How does debt management matter?

DMF Stakeholders’ Forum
Accra, Ghana, June 2012
1. Fiscal policy across the cycle – theory and practice
2. The role of debt management
3. Lessons from the global financial crisis
4. The road ahead
1. Fiscal policy across the cycle – theory and practice
Theory of fiscal policy across the cycle

- Fiscal policy can reduce the amplitude of the economic cycle:
  - “Automatic stabilizers”: $\downarrow$ GDP $\rightarrow$ $\downarrow$ revenue (T), $\uparrow$ expenditure (G)
  - Discretionary T and G policy changes add to smoothing effect (Keynesian view)

- Keeping tax rates stable is desirable:
  - Tax changes increase uncertainty, can increase deadweight losses
  - “Tax smoothing” theory: sustainable public spending depends on size of the permanent tax base. Therefore, fix tax rates accordingly

- Government should respond to temporary shocks by borrowing ($\downarrow$ GDP) or saving ($\uparrow$ GDP) more, balancing over time

Optimal fiscal policy is countercyclical with tax rates broadly stable and debt the residual. Key public finance decision is the permanent level of spending across the cycle
Practice: developing countries’ historical experience

- Fiscal policy in OECD countries indeed generally countercyclical
- But fiscal policy in developing countries generally procyclical. Reasons include:
  - Weak automatic stabilizers (e.g. non-existent/small safety nets)
  - Political economy obstacles to sound fiscal management
  - Reliance on foreign borrowing, leading to tightening credit constraints due to rising risk premia during crises
  - Vicious cycle of commodity dependence, capital flow volatility, macroeconomic volatility, and procyclical policies (“when it rains, it pours” – Kaminsky, Reinhart and Vegh [2004])

Historical difficulties in achieving countercyclical fiscal policy led to poor economic and social outcomes
Some evidence: fiscal policy in developing countries tended to be procyclical...

Correlation between government spending and GDP, 1960-1999

Source: Kaminsky, Reinhart and Vegh (2004), as adapted by Jeffrey Frankel (2012)
...but there is evidence that things began changing in the 2000s

Correlation between government spending and GDP, 2000-9

Source: Frankel, Vegh & Vuletin (2011)
Increased fiscal flexibility of developing countries highlighted by the financial crisis ...

Change in headline fiscal balance, 2007 to 2009 (% GDP)

Source: JP Morgan
...yet there is still wide variation across economies

- Emerging and developing economies
- Advanced economies

2. The role of debt management
Debt management is distinct from fiscal policy

- **Fiscal Policy** – Aggregate government spending and taxation, microeconomic impact of individual tax and spending policies. Determines the level of debt

- **Debt Management** – Structure of the debt, cost and risk of the debt portfolio within acceptable tolerances. Determines the composition of the debt

Debt sustainability analysis is not the same as the analysis required to support a debt management strategy
Why is sound government debt management important?

Risky public debt portfolios can exacerbate an economic crisis – examples:

- Russia 1998 – short-maturity GKOs
- Mexico 1994/95 – short-maturity and USD indexed
- Brazil 1998/99 – very short maturities, indexation (overnight rate and USD)
- Uruguay 2003 – unable to refinance maturing USD bonds

Alternatives for government are sharp spending cuts, tax increases or debt default, all imposing social and economic costs.

Some good news from the 2008/2009 crisis... most emerging market countries had reduced risk in public debt portfolios during the good times.

In a severe shock, when sovereign credit worthiness is in question and risk premia rise, a poor debt structure and funding decisions can constrain fiscal policy and add to procyclicality.
Sound debt management supports macro policies and financial development

- It adds to credibility of the macroeconomic framework
- Efficiency gains in debt management produce cost savings
- Liquid government securities market provides positive externalities

Debt management does matter. But what role should it play in achieving counter-cyclical fiscal policy?
In principle, debt composition could be geared towards being countercyclical...

Obvious way to make debt management countercyclical is to issue instruments with state contingent servicing costs – reduced payments in downturns:

- GDP-linked bonds ideal…but do not exist (data constraints/lags, pricing complexity, lack of natural investor base)

- In absence of this, what types of debt help provide a countercyclical outcome? ... depends on the type of shock

Source: Togo (2007)
...in practice, a focus on risk management provides a framework for managing uncertainty

☐ **ALM perspective on managing risk:**

☐ There are many sources of uncertainty and volatility to the government’s financial position

☐ Sound debt management helps contain risk on a government “balance sheet”...

