MCP SERVER | NO CODE | CLOUD HOSTED

BCB Economia MCP for AI Agents

Analyzing Brazilian macroeconomic indicators and debt ratios.

BCB Economia — PIB, Dívida, Reservas, PIX e SGS connects your AI client directly to core Brazilian economic data from the Central Bank of Brazil. Your agent can retrieve monthly GDP proxies, track public debt ratios against GDP, monitor international reserves in USD, and analyze payment statistics for the instant PIX system. It also provides access to over 20,000 time series indicators using specific SGS codes.

D Quality Score 51.59/100

economic-indicators | gdp-data | public-debt | trade-balance | time-series-data | financial-reporting

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vinkius.com/mcp/bcb-economia-pib-divida-reservas-pix-e-sgs

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.

BCB Economia — PIB, Dívida, Reservas, PIX e SGS MCP

7 tools available
Cloud-hosted on Vinkius

This MCP gives your AI client real-time access to critical data points that define the Brazilian economy. Instead of manually logging into multiple Central Bank portals and juggling spreadsheets, you instruct your agent to pull complex macroeconomic snapshots in a single query. Your agent pulls everything from GDP growth rates to unemployment figures and PIX transaction volumes. You can compare historical debt sustainability metrics with current international reserve levels —all without leaving your workflow.

The system handles the complexity of retrieving data across various time series indicators, including trade balance movements and public sector debt ratios. When you connect BCB Economia through Vinkius, your agent knows exactly where to find these specific datasets. It lets you model economic scenarios or generate reports that require combining metrics like IBC-Br proxies with PNAD unemployment rates instantly.

Core Capabilities

01 — Calculate Public Debt Ratios

Retrieve the liquid public sector debt as a percentage of the GDP to assess fiscal sustainability.

02 — Track International Reserves

Get the current total value of Brazil's international reserves, measured in USD.

03 — Assess Economic Output Change

Obtain monthly estimates for the Brazilian GDP using the IBC-Br index proxy.

04 — Monitor Payment System Volume

Pull up detailed statistics on PIX, including both the volume and count of instant transactions.

05 — Retrieve Any Time Series Data

Query over 20,000 historical data points from the BCB using specific SGS codes (e.g., Selic rate or IPCA).

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/bcb-economia-pib-divida-reservas-pix-e-sgs** — connect your AI agent in three steps.

01 Tell your agent precisely what economic metrics you need; for example, 'What was Brazil's debt/GDP ratio last quarter?'

02 Your agent identifies the necessary data endpoint and executes the query against the BCB data structure.

03 The client receives structured data containing the requested historical or current figures (e.g., GDP percentages, USD reserve amounts) ready for analysis.

The bottom line is that your agent handles all the technical steps of connecting to and interpreting raw Central Bank time series data so you get clean, usable economic metrics.

Built For

This MCP is for financial analysts, economists, and risk managers who routinely need deep, verifiable macroeconomic figures. If your job involves modeling country risk or writing policy reports based on official government statistics, you'll use this. It cuts out the time spent manually scraping Central Bank websites.

Macroeconomist

Uses BCB Economia to compare historical trends in international reserves against changes in public debt ratios for policy papers.

Financial Risk Analyst

Checks the latest IBC-Br proxy and PIX statistics to gauge immediate systemic stress or growth acceleration in the Brazilian market.

Investment Strategist

Retrieves specific SGS codes, like interest rates (Selic) or inflation metrics (IPCA), to inform asset allocation models.

What Changes When You Connect

01 Get instant, reliable data on key metrics like GDP using the `get_pib` tool, eliminating manual proxy calculations.

02 Assess fiscal risk immediately by running `get_divida_pib`, providing the public sector's net debt ratio relative to GDP.

03 Track national financial stability by checking current international reserves with `get_reservas` in USD terms.

04 Model market liquidity and growth using `get_pix_estatisticas`, seeing recent trends in instant payment volumes.

05 Compare trade performance over time by calling `get_balanca_comercial` to track export/import surpluses.

06 Access niche data points, like specific interest rates or inflation indices, through the flexible `get_serie_bcb` tool.

Real-World Applications

Comparing current debt stability with historical trends

A risk manager needs to know if Brazil's public sector can handle new borrowing. They ask their agent for the latest `get_divida_pib` ratio and compare it against data pulled from `get_serie_bcb` (for historical interest rate context).

Creating a quarterly economic snapshot report

An economist must compile a full report. They prompt the agent to gather GDP (`get_pib`), unemployment (`get_desemprego`), and PIX payment volumes (`get_pix_estatisticas`) all in one go.

Assessing commodity market health

An investment strategist wants to see if the trade balance is improving. They use `get_balanca_comercial` and then check international reserves using `get_reservas` to gauge external funding capacity.

Quickly checking specific financial metrics

A junior analyst needs the current Selic rate. Instead of searching, they ask for the SGS code 24369 (unemployment) and the relevant time series data using `get_serie_bcb`.

Patterns to Avoid

Mixing up debt types

✗ AVOID

A user asks for 'Brazil's total debt.' The agent might pull a general, unusable number because the request was vague.

✓ INSTEAD

Always specify that you need the liquid public sector debt ratio by using `get_divida_pib` to ensure accurate fiscal data.

Overlooking trade components

✗ AVOID

A user only asks for 'exports.' This is incomplete, as imports are required to calculate net movement.

✓ INSTEAD

Use `get_balanca_comercial` which calculates the full balance (exports minus imports), giving you the true picture of trade health.

Ignoring time series specificity

✗ AVOID

A user asks for 'inflation.' Without a code, the agent might pull the wrong measure or outdated data.

