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From the deposit facility to the Euribor basis — *how euro liquidity actually moves*

Most explanations of monetary transmission begin with a policy rate and end with inflation, and skip the part in between where the money physically has to get somewhere. This note is about that part. It assumes you know what the ECB is, what a bank is and roughly what a repo is, and it does not assume you know how a euro of central bank money travels from the Governing Council's decision to the rate a corporate treasurer is quoted. That journey is the whole subject.

The argument runs in one direction. The ECB sets three rates and stands ready to transact at them; only banks may transact with it; everyone else must rent a bank's balance sheet to get near those rates; the rent is visible in market prices; and as the quantity of central bank money falls, the rent goes up.

By the end we will put numbers on that. The overnight leg is measured directly — the spread between secured money and the deposit facility rate tracks excess liquidity with a correlation of -0.89 — and the step from there to the Euribor basis is set out as a mechanism, with an honest account of why its magnitude cannot be quantified from freely available data.

01

What the ECB actually controls

The ECB does not set the interest rate in the economy. It sets the terms on which it will do business with banks, and lets everything else be the consequence of other people's choices. Those terms are three prices and one list.

The deposit facility rate (DFR), currently 2.25%. What a bank earns on money left overnight at its national central bank. Since the March 2024 framework review this is the steering rate — the number the Governing Council decides and the one everything else is quoted against.

The main refinancing operation (MRO) rate, 2.40%. What a bank pays to borrow from the Eurosystem for one week against eligible collateral. It is fixed-rate and full-allotment: any bank with acceptable collateral can have as much as it wants at that price. Since 18 September 2024 it has been set 15 basis points above the DFR, down from 50.

The marginal lending facility (MLF), 2.65%. Overnight borrowing on demand, DFR + 40bp. The ceiling.

And the collateral list — the set of assets the Eurosystem will lend against, and the haircut it applies to each. This is not a footnote. It is the difference between a bank that can monetise its assets and one that cannot, and it is where a great deal of the interesting behaviour lives.

Two features of this design matter more than their prominence suggests.

The first is that the corridor is now very narrow. Fifteen basis points between the rate a bank earns on spare cash and the rate it pays to borrow means the Eurosystem is only ever a little more expensive than the market — by construction, so that recourse to it is occasional rather than either continuous or unthinkable.

The second is that **the deposit facility is open to credit institutions and to nobody else**. Not to money market funds, not to insurers, not to pension funds, not to corporates. That single restriction generates most of what follows.

02

The actors, and what each one may do

Think of the system as five groups arranged by distance from the policy rate, measured in balance sheets crossed.

	WHO	MAY TRANSACT WITH THE EUROSISTEM?	WHAT THEY WANT
1	The Eurosystem – ECB and the national central banks	–	to steer the stance without distorting the plumbing
2	Banks – credit institutions	Yes. Deposit facility, MRO, LTRO, MLF	to fund their assets as cheaply as their constraints allow
3	Money markets – repo, unsecured, FX swap, CP and CD	n/a – these are venues, not counterparties	–
4	Non-banks – money funds, insurers, pension funds, hedge funds, corporates, debt agencies	No , with narrow exceptions	to earn something on cash, or to borrow against securities
5	End demand – depositors, borrowers, sovereign issuers	No	a rate on their savings, their loan, their bonds

The asymmetry between rows 2 and 4 is the engine of the whole system, so it is worth stating precisely.

A **bank** that cannot find anyone to lend its spare cash to has an alternative: leave it at the deposit facility and earn 2.25%. That is its reservation rate — the return it can get without you — and no counterparty can make it accept less.

A **money market fund** in the same position has no such alternative. It can lend in the repo market, buy a short government bill, or leave the money in an unremunerated account. Its reservation rate

is strictly worse than a bank's, and the difference is not a market imperfection. It is the perimeter of the framework, drawn in law.

