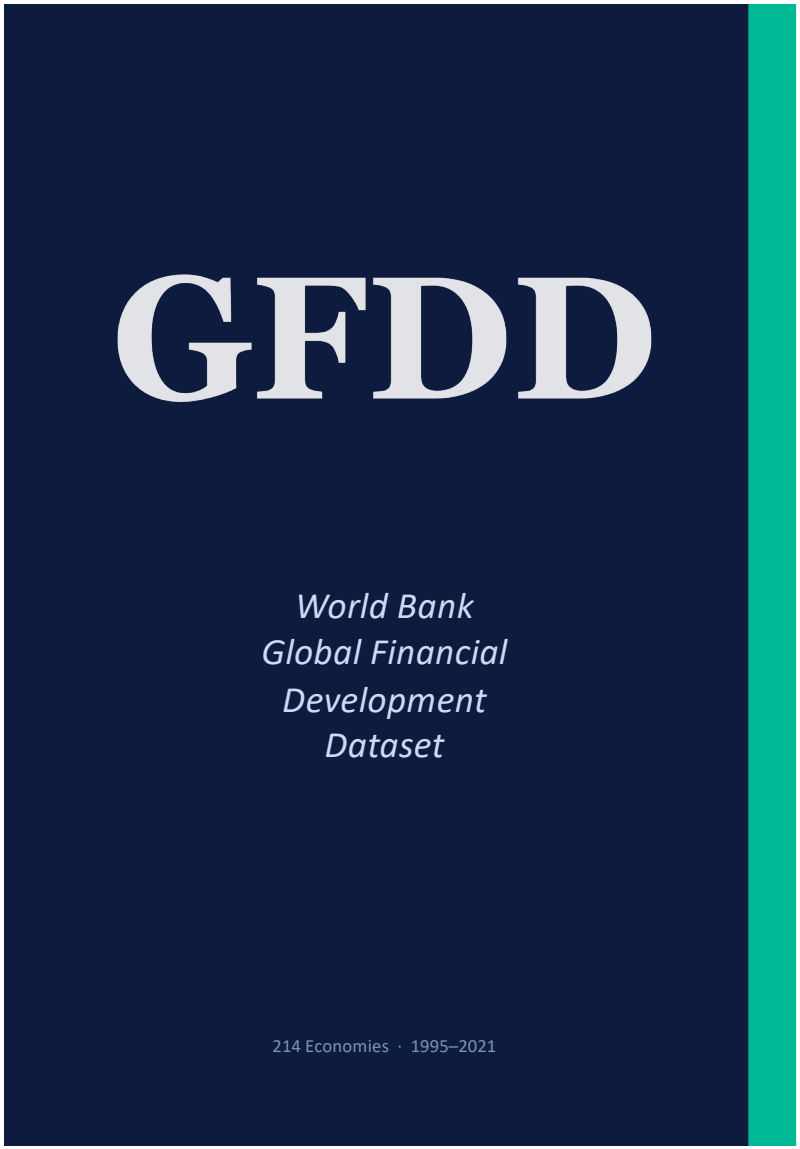


TABLEAU PROJECT

Global Financial Development Dataset Analysis

Equity Markets · Debt & Bond Markets · Banking System Health

214	27 yrs	21	3
Economies	1995–2021	KPI Charts	Dashboards

Presented by Anil

PROJECT OVERVIEW

Three dashboards. One connected story about global capital.

01 Global Equity Markets

Depth, Liquidity & Crisis Resilience

ANSWERS THE QUESTION:

How deep and liquid are global stock markets — and who crashed hardest?

KEY KPIs:

- Market Cap (% GDP)
- Return Heatmap
- Turnover Scatter
- Income Group Distribution

02 Debt & Bond Markets

Corporate Financing, Issuance & Credit Depth

ANSWERS THE QUESTION:

Are companies borrowing from banks or issuing bonds — and is the mix changing?

KEY KPIs:

- Corp Bond Issuance
- Pvt vs Pub Debt
- Bank vs Bond Trend
- Bond Maturity by Region

03 Banking System Health

Stability, Stress & Profitability

ANSWERS THE QUESTION:

Which banking systems survived crises — and which ones were already fragile?

KEY KPIs:

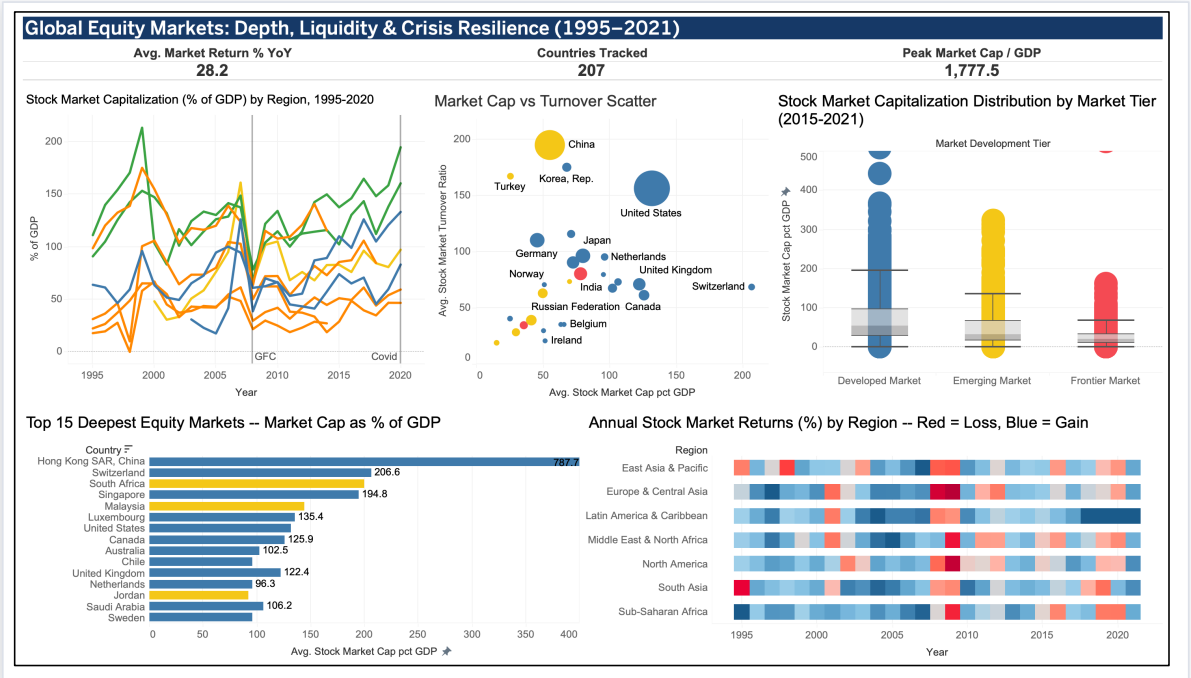
- Z-Score Stability
- NPL by Country
- Bank ROE vs NIM
- Capital Buffer vs Risk

