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Government Bonds

February 2018

What we will cover

- The uses of government bonds
- How government bonds are created and issued
- What happens when governments default on their bonds or restructure bonds to avoid default
- The special role of government bonds in recapitalising banks and resolving a banking crisis
- Why government bond returns should be indexed to GDP changes, but are not

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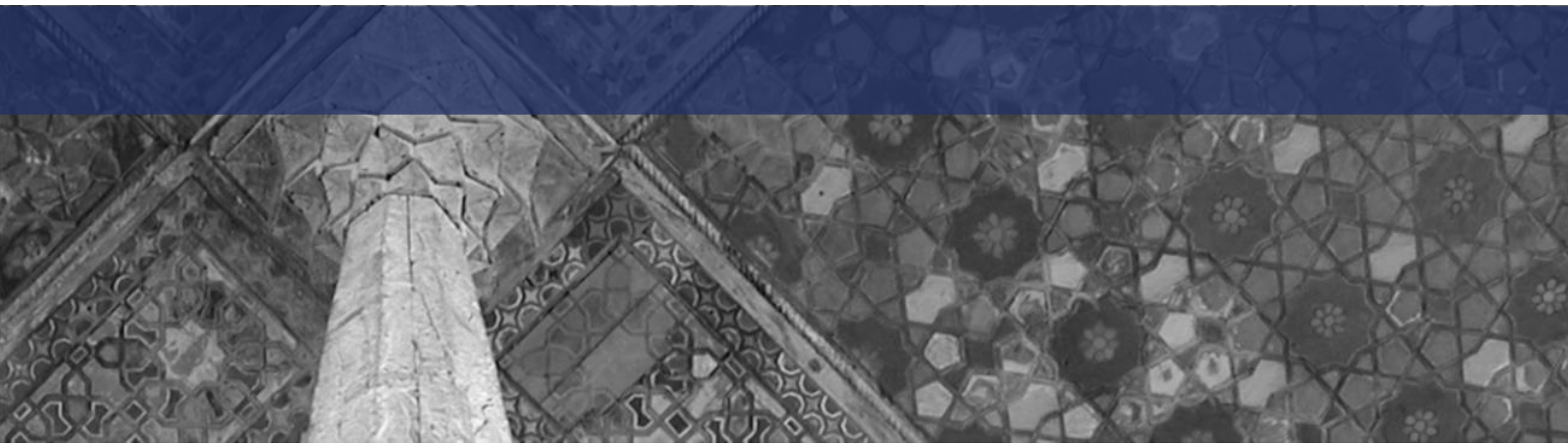
Uses



Bonds basics

- A bond is a transferable loan
  - Issued by the borrower (issuer) to the initial lenders (investors)
  - Arranged by investment banks who, in return for a fee from the issuer, agree to find investors

- International bonds vs domestic bonds
  - Domestic bonds are local currency denominated
    - International bonds are usually USD or EUR
  - Domestic bonds are marketed in one country
    - International bonds are offered globally

Differences with loans

Bonds
vs
Loans

- Transferability
- Capital market investors **vs** bank lenders
- Unknown investors **vs** relationships with bank lenders
- Take it or leave it **vs** bilaterally negotiated
- Weaker lender protections **vs** stronger ones
- Bond investors do not negotiate bond terms – the investment banks do it
- Many more bond investors than banks
- Negotiation time limited by need to take advantage of market windows

History

- Before industrialisation, 90% of government budgets in Europe were spent on items related to war. Conquerors invaded and cities defended.
- War required large current sums, in excess of available resources.
- Some managed their finances poorly: Spain defaulted 13 times between 1500 and 1900.
- Some managed finances well: 18th century Britain had debt in excess of current views of sustainable levels (at 85% of GDP), but never defaulted.
  - It’s approach was based on financial repression
  - Government had privileged access to savings
  - Interest rates were heavily regulated
  - Usury laws

Uses

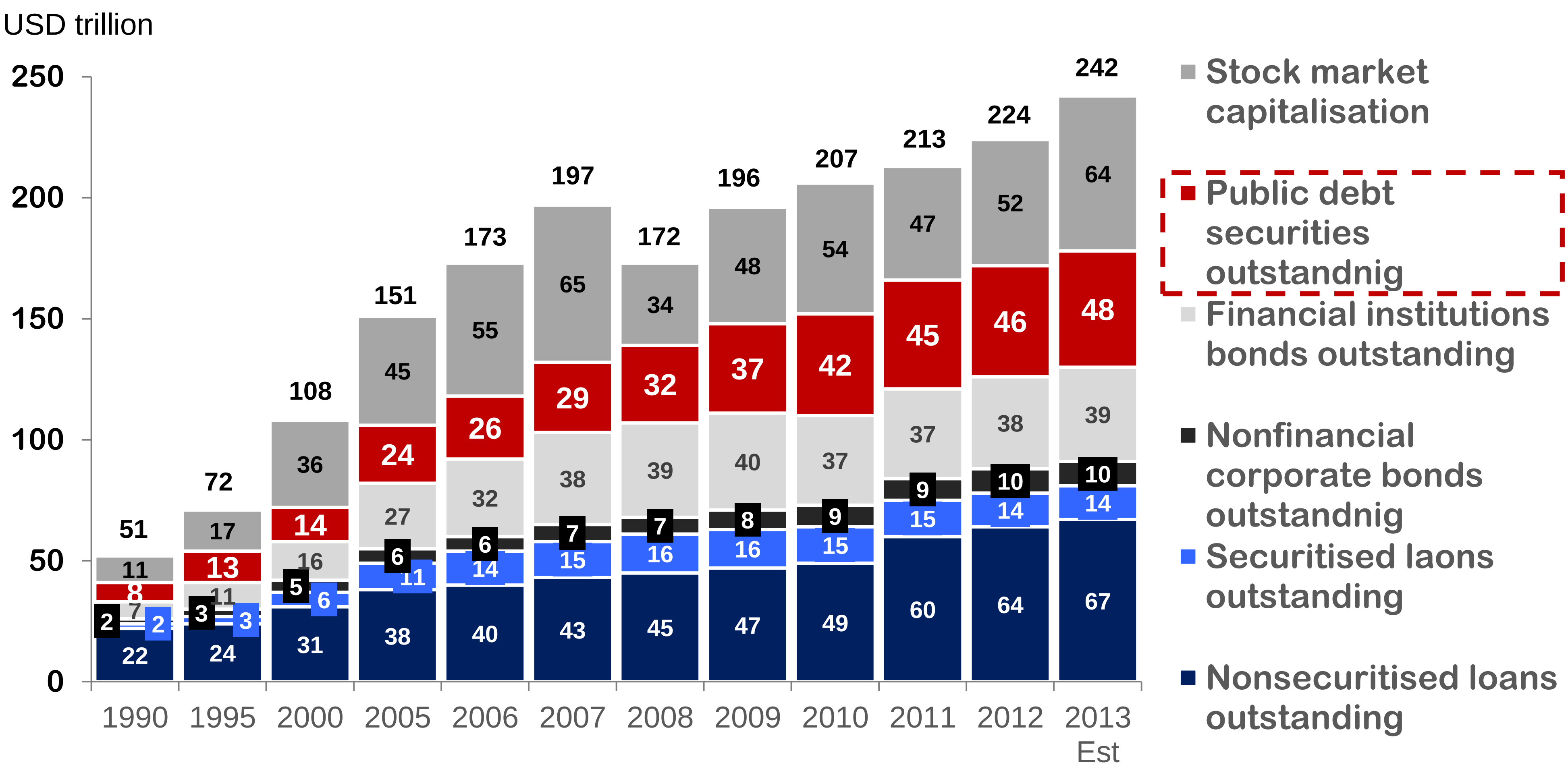
1. Financing of current budget deficits or long-term capital projects, relieving pressure from the banking system
2. Reducing need for foreign borrowing, through a strong local currency debt program
3. Providing a monetary policy instrument to the central bank, who can control the money supply through open market operations
4. Creating a domestic or international yield curve across maturities, to act as pricing benchmark for private issuers and new products
5. Enhancing the domestic capital market, as the largest issuer
6. Recapitalising banks with capital adequacy problems, usually due to NPL losses
7. Opening the international market for corporate issuers
8. Accessing foreign investors via local currency bonds
9. Mobilising small investors and providing them a safe investment

