

# **Special Series on COVID-19**

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# Debt Management Responses to the Pandemic<sup>1</sup>

This note aims to provide guidance on areas in which sovereign debt managers may need to respond to challenges stemming from the COVID-19 crisis. It provides some considerations for addressing strains in situations where a debt manager is faced with sharply increased government financing requirements and borrowing costs, and where sound judgment is needed to distinguish between temporary dislocations and permanent changes. Within these constraints, sovereign debt managers can help cushion a liquidity shock by minimizing near-term liquidity risk, meet rollover needs and support orderly functioning of primary and secondary government bond markets. The note presents a menu of actions that sovereign debt managers can consider in order to adapt to new circumstances.

The COVID-19 crisis presents a challenge for sovereign debt managers. In many countries, debt stresses are likely to exceed past experience across a number of dimensions, including the potential increase in financing requirements, the strain in market functioning, and, for emerging and developing economies (EMDEs), a drop in external demand and capital flow reversals. Sovereign debt managers will need to be prepared to utilize all elements of their crisis playbook, potentially to a greater extent than ever before and apply judgment to navigate carefully between temporary dislocations and permanent changes. The crisis may lead authorities to undertake measures that create a departure from sound debt management practices. In departing from sound practices, debt managers will need to alert fiscal and monetary authorities to the risks brought about by those departures and try to minimize those risks. It is important for policy makers to be clear that any such departures ought to be temporary, be prepared to unwind them as soon as the extraordinary times end and communicate them effectively to market stakeholders.

#### I. ADDRESSING SHORT-TERM LIQUIDITY AND FINANCING NEEDS

Debt managers will likely face significantly increased government financing requirements as a result of policy responses to the crisis, particularly in the near term.<sup>2</sup> In addition to increased financing requirements, a

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<sup>&</sup>lt;sup>2</sup> For a discussion of the fiscal response to COVID-19 that may result in a higher financing requirement, see IMF (2020a), "Managing Fiscal Risks Under Fiscal Stress."

deterioration in market conditions in EMDEs may make it more difficult for issuers to roll over existing debt and meet existing foreign debt service payments that may also have increased due to currency depreciation.

Some countries may face higher financing costs across the maturity spectrum, which cannot be changed through debt management operations. While some advanced economies may experience increased demand for government securities due to their safe haven status, many EMDEs may face a decline in demand for government bonds (especially from non-residents) as a result of higher risk aversion. Market perceptions of credit risk will be driven by higher financing requirements and an anticipated deterioration in the country's debt dynamics. These factors may manifest themselves through:

- increasing central government (CG) financing needs resulting from higher expenditure needs and revenue shortfalls:
- stressed public finance and foreign exchange reserves that create doubts about the capacity of the CG to service its existing debt;
- increased or new financing needs from sub-national governments and state-owned entities;
- the realization of implicit and explicit contingent liabilities, such as calls on government quarantees; and
- potential liquidity runs creating dislocations in the domestic bond market.

Low-income countries (LICs) without access to market financing or with small domestic government bond markets are likely to need additional external financing to cover COVID-19-induced increases in expenditures and in the fiscal deficit. Those eligible for concessional borrowing might seek to accelerate disbursements from official creditors and IFIs, including by accessing emergency-type facilities. Where possible, borrowers can seek to take advantage of the G20 debt relief initiative, which enables countries to enter into a time-bound suspension of debt service payments by bilateral official creditors.

In developing a response to the crisis, countries can also take advantage of technical assistance and capacity building on debt management, which can be provided remotely. Under the Debt Management Facility (DMF), and through bilaterally-supported capacity building initiatives, the IMF and World Bank seek to help countries to strengthen their debt management institutions, processes and capacity to reduce debt-related vulnerabilities.

#### **Revising the Debt Management Strategy and Annual Borrowing Plan**

A significant change in government financing requirements, or in financing costs, is typically a trigger for an immediate revision in the Debt Management Strategy (DMS) and Annual Borrowing Plan. As with all decisions in debt management, this will require authorities to make an appropriate judgement on the appropriate balance between cost and risk. In that context, these decisions are best made through the Medium-Term Debt Management Strategy framework (as set out in IMF-World Bank (2019)). Continuing to situate debt management decisions in the context of a formal DMS will support the debt manager as financing conditions return to a new steady state.<sup>3</sup>

Depending on the nature of the changes to financing plans, an effective response may necessitate addressing legal impediments to potential adjustments in debt management practices. As a consequence, the debt manager may need to secure the necessary authorizations for such changes. While crisis situations can require

<sup>&</sup>lt;sup>3</sup> In addition to the use of the MTDS framework, the debt manager would be expected to provide appropriate input to the government's Debt Sustainability Analysis (DSA).

the suspension of some standard practices, emergency authorizations should not be open-ended and without reasonable limits.