DASHBOARD 1 — EQUITY MARKETS

North America peaked at 210% GDP — then lost half its value in 12 months.

28.2%
Avg. Annual Market Return (YoY)

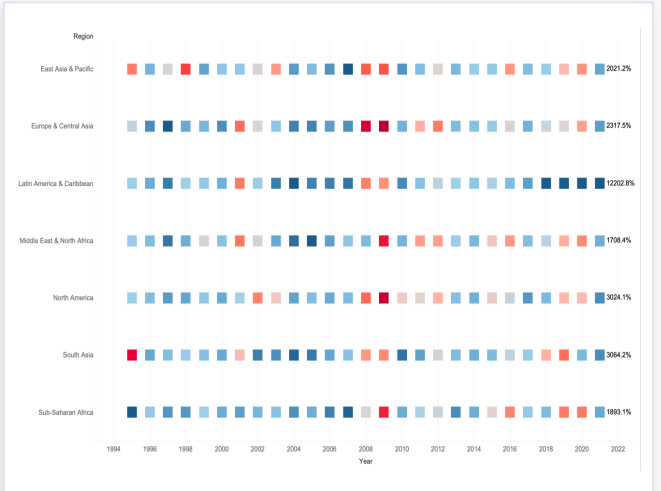
207
Countries with Equity Data



SO WHAT?

The 2008 crash is unmistakable in every region.

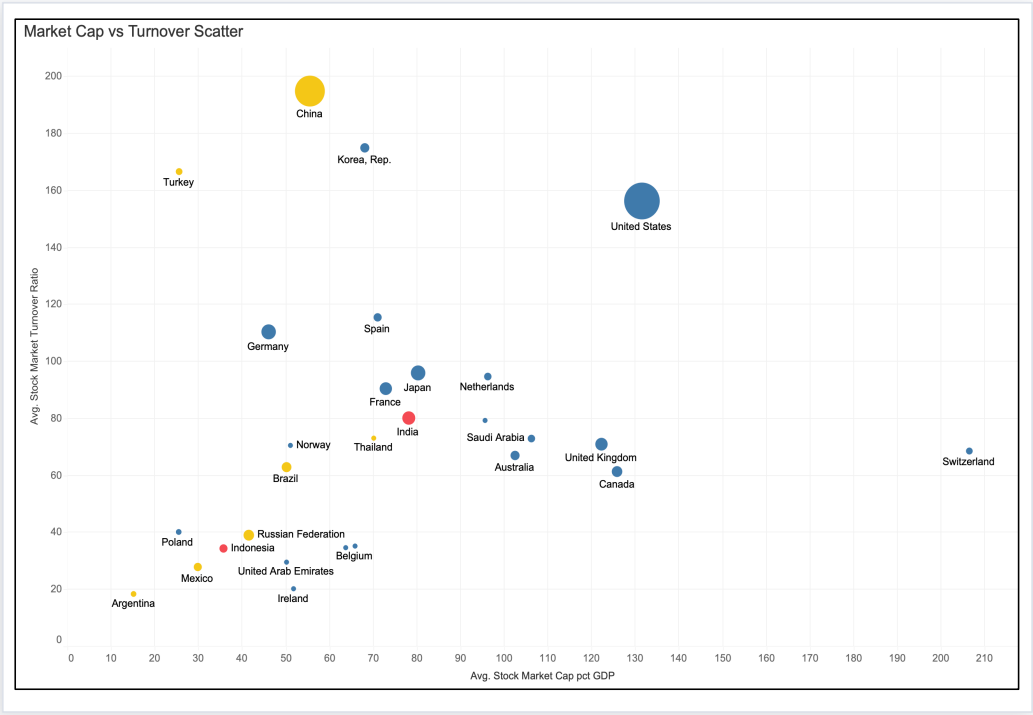
Every line collapsed simultaneously in 2008–09. North America fell from ~210% GDP to under 90% in one year. Recovery was complete by 2013, then markets surged to record levels by 2020.



▸ Red = annual loss. Blue = gain. Every region went deep red in 2008 — and again (briefly) in 2020.