Two recent exceptions prove the rule by what they withhold. Central counterparties hold most of their liquid resources as central bank money and, since April 2025, may draw overnight credit — but they are not remunerated as monetary policy counterparties. Non-bank payment providers have been able to hold settlement balances in TARGET since October 2025 — with no credit, no policy remuneration, and a cap at twice their trailing peak outflow. The perimeter widened. Nobody got a new floor.

03

The first mile: why the floor leaks

Here is the first genuinely non-obvious fact. The euro area's benchmark unsecured overnight rate, **€STR, prints below the deposit facility rate** — currently 2.19% against 2.25%, a gap of about six and a half basis points. A rate that is supposed to be a floor is being traded through, every day, in size.

Nothing is broken. €STR measures what banks pay to borrow overnight from financial counterparties, and roughly five sixths of that volume comes from lenders with no access to the deposit facility. Those lenders cannot earn 2.25% by themselves. They can only get near it by lending to a bank, which then places the money at the facility and keeps a margin for the use of its balance sheet.

So the €STR–DFR spread is a rent: the price of the intermediation that carries non-bank cash to the central bank. Two consequences follow.

Even perfect bargaining cannot close it. Suppose a money fund had all the negotiating power in the world. The most a bank would ever pay is the DFR minus what the balance sheet costs it — otherwise it loses money on the trade. The floor leaks by at least the cost of intermediation, and no amount of skill recovers that.

It widens when balance sheets get expensive. At quarter-ends and year-ends, when leverage-ratio and G-SIB reporting make it costly for a dealer to hold an extra euro, the rent rises and the spread widens. That is not a stress signal about the stance. It is this mechanism, with the price of balance sheet going up.

The contrast with the United States makes the point sharply, because the Federal Reserve made the opposite design choice:

	EURO AREA	UNITED STATES
Administered floor	DFR 2.25%	IORB 3.65%
Unsecured overnight	€STR 2.19%	EFFR 3.63%
Spread to the floor	–6.5bp	–2.0bp
A facility open to non-banks?	none	the ON RRP

American money funds can place cash directly at the Fed through the overnight reverse repo facility. They never need to rent anyone's balance sheet, so the dollar floor holds to within about two basis points. The euro floor is soft by construction, and the difference is one facility.

It is tempting to conclude the ECB should simply build an ON RRP. The trade is real but it is two-sided: the spread that leaks is the revenue that makes intermediation worth doing. Push a non-bank facility all the way to the DFR and there is nothing left to pay a bank for standing in the middle — the unsecured market does not shrink, it ceases. Somewhere below the DFR there is a sensible answer; at the DFR there is not.

04

The second mile: reserves are moved by repo, not by the ECB

The euro area holds about **€2.1 trillion** of excess liquidity — reserves above what banks are required to hold. It is tempting to read that as "no bank can possibly be short". That inference does not follow, because the aggregate says nothing about distribution.