While there may be a need to raise additional financing rapidly, due consideration will have to be given to the key risks embedded in the debt portfolio and the effect that issuance choices will have on portfolio composition. The debt manager will have to consider a range of risks, with a particular focus on interest rate risk, refinancing risk and foreign exchange rate risk, and determine an appropriate tradeoff between them and potential financing costs.

For countries with a well-functioning liquid domestic government bond market, issuance plans will require adaptation to meet near-term financing needs. Given the prospective challenge of raising substantial volumes of financing quickly, as well as meeting near-term redemptions, this is likely to require increased issuance in the most liquid part of the government bond market. Specifically, this would be expected to include increased issuance of debt at shorter maturities, including Treasury bills and short-maturity bonds, potentially at the expense of pre-planned issuance of longer-maturity securities.

Where feasible, countries could seek to address forthcoming redemptions, with a potential commensurate increase in funding cost, by using liability management operations (LMOs), such as debt buybacks or exchanges, to deal with near-maturity securities (both domestic and international). To the extent that market participants are willing to participate in such operations, debt exchanges are preferred to buybacks as a means to swap near-maturity securities for longer-maturity instruments to avoid creating new cash needs.

## **Use of Precautionary Cash Buffers**

Using pre-existing precautionary cash buffers for debt servicing requires careful evaluation of underlying market conditions. While COVID-19-driven financing needs may dwarf most buffers, drawing down precautionary cash buffers may be appropriate as a bridge to a new equilibrium in situations where normal market functioning is anticipated to return within a short period. This necessitates an assessment of whether higher funding costs and/or lower demand for government bonds represent a temporary market dislocation or a longer-term shift in borrowing conditions. Such an evaluation can be informed by market intelligence and an analysis of underlying investor dynamics (domestic and non-resident).

In the event that a decision is made to use cash reserves, they can be used sparingly to signal continued access to market-based financing (to smooth changes to the auction program as the borrowing mix is adjusted or auction sizes are reduced), which, in turn, would be beneficial for financial stability. As a general rule, the use of buffers is advisable only in situations where government debt is deemed to remain sustainable and a return to normal market operations is plausible. If there is a single cash buffer for both debt management and cash management purposes its use must be coordinated with the government's cash manager.

Some countries may also be able to pool excess liquidity available within the public sector during the stressed period. Where there exist excess deposits outside of central government or the Treasury Single Account, there may be opportunities to identify and sweep in additional idle balances to assist near-term liquidity. While the maximum amount of cash consolidation is desirable, a case by case approach will be necessary across potential sources given potential legal restrictions.

# **Avoiding Central Bank Financing**

It is important for country authorities to try to refrain from direct government financing from the central bank as long as possible. Direct central bank lending to the government is a last-resort mechanism and only considered in circumstances where it is not possible to obtain sufficient financing from any other source even at a high cost. Moreover, central bank lending in those special circumstances would be expected to be on market terms (e.g. the central bank participates in primary issuance as a non-competitive bidder to cover possible shortfall vis-à-vis the intended allotment), restricted in time, for the smallest possible amounts (with a maximum limit as a percentage of GDP), and with an explicit repayment plan over the medium term.

If legally permitted, there may be scope for the government to draw on an overdraft at the central bank for cash management purposes to help facilitate debt issuance. However, again, such an arrangement would be expected to be at market rates and be used for seasonal and not structural funding needs, being repaid as quickly as possible within the year. Other market-distortive measures such as the accumulation of arrears on government obligations and forced financing on non-market terms are to be avoided as their costs are likely to outweigh and outlast their benefits.

#### The Importance of Investor Relations (IR) and Market Communication

Enhanced market communication and consultation is essential to ensure the creditor community's understanding of the debt manager's decision-making process. An effective IR function, or good IR practices, can be a vital support to a debt manager in a time of crisis and help countries maintain market access.

More generally, any changes to the issuance approach, in terms of the size of the financing requirement, issuance mix or issuance methods, that are made as a result of the COVID-19 crisis requires explanation and communication to all stakeholders, including the public. This will necessitate the development of a communications plan, as well as ensuring that debt management websites are kept up to date with relevant information. It is important for the government to keep in regular contact with credit rating agencies, who are best kept appraised of the approaches that are planned to manage the crisis.

