MCP SERVER | NO CODE | CLOUD HOSTED

ECB Monetary MCP for AI Agents

Analyze Eurozone Money Supply, Yield Curves & Banknotes Data

The ECB Monetary MCP gives your AI agents instant access to core Eurozone financial data, including M1, M2, and M3 money supply aggregates. It also tracks government bond yield curves from 3 months up to 30 years, plus current euro banknote circulation statistics. Use this MCP for comprehensive macro analysis on central banking trends.

A+ Quality Score 98.33/100

money-supply | yield-curves | euro-banknotes | monetary-aggregates | financial-modeling

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vinkius.com/mcp/ecb-monetary-money-supply-yield-curves-banknotes

SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

ECB Monetary — Money Supply, Yield Curves & Banknotes MCP

4 tools available
Cloud-hosted on Vinkius

This connector gives your AI agents a direct line into the European Central Bank's monetary data flow. You can analyze everything from how much money is circulating in the Eurozone (M1, M2, and M3) to what market participants expect about future rates by looking at bond yields. Your agent pulls current government bond yield curves—showing maturities from three months up to thirty years—and also tracks euro banknotes in circulation.

Want to model policy impacts? You can run a full curve snapshot anytime to see the shape of the entire curve, whether it's normal or inverted. This depth is crucial for anyone doing financial modeling. If you connect this MCP through Vinkius, your agent gains access to thousands of specialized tools across finance and beyond, letting you build complex economic reports without manual data scraping. The result is instant insight into the health of the Eurozone economy.

Core Capabilities

01 — Determine Monetary Aggregates

Get the current M1, M2, or M3 money supply figures for the entire eurozone.

02 — Analyze Specific Bond Yields

Retrieve the yield rate for any specific government bond maturity, from 3 months to 30 years.

03 — Get Full Curve Snapshot

View the current shape of the entire eurozone bond yield curve across all maturities at one time.

04 — Track Banknote Circulation

Access historical and current statistics on euro banknotes in circulation by denomination.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/ecb-monetary-money-supply-yield-curves-banknotes** — connect your AI agent in three steps.

01 Your agent first determines the required data point, like a specific maturity yield or a money supply aggregate (M3).

02 The MCP connects to the European Central Bank's historical and live datasets, filtering for the precise time period and metric you need.

03 You receive structured, actionable data—such as M1/M2/M3 values or a complete curve chart—ready for immediate analysis in your workflow.

The bottom line is that it converts complex, siloed central bank reports into clean, callable data points for your AI agent to process.

Built For

This MCP is built for financial analysts and economists who need real-time visibility into macro trends. If you regularly model the relationship between money supply growth and bond yield movements, this tool saves hours of manual data collection.

Macroeconomist

Uses M1/M2/M3 to assess credit conditions and models how changes in monetary aggregates affect the overall Eurozone economy.

Quantitative Analyst

Runs comparisons between the current yield curve snapshot and historical data to predict shifts in interest rate expectations for investment modeling.

Financial Strategist

Tracks banknote circulation growth alongside bond yields to gauge consumer spending health and potential liquidity issues across member states.

What Changes When You Connect

01 Understand the relationship between money supply and debt expectations. Use `get_monetary_aggregate` to see M3 changes alongside bond yield movements.

02 Model market sentiment instantly. The `get_yield_curve_snapshot` provides a single view of whether interest rate expectations are normal, flat, or inverted.

03 Build comprehensive reports quickly. Combine data from all four tools into one cohesive analysis—from money aggregates to specific banknote counts.

04 Pinpoint critical economic shifts. By calling `get_yield_curve` for specific maturities, you can isolate which part of the curve is driving market concern.

05 Benchmark circulation trends. Use `get_banknotes` to track physical currency flow against digital monetary metrics.

Real-World Applications

Assessing Economic Stress During Rate Hikes

A strategist asks the agent what happened when rates spiked last year. The agent pulls the historical `get_yield_curve` data for 2-year and 10-year bonds, compares it to M3 growth from that period, and reports on the rate of money supply contraction.

Forecasting Near-Term Liquidity Issues

An analyst needs to know if cash reserves are stable. They run `get_banknotes` alongside an M2 check using `get_monetary_aggregate`. The agent reports on the correlation between physical currency flow and overall money supply.

Determining Central Bank Policy Signals

A policy advisor wants to know if the market consensus is changing. They request a full curve snapshot using `get_yield_curve_snapshot` and ask the agent to flag any significant deviation from historical norms.

Comparing Current vs. Historical Money Flow

A research team needs to compare today's monetary conditions to a decade ago. They use `get_monetary_aggregate` for both periods, allowing them to quantify the change in M3 and observe how the yield curve has shifted.

Patterns to Avoid

Analyzing money supply without context

✗ AVOID

Just looking at the raw M3 figure tells you nothing. It doesn't explain if that growth is driven by sustainable credit or temporary liquidity injections.

✓ INSTEAD

Always cross-reference your M3 data from `get_monetary_aggregate` with a full curve snapshot using `get_yield_curve_snapshot`. This shows the market context behind the numbers.

Ignoring maturity differences

✗ AVOID

Comparing the 2-year yield to the 30-year yield without understanding the shape of the middle section is misleading. You miss the key story in between.

✓ INSTEAD

Use `get_yield_curve` repeatedly for specific maturities (e.g., 5yr, 10yr, 20yr) and then use the full snapshot to visualize how they fit together.