They can create headaches too

Potential abuses

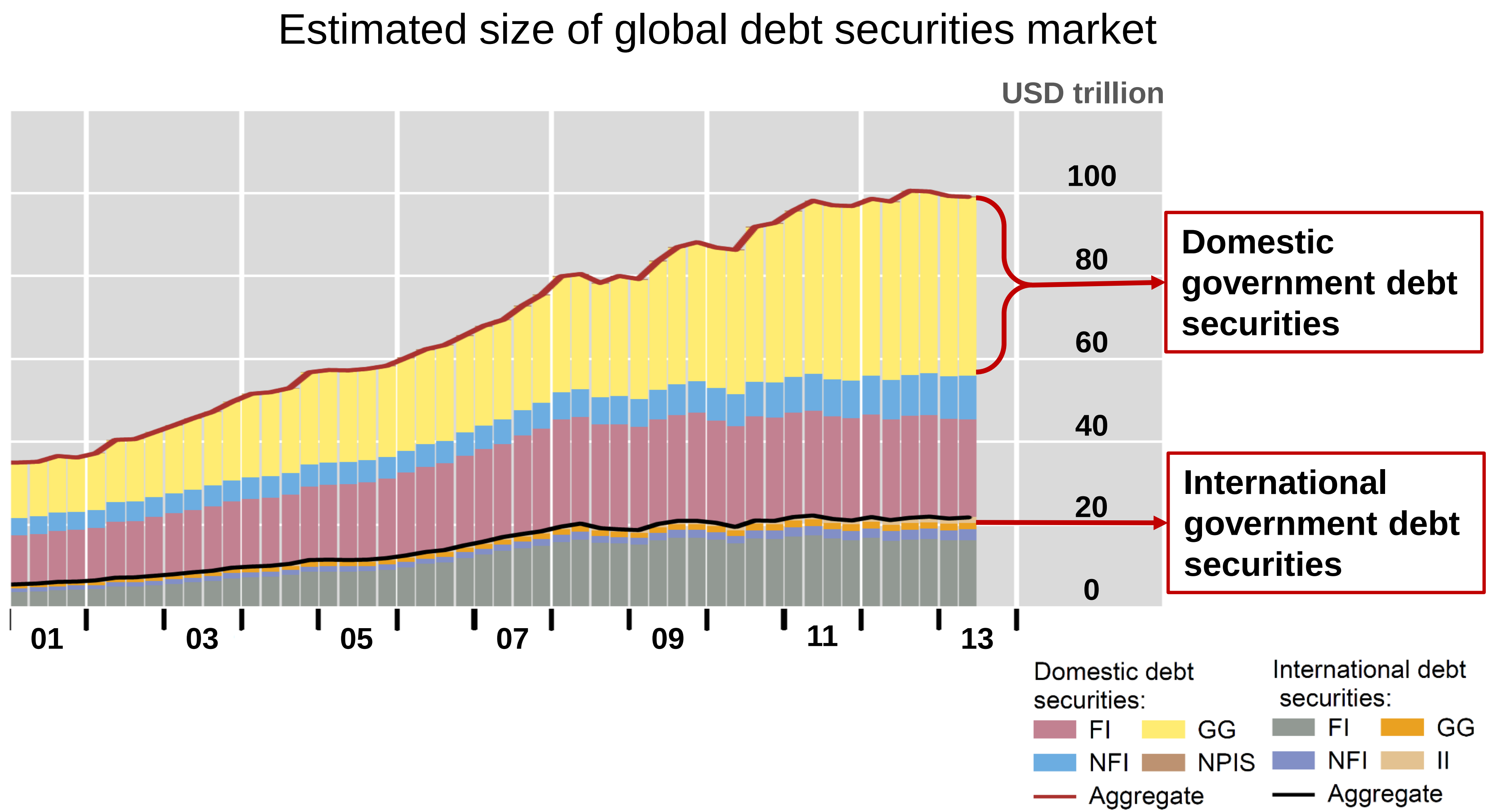
- Accumulating unsustainable debt for the future
- Enabling fiscal indiscipline
- Accumulating overly large exposures to foreign currencies
- Crowding out private issuers from the capital market
- Creating a moral hazard by saving badly managed banks
- Attracting hot money to the domestic capital market