The crisis presents a clear rationale for debt managers to increase their level of active engagement with formal and informal contacts and consultation with market participants, including primary dealers and end-investors, in order to provide feedback on evolving issuance plans and respond to possible emerging concerns with a goal of maintaining market access. Debt managers will need to be proactive and take the lead on requesting advice from key market counterparties.

#### II. INSTITUTIONAL COORDINATION

Communication and coordination between debt management, monetary, fiscal, and financial sector regulatory authorities is vital during a crisis period, both with respect to policies and specific measures or interventions. Where possible, existing committees and structures can be used for such purposes, but an effective crisis response might involve the creation of new formal and informal coordination mechanisms. While institutional independence needs to be respected, given the different mandates and challenges faced by each authority, it is important for each institution to communicate effectively, form a common view on the overall absorption capacity of domestic financial markets, and analyze the impact of regulatory and liquidity measures that might affect the ability of the sovereign to borrow. In making any changes to regulation and supervision of financial markets and institutions, those concerning the regulatory treatment of government debt will require careful consideration, given the potential to impact the functioning of the primary and secondary markets for government debt.

#### **Fiscal Coordination**

Debt managers are responsible for providing timely and accurate assessments for the fiscal authority of the amount of new debt that can realistically be absorbed by the market. Large volumes of issuance may result in a substantial increase in financing costs and risks of a mismatch between planned supply and demand. In the current circumstances, there is greater emphasis on the debt manager to appraise the fiscal authorities of its ability to raise the required amount of financing. Depending on prevailing institutional arrangements, enhanced coordination with the treasury or cash manager is also critical to ensure timely identification of liquidity needs and adjustment of cash and borrowing plans as needed.<sup>4</sup> This is also the case where a government has in place a sovereign-asset liability management (SALM) framework in place or substantial assets under management.

# **Monetary Policy Coordination**

Significant operational changes to monetary policy or debt management necessitate effective coordination. This applies to both conventional and unconventional monetary policy. For example, potential changes to collateral requirements should be discussed with the debt manager where this could have spillover effects on the pricing and liquidity of government securities. To the extent that the central bank is undertaking, or plans to undertake, unconventional monetary policy measures (for example, issuance of central bank securities, or direct purchases of government bonds), coordination with the government debt manager is essential to mitigate, and ideally avoid, conflicts between the two policies.

#### Potential New Roles and Responsibilities for the Debt Manager

Debt managers may be asked to assume new responsibilities. The policy response to the COVID-19 crisis may include new modalities of public intervention in the financial sector and broader economy, including the provision of guarantees. Where the debt manager has relevant expertise, particularly in the context of financial sector interventions, the government may decide to allocate some of these responsibilities to them. Early engagement by the debt manager on its potential involvement in wider government interventions will facilitate the smooth adoption of new responsibilities.

#### **III. PRIMARY MARKET: NAVIGATING VOLATILE FUNDING CONDITIONS**

Sovereign debt managers are likely to need to modify their domestic issuance mix, in terms of both securities and methods.<sup>5</sup> Depending on market conditions, demand may evaporate quickly, particularly for longer maturity instruments. This may be particularly pressing for countries with a large share of nonresident investors, who may pull back from the market quickly.

There is a clear trade-off between flexibility and predictability in debt management. Where debt managers seek to increase their flexibility of financing in response to a crisis, including by providing less notice of issuance to the market, it is important for them to communicate these strategic changes to issuance approaches, including by situating such changes within an operational framework with well-defined parameters in order that market participants can continue to understand the issuer's decisions and react accordingly.

<sup>&</sup>lt;sup>4</sup> See IMF (2020b) "Government Cash Management under Fiscal Stress."

<sup>&</sup>lt;sup>5</sup> For a detailed discussion of the debt management response to the Global Financial Crisis (GFC), including country-specific examples, see IMF (2011), "Managing Sovereign Debt and Debt Markets through a Crisis — Practical Insights and Policy Lessons".

### Aligning Borrowing Programs with Market Demand and Monitoring the Investor Base

In difficult market conditions, increased outreach is necessary to align borrowing programs with market demand. Communication with domestic and non-resident investors can be enhanced to assess demand, and flexibility is likely to be necessary from authorities in being prepared to modify their financing program to tap into demand when it surfaces: implying increased ad-hoc auctions and liability management operations. Ideally, financing operations should remain competitive and open to all market participants, with private placements of securities avoided if possible, given the impact on market liquidity and pricing.