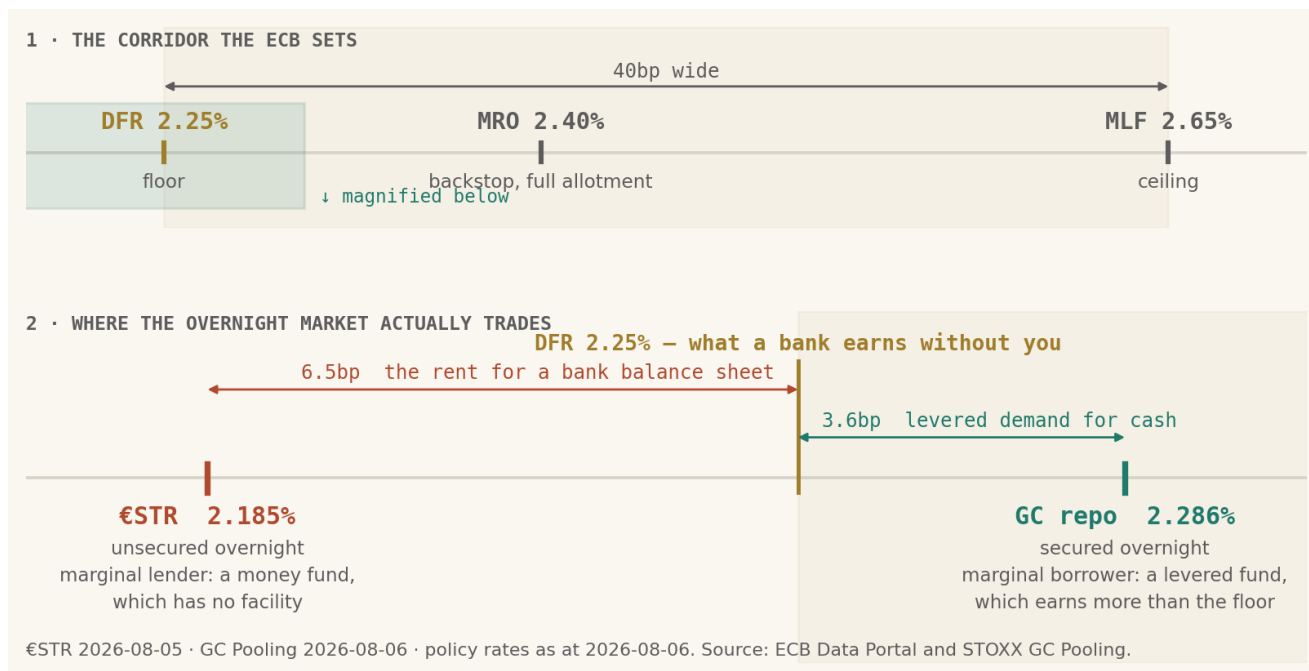
What actually happens is that reserve-rich banks — largely the German, French and Dutch universal banks — lend their surplus, secured, to everyone else. The venue is the repo market: cash against collateral, overnight to three months, mostly cleared through central counterparties. This is where reserves are redistributed, and the Eurosystem is barely involved.

That mechanism has been working, and there is a striking piece of evidence that conditions are changing. **General collateral repo now trades above the deposit facility rate.** In 2022 and 2023 it printed above the DFR on about 3% of days. In 2025, 31%. So far in 2026, 88%.

Why? Because the marginal borrower of cash in the repo market is not a bank at all — it is a leveraged account, a hedge fund funding a relative-value position, which is happy to pay above the DFR because the trade earns more than that. Meanwhile the marginal lender of unsecured cash is a money fund with no facility, which accepts less. The two benchmarks have different marginal counterparties, which is why one sits above the floor and the other below it.

All of which gives the picture below. The ECB sets a corridor forty basis points wide; the overnight market lives in a sliver at the bottom of it, a few basis points either side of the deposit facility rate. The two benchmarks sit on opposite sides of that floor, and the reason is not that one is secured and the other is not. It is that they have **different marginal counterparties**. Unsecured overnight is priced by a lender that cannot reach the facility and must accept less; secured overnight is priced by a borrower that is funding a leveraged position and can afford to pay more.

The distance from €STR up to the floor is the rent a non-bank pays for the use of a bank's balance sheet. The distance from the floor up to GC is what levered demand for cash is worth. And the distance from GC up to the MRO is the only reason banks are not queuing at the central bank — which is the subject of the next two sections.



The euro overnight market inside the ECB corridor. Top: the policy corridor, deposit facility to marginal lending facility. Bottom: a magnification of the shaded sliver, showing €STR below the deposit facility rate and general collateral repo above it.

05

What the ECB lends against, and why it is not one pool

If a bank wants central bank money it must pledge collateral, and the terms depend on what the collateral is. A one-week MRO, a three-month LTRO and the marginal lending facility all draw on the **same single list** of eligible assets — the Eurosystem merged its old two-tier system in 2007. What differs is the **haircut**: the discount applied to the asset's value, which varies with its category, maturity, coupon and — the part that moves — its **credit quality step**.

Eligibility requires credit quality step 3, which is BBB– or equivalent. The Eurosystem accepts five rating agencies and applies a **first-best rule**: where several rate an asset, the best rating governs. That is much more forgiving than most commentary assumes. Italy in October 2018, when Moody's cut it to Baa3, was widely described as one notch from losing ECB eligibility. It was three, because DBRS had it higher.

