

ISUS Urban Infra Forum Guest Lecture

Contemporary Macro-Financial Issues of the Global Economy

2026. 6 17

Jun I. Kim

GSIS, Yonsei University

Topics of Presentation

1. Global Imbalances
2. Sovereign Debt Sustainability
3. Geopolitical Risk and Fragmentation
4. AI Technology and Labor Market

Prologue

Why should we care about macro-financial developments in the global economy?

- Macro-financial developments in the global economy matter for all of us as we are living in a highly integrated world, both economically and financially
 - External shocks, cross-border spillovers, statecrafts (e.g., sanctions, weaponization of finance and trade), wars and conflicts, are all common aspects of our daily life
- Macro-financial stability is a bedrock for **sustainable** development and global prosperity
 - Macro-financial instability leads not only to inefficiency but also inequality (as the cost of instability weighs more on the underprivileged than on the privileged)
 - Macro-financial stability is the first layer of **social insurance and protection**
- Economic and financial crises—an extreme form of macro-financial instability—are extremely costly, disruptive, and trend-changing in nature

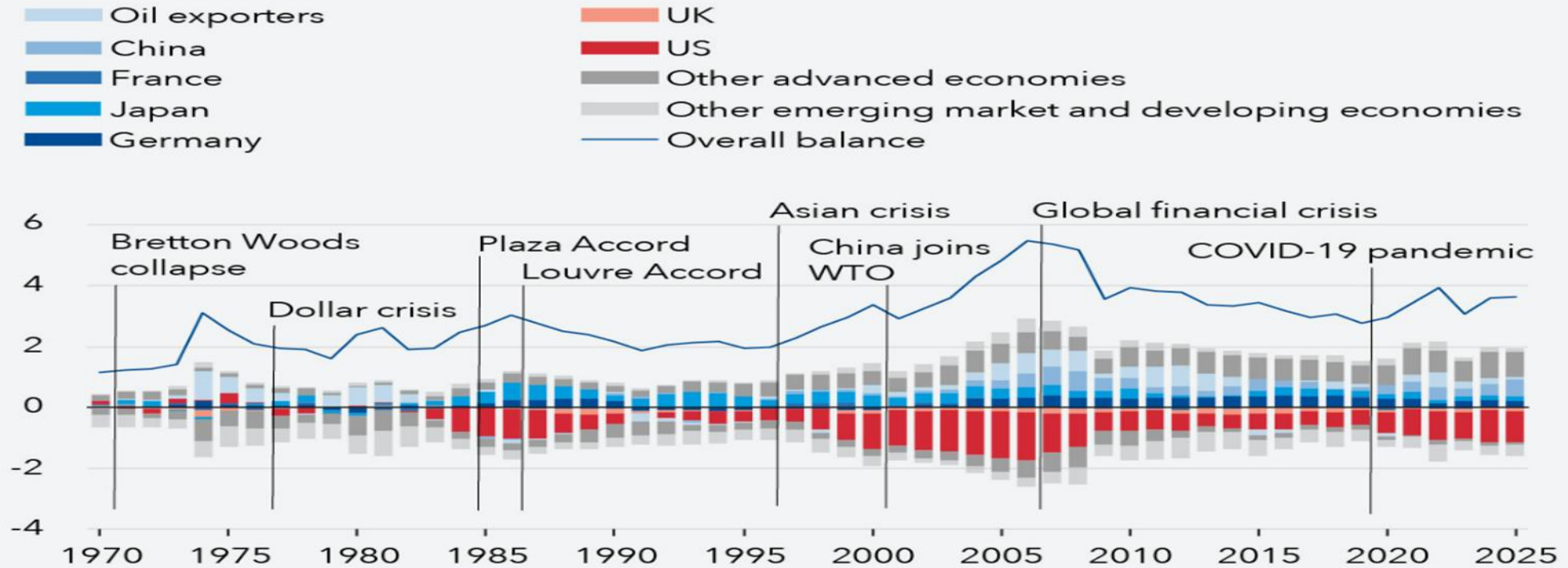
1. Global Imbalances

1. Global Imbalances

- Global imbalances is about the cross-country distribution of current account balance (CAB)
 - Current account (CA) is an accounting framework which records transactions of goods and services and factor incomes/transfers between residents and nonresidents
 - BOP definition: $CAB = TB$ (trade balance) + IB (income balance)
 - National Income Accounting Identity: $CAB = S - I \Rightarrow CAB \geq 0 \Leftrightarrow S \geq I$
 - CA Accounting Identity: national CABs must sum to zero (**the world is a closed economy!**)
- Global imbalances refer to a phenomenon that excessively large CA deficits of some countries are matched with excessively large CA surpluses of other countries.
 - Alternating CA surpluses/deficits are normal, but troubling if excessively large and persistent
- If sustained for long, global imbalances threaten macro-financial stability at both national and international levels

1. Global Imbalances

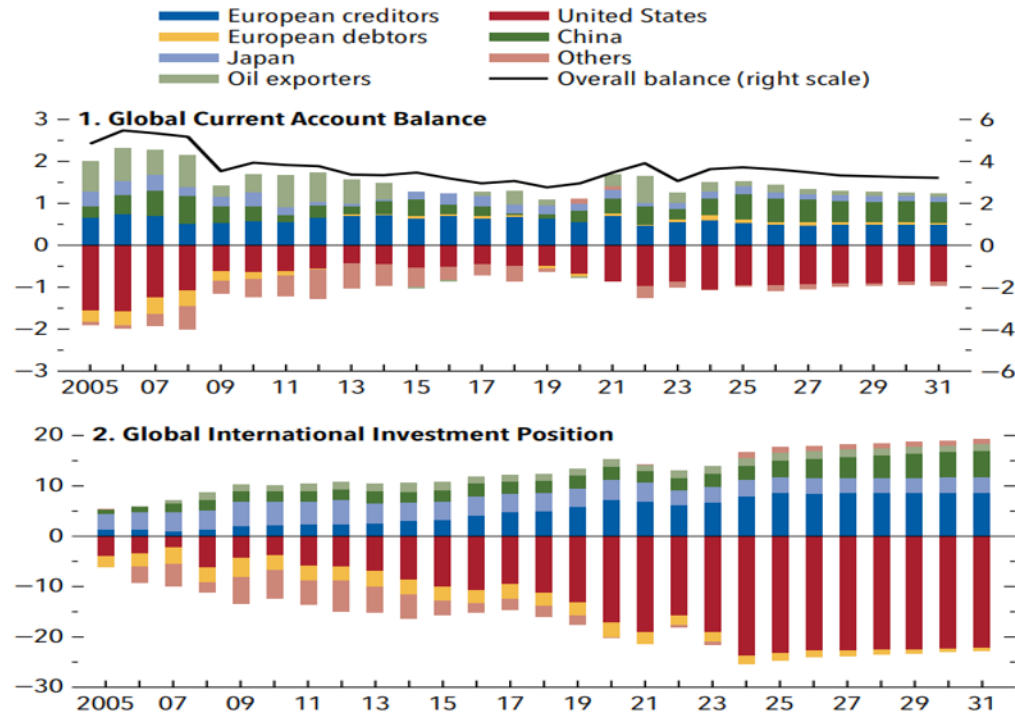
Percent of world GDP



Sources: IMF, World Economic Outlook; IMF, Balance of Payments; and IMF staff calculations. Notes: Overall balance is sum of absolute values of current account surpluses and deficits. Figures for 2025 partly based on projections.

1. Global Imbalances

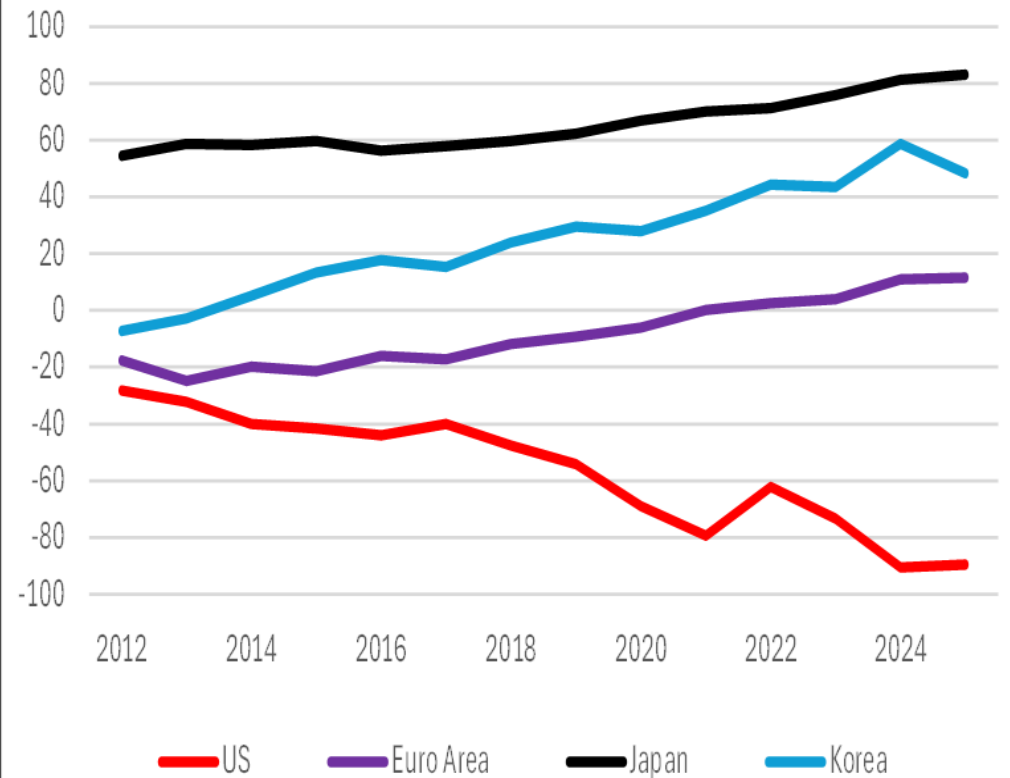
Figure 1.11. Current Account and International Investment Positions
(Percent of global GDP)



Source: IMF staff calculations.

Note: "European creditors" are Austria, Belgium, Denmark, Finland, Germany, Italy, Luxembourg, The Netherlands, Norway, Slovenia, Sweden, and Switzerland. "European debtors" are Cyprus, Greece, Ireland, Portugal, and Spain. "Oil exporters" are Algeria, Azerbaijan, Iran, Kazakhstan, Kuwait, Nigeria, Oman, Qatar, Russia, Saudi Arabia, United Arab Emirates, and Venezuela.