DASHBOARD 1 — EQUITY DEPTH

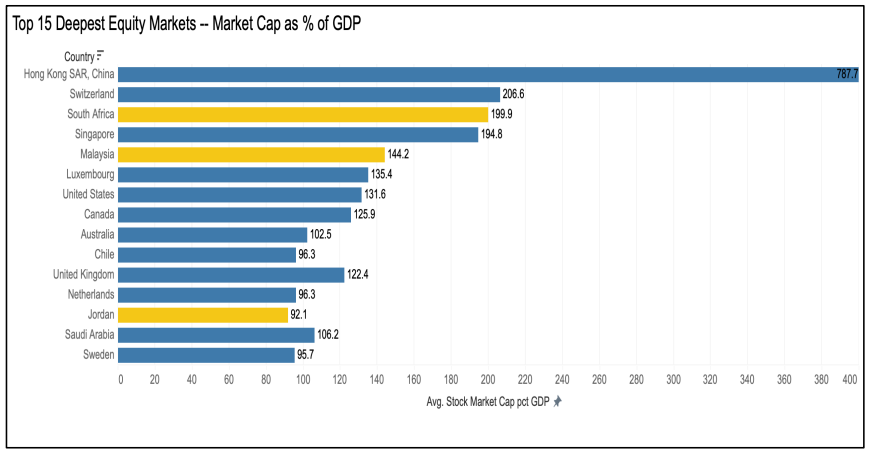
Hong Kong's market is 6× larger than its economy. The US isn't even close.



SO WHAT?

Small, open financial centres — not large economies — win on depth.

The top 5 deepest markets are city-states or trade hubs. Market depth is driven by financial openness and low capital controls — not economic size.

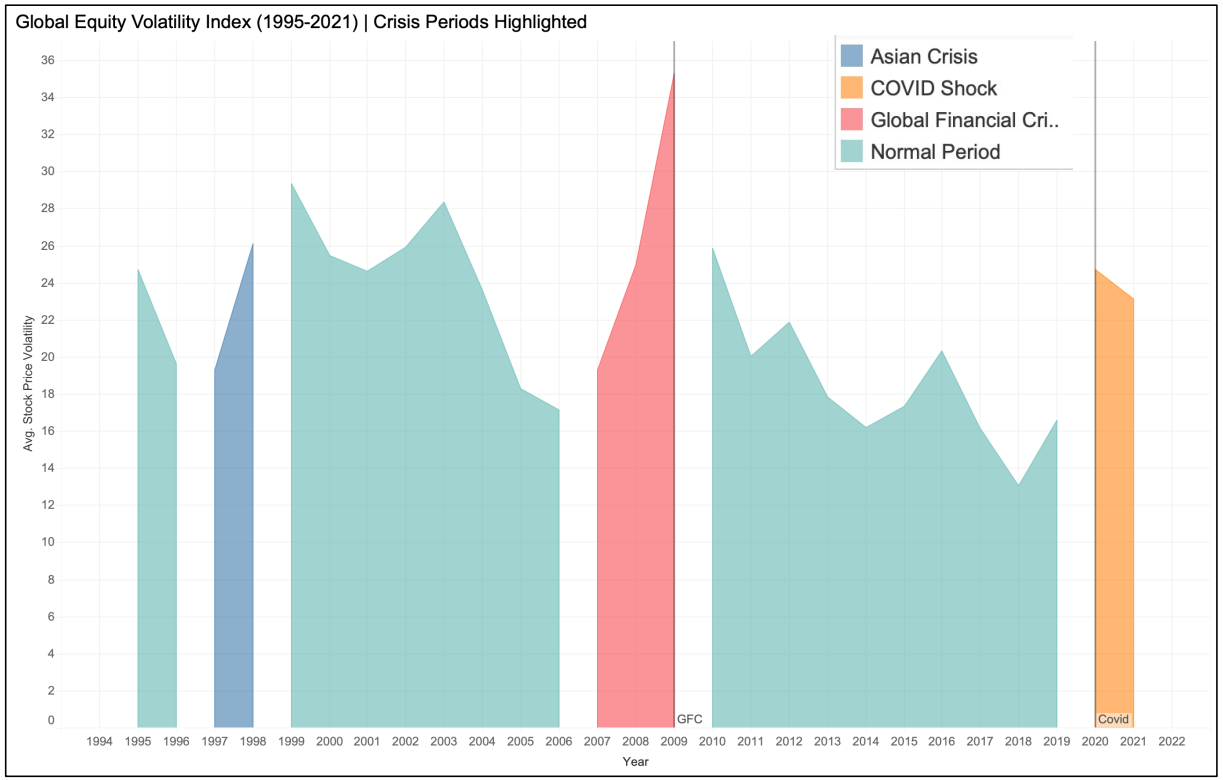


▸ Scatter: countries with the deepest markets (right) also show the highest turnover — depth and liquidity reinforce each other.

▸ HK SAR: 787.7% of GDP. Switzerland: 206.6%. Singapore: 194.8%. US: 131.6%. Small open economies dominate depth rankings — not large ones.

DASHBOARD 1 — EQUITY DEPTH

Every major crisis leaves a clear spike. The GFC was 2× worse than any other.



▸ Volatility index: Asian Crisis 1997–98 (blue), GFC 2007–09 (red/pink), COVID 2020 (amber). GFC spike of 35+ dwarfs all other periods.

SO WHAT?

GFC was a 2× outlier — every other crisis pales in comparison.

Peak volatility in 2008–09 reached 35+ vs a normal range of 13–18. The Asian Crisis barely registers by comparison. COVID spiked fast but recovered within months.

SO WHAT?

Volatility fell steadily 2010–2019 — a decade of calm before COVID.

Post-GFC stability wasn't just recovery — it was a structural compression of risk. Low rates, QE, and coordinated policy kept markets unusually stable for 10 years.