But the same rule creates a subtler exposure. It guarantees that some agency keeps a sovereign eligible. It does not guarantee that any agency keeps it in a given haircut bracket. And the bracket boundary that matters — A– to BBB+ — roughly **quintuples** Category I haircuts: a five-to-seven year government bond goes from a 2% haircut to 10%.

Italy sits exactly there today. Four of the five agencies already have it in the lower bracket; DBRS alone, at A (low), holds the entire stock in the cheaper one. One DBRS notch would take the weighted haircut on Italian government bonds held by EU banks from about 2.4% to about 9.6% and remove roughly **€34 billion** of collateral value from a €483 billion book — without any other agency moving, and without a single bond becoming ineligible.

This is not hypothetical, and the precedent is the same country. Fitch cut Italy to BBB+ in March 2013, leaving DBRS's A (low) as the only rating holding it in the cheaper bracket; that lasted three years and ten months, and on 13 January 2017 DBRS downgraded, the step moved, and the haircut on a five-year BTP went from 2% to 10% overnight. DBRS took Italy back up on 17 October 2025, and the configuration is now exactly what it was in 2013. Across the whole ESMA register there have been ten such crossings in eleven years, every one of them caused by a single agency acting alone.

This matters for liquidity because collateral is not fungible in practice even though it is in law. Banks hold their own government's paper far beyond diversification: Greece 53%, Spain 50%, Italy 50%, France 47%. So a haircut change hits a concentrated pool, and it hits the banks whose other collateral is also domestic.

06

The refinancing operations, and the number the ECB is watching

With all of that in place, the central question of the current framework becomes easy to state: **when does a bank stop funding itself in the market and start borrowing from the Eurosystem?**

The answer is a price comparison. Borrowing at the MRO costs 2.40%. Borrowing in GC repo costs about 2.29%. So the market is roughly eleven basis points cheaper, and a bank with market-acceptable collateral has no reason to bid. Recourse to the Eurosystem is correspondingly small: about €22bn of MRO and €14bn of three-month LTRO outstanding, against a €5.9 trillion balance sheet.

But it is rising, and the reason is that the gap is closing. Plot the price gap against the quantity taken and you get a demand curve for central bank credit:

- Before the September 2024 corridor change: the market was ~52bp cheaper, and MRO outstanding averaged €2.6bn.
- Since: the gap has averaged ~16bp, and MRO outstanding ~€10.6bn.
- Latest month: 13bp, and €15.3bn — the narrowest gap and the largest recourse observed.

Roughly a fourfold rise in quantity for a fourfold fall in the price gap. Two caveats keep this honest. The relationship is identified almost entirely off one policy change, and the gap has never been observed at zero, so where take-up goes if it closes is extrapolation rather than measurement.

Why this is the number to watch: Isabel Schnabel's stated sequencing is that the ECB will introduce structural longer-term operations and a structural bond portfolio only after "a persistent and broad-based rise in the take-up of standard refinancing operations". The size of the future Eurosystem balance sheet is therefore conditioned on this variable. ECB staff put steady-state reserve demand somewhere between €600bn and €2.2trn — a range wide enough to tell you they do not know either.

Where the reserves are going

Excess liquidity peaked at €4.75 trillion in November 2022 and stands at about €2.12 trillion. It is falling for two reasons, and it helps to keep them separate.

The targeted operations were repaid. TLTRO-III, the pandemic-era subsidised lending, ran off entirely by December 2024. That was a one-off and it is finished.

The bond portfolios are running off. The APP and PEPP holdings, about €3.4 trillion, are no longer fully reinvested. Every redemption destroys central bank money — and, note, simultaneously returns a bond to the market. Scarcity of reserves and scarcity of collateral therefore move in opposite directions, which is why the 2022–23 collateral squeeze eased as quantitative tightening progressed rather than in spite of it.