International Investment Position (net)
(in percent of GDP)



1. Global Imbalances

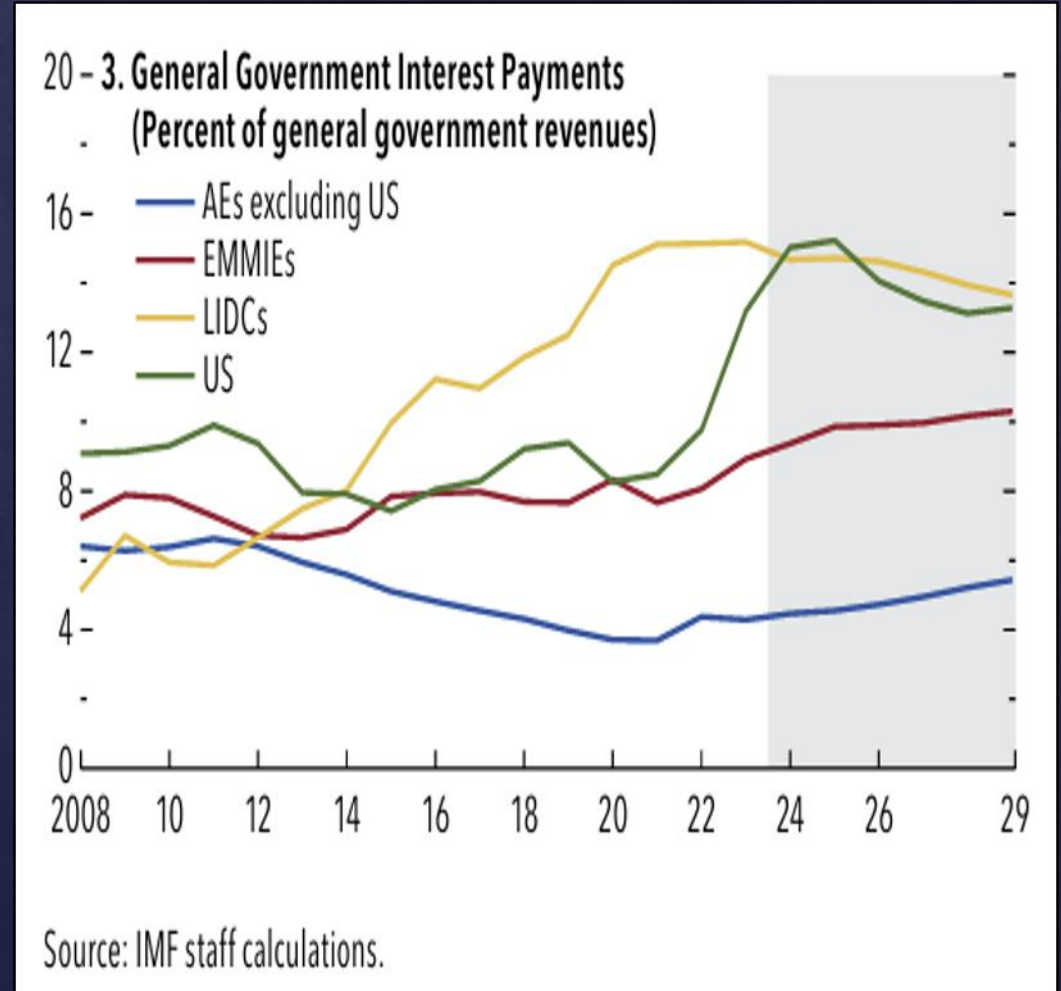
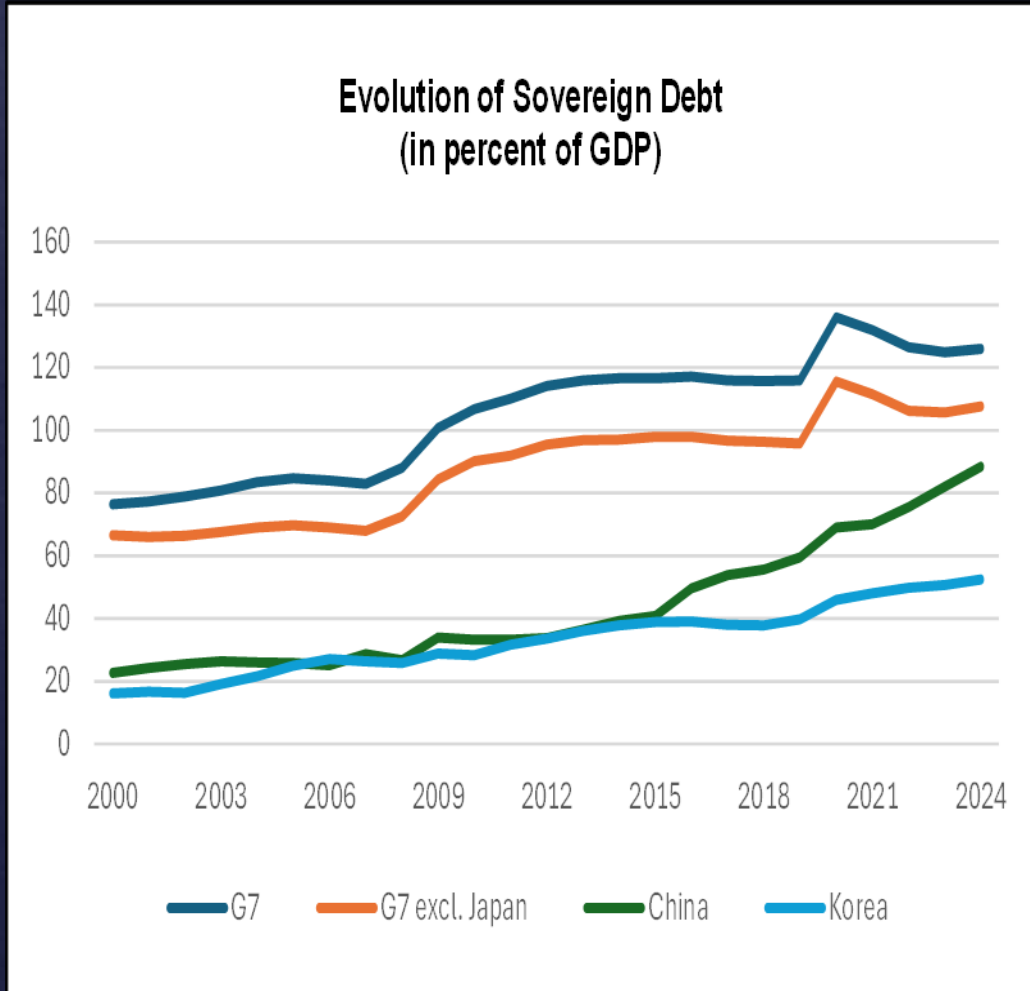
- US deficits and China surpluses are key drivers of global imbalances
 - US deficits: Caused primarily by fiscal deficits and related to the role of the US dollar as the dominant reserve currency of the global economy
 - China surpluses: Caused primarily by excessive domestic savings and related to China's growth model which depends heavily on foreign demand (exports).
- Global imbalances cannot last forever (due to debt sustainability constraints) and must be adjusted at some point of time, which could be disorderly and disruptive if too late
 - Reducing CA deficits is far more difficult, both economically and politically, than reducing CA surpluses ⇒ such asymmetry delays adjustments and makes global imbalances persistent
- International policy coordination/cooperation is key to resolving global imbalances
 - Simultaneous and coordinated adjustment at both ends should be far easier and less costly for the global economy

2. Sovereign Debt Sustainability

2. Sovereign Debt Sustainability

- G7 sovereign debt ratio rose by 40 ppt over the last quarter century (2000, 80% → 2024, 120%)
 - China: Debt ratio more than doubled over the past decade (2015, 40% → 2024, 90%)
- US enjoys privilege in financing fiscal deficits aided by large international demand for US debt (and the dollar) linked to its dominant status as global safe asset (e.g., dollar-based stablecoins)
- Nevertheless, debt sustainability is of increasing concern (pushing up risk premium, crowding out private funding for investment, etc.)—debt crisis in major AEs could act as a trigger of global crisis
- Higher debt translates into higher debt services and hence reduced fiscal space and limited capacity to absorb adverse shocks and support the underprivileged.
- Growing out of debt is possible but unlikely, and hence painful fiscal adjustment (tightening) is ultimately needed to ensure/restore sovereign debt sustainability
 - Other means such as financial repression are highly distortionary and economically costly

2. Sovereign Debt Sustainability



2. Sovereign Debt Sustainability

- Debt dynamics equation (DDE) for Debt/GDP ratio (denoted by d):

$$d_t = (1 + r_t - g_t)d_{t-1} - pb_t \quad \Leftrightarrow \quad \Delta d_t = (r_t - g_t)d_{t-1} - pb_t$$

where r = real interest rate, g = real GDP growth, and pb = primary balance/GDP ratio

- $(r - g) < 0$ during 2009-20 because of UMP (e.g., zero nominal interest rate), enabling large and sustained primary deficits without getting into debt distress, which will end if MP is normalized
- Risk of fiscal dominance and financial repression is emerging as sovereign debt increases and fiscal space is limited.
 - MP independence is undermined; MP objective is being subordinated to fiscal objectives (containing debt increases by suppressing interest rates and imposing **inflation tax**); financial regulations and moral suasion used to increase the demand for sovereign debt
- Sovereign debt dynamics is slow-moving in normal times, but **accelerates rapidly** in the run-up to debt crisis