☐ ...increases the balance sheet’s resilience to shocks

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and other liquid assets</td>
<td>Accounts payable</td>
</tr>
<tr>
<td>Receivables and loans extended</td>
<td>Future stream of spending</td>
</tr>
<tr>
<td>Future stream of taxes</td>
<td>Expected value of contingent liabilities</td>
</tr>
<tr>
<td>Equity investments (e.g. SOEs)</td>
<td>Outstanding borrowings (all debt and loans, LX and FX)</td>
</tr>
<tr>
<td>Infrastructure and other asset holdings</td>
<td></td>
</tr>
<tr>
<td>Central bank FX reserves</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Wheeler (2004)
Sound debt management manages risk across the cycle and can contribute to countercyclical fiscal policy and “fiscal space”:

- **Focus on risk management:**
  - Tends to mean more reliance on domestic long-term, fixed rate debt – reducing exposure of funding costs to short-term volatility in interest rates and exchange rates
  - Such an approach may be viewed as avoiding procyclicality (or “acyclical”): reduces the risk of a vicious cycle

- **Fostering domestic debt market development:**
  - **Diversified investor base** and **more developed yield curves** facilitate transmission of official interest rates and expectations to borrowing costs
  - Increases information and liquidity which can reduce risk premia, making bonds more of a “safe haven” asset when negative demand shocks hit

Debt management strategy should take the long view, minimizing cost subject to containing risk.
3. Lessons from the global financial crisis
Pre-crisis, stronger fundamentals facilitated the transformation of public debt portfolios

- Increase in the share of the domestic debt
- Extension of the maturity of the domestic debt:
  - Supported by increased credibility of monetary policy
- Diversification of the investor base:
  - Expansion of the local investor base especially non-bank financial institutions
  - Increased interest by foreign investors

The aim of the portfolio shifts was to reduce the exposure of EMs to exogenous shocks and changes in market sentiment.
There was a significant reduction in FX risk...

Currency composition of government debt portfolios moved dramatically in favor of local currency

**Ratio of external to domestic debt**

- **Emerging Markets**
- **ECA**
- **LAC**
- **EAP**

Note: USD-linked domestic debt reallocated to external.
and net foreign currency debt was significantly reduced (1)

...and net foreign currency debt was significantly reduced (2)

Gross external debt vs. Int. Reserves (no China)
2009

FX Reserves  FX debt  Net FX debt to GDP (right axis)

Exposure to refinancing and interest rate risks was also reduced (1)

There was a contraction in the ratio of floating rate to fixed rate bonds

Exposure to refinancing and interest rate risks was also reduced (2)

There was an extension in the average life

![Average Life Chart]

Countries reduced or delayed borrowing from regular market sources:
- Using cash reserves
- Government bond purchases by central banks
- Stepped up borrowing from multilaterals
- Start/expansion of retail debt programs and issuance of new products

Countries revised market borrowing to reflect demand composition:
- Suspension of international issuance
- Reductions in LX bond auctions:
  - Virtual halt in LX market for medium- and long-term paper
  - Dramatic reduction in issuance of fixed rate paper
- Issuance concentrated in the shortest tenors and floaters:
  - Increased volume of T-Bill issuance, some dramatically
  - Two of the worst hit countries relied on short-term and floaters for 8 months
Buybacks and switches were used as liability management tools:

- Buybacks alleviated sell-off pressure, enhanced liquidity and improved pricing of liquid instruments
- Switches stabilized market, consolidated debt into large benchmarks and reduced refinancing risk (e.g. Brazil, Indonesia and South Africa)

Revision of formal targets:

- Some countries needed to make changed, e.g. higher share for FX debt
- Those with broader directional targets operated within existing mandates

Other measures addressed financial sector instability (especially in AEs):

- Some DMOs bypassed primary dealers and dealt directly with investors
- Greater use of syndication to issue bonds
Many (mostly positive) lessons learnt from the global financial crisis...

- Sound macroeconomic policy was elemental for insulation and recovery.
- Prudent debt management pre-crisis played a role in enhancing EM’s resilience (sometimes requiring difficult cost-risk tradeoffs).
- Debt managers had room to maneuver, adapt, and absorb risk.
- Multilateral funding was critical where international capital markets were closed and domestic investors fled to safer markets.
- Countries with larger, more developed bond markets fared better.
- Crisis highlighted EM’s improved capacity in public debt management.
4. The road ahead
The relative importance of market-based financing continues to grow...