World stock of financial assets and the share of government bonds



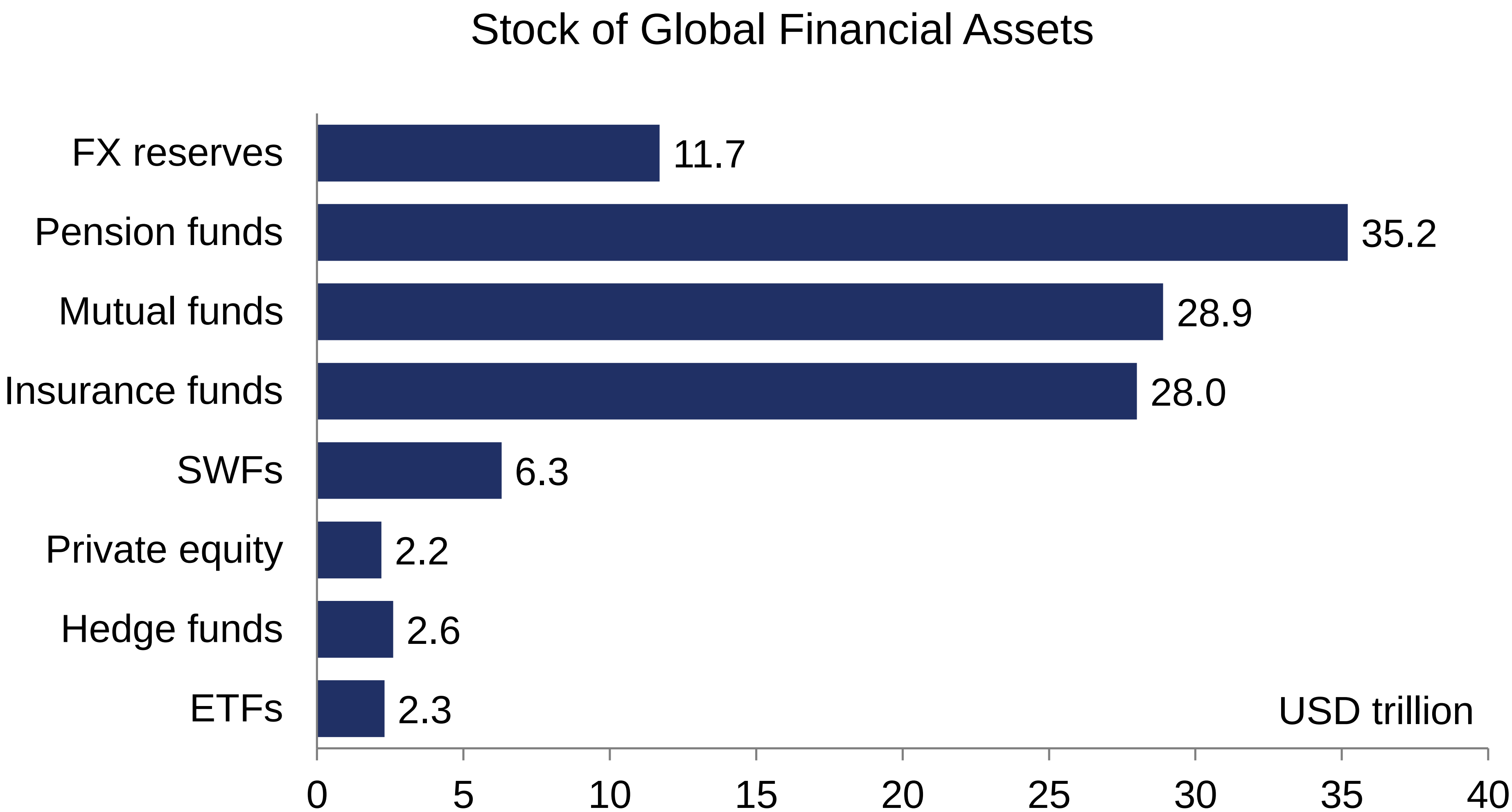
Sources: McKinsey Global Institute, Haver, BIS, DB estimates
DB Mapping the world's Financial Markets 2014

Government bond share of local and international bond markets



Sources: Source: BIS Quarterly Report March 2014

Bond market investors



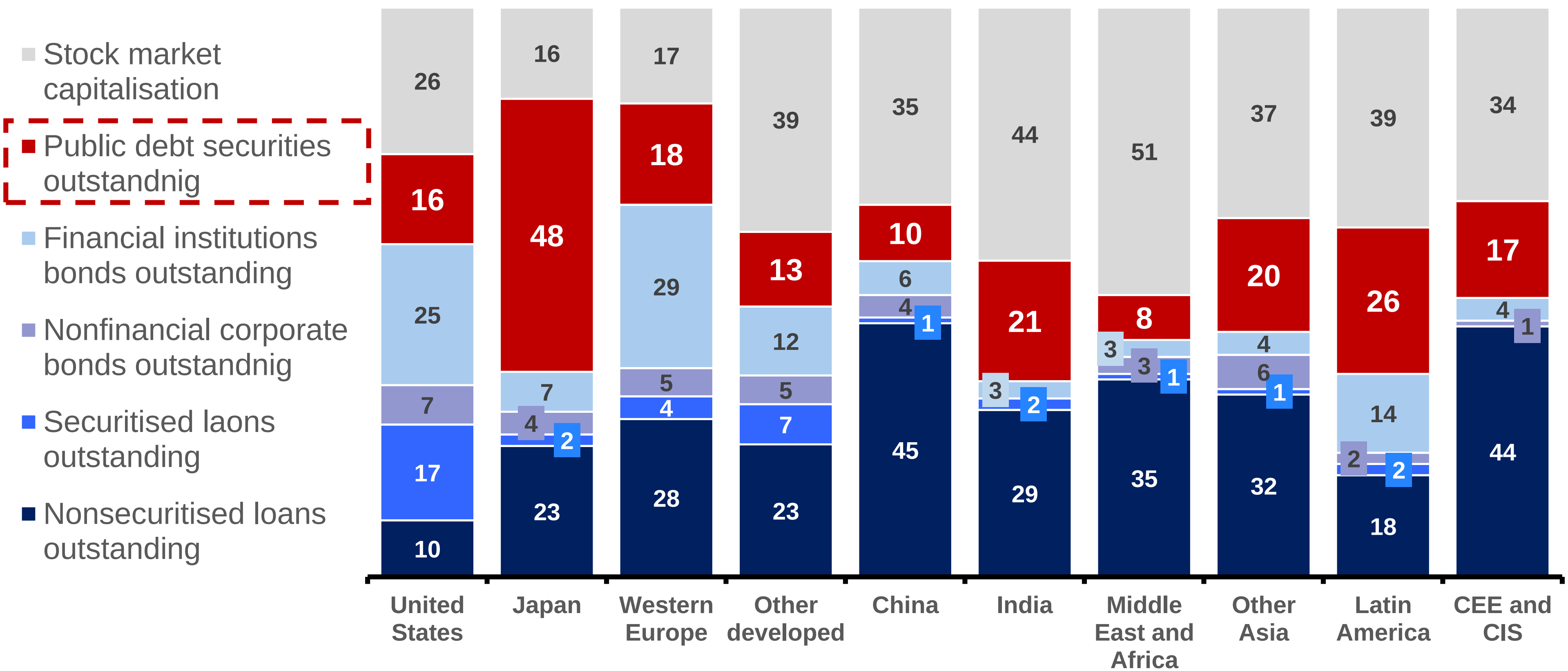
Sources: Deutsche Bank, TheCityUK, HedgeFundsReview, IMF
DB Mapping the world's Financial Markets 2014

Government bonds relative to other instruments in different regions

The structure of capital and banking markets varies widely between countries

Financial depth, year end 2010

Percent; % of regional GDP



Sources: Bank for International Settlements; Dealogic; SIFMA; Standard & Poor's; McKinsey Global Banking Pools; McKinsey Global Institute analysis - McKinsey Mapping global capital markets 2011