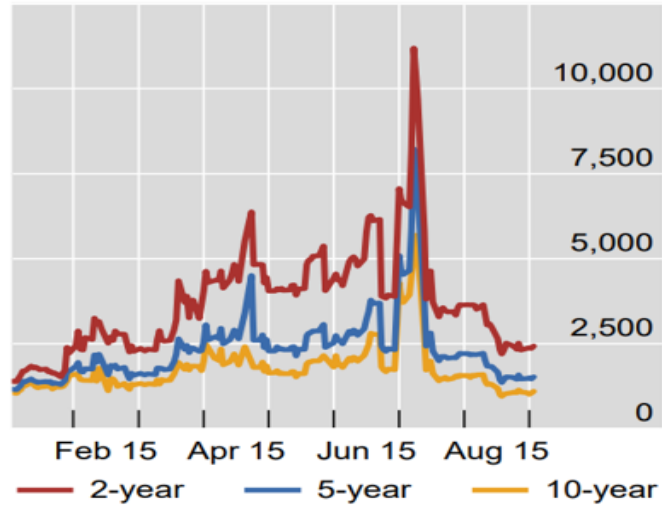
2. Sovereign Debt Sustainability

Renewed Greek turmoil

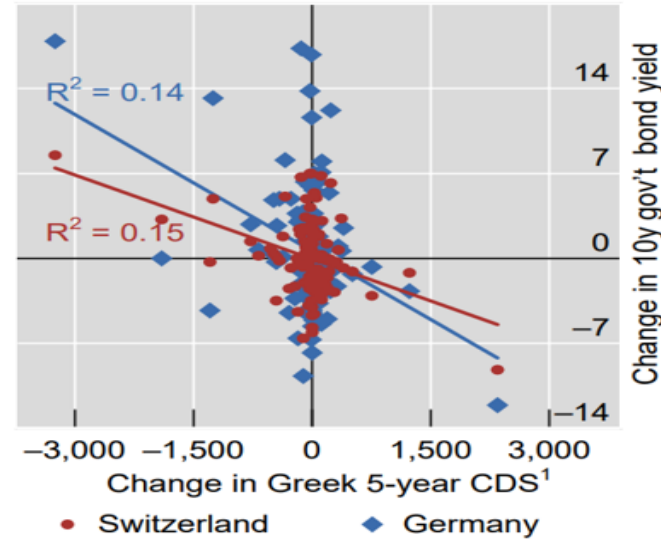
In basis points

Graph 2

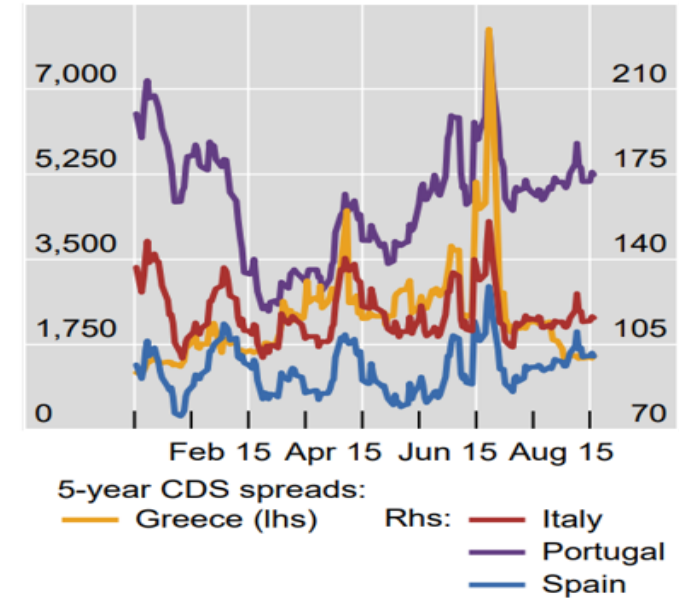
Greek CDS spreads¹



Flight to safety²



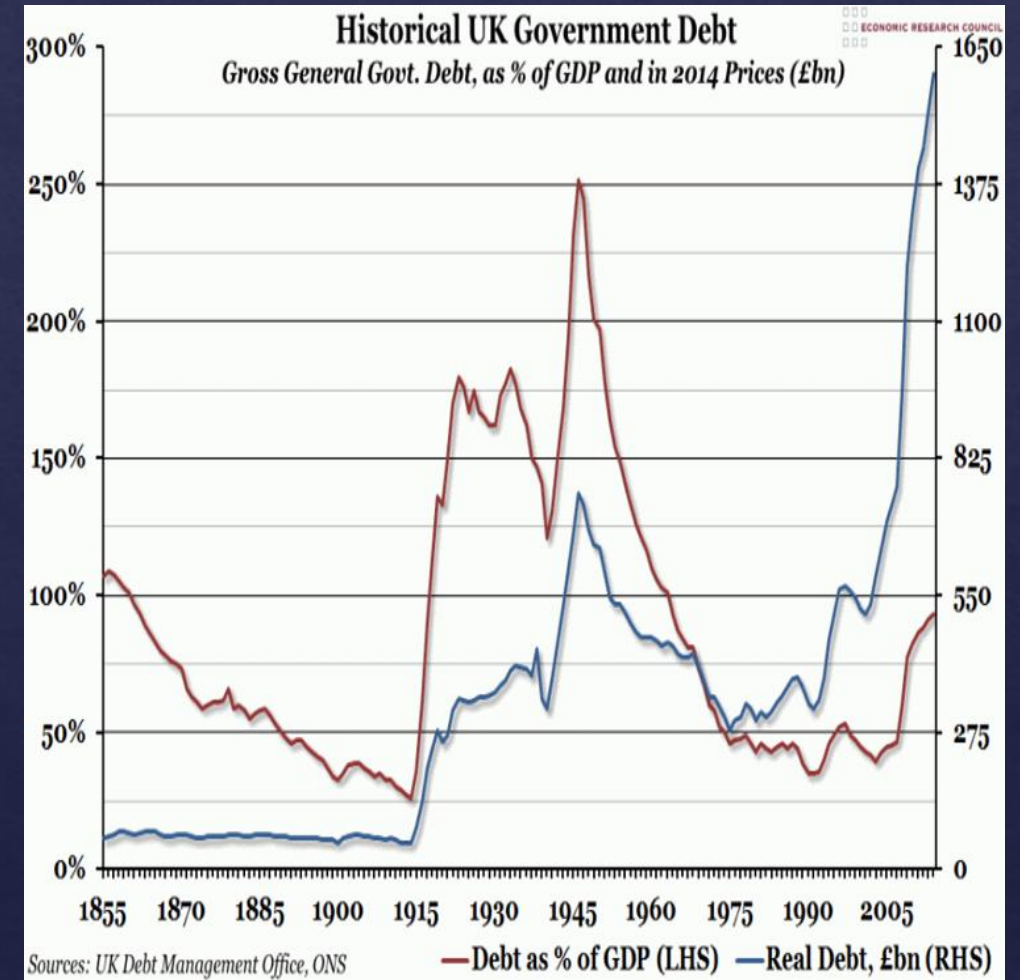
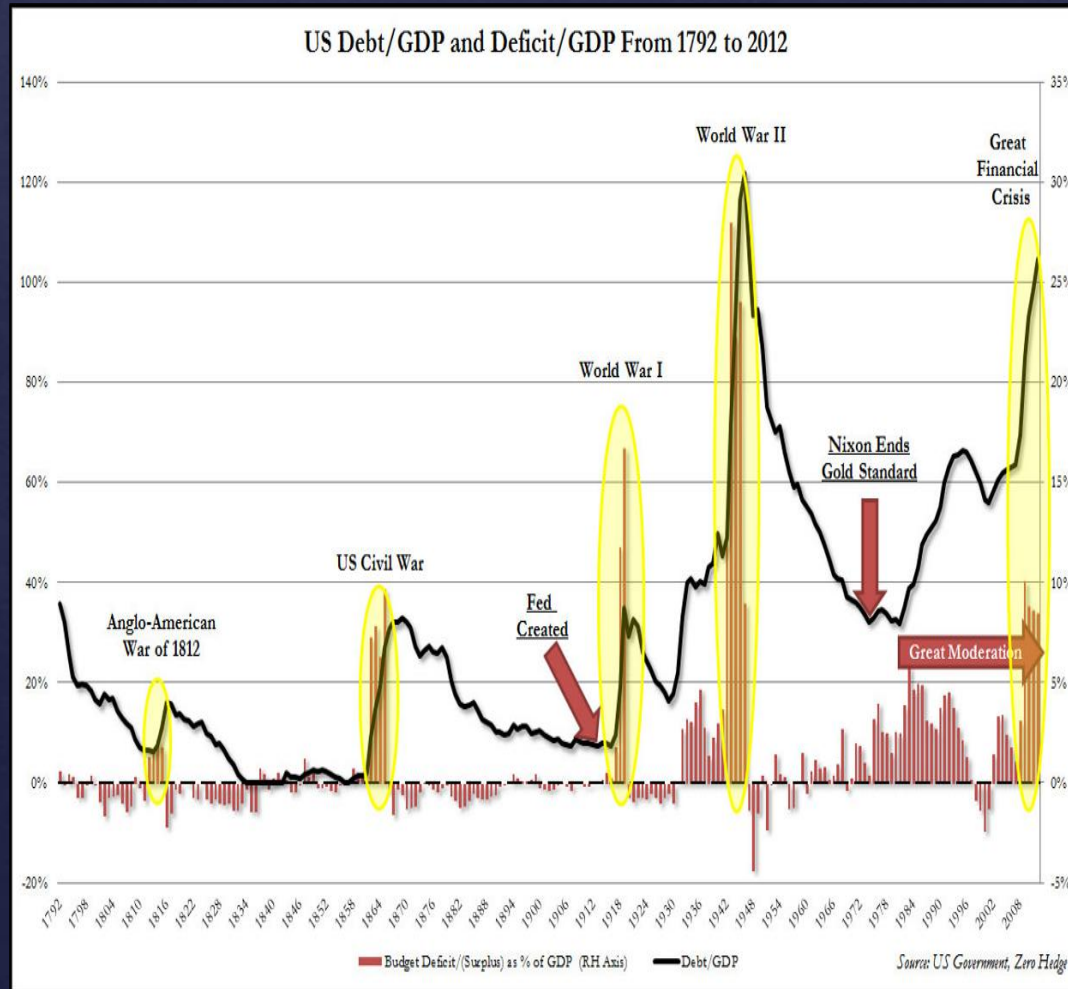
Limited contagion¹



¹ Sovereign US dollar-denominated credit default swaps (CDS); complete restructuring clauses. ² Based on daily observations between 1 April 2015 to 2 September 2015.

Sources: Bloomberg; Markit; BIS calculations.