Looking through the economic and market turmoil of recent years:

- Rising proportion of countries are qualifying for more market-based financing (e.g. IBRD)
- Rising relative importance of private capital flows to developing countries

Global country classification by per capita income

Flows from OECD (DAC) to developing countries

Source: World Bank
More and more developing countries across the economic size and income spectrum are tapping global capital markets.

As market development continues and access to market finance rises, LICs’ debt portfolios will increasingly resemble MICs’

<table>
<thead>
<tr>
<th>Year</th>
<th>Debut Eurobonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Indonesia ($1bn), Pakistan ($500m)</td>
</tr>
<tr>
<td>2005</td>
<td>Ecuador ($650m), Vietnam ($750m)</td>
</tr>
<tr>
<td>2006</td>
<td>Fiji ($150m), Seychelles ($200m)</td>
</tr>
<tr>
<td>2007</td>
<td>Ghana ($750m), Gabon ($1bn), Sri Lanka ($500m)</td>
</tr>
<tr>
<td>2008</td>
<td>Georgia ($500m)</td>
</tr>
<tr>
<td>2009</td>
<td>Senegal ($200m)</td>
</tr>
<tr>
<td>2010</td>
<td>Belarus ($600m), Albania (€300m), Jordan ($750m), Montenegro ($200m)</td>
</tr>
<tr>
<td>2011</td>
<td>Nigeria ($500m), Namibia ($500m), Serbia ($1bn)</td>
</tr>
<tr>
<td>2012</td>
<td>Zambia ($500m)*</td>
</tr>
</tbody>
</table>

Source: Bloomberg, Reuters; *Prospective

Source: JP Morgan
Rapid growth of EM domestic debt markets is positive and a sign of success, but comes with challenges.

Source: IMF WEO (April 2012)
Going forward: binding debt stock constraints in advanced economies?

**Government Debt to GDP**

- **Advanced economies**
- **Euro area**
- **Emerging and developing economies**

Source, IMF WEO (April 2012)
Uncertain outlook:
- Ongoing Eurozone debt crisis
- Global imbalances persist
- Heavy volume of government borrowing globally
- Divergent views on resilience of emerging economies

Need to maintain preparedness for market dislocations and seek opportunities to contain risk in public debt portfolios:
- Take advantage of periods of ample liquidity to reduce currency and interest rate risks
- Stress test scenarios and cost-risk modeling need to include potential capital outflows
- Ensure timely and accurate communications with investors and other stakeholders – even more critical when market participants are risk averse
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TREASURY
THE WORLD BANK
Appendix: theory of fiscal policy in a bit more detail, and some references (1)

☐ A simple reason for counter-cyclical fiscal policy (seminal paper by Lucas & Stokey (1983)):
  ☐ No reason to think $G = T$ will always be optimal
  ☐ It is impossible to sustain $G > T$ forever
  ☐ Therefore you will either want to have, or need to have, occasional primary surpluses, $G < T$
  ☐ When? → run surpluses during “good times”

☐ Which should adjust more – expenditure or taxes?
  ☐ Tax changes cause uncertainty → deadweight losses
  ☐ Keynesian models: $G$ has a bigger multiplier effect than $T$

Good reasons to (1) make fiscal policy broadly counter-cyclical and (2) maintain broadly stable taxes
Formal version of these intuitions is **tax smoothing** theory of optimal fiscal policy (Barro 1979; Lucas & Stokey 1983):

- Sustainable public spending is determined by the size of **permanent** tax base (current + PV future tax inflows)
- Implies stable tax rates
- Temporary shocks: borrow or save, don’t change taxes
- “Ricardian equivalence”: tax cut will simply raise debt costs

Requires restrictive assumptions:
- Certainty over the future and infinite time horizons
- Lump sum taxes
- Perfect capital markets

**Theory**: “optimal” fiscal policy is counter-cyclical and – in a perfect world – the only real decision in public finance is how much to spend
Key references

- **Theory of tax smoothing:**
  - “On the determination of the public debt”, Barro (1979)

- **Fiscal policy in developing countries:**
  - “When it rains, it pours: procyclical capital flows and macroeconomic policies”, Kaminsky, Reinhart & Vegh (2004)
  - “On graduation from procyclicality”, Frankel & Vegh (2011)

- **Debt management responses to the financial crisis:**
  - “Public debt management in emerging market economies: has this time been different?”, Anderson, Silva & Velandia (2010)