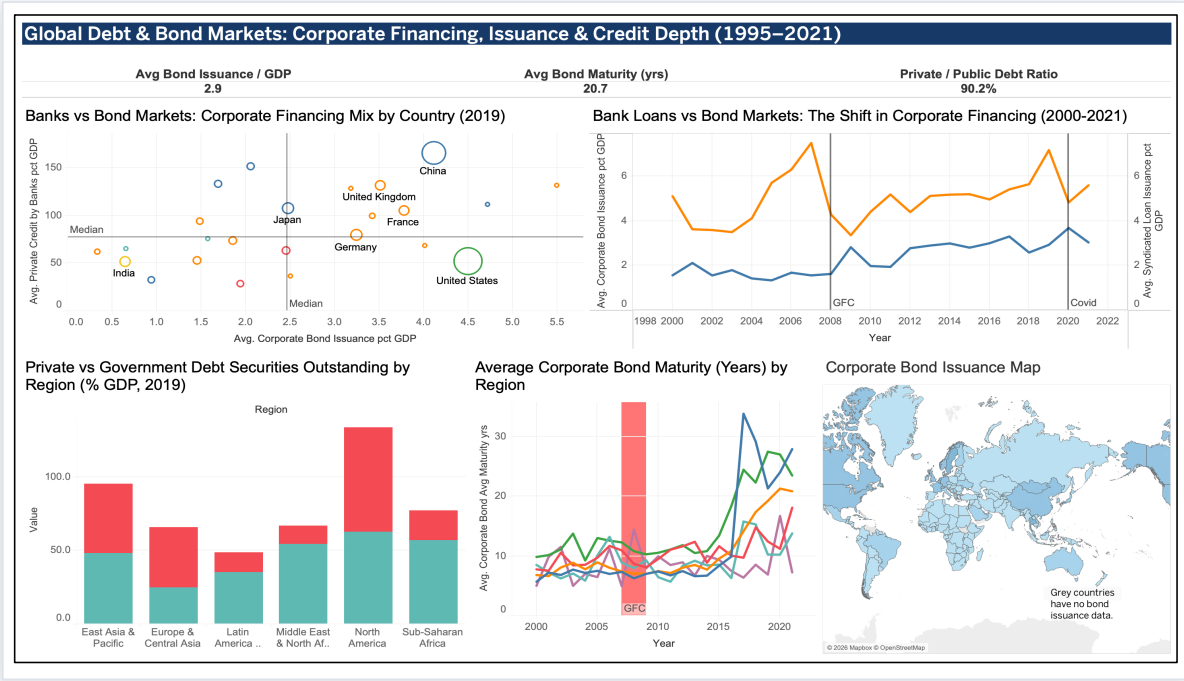
DASHBOARD 2 — DEBT & BOND MARKETS

After 2009, companies stopped borrowing from banks and started issuing bonds instead.

2.9%
Avg Corporate Bond Issuance / GDP

20.7 yrs
Avg Corporate Bond Maturity

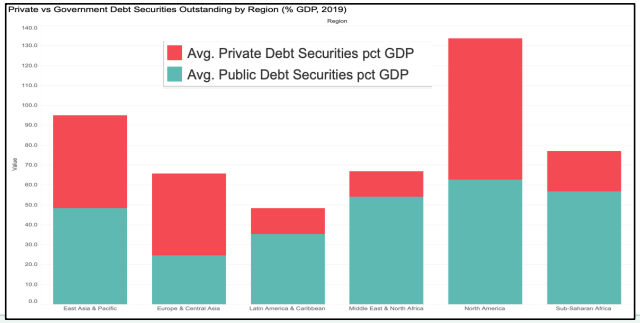
90.2%
Private / Public Debt Ratio



SO WHAT?

North America: private debt markets are bigger than government bond markets.

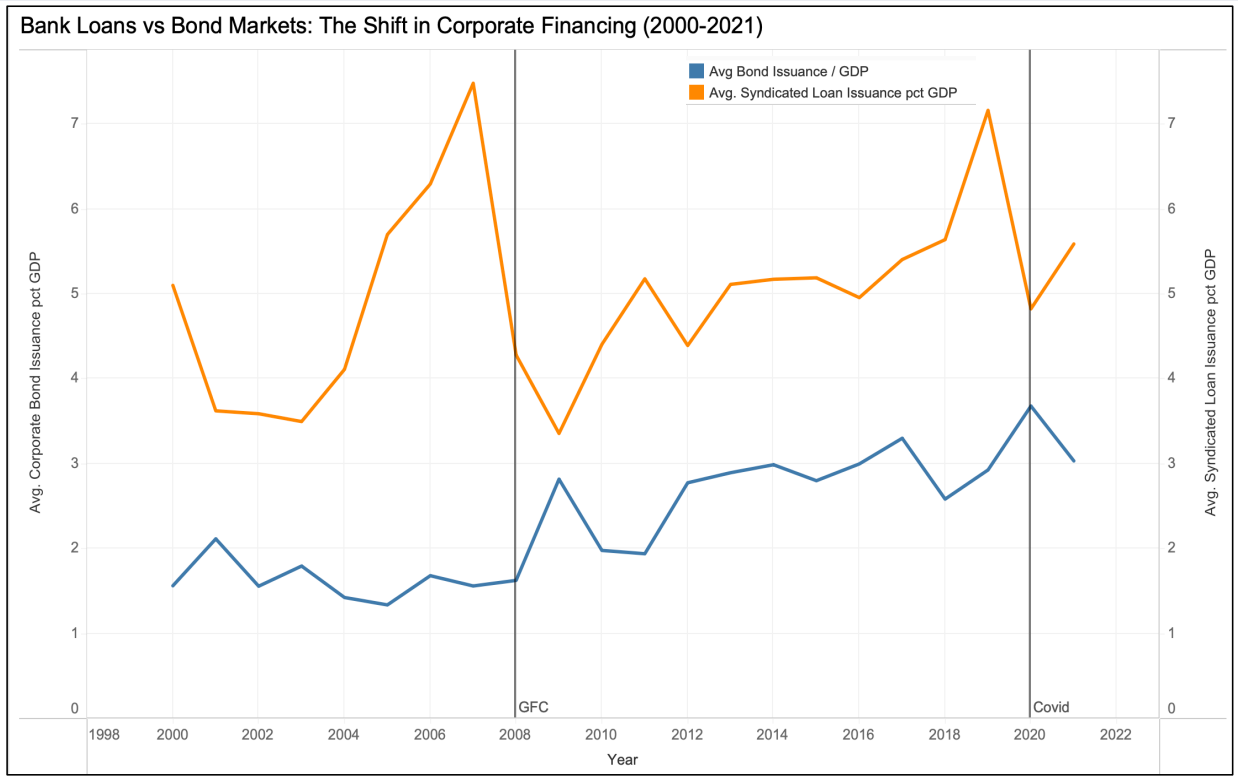
A private/public ratio of 90.2% means corporates borrow almost as much through capital markets as governments do. This is the hallmark of a mature DCM ecosystem.