2. Sovereign Debt Sustainability



2. Sovereign Debt Sustainability

- Debt sustainability can be assessed by using **fiscal space defined as the distance between actual debt ratio and the debt limit** (i.e., sustainable upper bound of debt ratio)
 - Governments are forced to default if actual debt ratio exceeds the debt limit (because creditors refuse to rollover the debt expecting that the debt ratio will increase indefinitely).
- Debt limit is **country specific** and **time varying**
 - It would be safe to keep the debt ratio sufficiently below the debt limit
- While simple cross-country comparison of sovereign debt ratios is widely used as a quick and preliminary test of debt sustainability, it could be quite misleading
 - Low debt levels relative to other countries do not necessarily mean that the country is sufficiently below its own debt limit
- Debt limit can be raised (sustainability enhanced) by improving fiscal credibility/prudence and strengthening fiscal institutions (e.g., fiscal rules) and debt management (e.g., longer maturity)

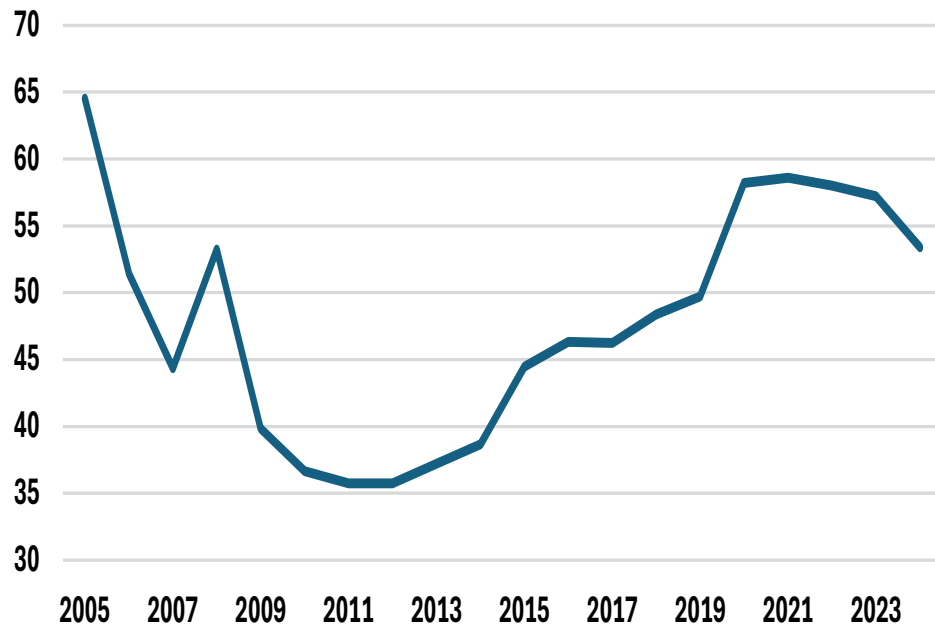
2. Sovereign Debt Sustainability

Debt Sustainability and Fiscal Space for Economic Development in LICs

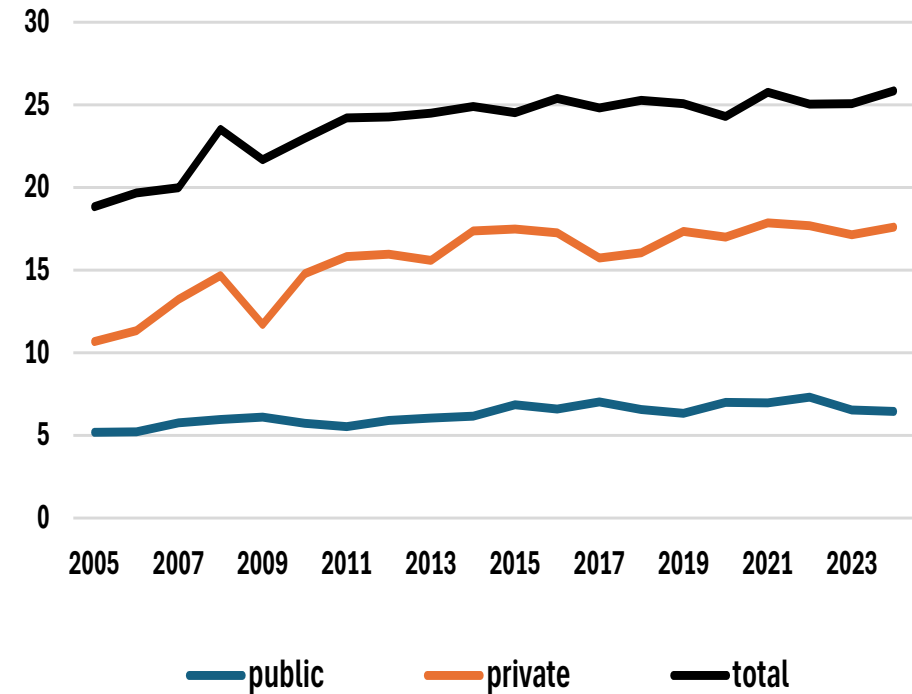
- Low-income countries (LICs) are facing enormous investment need for economic development
 - High infrastructure gap, large investment need for climate mitigation, etc.
- After falling sharply aided by HIPC/MDRI debt relief in the 2000s, LICs' public debt rose again since 2011 due in part to large increases in debt-financed investment and increased access to non-concessional borrowing.
 - Currently, more than 40 LICs are at the high risk of or already in debt distress
- Investment efficiency, which is central to the investment-growth-debt nexus, remained low and even worsened in LICs as economic growth did not accelerate proportionately
 - LICs' capacity constraints in public investment management (project selection, appraisal, funding, implementation, and evaluation) were key sources of low and worsening investment

2. Sovereign Debt Sustainability

Public Debt Ratio of LICs: 2005-2024
(cross-country average; percent)



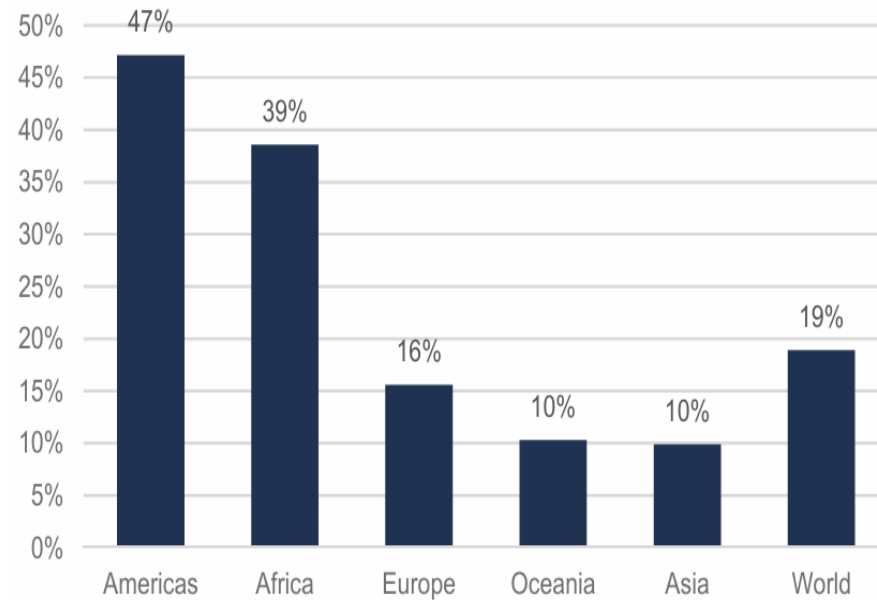
Fixed Investment/GDP in LICs
(in percent)



2. Sovereign Debt Sustainability

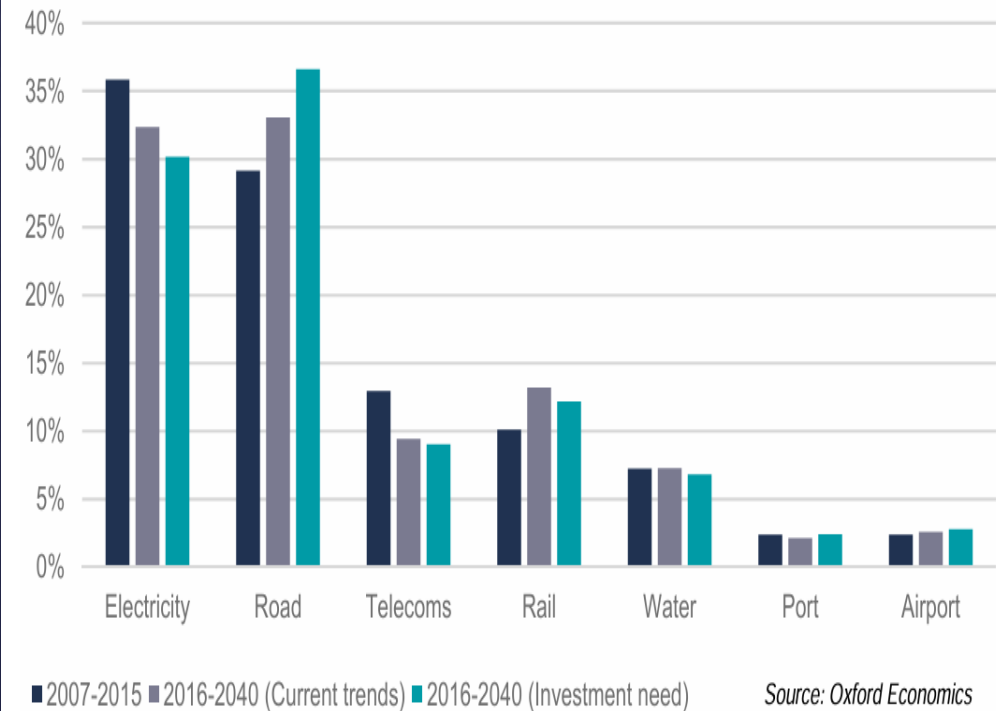
Fig. 2. Infrastructure investment gap by region, 2016-2040

Extent to which estimated investment need is greater than investment expected under current trends