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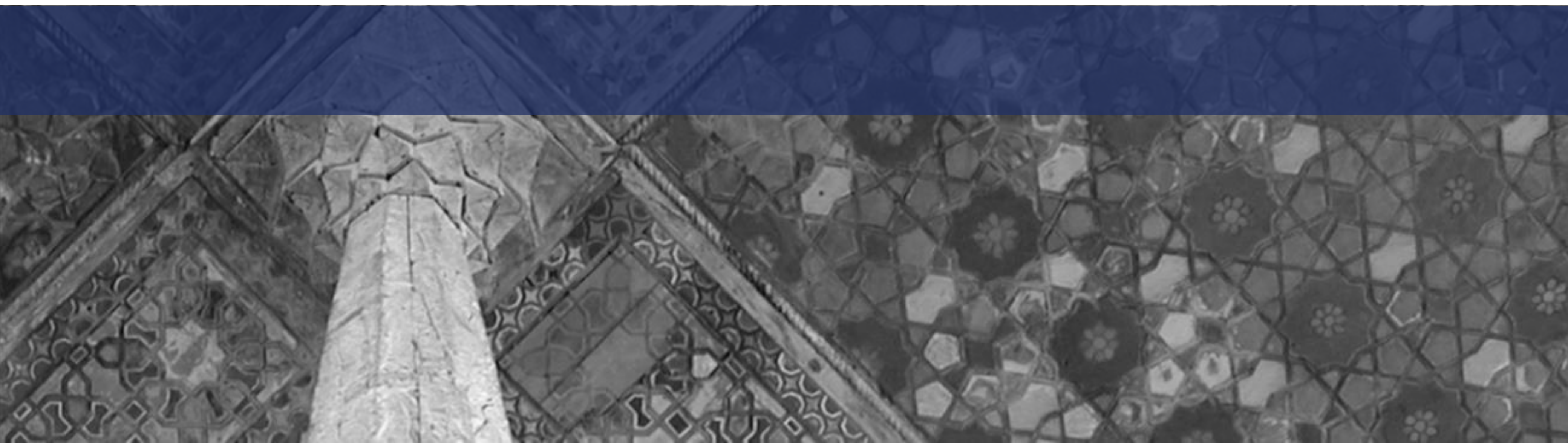
The issuance process



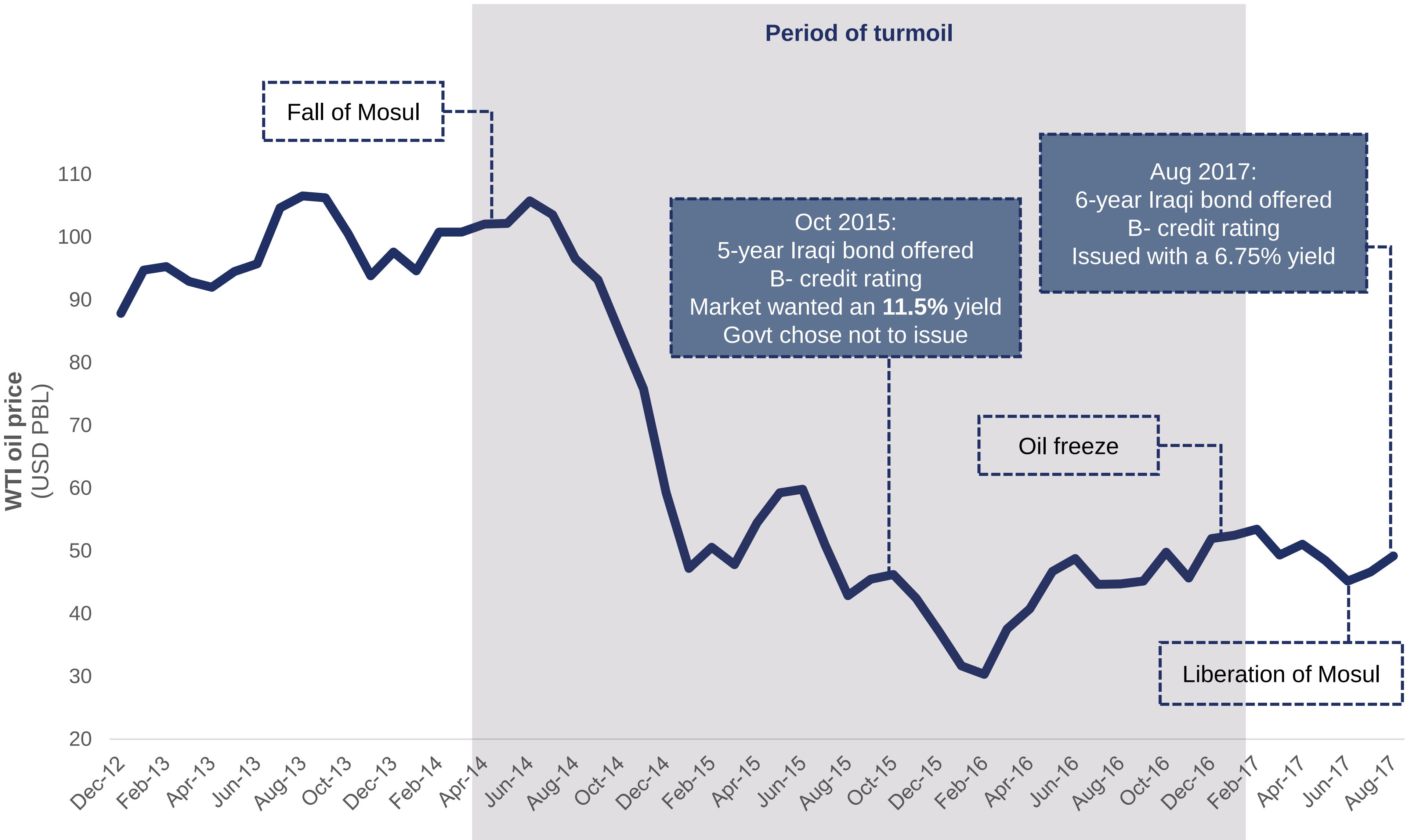
The main parties

Government	Lead by the ministry of finance and central bank
Underwriters	Based on strength in the relevant market: USD, EUR, JPY, other currencies, sukuk
Legal advisors	Separately for the government and the underwriters
Rating agencies	Driven by investor preference
Listing exchange	Driven by investor preference and disclosure requirements
Trustee and paying agent	Marginal in peace, critical in battle

The main processes

Due diligence	• Review of information and meetings with the government
Offering document	• Disclosure at the standard of the relevant market • Liability document vs marketing document vs embarrassment
Rating	• Ability and willingness to repay principal and interest on time
Marketing	• Investor presentations by the government and underwriters • Underwriters build a book of investor orders
Pricing	• Interest rate decided based on the order book
Closing	• Signing of documents and issuance of bonds