▸ North America's private debt (teal) towers over public debt (red). Latin America is the opposite — government dominates.

DASHBOARD 2 — DEBT & BOND MARKETS

Post-2009: bond markets took over from banks as the engine of corporate funding.

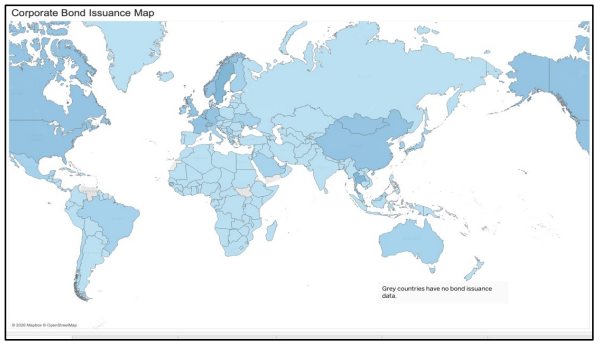


▸ Orange = corp bond issuance. Blue = syndicated loans. Pre-GFC: loans dominated. Post-2009: bonds accelerated and widened the gap. COVID caused a simultaneous spike in both.

SO WHAT?

The GFC permanently changed how companies borrow.

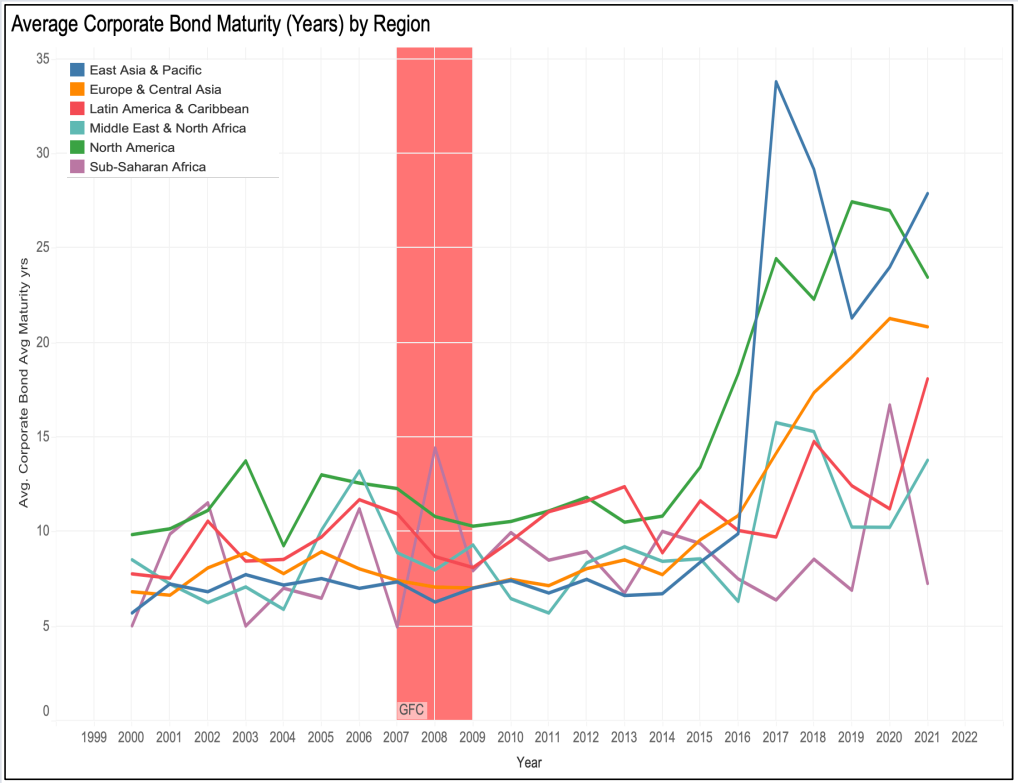
Banks became risk-averse post-2009. Companies that once relied on syndicated loans pivoted to capital markets. Bond issuance surged and never looked back. This shift is visible in every major economy.



▸ Scatter: China and UK show highest bond issuance AND highest bank credit — true dual-channel corporate financing systems.

DASHBOARD 2 — DEBT & BOND MARKETS

Investors are lending longer — a signal of confidence in capital market stability.