Focusing only on aggregate numbers

✗ AVOID

Only looking at M2 misses key insights about physical cash flow. The money supply is theoretical; banknotes are real.

✓ INSTEAD

Run `get_monetary_aggregate` for the high-level view, but immediately follow up by running `get_banknotes` to ground the analysis in tangible circulation data.

The Right Fit

Use this MCP if your primary goal is to model macro trends using multiple correlated datasets. Specifically, you need to link money supply growth (M1/M2/M3) with interest rate expectations derived from the yield curve. If you only care about a single data point—for instance, just the 10-year bond yield—a simpler financial data tool might suffice. However, if your question involves 'why' rates are moving or what monetary policy means for liquidity (e.g., linking M3 to banknote counts), this MCP is necessary because it combines all these distinct economic pillars into one accessible package. Don't use this if you only need a simple stock ticker quote; that requires a different, more focused asset pricing tool.

Analyzing ECB Monetary Flow with the ECB Monetary MCP

Today, understanding Eurozone monetary health means juggling three separate reports: one for money supply aggregates (M3), another for bond yields across decades, and a third tracking physical cash flow. You spend hours cross-referencing these data sets in spreadsheets, manually checking if the current M3 growth aligns with the shape of the 10-year yield curve.

With this MCP, your agent handles that complexity automatically. Simply ask it to compare today's money supply against last quarter's bond yields and banknote circulation. You get a synthesized answer detailing the economic signals immediately.

Modeling Bond Yield Expectations with ECB Monetary MCP

Before this, determining market expectations required running multiple queries: first for the 3-month yield, then the 5-year, and finally the 30-year. You had to manually piece together these points to understand if the curve was flattening or steepening.

Now, your agent uses `get_yield_curve_snapshot` to provide a single, comprehensive view of all maturities at once. This eliminates manual data compilation and gives you immediate insight into market consensus.

ECB Monetary: 4 Tools for Macroeconomic Analysis

These tools let you retrieve specific monetary aggregates (M1/M2/M3), pinpoint individual bond yields, get full curve snapshots, and track banknote circulation.

#	TOOL	DESCRIPTION
01	`get_monetary_aggregate`	Retrieves the current M1, M2, or M3 money supply figures for the eurozone.
02	`get_yield_curve`	Gets the specific government bond yield rate for a single chosen maturity (e.g., 5 years).
03	`get_yield_curve_snapshot`	Pulls all current maturities onto one chart, showing the full shape of the eurozone yield curve.
04	`get_banknotes`	Provides historical and recent statistics on how many euro banknotes are circulating across different denominations.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U What was the M3 money supply growth compared to bond yields in Q1 2023?

Eurozone Monetary Snapshot (Q1 2023 vs. Current)

• **M3 Aggregate:** Last quarter, M3 hit €X trillion, showing a deceleration of only 1.5% growth year-over-year.
• **Yield Curve Signal:** The 10-year yield was at 2.8%, significantly higher than the previous period's peak of 4.1%. This suggests market confidence in long-term rates stabilizing.
• **Key Takeaway:** Slowing M3 growth paired with high, stable yields indicates tightening credit conditions.

U How do banknote circulation levels correlate with the current yield curve shape?

Based on recent data:

1. **Banknotes in Circulation:** The total value of euro banknotes stands at €Y billion, showing a modest increase of 0.8% month-over-month.
2. **Yield Curve Status:** The full yield curve snapshot shows an inverted shape (short rates are higher than long rates).
3. **Interpretation:** While physical currency circulation is up slightly, the inverse yield curve suggests underlying financial stress or pessimism regarding future economic growth.

U What were the M1 and banknote levels five years ago versus today?

Comparison: Five Years Ago vs. Today

METRIC	5 YEARS AGO (2019)	CURRENT DATA (2024)	CHANGE
M1 Money Supply	€A trillion	€B trillion	+X%
Banknotes Circulating	€C billion	€D billion	-Y%

Overall, the data shows a significant increase in money supply volume but a decline in physical currency circulation.

Frequently Asked Questions

01 **How can I use the ECB Monetary MCP to track changes in Eurozone inflation indicators?**

While it doesn't track CPI directly, you can infer inflationary pressure by analyzing M3 money supply aggregates and how quickly banknote circulation is growing. Rapid increases in both metrics often precede higher inflation rates.

02 **What kind of data does the ECB Monetary MCP provide regarding bond yields?**

You get detailed yield curve information, including specific rates for maturities from 3 months up to 30 years. You can use these precise figures to model market expectations and economic cycles.

03 **Can the ECB Monetary MCP help me compare multiple time periods?**

Yes, you can easily pull data for different dates or historical ranges. This allows you to benchmark current monetary conditions against past crises or stable growth periods for deeper analysis.

04 **Is the M3 money supply data reliable enough for investment decisions?**

The M3 aggregates are official figures from the European Central Bank and serve as a foundational metric. Always cross-reference this with yield curve snapshots to ensure your investment thesis accounts for market sentiment.

05 **I need to know how much physical cash is moving in Eurozone markets.**

Use the dedicated banknotes tool within the ECB Monetary MCP. It gives you circulation statistics across all denominations, helping track the real-world flow of money separate from digital aggregates.

06 **What if I need to see the entire yield curve at once?**

The full curve snapshot tool lets you bypass querying every single maturity. It instantly provides a visual and numerical summary of all bond yields, which is crucial for quick policy assessment.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"ecb-monetary-money-supply-yield-curves-banknotes": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

ECB Monetary — Money Supply, Yield Curves & Banknotes is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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