Source: Oxford Economics

Fig. 3. Sectoral share of global infrastructure investment, 2007-2040



Source: Oxford Economics

2. Sovereign Debt Sustainability

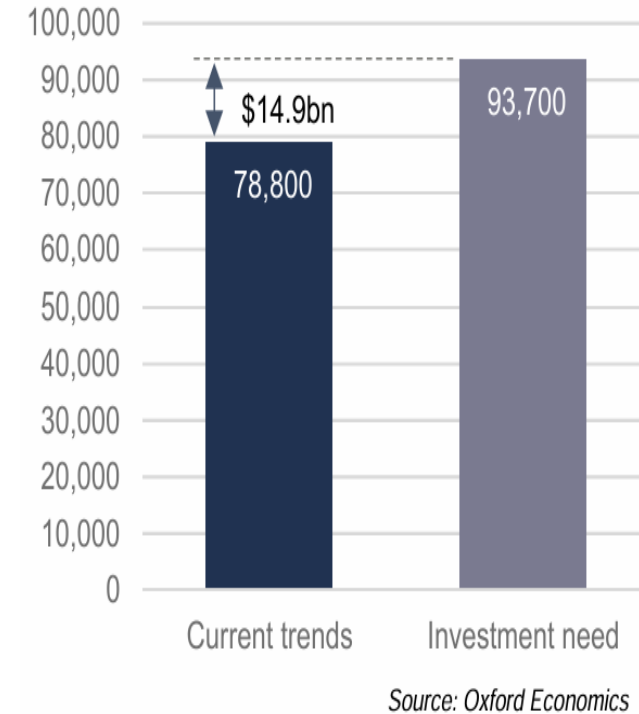
Fig. 17. Global infrastructure spending, 2007-2040

Billion US\$, 2015 prices and exchange rates



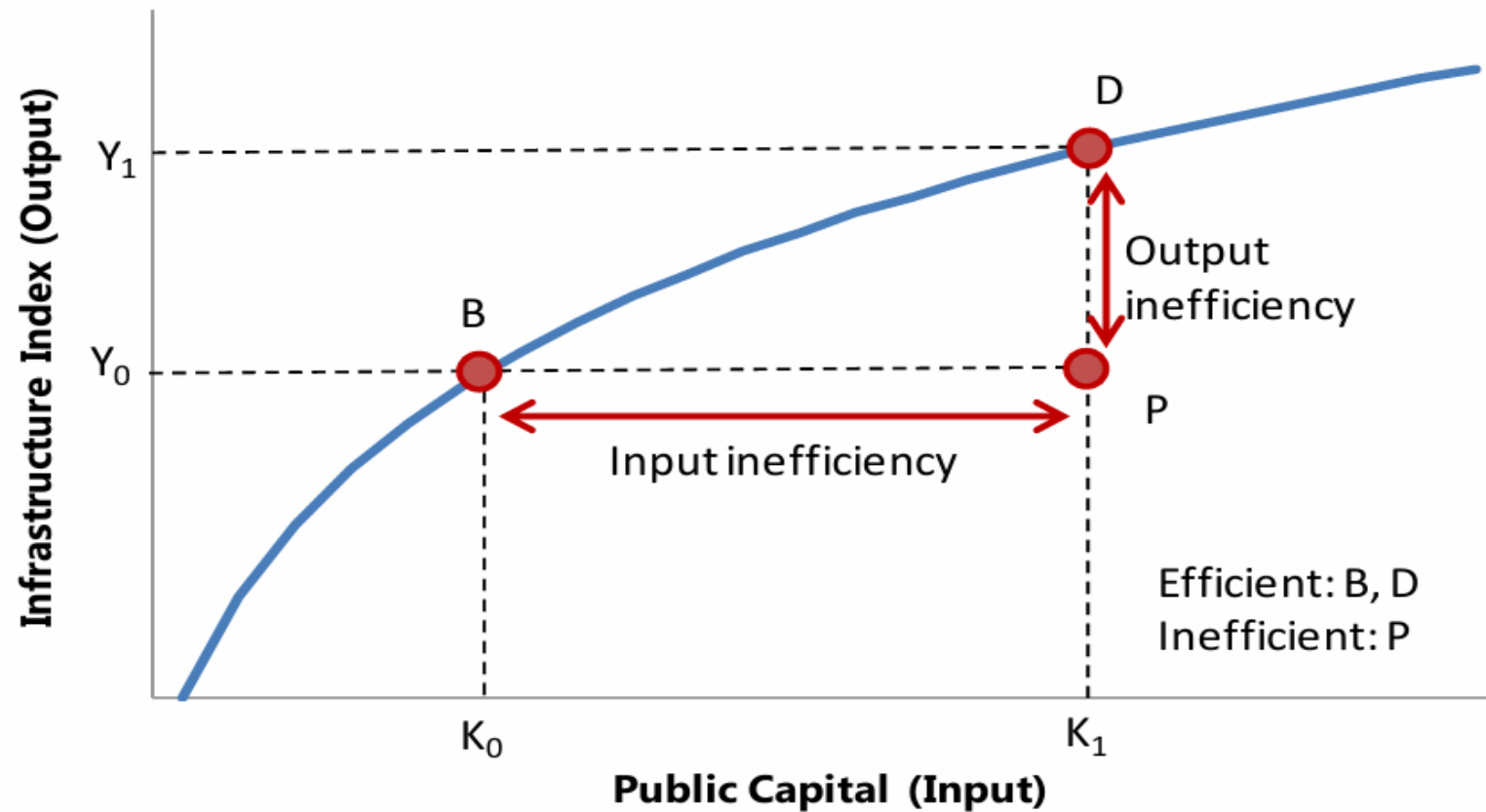
Fig. 19. Cumulative global infrastructure spending requirement, 2016-2040

Billion US\$, 2015 prices and exchange rates



2. Sovereign Debt Sustainability

Figure 6. Constructing the Public Investment Efficiency Frontier



3. Geopolitical Risk and Fragmentation

3. Geopolitical Risk and Fragmentation

- Economic and financial integration, which has supported global prosperity over four decades since the 1980s, is being stalled in recent years due in part to rising geopolitical risk
 - Integration generated efficiency gains and productivity growth by enabling more efficient resource allocations at the global level (e.g., emergence of global supply chain)
- Geopolitical risk is creating global uncertainty, fostering economic and financial fragmentation, and undermining efficiency gains from integration
 - US-China hegemonic rivalry is at the center of rising geopolitical risk, although increasing frequency and scale of conflicts also contributed
 - US-China rivalry at present is far more complex than US-Soviet Union rivalry during the Cold War period (because Soviet Union was not integrated into the global economy, but China is)
- Geopolitical risk weakens international policy cooperation on global challenges that affect all

3. Geopolitical Risk and Fragmentation

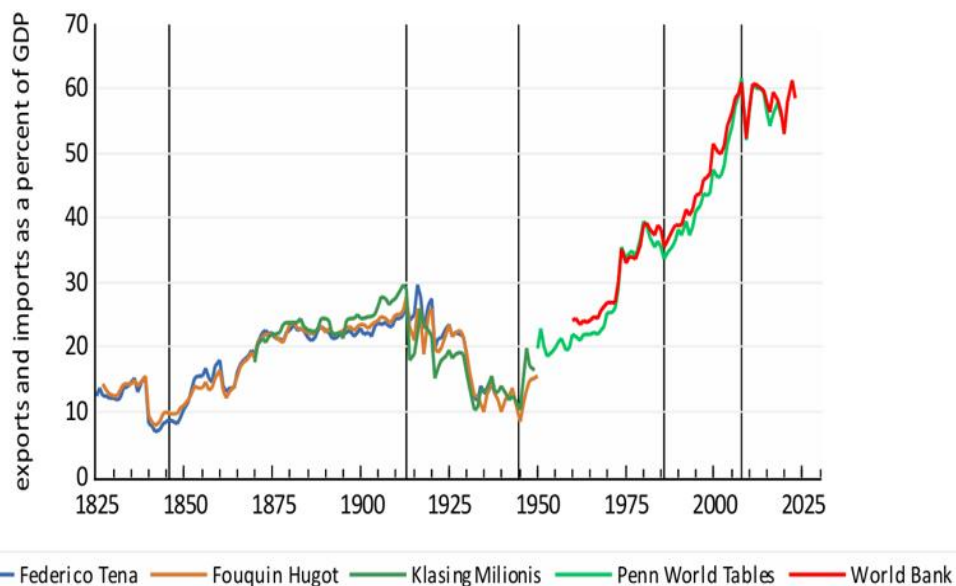


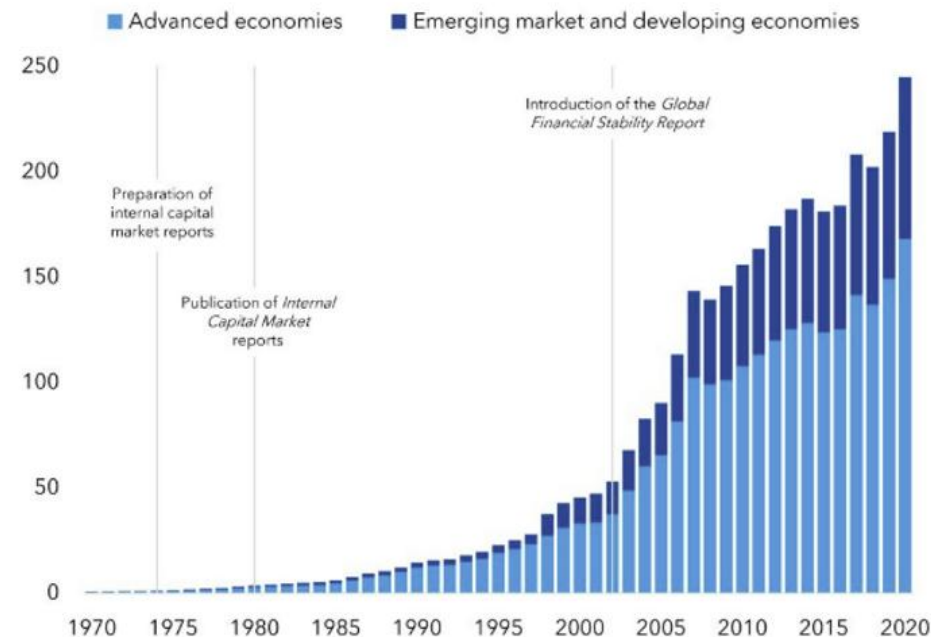
Figure 1: Globalization Eras, 1825-2023

Note: World exports and imports as a percentage of world GDP. These series have different country coverage that accounts for some of the variation across measures.

Source: Federico and Tena (2019) from 1825-1938 (in blue), Fouquin and Hugot (2016) from 1826-1950 (in tan), Klasing and Milionis (2014) for 1870-1949 (in dark green), Penn World Tables for 1950-2017 (in light green), and World Bank for 1960-2023 (in red).