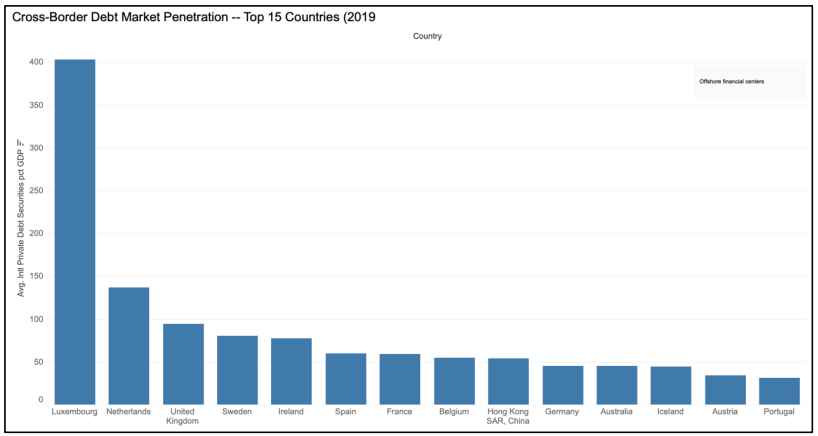


▸ Bond maturity (avg years) by region, 2000–2021. GFC caused a sharp contraction — investors shortened duration when uncertain. Post-2015 maturities extended dramatically in most regions.

SO WHAT?

Longer maturities = investors trust the future.

When investors extend duration, they're betting that the borrower will still be around and creditworthy in 20–30 years. Post-2015 maturity extension signals structural confidence in capital markets.



▸ Corporate bond issuance world map. Deeper blue = more active issuance. North America and Western Europe lead; Sub-Saharan Africa and much of South Asia show minimal activity.

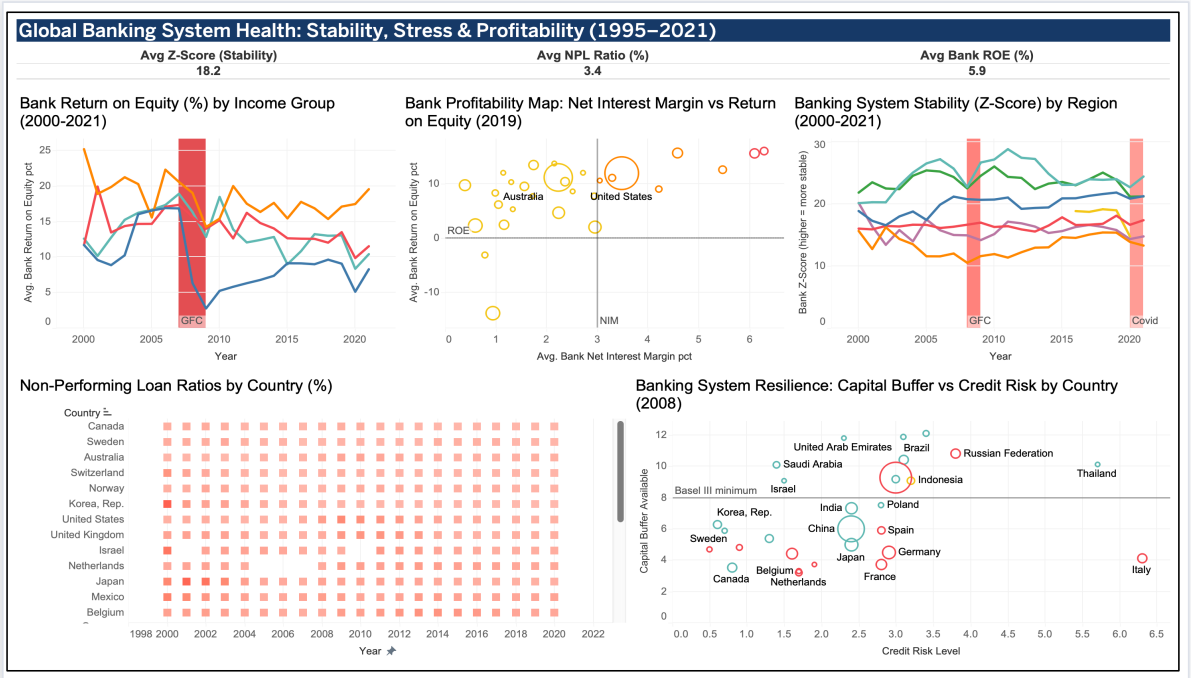
DASHBOARD 3 — BANKING HEALTH

The GFC didn't just hurt markets — it revealed which banking systems were already fragile.

18.2
Avg Z-Score (higher = more stable)

3.4%
Avg Non-Performing Loan Ratio

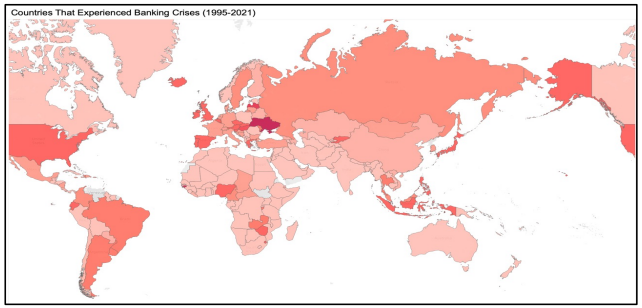
5.9%
Avg Bank Return on Equity



SO WHAT?

High-income bank ROE collapsed from 20%+ to near-zero in one year.

