friction each tool exploits.

Three Tools, Three Frictions

Each monetary policy tool depends on a specific market imperfection. Remove that imperfection and the tool stops working. The key insight is that different imperfections have different vulnerabilities to mesh participation.

Forward guidance depends on processing delay. When the Fed releases an FOMC statement, it works because human institutions need days to weeks to fully digest the implications. During that processing window, the anticipated rate path shapes portfolio decisions and asset prices. The delay *is* the mechanism. If everyone processed the statement instantly, prices would jump immediately and there would be no extended "guidance" effect.

QE depends on slow arbitrage. When the Fed buys $80 billion in Treasuries per month, it works because human traders cannot instantly arbitrage away the resulting price distortion. The buying pressure compresses term premia — the extra yield investors demand for holding long-duration bonds. This portfolio balance channel requires that the arbitrage takes time. QE also has a signaling channel (communicating the Fed's commitment to low rates), which does not depend on speed (Woodford2003).

Financial repression depends on captive savers. When governments hold interest rates below inflation, it works because ordinary savers have nowhere else to go. A retiree in a country with 8% inflation and 3% deposit rates loses purchasing power every year, but if capital controls or institutional barriers prevent access to alternatives, the retiree is trapped. The government effectively taxes savers to finance its debt at below-market rates.

The Ordering: Why Forward Guidance Dies First

Let ϕ denote mesh participation — the fraction of financial market activity conducted by autonomous AI agents. As ϕ rises from zero, the three tools degrade in a strict order.

Forward guidance fails first because it depends on the simplest friction: information processing speed. A mesh agent parses an FOMC statement, cross-references it with historical patterns, and updates its portfolio in milliseconds. There is nothing subtle about this advantage. The processing delay that gives forward guidance its power simply vanishes. Formally, forward guidance effectiveness decays as:

$$\mathrm{FG}(\phi) = \mathrm{FG}_0 \cdot (1-\phi)^{\alpha_{FG}}$$

Even modest mesh participation — $\phi = 0.2$ — substantially reduces the window during which forward guidance can shape expectations.

QE weakens next because it depends on a harder friction to eliminate: arbitrage speed at scale. Mesh agents arbitrage faster than humans, but large positions still face inventory costs and capital constraints. A Fed purchase of $50 billion in 10-year Treasuries is not arbitraged in the same millisecond as an FOMC statement is parsed. The portfolio balance channel degrades, but more slowly. Meanwhile, the signaling component — which communicates the Fed's commitment rather than exploiting market friction — survives regardless of ϕ:

$$\mathrm{QE}(\phi) = w_{\mathrm{PB}} \cdot \mathrm{QE}_0 \cdot (1-\phi)^{\alpha_{QE}} + w_{\mathrm{sig}} \cdot \mathrm{QE}_0$$

The signaling weight w_{sig} is the floor. QE never reaches zero, but its friction-dependent component steadily shrinks.

Financial repression fails last because it depends on institutional barriers, not speed. Capital controls, banking regulations, and simple unfamiliarity with alternatives are not things that mesh agents directly erode. What erodes them is stablecoins — digital dollar-denominated tokens that give savers in any country an exit from negative real rates. The relevant variable is not ϕ directly but stablecoin ecosystem size S:

$$\mathrm{FR}(\phi, S) = \mathrm{FR}_0 \cdot \left(1 - \min\left(1, \frac{S}{S_{\mathrm{crit}}}\right)\right)^{\alpha_{FR}}$$

Below the critical threshold S_{crit}, stablecoins are too inconvenient to matter — wallets are clunky, on-ramps are scarce, regulatory risk is high. Above S_{crit}, the exit is viable and savers leave en masse. The transition resembles a bank run: continuous in theory, practically discontinuous (Kyle1985).

Quantifying the Decline

The composite effectiveness of monetary policy combines all three channels:

$$\mathrm{MP}(\phi, S) = w_{FG} \cdot \mathrm{FG}(\phi) + w_{QE} \cdot \mathrm{QE}(\phi) + w_{FR} \cdot \mathrm{FR}(\phi, S)$$

This function is monotonically declining in both ϕ and S, with a sharp cusp near $S = S_{\text{crit}}$ where the financial repression channel collapses. The "Lucas Gap" captures how much control the central bank has lost (Lucas1976):

$$L(\phi) = 1 - (1 - \phi)^2$$

This is convex and accelerating. At $\phi = 0.3$, the central bank retains roughly 49% of its effectiveness — losing half its toolkit while the mesh is still a minority of market activity. At $\phi = 0.5$, only about 25% remains. The losses are front-loaded: the first 30% of mesh adoption does more damage to monetary policy than the next 30%.

Japan's Yield Curve: A Preview

Japan's yield curve control (YCC) policy offers a preview of what the *monetary_transmission_ordering* looks like in practice. Since 2016, the Bank of Japan has capped 10-year government bond yields at a target level, buying whatever quantity of bonds is necessary to maintain the cap. This is a combination of QE (the purchases) and financial repression (the artificially suppressed yield).

Even without significant mesh participation, YCC has been under persistent strain. Market participants repeatedly tested the cap, forcing the BoJ into massive purchases. The BoJ widened its tolerance band in December 2022, again in July 2023, and effectively abandoned the policy by March 2024.

Now imagine this same dynamic with $\phi = 0.3$. Mesh agents would detect any deviation between market-implied yields and the BoJ's target within milliseconds. They would execute arbitrage trades — shorting JGBs, going long foreign bonds, unwinding duration exposure — at a speed and scale that would overwhelm the central bank's buying capacity. Maintaining an artificial yield curve requires that arbitrageurs act slowly. Mesh agents do not act slowly.

What Survives

Not everything dies. Two core central banking functions are friction-independent:

The interest rate channel survives. When the central bank raises the policy rate, the cost of capital increases for firms and households. This works regardless of market efficiency. Mesh agents transmit rate changes to asset prices faster, but the real effects — construction timelines, business planning horizons, household borrowing decisions — are mediated by the physical economy, not by information speed.

Last-resort lending survives. Central banks can still create reserves. In a liquidity crisis, unlimited domestic-currency liquidity provision does not require any market friction. However, if the crisis involves a flight *from* domestic currency *to* stablecoins, the central bank faces a new constraint: it can supply domestic liquidity but not dollar-denominated stablecoin liquidity.

Prudential regulation persists. Bank supervision, capital requirements, and stress testing operate through legal authority, not market friction. These tools are unaffected by mesh participation and may become *more* important as other tools fade.

The Bottom Line

Monetary policy is not a single thing that works or fails. It is a bundle of tools, each exploiting a different market friction, and those frictions are not equally durable. As mesh participation rises and stablecoins mature, the tools fail in order: forward guidance first (information delay eliminated), QE second (arbitrage speed increased), financial repression last (saver captivity broken). The loss is convex — modest mesh adoption causes disproportionate damage. What remains is a stripped-down toolkit: the interest rate lever, emergency lending, and bank supervision. Central banks do not become irrelevant, but they become far less powerful than the institutions we have built our macroeconomic policy framework around. The transition is not a cliff — it is a slope, and we are already on it.

References