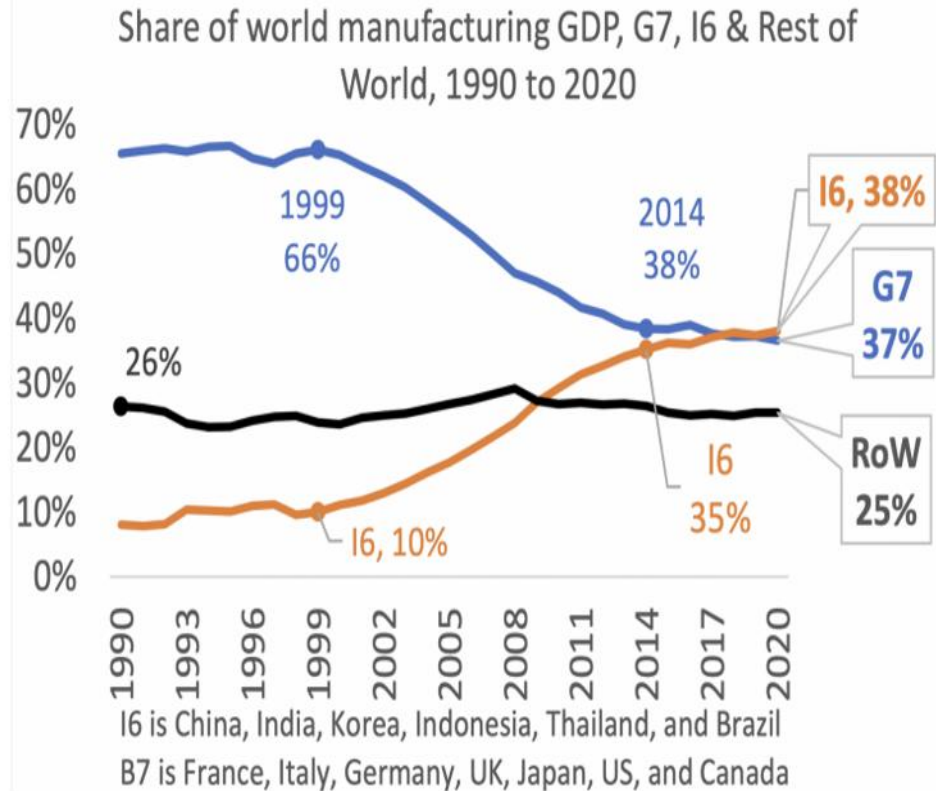
Monitoring financial integration

The IMF's main multilateral surveillance tool has evolved with the increase in cross-border capital flows.
(total external liabilities, in trillions of USD)



Sources: Lane and Milesi-Ferretti's External Wealth of Nations database; authors' calculations.
Note: Country groupings are based on classifications in the IMF's World Economic Outlook.

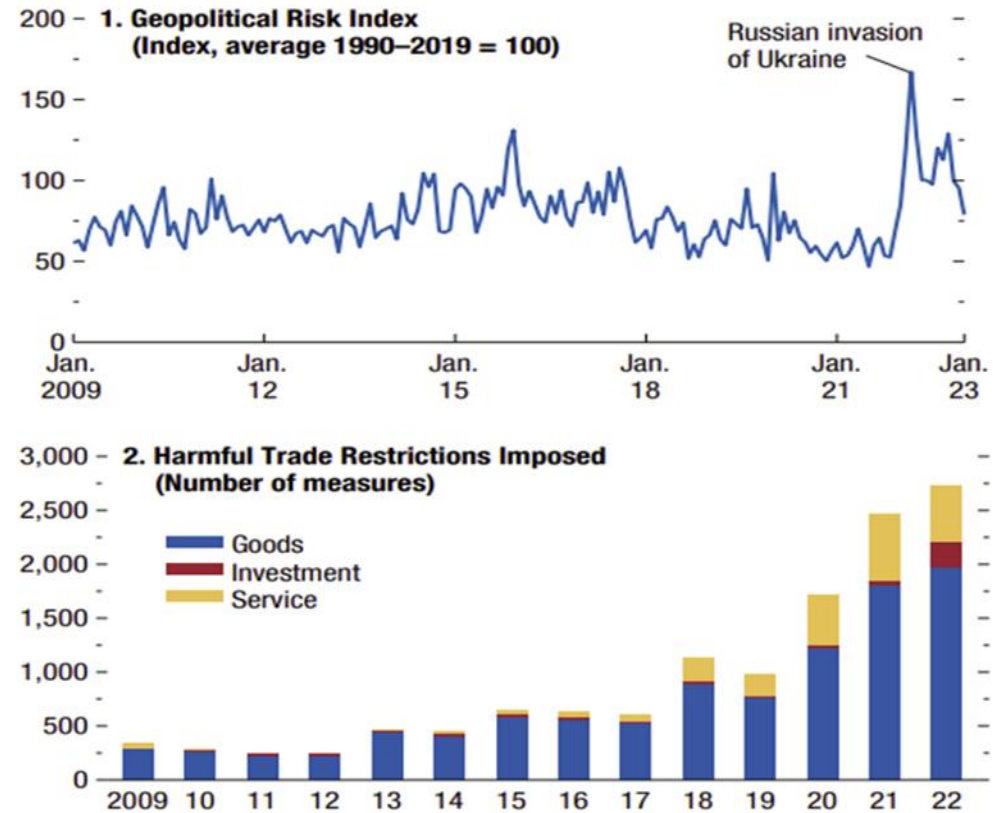
3. Geopolitical Risk and Fragmentation



Source: Author's calculations based on UNIDO data.

Note: Manufacturing Value Added, current USD.

Figure 1.21. Geopolitical and Trade Tensions Rising over Time

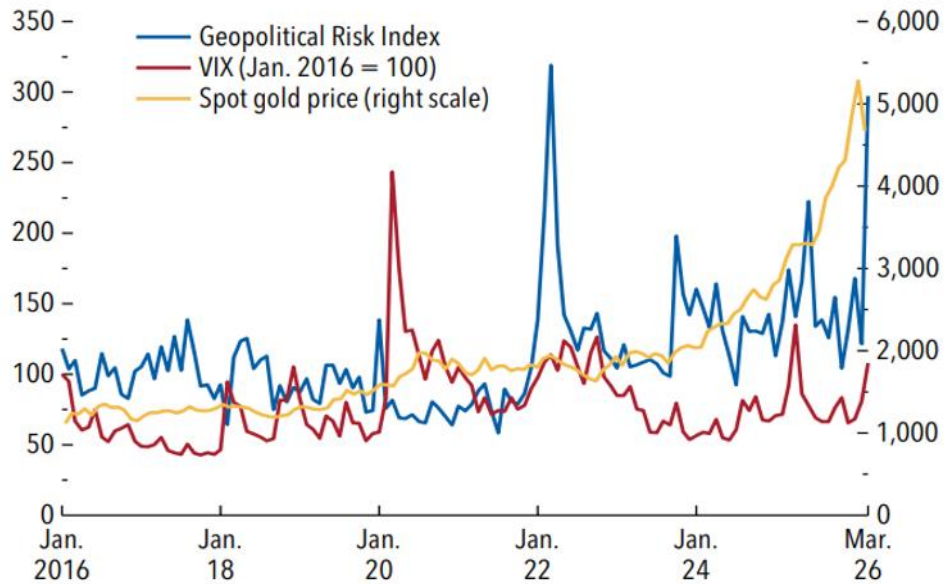


Sources: Caldara and Iacoviello (2022); and Global Trade Alert.

Note: In panel 2, data on harmful trade restrictions are as of February 1, 2023.

3. Geopolitical Risk and Fragmentation

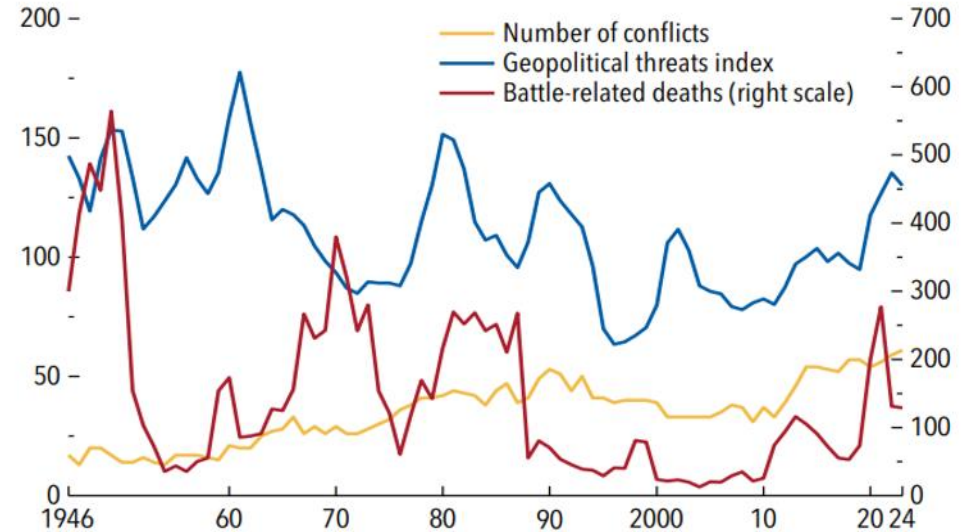
Figure 1.6. Global Geopolitical Risk
(Index; US dollars per ounce)



Sources: Caldara and Iacoviello 2022; Chicago Board Options Exchange (CBOE); London Stock Exchange Group, Datastream; and IMF staff calculations.

Note: This figure plots the monthly global geopolitical risk index of Caldara and Iacoviello (2022), a news-based measure of adverse geopolitical events that covers 10 major newspapers in Canada, the United Kingdom, and the United States. Data were downloaded from <https://www.matteoiacoviello.com/gpr.htm> on April 02, 2026. VIX = CBOE Volatility Index.