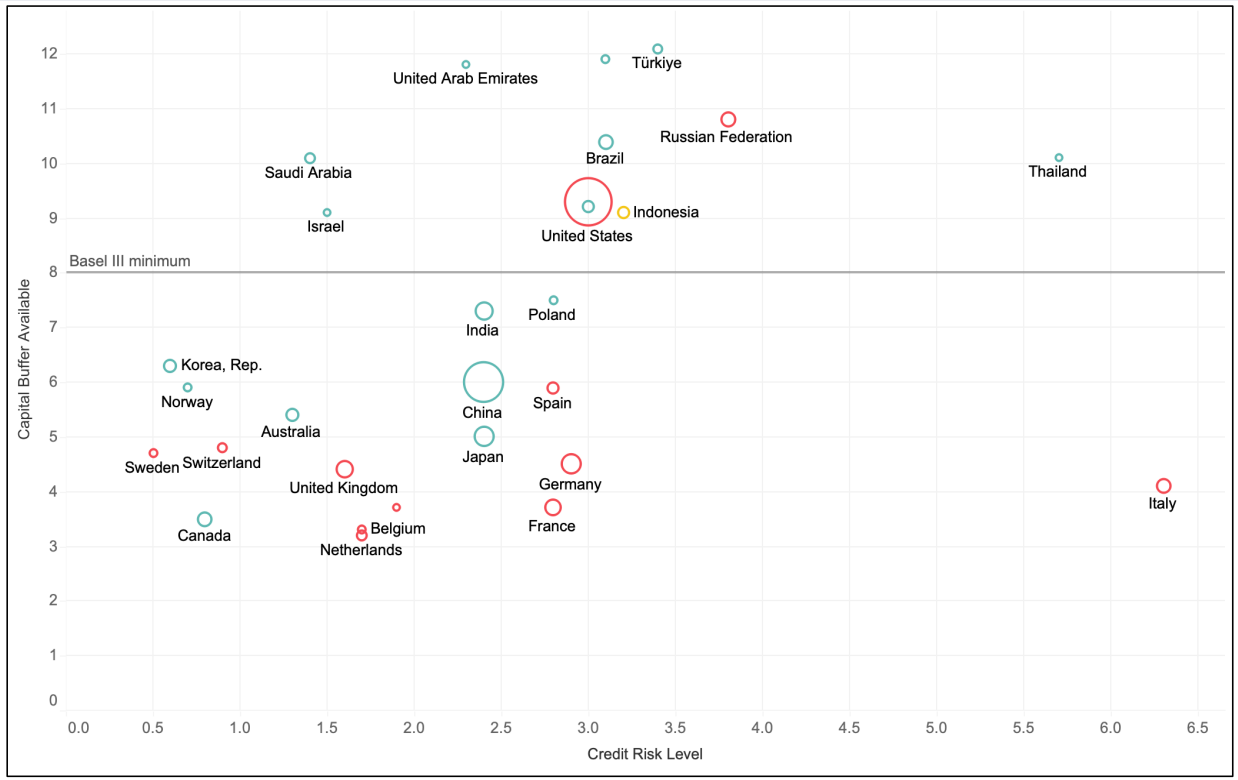
Bank Return on Equity across high-income countries fell off a cliff in 2008. Recovery to 10–12% took nearly a decade, and many banks never returned to pre-crisis profitability.



▸ Scatter: countries below the Basel III minimum capital buffer line in 2008 were most exposed. Germany, France, Spain all appear in the danger zone.

DASHBOARD 3 — BANKING HEALTH

Canada and Sweden show near-zero NPLs for 20 years. Italy and Indonesia show chronic stress.



▸ NPL heatmap: rows = countries sorted by average NPL. Darker red = higher non-performing loans. Canada/Sweden/Australia consistently pale — Italy, Indonesia, Argentina and Turkey show persistent dark red stress.

SO WHAT?

NPL ratios reveal structural fragility — not just crisis reactions.

Countries with chronically high NPLs (Italy, Thailand, Indonesia) were fragile before any crisis hit. The GFC didn't cause their problems — it exposed them. Canada's sub-1% NPL over 20 years reflects genuine systemic resilience.

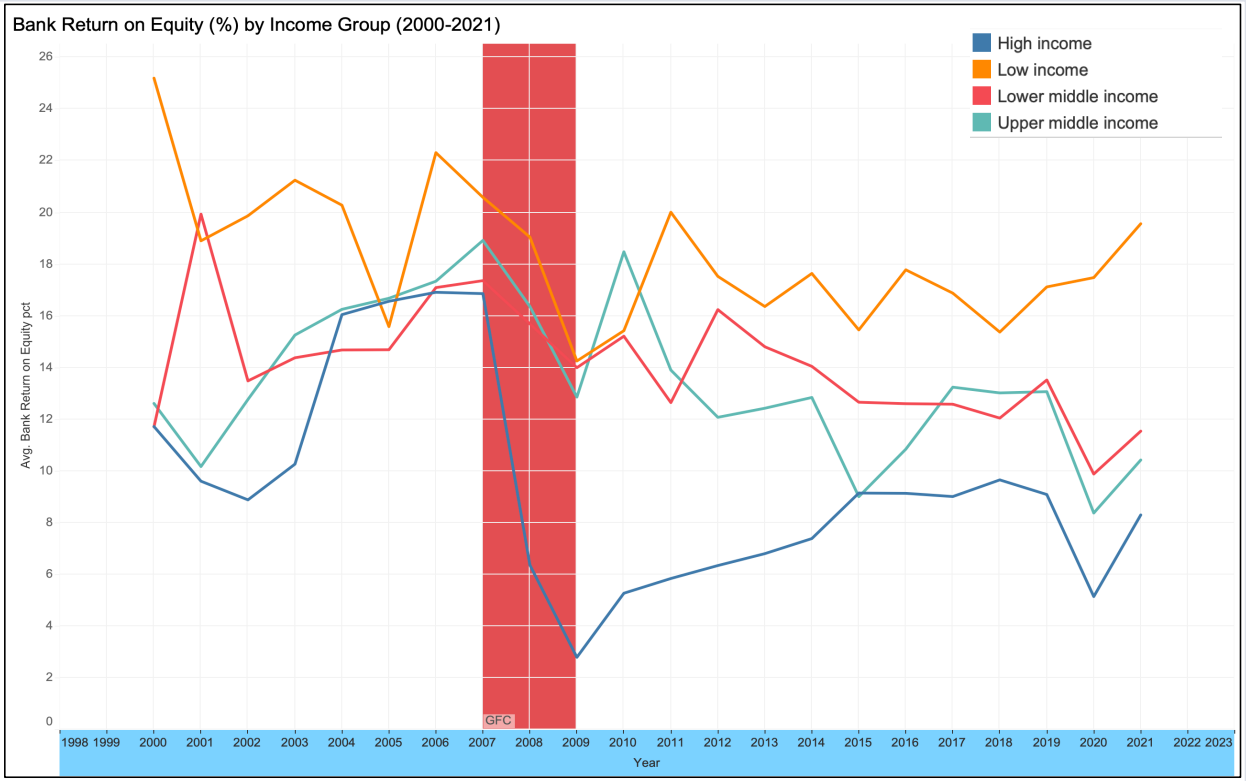
SO WHAT?