✓ INSTEAD

Use `get_serie_bcb` and provide the specific SGS code (e.g., 433 for IPCA) to guarantee you get the exact time series metric needed.

The Right Fit

Use this MCP if your workflow requires combining multiple, disparate official economic indicators from the Central Bank of Brazil in one automated process. It is ideal when you need cross-sectional comparisons, like comparing current GDP growth (`get_pib`) against long-term unemployment trends (`get_desemprego`). Don't use it if you only need a simple, single data point that could be found elsewhere (like a basic search engine). Also, don't rely on this for predictive modeling; the tools retrieve historical and current metrics. For forecasting future rates or creating proprietary models based on external assumptions, you still need to build those calculations yourself using the retrieved raw numbers.

BCB Economia — PIB e Dívida/PIB: Analyzing Brazilian Fiscal Health with BCB Economia

Today, calculating a full macroeconomic picture means jumping between multiple government sites. You copy the latest GDP number from one tab, then switch to another site just to find the public debt ratio relative to GDP. This manual cross-referencing process is slow, prone to version mismatches, and forces you to juggle data across several disconnected dashboards.

With BCB Economia connected, your agent pulls these core metrics simultaneously. You ask for a snapshot, and it returns both the `get_pib` proxy and the current `get_divida_pib` ratio in one clean payload. You get immediate comparative analysis without leaving your terminal.

BCB Economia — Reservas e PIX: Gauging Brazil's Financial Stability with BCB Economia

To assess financial stability, you traditionally have to check international reserves separately from payment statistics. You manually pull the USD reserve total and then run a separate report on transaction volumes (like PIX). These two metrics are critical for different reasons but often need to be compared side-by-side.

BCB Economia allows your agent to retrieve `get_reservas` alongside `get_pix_estatisticas`. This means you can instantly correlate the country's external funding capacity with its daily internal payment activity. The insight is immediate and actionable.

BCB Economia — 7 Tools for Macroeconomic Data Retrieval

Use these specialized endpoints to pull precise, verifiable metrics on Brazil's economy, from GDP proxies to instant payment volumes.

#	TOOL	DESCRIPTION
01	`get_pib`	Calculates the monthly percentage variation of Brazil's economic activity using the IBC-Br index proxy.
02	`get_divida_pib`	Determines the ratio of the liquid public sector debt relative to the Gross Domestic Product (GDP).
03	`get_reservas`	Pulls the current international reserve total for Brazil, expressed in U.S. Dollars.
04	`get_balanca_comercial`	Retrieves the net balance of Brazilian trade (exports minus imports) over a specified period.
05	`get_desemprego`	Fetches the unemployment rate for Brazil, based on PNAD survey data.
06	`get_pix_estatisticas`	Gets detailed volume and count statistics regarding PIX instant payment transactions in Brazil.
07	`get_serie_bcb`	Queries any specific time series data published by the BCB using its unique SGS code identifier.

See It in Action

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

U Give me a summary of Brazil's economy over the last 5 years, focusing on GDP, debt trends, and reserves.

BR Brazilian Economic Snapshot (Last 5 Years)

METRIC	TREND/VALUE
GDP Growth Proxy	Volatile; Average annual growth was +1.2%
Debt to GDP Ratio	Decreased from 78% to 63%
International Reserves	Stable, averaging $350B USD per year

Data sourced from multiple BCB endpoints.

U What were the trade balance and unemployment rates for Q4 of last year?

📊 Quarterly Economic Data (Q4)

- **Trade Balance:** The net surplus reached $8.1 billion, driven primarily by agricultural exports.
- **Unemployment Rate:** The PNAD rate stabilized at 7.5%, showing a slight improvement from the previous quarter.

This comparison shows external trade strength supporting labor market stability.

U Compare the PIX transaction volume against the general inflation rate (IPCA) over 18 months.

📈 BCB Data Comparison: PIX vs. Inflation

PERIOD	PIX VOLUME (BILLIONS)
Q3 2023	4.5 B
Q4 2023	5.1 B
Q1 2024	6.2 B

Observation: PIX volume continues to rise steadily, outpacing the inflation rate (IPCA), suggesting strong consumer demand and adoption of digital payments.

Frequently Asked Questions

01 **How can I use BCB Economia to check Brazil's public debt sustainability?**

You can assess fiscal health by using the `get_divida_pib` tool. This provides the current ratio of liquid public sector debt relative to GDP, which is key for determining if the country's debt load is sustainable over time.

02 **I need historical data on Brazil's economy; does BCB Economia support it?**

Yes. The MCP gives you access to specific series through `get_serie_bcb`. You just need the SGS code (like 432 for Selic) and can pull decades of reliable time series data instantly.

03 **What is the best way to compare GDP growth with job market indicators using BCB Economia?**

You should retrieve both the monthly proxy from `get_pib` for economic activity and the quarterly rate from `get_desemprego`. Comparing these two endpoints helps you see if overall output growth is supporting stable employment.

04 **Can BCB Economia help me track payment system usage in Brazil?**

Absolutely. Use `get_pix_estatisticas` to get the latest volume and count figures for PIX. This tells you exactly how much the instant payment network is being used by consumers and businesses.

05 **How do I find out if Brazil's foreign reserves are increasing or decreasing?**

Use `get_reservas` to pull the most recent international reserve total in USD. Tracking this metric shows whether the country is accumulating or depleting its external financial assets.

06 **Is BCB Economia good for analyzing trade performance?**

Yes, it provides `get_balanca_comercial`. This tool calculates the full balance (exports minus imports), giving you a clear picture of whether Brazil's primary trade sector is running a surplus or deficit.

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 `"bcb-economia-pib-divida-reservas-pix-e-sgs": { "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

BCB Economia — PIB, Dívida, Reservas, PIX e SGS 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 →

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