Figure 3.1. Conflicts and Geopolitical Threats
(Number; index, 2019 = 100, left scale; thousands of deaths, right scale)



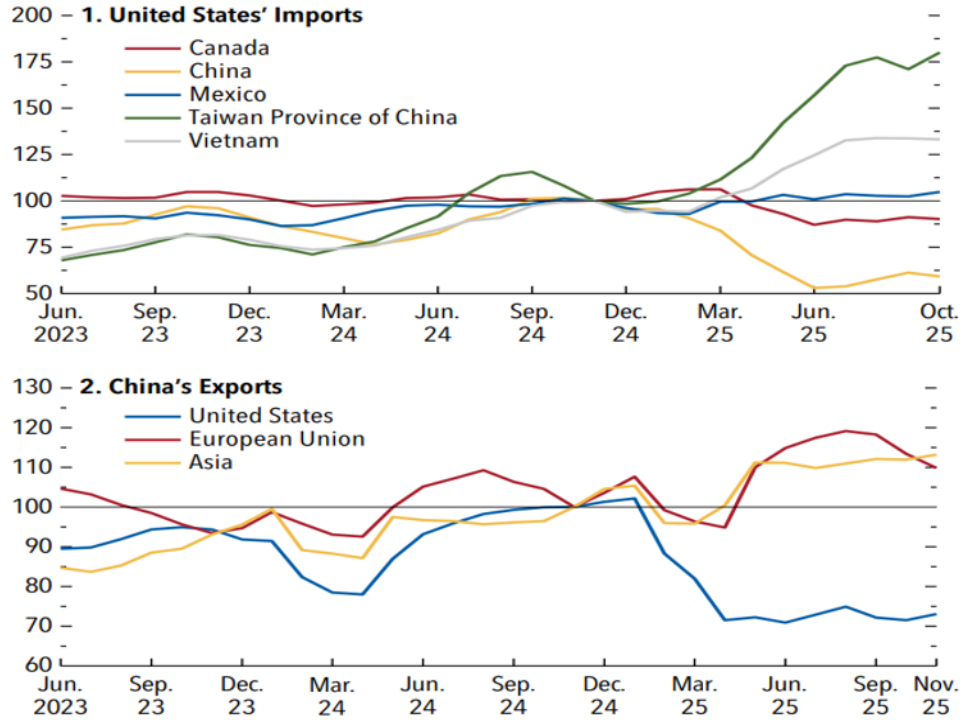
Sources: Caldara and Iacoviello 2022; PRIO Battle Deaths Dataset version 3.1; UCDP Georeferenced Event Dataset (GED) version 25.1; UCDP/PRIO Armed Conflict Dataset version 25.1; and IMF staff calculations.

Note: The figure shows the number of conflicts involving the government of at least one state, based on the UCDP/PRIO dataset. The geopolitical threats index captures threats related to war, peace, military buildups, nuclear risks, and terror, and is shown as a three-year moving average. Battle-related deaths are drawn from the PRIO dataset for 1946–88 and from the GED for 1989–2024. PRIO = Peace Research Institute Oslo; UCDP = Uppsala Conflict Data Program.

3. Geopolitical Risk and Fragmentation

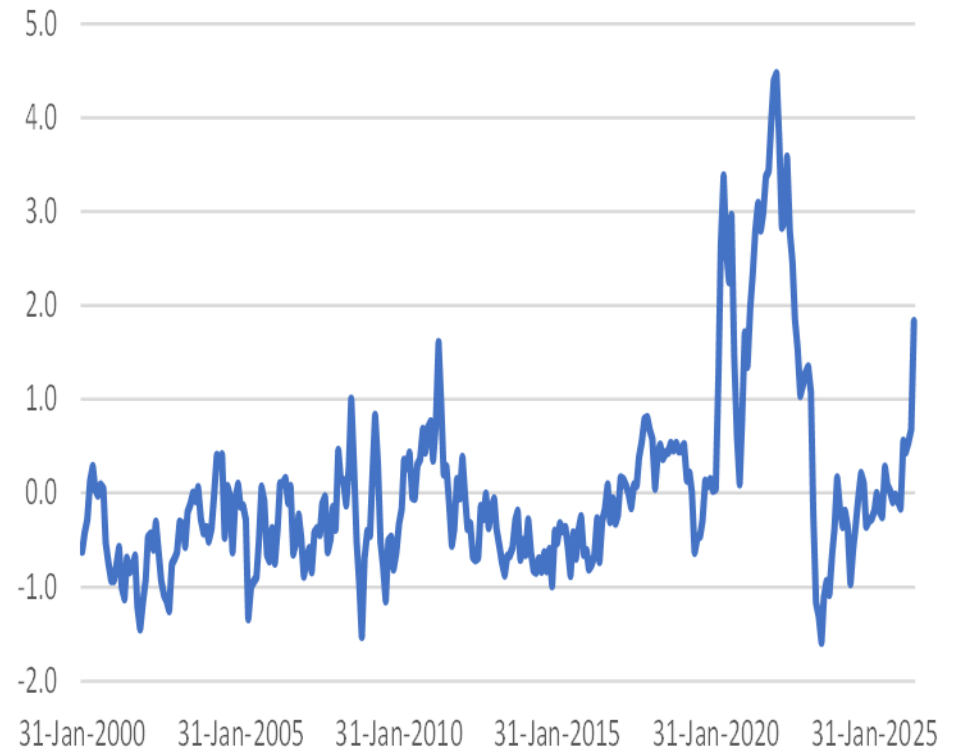
Figure 1.5. Reorientation of Global Trade

(Index, 2024 = 100)



Sources: Antràs and Presbitero 2026; Trade Data Monitor; and IMF staff calculations.
Note: Three-month moving average of non-seasonally adjusted US dollar values, based on cross-border shipments data sourced from Trade Data Monitor. These data can differ from balance of payments data.

Global Supply Chain Pressure Index



4. AI Technology and Labor Market

4. AI Technology and Labor Market

- AI technology is a cognitive technology like no others previously developed, and set to profoundly change the global economy (as akin to a new industrial revolution)
 - AI promises to boost productivity and economic growth, but its impact on economies and societies is yet uncertain with the potential to amplify disparities
- AI technology is now transforming production process in a wide range of industries, leading innovations and investment (particularly in data infrastructure and energy), driving cross-border capital flows, and acting as a central part of US-China hegemony rivalry.
- Almost 40 percent of global employment is exposed to AI, with advanced economies at greater risk but also better poised to exploit AI benefits than EMDCs
- The effect on labor market and income inequality depends largely on the extent to which AI displaces or complements high-income workers.

4. AI Technology and Labor Market

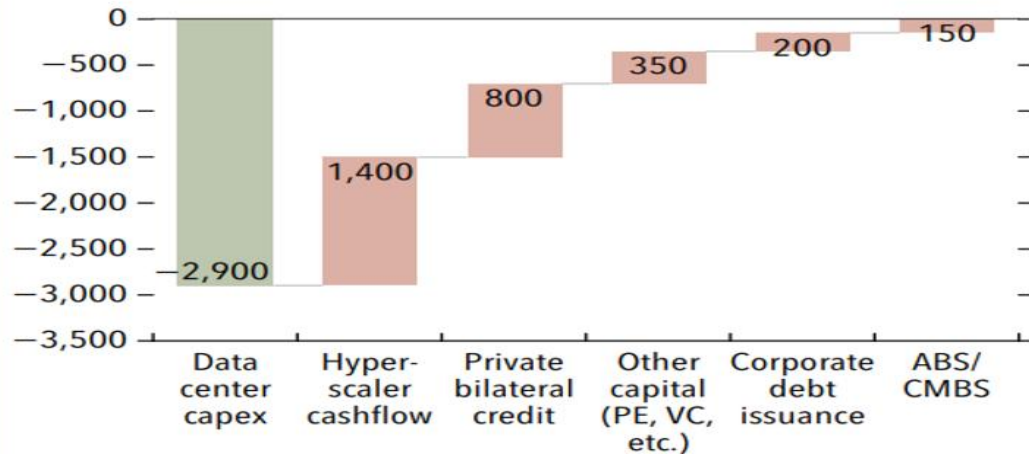
AI Technology: Magnet of Investment

Figure 1.3.1. Required Financing and Securitization for Data Centers

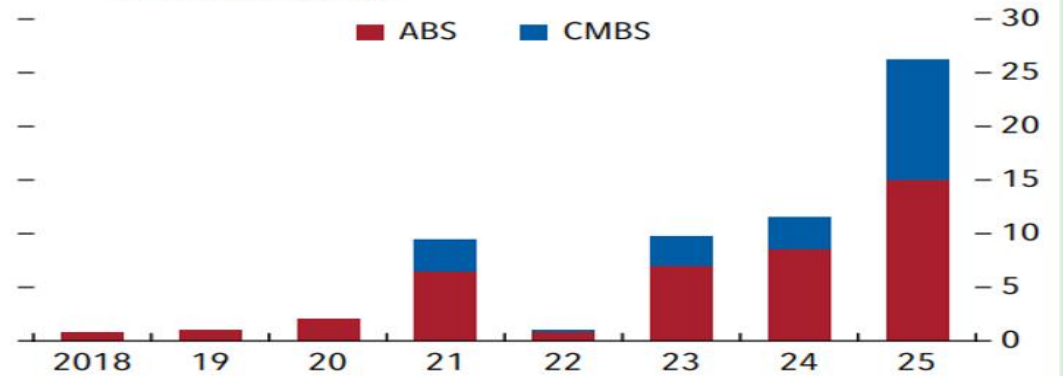
Data center capital expenditure far outstrips other sources, signaling sizable financing gaps through 2028.

Rising asset-backed securities and commercial mortgage-backed securities issuance points to stronger securitization flows as funding needs intensify.

1. Data Center Capital Expenditure through 2028
(Billions of dollars)



2. New Issue Supply of Data Center Linked Asset-Backed Securities and Commercial Mortgage-Backed Securities
(Billions of dollars)



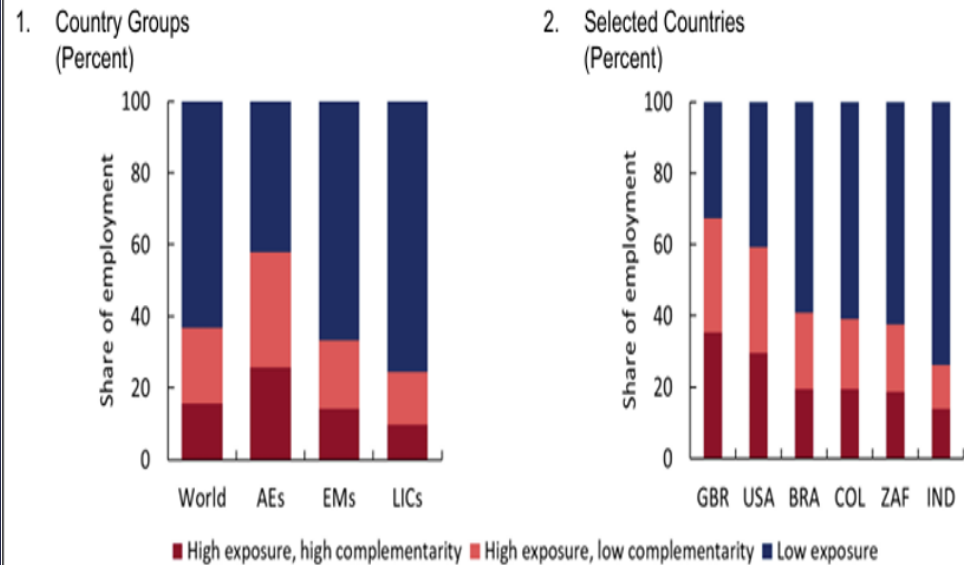
Sources: Bank of America; and Morgan Stanley.