The safest banking systems have one thing in common: strict regulation and conservative lending.

Canada, Sweden, Switzerland, Australia — all maintain strong supervisory frameworks, conservative LTV limits, and capital buffers well above Basel III minimums. That combination, not luck, drives resilience.

DASHBOARD 3 — BANKING HEALTH

Ukraine, Eastern Europe and parts of Asia experienced the most banking crises — not the West.

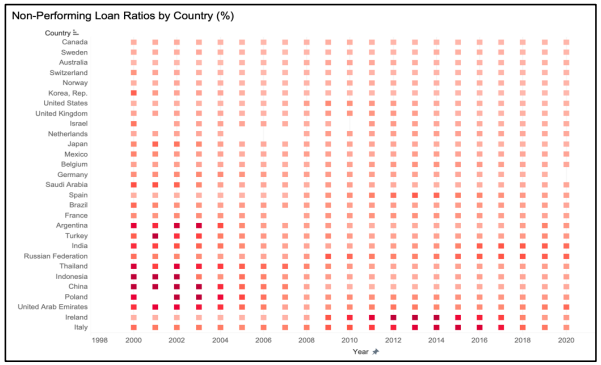


▸ Choropleth: cumulative banking crisis years per country, 1995–2021. Darker = more crisis years. Eastern Europe and parts of Sub-Saharan Africa are consistently the most crisis-prone.

SO WHAT?

The US and UK had one big crisis. Eastern Europe had many.

Ukraine appears almost black — it has experienced chronic banking system failures across multiple cycles. Countries like Canada, Australia and Switzerland appear near-white, with essentially zero crisis years in 27 years of data.



▸ Z-Score by region over time. GFC caused a universal dip — but emerging/frontier markets started lower and recovered more slowly.

CROSS-DASHBOARD ANALYSIS

The GFC hit every indicator simultaneously. No other crisis came close in breadth.

1997–98

Asian Financial Crisis

EQUITY

Regional equity crash. SE Asia markets fell 40–70%. Minimal impact on North America or Europe.

DEBT

Syndicated loan markets froze briefly in affected regions. Bond issuance unaffected elsewhere.

BANKING

NPLs spiked dramatically in Thailand, Indonesia, Korea. Z-scores collapsed in SE Asia only.

2007–09

Global Financial Crisis

EQUITY

Global market cap fell 50%+. ALL regions collapsed. Recovery took 4 years. Defining inflection point.

DEBT

Bond markets temporarily froze. Post-recovery: bond issuance accelerated and permanently replaced loans.

BANKING

Bank ROE near zero globally. NPLs rose in every major economy. Capital buffers proved insufficient.

2020–21

COVID-19 Shock

EQUITY

V-shaped crash then record recovery within 12 months. Fastest equity market recovery in history.

DEBT

Bond issuance surged as companies raised precautionary liquidity. Loans also spiked simultaneously.

BANKING

Z-scores dipped but policy intervention was immediate. NPLs rose only modestly.

Five things the data proves.

01

Small, open economies dominate equity market depth — not large ones.

Hong Kong (787.7% GDP), Singapore (194.8%), Switzerland (206.6%) top the rankings. Financial openness and low capital controls matter more than GDP size.

02

The 2008 GFC was a once-in-a-generation simultaneous shock across all three dashboards.

Every KPI — market cap, bank ROE, Z-score, NPL, bond issuance — inflected at exactly 2008–09. No other event comes close in breadth or depth of disruption.

03

The GFC permanently shifted corporate borrowing from bank loans to bond markets.

Post-2009, corporate bond issuance accelerated while syndicated loans stagnated. Companies diversified their funding sources and bond markets became the dominant channel.

04

Banking resilience is structural, not luck — Canada and Sweden prove it across 27 years.

Consistently near-zero NPLs, Z-scores well above average, and capital buffers above Basel III minimums. The same 5–6 countries appear at the top of every banking stability ranking.

05

Emerging markets offer higher returns — but carry visibly higher fragility across all dimensions.

Higher equity returns AND higher volatility. Higher bank ROE AND lower Z-scores. Higher bond yields AND lower capital buffers. The risk/return trade-off is clearly quantified in the data.

Thank You

Anil

Tableau Project

World Bank GFDD Dataset

Project Summary

DATASET

World Bank GFDD · 5,778 rows · 214 economies · 1995–2021

ARCHITECTURE

LEFT JOIN on ISO3_Code · 13 Calculated Fields · 21 KPI Sheets

DASHBOARD 1

Equity Markets: depth, liquidity, crisis resilience, return heatmaps

DASHBOARD 2

Debt & Bond Markets: issuance trends, financing mix, bond maturity

DASHBOARD 3

Banking Health: Z-score stability, NPL stress, ROE, capital buffers

KEY THEME

The GFC was the defining inflection point across all three dimensions