Market timing and mentality: the Iraqi USD bond



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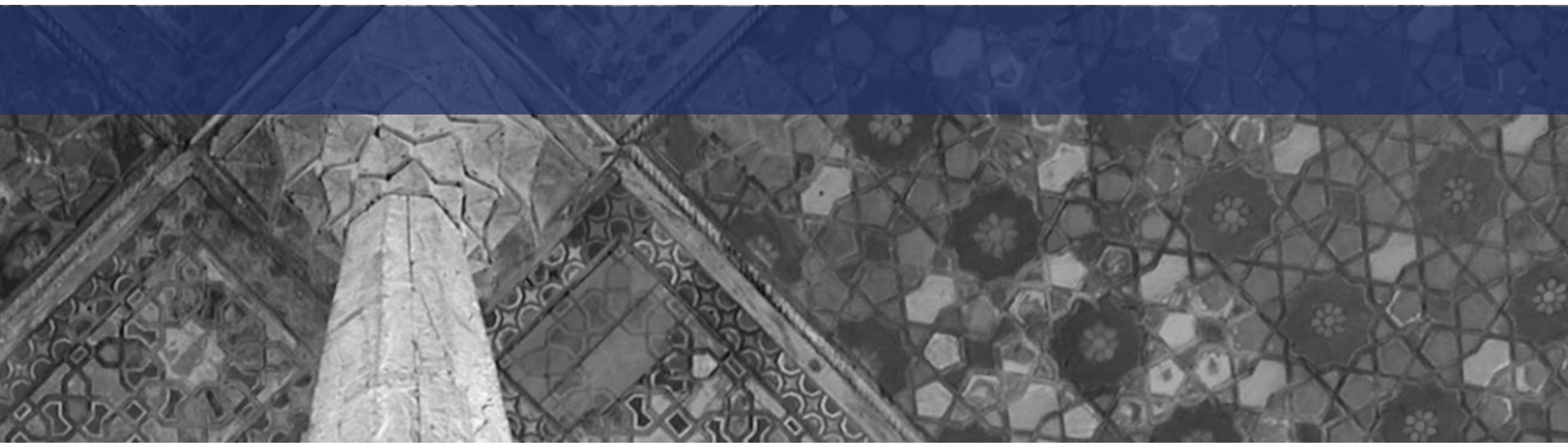
Default and restructuring



Default and state insolvency

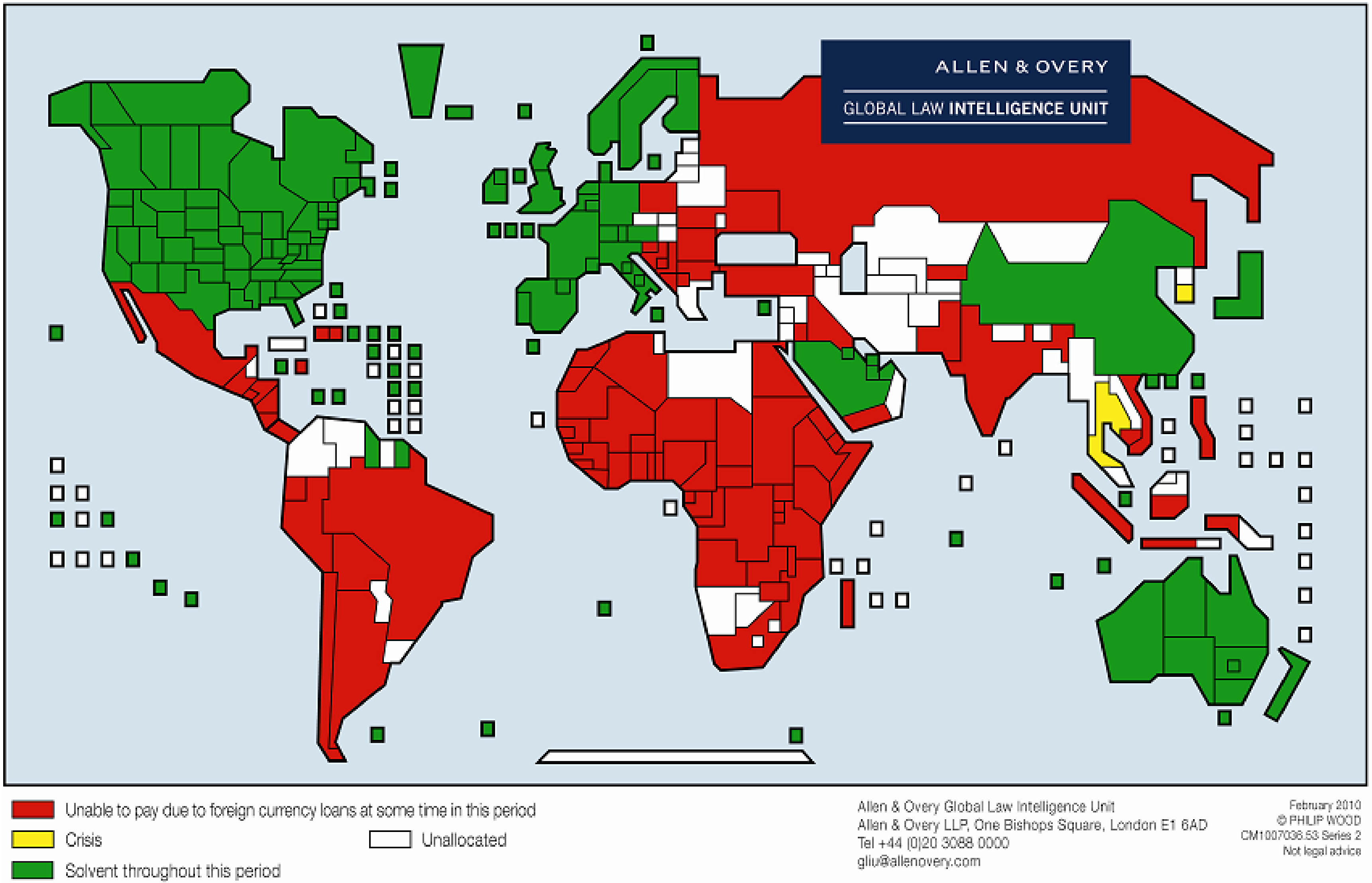
- **Default** is a failure to pay. It happens when a government is effectively **insolvent**, but sometimes it is elective.
- Corporate insolvency involves pooling and pro-rata sharing of assets of the debtor among creditors. Courts can impose terms on creditors.
- There is **no sovereign insolvency regime**.
  - Governments choose whom to pay and how much
  - Politically infeasible to impose terms on governments
  - No court to impose terms on creditors
  - Sovereign immunity makes enforcement difficult