Note: In panel 1, data center capital expenditure through 2028 is based on Morgan Stanley Research estimates as of July 2025. Given recent guidance from hyperscalers on increased AI-related capital expenditure during the fourth quarter of 2025, estimated expenditures and therefore funding sources through 2028 may be meaningfully higher than depicted. Estimates are inclusive of data center spending but not associated power investments. Private bilateral credit includes credit through asset-backed financing. Other capital sources include private equity, venture capital, and sovereign funding. ABS = asset-backed securities; AI = artificial intelligence; CMBS = commercial mortgage-backed securities; PE = private equity; VC = venture capital; YTD = year to date.

4. AI Technology and Labor Market

AI Technology: Skill-biased? or New Kid on the Block?

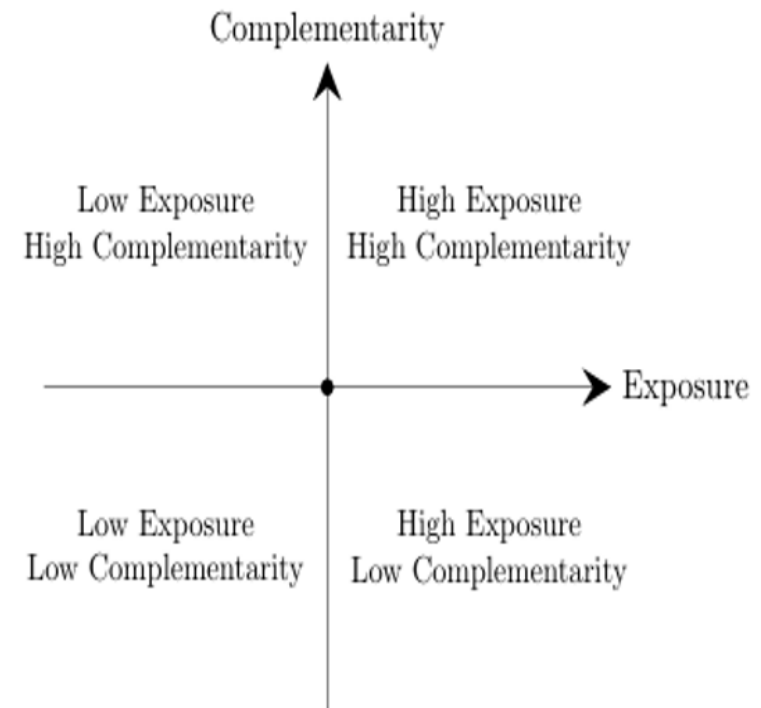
Figure 1. Employment Shares by AI Exposure and Complementarity: Country Groups and Selected Individual Countries



Sources: American Community Survey; Gran Encuesta Integrada de Hogares; India Periodic Labour Force Survey; International Labour Organization; Labour Market Dynamics in South Africa; Pesquisa Nacional por Amostra de Domicílios Contínua; UK Labour Force Survey; and IMF staff calculations.

Note: Country labels use International Organization for Standardization (ISO) country codes. AEs = advanced economies; EMs = emerging market economies; LICs = low-income countries; World = all countries in the sample. Share of employment within each country group is calculated as the working-age-population-weighted average.

Figure 1: AI exposure and Complementarity Diagram



4. AI Technology and Labor Market

High-skill jobs are the most exposed to advances in artificial intelligence

Exposure to AI (the extent that AI capabilities can match tasks performed by workers in various occupations, min = 0 max = 1)



Workers are divided about the impact of artificial intelligence on jobs

Almost two-thirds of workers using AI in finance and manufacturing (63%) said that it had improved enjoyment in their job.

However, 60% of workers are also worried about losing their jobs to AI in the next ten years.



Enjoy their job more because of AI



Worried about losing their job to AI

Lack of relevant skills is a barrier to using artificial intelligence

2 out of 5 companies declare that the lack of relevant skills is a barrier to using AI at work.



Social partners, such as trade unions and business associations, can facilitate the use of AI by helping to decide which AI technologies are adopted, securing key worker rights as well as helping them to develop new skills.

Urgent action is needed to ensure trustworthy AI in the workplace

57% of workers in finance and manufacturing whose employer uses AI worry about their privacy.



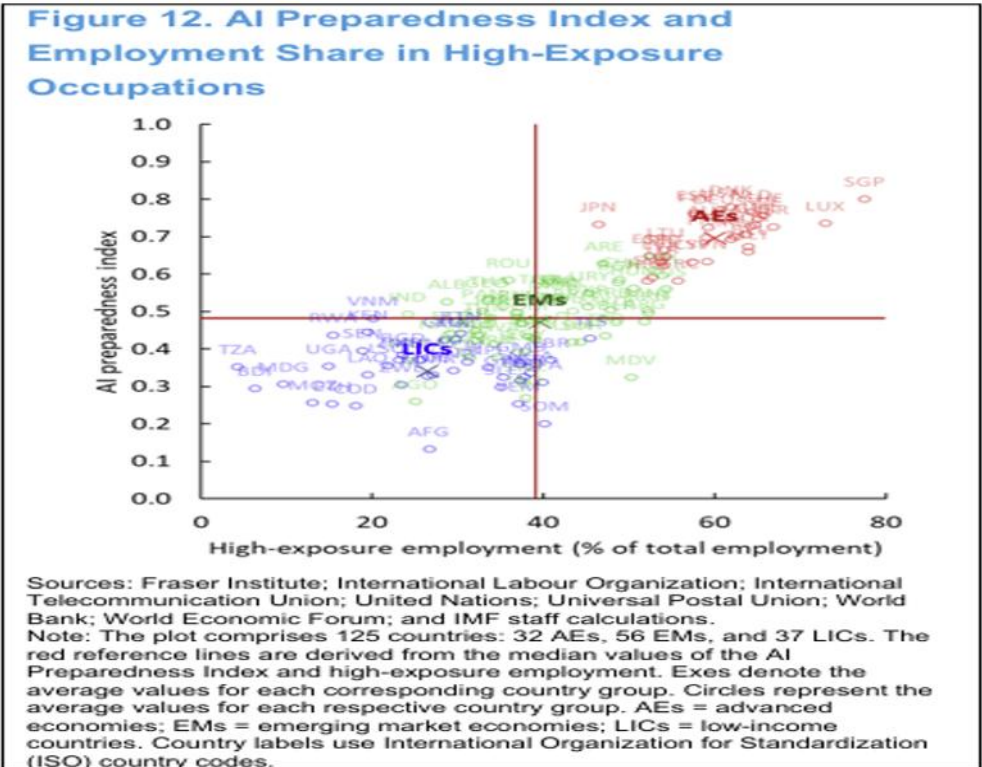
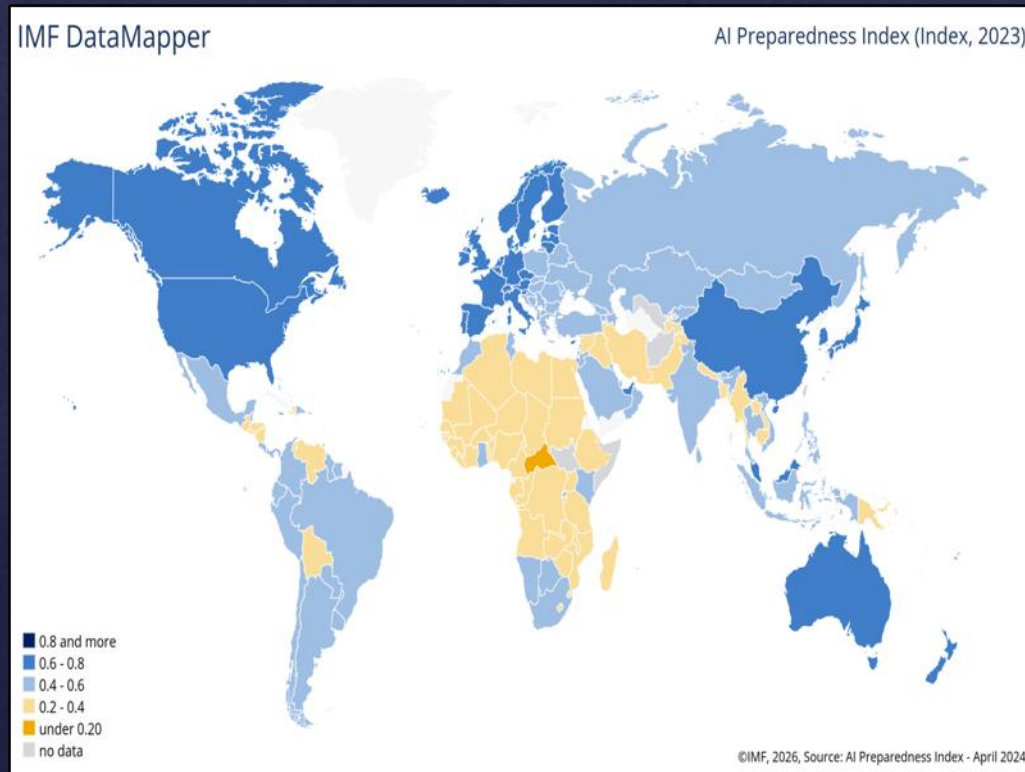
Worried about losing their privacy



Many countries have developed principles and some are introducing AI specific regulations, but much remains to be done to ensure trustworthy use of AI in the workplace.

4. AI Technology and Labor Market

Harnessing the advantages of AI depends on countries' preparedness and the ability of workers to adapt to this new technology



ISUS Urban Infra Forum Guest Lecture

Thank you!