Set against that, the autonomous factors keep growing: banknotes in circulation are around €1.64 trillion and rise over time, mechanically absorbing reserves. The ECB's own published path has reserves falling by roughly €470 billion a year.

So the direction is clear, the destination is not, and the interesting question is what the journey does to prices.

From reserves to the Euribor basis

This is where the note lands, so let me define the destination carefully — and be equally careful about what can and cannot be measured.

Euribor is the rate at which banks lend to each other, unsecured, at term — one, three, six or twelve months. It is what most euro loan contracts and floating-rate notes reference. Crucially it is a **forward-looking** rate: the three-month fixing today is a price for money over the next three months, and it therefore embeds the market's expectation of where overnight rates are heading, plus bank credit risk, plus a term funding premium.

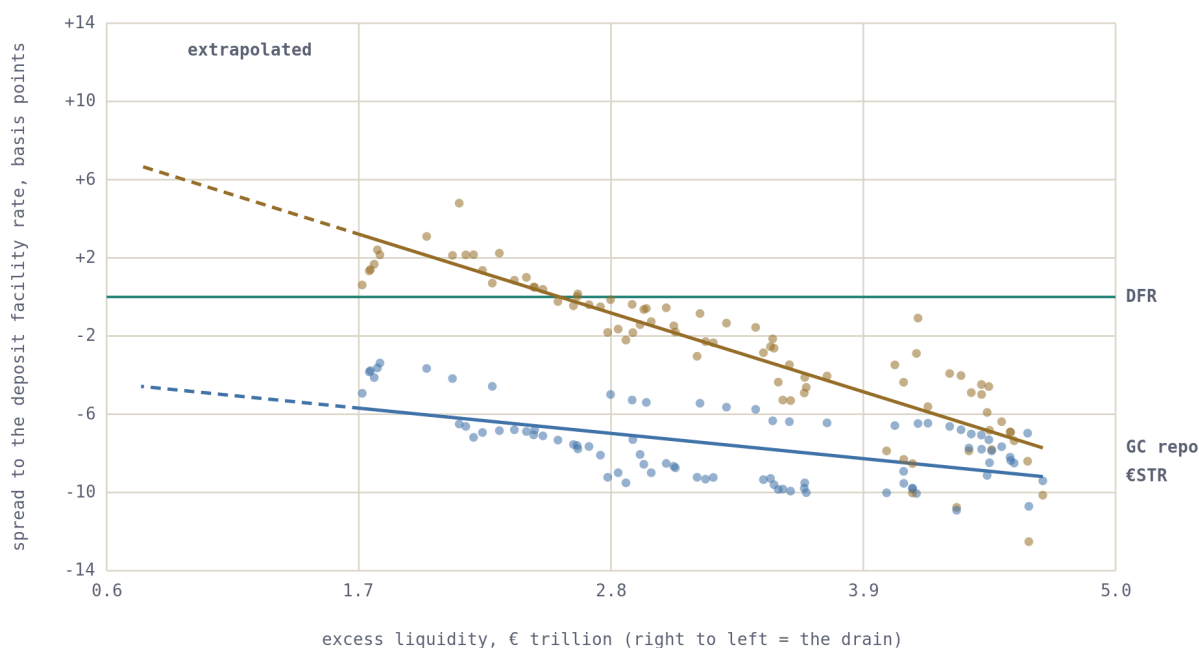
The **€STR/Euribor basis** is Euribor minus the risk-free rate for the same period. It is the euro analogue of the old Libor–OIS spread and the cleanest single price of bank funding pressure.

To measure that basis you need both legs struck on the **same information set**: the three-month Euribor fixing today against the three-month €STR **swap** rate today — a forward-looking term rate derived from the €STR OIS market, such as Eterm or FTSE Term €STR. Comparing today's Euribor with the realised compounding of €STR over the following three months does not give you the basis. It gives you the basis **plus the market's expectation error**, because one leg is a forecast and the other is the outturn. Around policy turning points that error dominates.