Causes and effects of insolvency

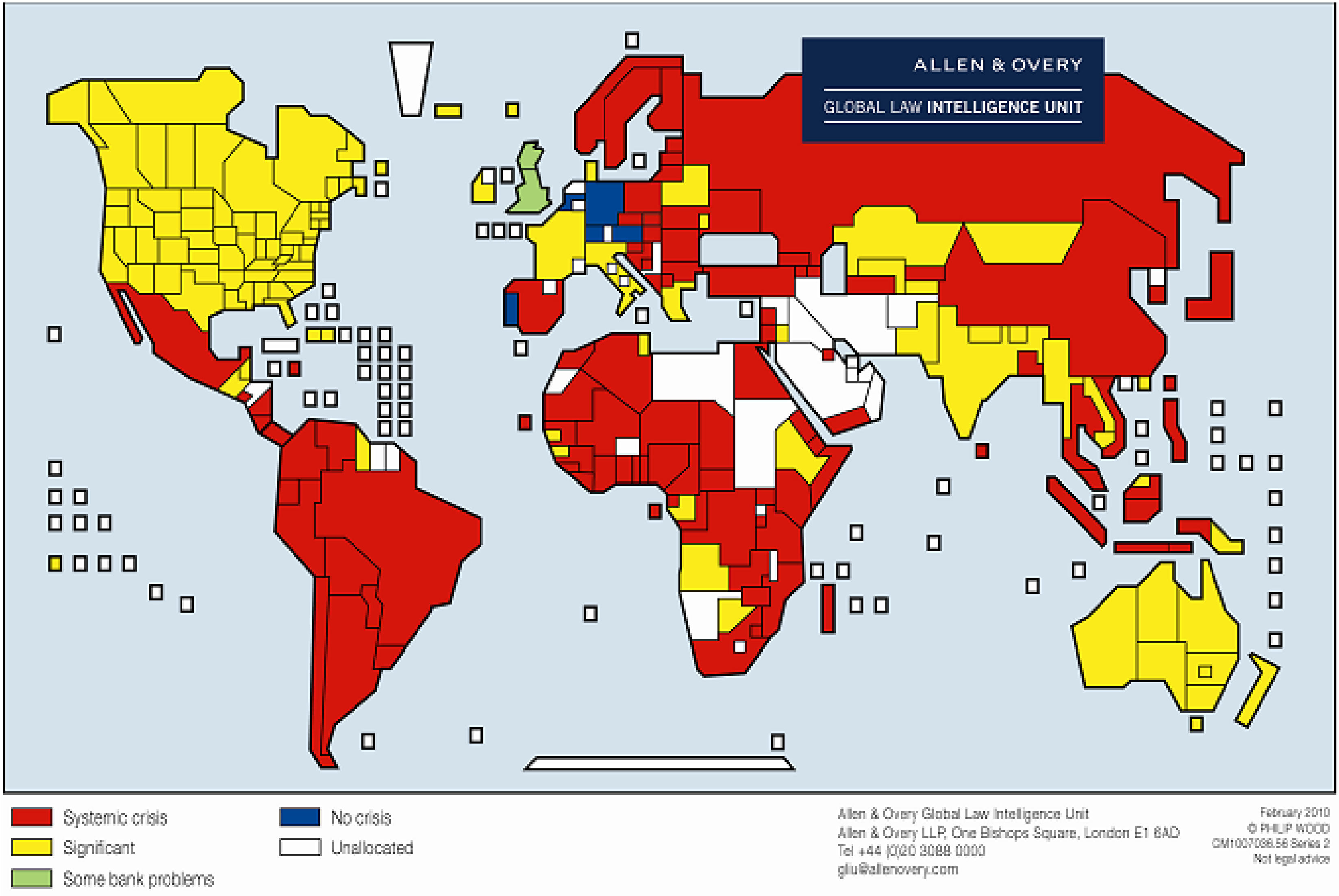
- Usual causes
  - Over-borrowing
  - Mismanagement of fiscal and monetary affairs
  - External events

- Usual effects
  - Economic devastation, collapse of local banking system, effect on companies
  - Losses to creditors
  - Slowing of economic growth
  - Political tension
  - Contagion effect on other countries

State insolvency, 1980 - 2010



Bank insolvency, 1980 - 2002

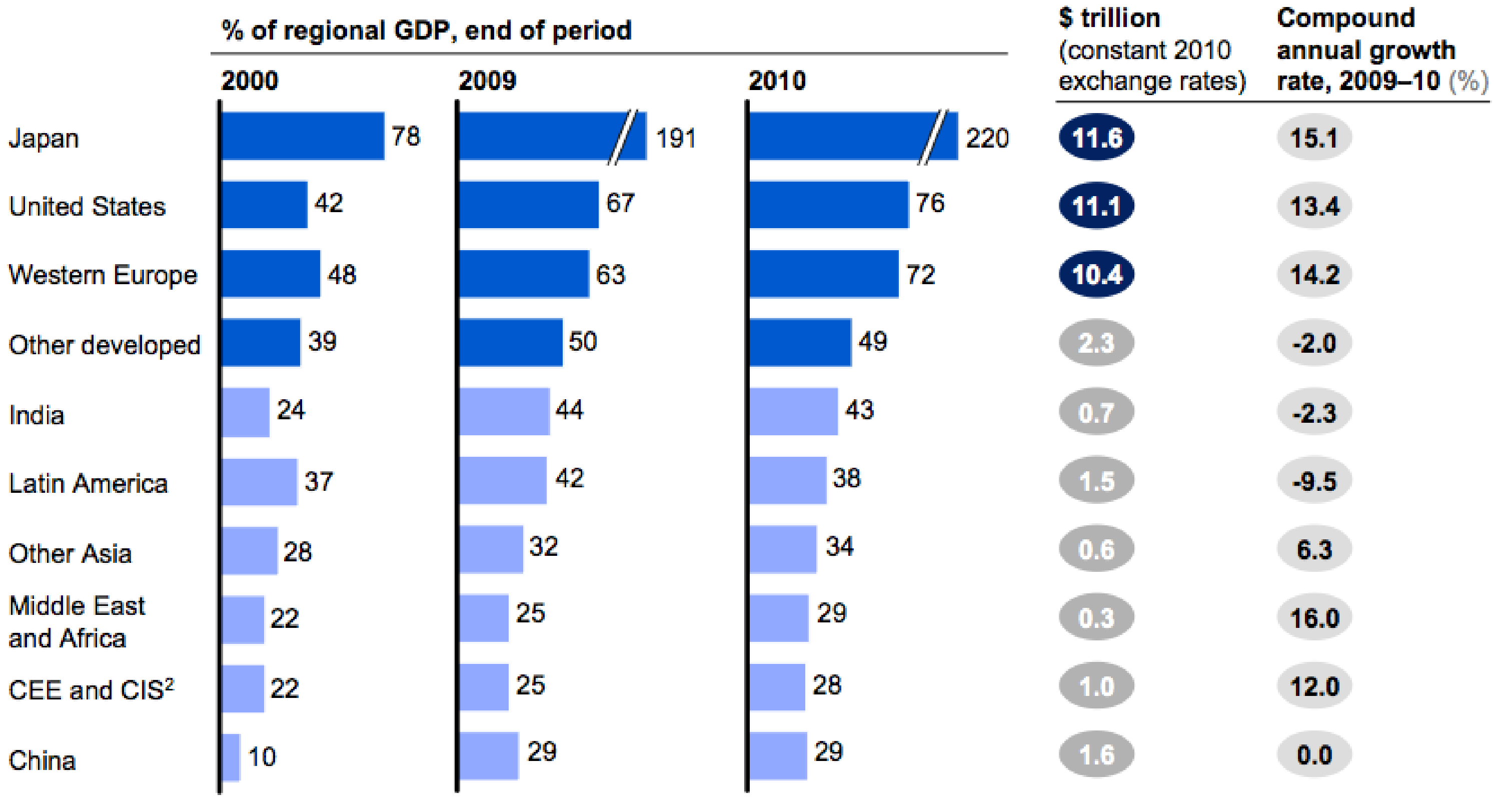


Recent increases in government debt

Governments in many developed economies have steadily increased public debt over the last ten years

Developed
Emerging

Gross public debt outstanding[1] per region



1 Defined as general government marketable debt securities; excludes government debt held by government agencies (e.g., US Social Security Trust Fund).
2 Central and Eastern Europe and Commonwealth of Independent States.
SOURCE: Bank for International Settlements; McKinsey Global Institute analysis

Restructurings

General approach for sovereign debt restructuring

- Paris Club
    - 19 countries (US, Europe, Japan, Australia, Canada, Russia), and observers from IMF, OECD, EC and MDBs
- Commercial banks
- Bond restructuring
- IMF and structural reform programs
- Preferred creditors are treated differently

- Bond restructuring is usually via an exchange offer of new bonds for old bonds. Applies to foreign currency / foreign law bonds, not local ones.
- Often done before an actual default.

Key legal choices - pari passu clause

- An anti-discrimination provision, usually ignored
- Usual: “The Bonds shall rank pari passu, without any preference amongst themselves, with all other outstanding, unsecured and unsubordinated obligations of the State, present and future.”
- Peru litigation (2000): To overcome sovereign immunity, Elliott Associates, a US hedge fund holdout, pursued the intermediary holding money – Chase as paying agent – via the pari passu clause. It won.
  - Argued that pari passu applied to <u>payments.</u>
- Argentina litigation (2012): The Bonds shall at all times rank pari passu and without any preference among themselves. The <u>**payment obligations**</u> of Argentina under the Bonds shall at all times rank at least equally with all its other present and future unsecured and unsubordinated External Indebtedness…
- Flaw in the contract design and development process

Key legal choices - collective action clause

- Provision which allows a vote by majorities to bind minorities.
- Traditionally, bondholder rights were individual not collective
  - Unanimous consent for modification
  - Holdout problems and vulture investors
- Can facilitate or impede a restructuring during financial stress.
- Reduces cost of holdouts and official sector bailouts.
- Creates a moral hazard? Increases borrowing cost?
- Paper voting vs physical meeting
- Usually 75% by amount. Aggregated voting could allow 75% across all series, as long as 67% of each series approves.
- Before the 2001 Argentina default, <10% of NY law bonds had CACs. By 2003, >90% had it, pushed by the official sector and US Treasury.

Key legal choices - governing law and courts

- For international bonds, usually New York or English law
  - Sometimes Swiss, German or Japanese law
  - In Eurozone, often national law
- Government can amend national law to add or change terms.
  - Can impede enforcement or recovery in case of a default.
  - German law in 1933 converted foreign currency debts governed by German law into Reichsmark debts
- Greece's 2012 restructuring involved bonds governed by English law, Swiss law, Japanese law, Italian law and Greek law
  - The Greek law bonds had CACs added by legislation to allow the restructuring to happen
- Neutral courts are usually chosen – English or New York

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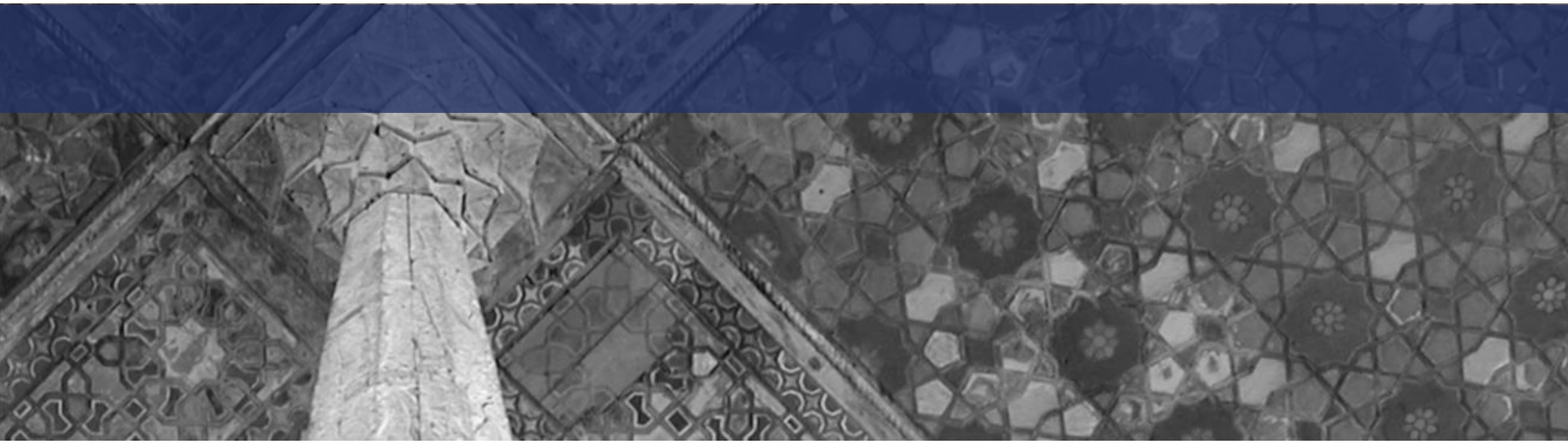
Uses in bank recapitalisation



Special bank recapitalisation bonds

- Following a banking crisis, which is often NPL-related, the government may be the only option for rescuing the banking system.
- However, during a banking crisis the government is quite likely to be in a difficult fiscal position and without sufficient resources to rescue banks.
- The government can recapitalise banks with government bonds in two ways:
  - issuing special recap bonds to the market and using the proceeds to purchase NPLs or new shares in the bank
  - issuing special recap bonds directly to the bank in exchange for NPLs or new shares (particularly useful if the government can't access the market)
- Alternatively, the issuer can be an AMC or deposit insurer, with a government guarantee.

Tensions between the government and banks with recap bonds

- **Maturity**: The bank will prefer earlier maturities and the government later ones
- **Tradeability**: The bank will want to sell the bonds soon to make new loans, while the government may prefer to limit the bank's growth
- **Fixed vs floating rate**: The government will prefer to fix its interest cost but the bank may have basis risk with fixed rates
- **Interest rate**: The bank will prefer higher income on the bonds but the government will prefer to conserve resources