Both published forward-looking term €STR rates are licensed. FTSE Term €STR publishes only the latest fixing on its public page, one business day delayed, and its terms make using it as an input into analysis a commercial purpose requiring an agreement. EMMI's Eterm requires registration and prohibits redistribution without a licence. The ECB Data Portal carries Euribor but no OIS. **So the properly-specified basis cannot be computed from freely redistributable data, and this note does not pretend otherwise.**

What can be measured cleanly is the step before it — and it turns out to be the more informative one anyway.

The overnight complex has no expectation problem at all. €STR, the GC repo rate and the deposit facility rate are all observed on the same day for the same day. Plotting the two market rates against excess liquidity gives the mechanism directly:



Monthly averages of the GC repo rate and €STR, each measured as a spread to the deposit facility rate, against euro-area excess liquidity, October 2019 to date. Both legs are same-day observations, so no expectation error enters. Dashed segments extrapolate below the observed range.

The relationships are strong and they point the same way:

SPREAD TO THE DFR	CORRELATION WITH EXCESS LIQUIDITY	PER €1TRN DRAINED	TODAY
GC repo	-0.89	+3.7bp	+4.8bp
€STR	-0.56	+1.2bp	-6.5bp
The band between them	-0.78	+2.5bp	11.3bp

Read that as one sentence: **as reserves drain, secured money gets dearer faster than unsecured money does, and the band around the deposit facility rate widens.** The secured leg is the sharp one, at -0.89 over eighty-three monthly observations, because that is where the marginal borrower — a leveraged account bidding for collateral — competes directly against a shrinking pool of surplus reserves.

Extrapolating the fitted lines, a fall from today's €2.1 trillion to €1.0 trillion would put GC repo roughly six basis points above the deposit facility rate rather than five, and widen the overnight band from about 11bp to about 13bp.

And so to Euribor

The link from there to term bank funding is a chain of steps that are individually uncontroversial:

1. Fewer surplus reserves means fewer banks are natural lenders of term cash.
2. More banks need to raise term funding rather than place it.
3. Competition for deposits, certificates of deposit and commercial paper intensifies.
4. Euribor fixings drift up relative to the risk-free curve — that is, the basis widens.
5. €STR itself barely moves, because it is pinned near the deposit facility rate by the mechanism in the first mile.

So the widening comes almost entirely from the Euribor leg, and the direction is not in doubt. **The magnitude is.** Quantifying it honestly requires the licensed term €STR data described above, and the right way to do it would be to regress the Eterm-based three-month basis on excess liquidity over the period since those rates began publishing in January 2024 — around thirty monthly observations, a short but correctly specified sample.

If you have access to Eterm or FTSE Term €STR, that regression is a small piece of work and this note's pipeline is set up to accept it. Until then the defensible statement is the qualitative one, anchored on the overnight numbers above: the pressure is real, it is visible today in the secured market, and it reaches term funding through bank balance sheets rather than through the policy rate.

09

What to watch, in order

If you follow only a handful of series, these are the ones that carry information, roughly in the order they will move.

1. **GC repo minus the MRO rate.** The take-up trigger. It has gone from -52 bp to -13 bp. When it approaches zero, recourse to the Eurosystem becomes economic for banks with ordinary collateral.
2. **MRO and 3-month LTRO outstanding.** The quantity that answers the trigger, and explicitly the ECB's own condition for introducing structural operations.
3. **€STR minus the DFR.** The price of bank balance sheet. Watch quarter-ends specifically: the size of the widening tells you how tight intermediation capacity has become.

4. **The share of repo trading above the DFR.** Currently 88% of days. A measure of how much levered demand is competing for collateral.
5. **The 3-month Euribor basis,** measured properly — the Euribor fixing against a forward-looking term €STR rate struck the same day, not against realised overnight compounding. The end of the chain, and the one that reaches loan contracts.
6. **DBRS on Italy.** Narrow, but a single notch there moves roughly €34bn of collateral value, no other agency is positioned to absorb it, and the same agency did exactly this in January 2017.

Derived from public sources — see method. Estimates, not official publications. Not investment advice. ·
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