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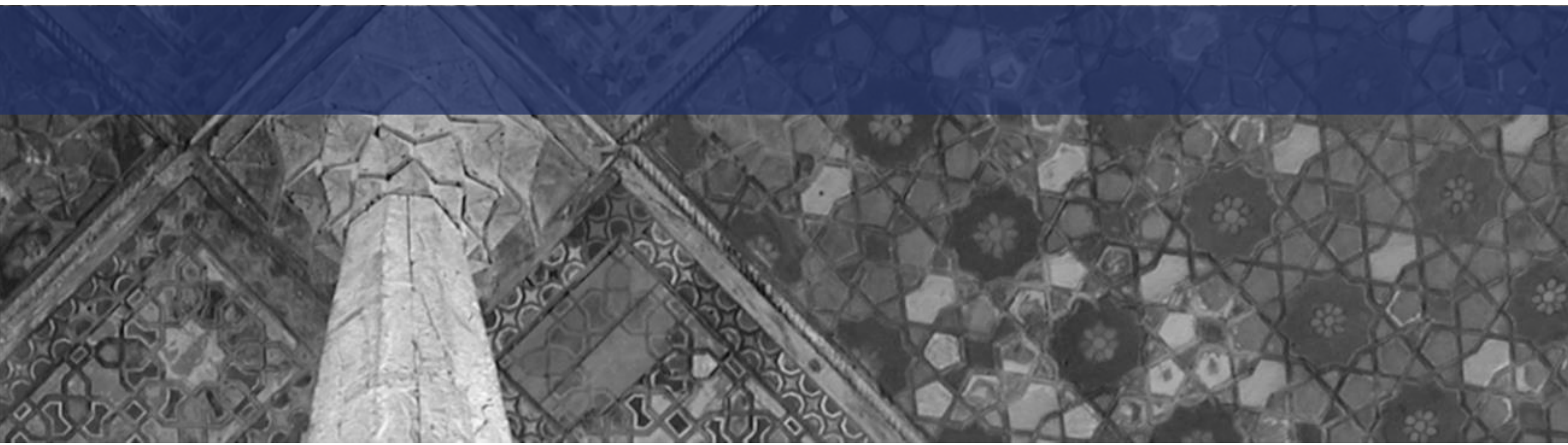
GDP-indexed returns



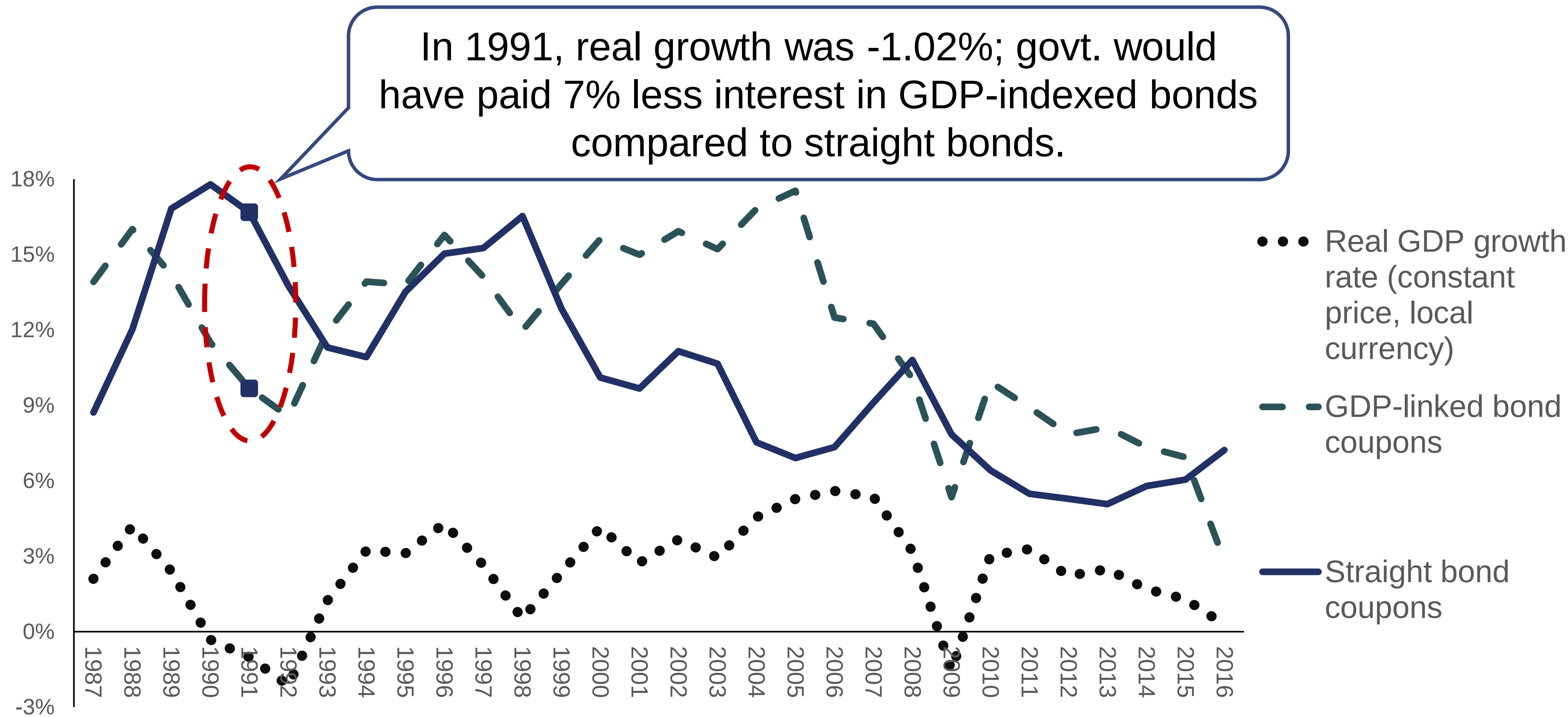
GDP-indexed bonds

A GDP-indexed bond has a return which is a function of changes in the issuing government's GDP:

- Fiscally friendly: a government pays more in times of high growth, and pays less during slow or negative growth.
- Implied insurance for the issuer.
- Not the same as GDP-linked warrants
  - Argentina, Bosnia, Bulgaria, Costa Rica, Greece
- Not the same as inflation-indexed bonds
- Discussed since 1980
  - Shiller (*Macro Markets*, 1993) suggests a security representing a perpetual future share of GDP (no principal).
  - Would create a market for growth risk, and instruments to hedge against growth risks.

A hypothetical GDP-indexed bond: The case of South Africa

- $GDP - indexed\ Coupon = max\{\ \bar{c}\ + (g_t - \bar{g})\ , 0\ \}$
- $\bar{g}$: 20 year average annual growth rate of real GDP (fixed for each 5-yr bond)
- $\bar{c}$: 10 year average of straight bond coupons



GDP-indexed bonds – why?

Benefits to governments

- Avoidance of unsustainable debt, debt crises and default
  - Depends on portion of debt stock that is GDP-indexed
- Pro-cyclical government fiscal position
  - Now, maintaining access to markets usually requires fiscal tightening during slow growth, and social welfare costs

Benefits to investors

- Overall exposure to a country's growth
- Portfolio diversification – EM growth rates not correlated
- Fewer defaults, which destroy value

GDP-indexed bonds – why not?

- Uncertain pricing
- Illiquid
- GDP data reliability
- Novel
  - Markets unfamiliar
  - No obvious investor base
  - No track record
  - Rating agencies unfamiliar with them
- Incentives:
  - Underwriters are paid only on a successful sale
  - Issuers prefer certainty of funding
- Misalignment of interests of underwriters and issuer

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