Aligning issuance with market demand, with regular feedback from market participants, is critical to help minimize the risk of auction failures. However, higher market volatility and uncertainty make uncovered or failed auctions more likely in crisis times. Preparing in advance for such an eventuality, including developing mechanisms for addressing financing shortfalls and dealing with unsold securities, will facilitate a quick response to such an outcome and help to present quickly a consistent message to external counterparties, helping to support market confidence.

Given current circumstances, there is a greater need for debt managers to pay special attention to monitoring their investor base. This applies to both domestic bank and non-bank holders of securities, and particularly those of non-residents. In this regard, investor dynamics and effective market risk transfer are especially important. Mitigation measures could include buyback or exchange transactions to provide for price discovery (see below) to reduce market pressures, taking into account the need to manage cash resources effectively. If market pressures created by the exit of resident and non-resident investors are extreme, debt managers will need to inform the fiscal and monetary authorities. In the event that pressures from the exit of non-resident investors result in crisis or near crisis circumstances, there will be a need for debt managers to consult with the fiscal and monetary authorities, who, if necessary, may in turn evaluate the scope for capital flow management measures (CFMs). The appropriateness and design of CFMs is highly country-specific and are best considered in the context of the IMF's Institutional View on Capital Flows in Practice (2018).

For those countries that have issued securities in international markets, effective risk management requires debt managers to continuously assess their ability to finance, and refinance, in those markets. For those with large forthcoming Eurobond redemptions, engaging early with banks that are potential lead managers for refinancing such instruments is recommended. In instances where rolling-over maturing international debt is seen as difficult, the debt manager and central bank will find it necessary to discuss the potential implications of forthcoming redemptions for international reserves and the exchange rate. In this context, it is a good opportunity for debt managers of countries with contingency credit lines to make sure that existing borrowing documentation is up-to-date and credit lines available in case of stress (including bilateral swap facilities from multilateral and bilateral entities). Where possible, countries with undisbursed loans from official or multilateral creditors can actively seek to speed up their loan utilization (especially in the context of non-project loans).

#### **Modifying the Issuance Mix**

A rebalancing of issuance towards shorter maturity instruments will need to take into account the financial sector's needs. Given the typical higher liquidity at the shorter end of the market, it might be expected that issuers choose to lower the amounts offered at longer maturities, with a possible introduction of new shorter tenor securities, depending on the circumstances. In this case, consultation with the central bank will provide pertinent information on the demand for short-term instruments by commercial banks (e.g., for use as collateral in repo transactions). Other reasons for concentrating on issuance of short-dated securities include difficulty in pricing the risk of longer-dated instruments and a lapse in demand from institutional investors. That said,

countries facing significant refinancing risk from a debt structure already tilted to the short term may have to undertake maturity extension operations to create near-term borrowing space.

Debt managers may wish to consider the issuance of new instruments where opportunities to issue existing types of securities becomes more difficult. This could include moving from the sale of fixed to floating rate securities or considering the sale of instruments denominated in foreign currency. It is important that such decisions are taken in the context of a medium-term debt management strategy framework, given the cost and risk implications of such changes for the overall debt portfolio. In addition, any decisions around new instruments will need to take into account the preparatory work required and the potential time-lag to first issuance.

The pandemic may also generate interest in the issuance of securities earmarked for health expenditure or relief responses. Particular caution is warranted in creating and issuing such earmarked instruments, as doing so may result in market fragmentation, lower liquidity and higher financing costs. Likewise, the introduction of products targeted at retail investors may have unintended consequences for financial stability if it results in a substantial reallocation of deposits from the banking sector. A better approach is to provide greater clarity on the use of debt financing for health and relief responses rather than creating earmarked instruments that may limit the government's flexibility.

#### **Adapting Issuance Techniques**

A modification of the auction calendar, e.g., an increase in the frequency of auctions, use of special auctions (mini-tenders) and use of syndications can also be considered to broaden the pool of buyers. In countries with relatively illiquid secondary markets, primary market rates will tend to be regarded as a market reference (or benchmark). In these cases, having well-subscribed competitive auctions will be important to prevent episodes of mispricing caused by limited auction participation. Where there is greater uncertainty over pricing, it may be beneficial for debt managers to consider switching from competitive to uniform-price auctions. In addition to adjusting the maturity of instruments on offer in line with expected demand, issuance mechanisms such as syndications may be preferable for launching new bonds. The book-building process lowers the risk of a bad outcome as it provides the debt manager with more control over the transaction and greater flexibility. In some instances, additional financing may be mobilized through greater use of non-competitive facilities for primary dealers or through tap sales of non-benchmark issues.

#### IV. SECONDARY MARKET MANAGEMENT: ADDRESSING MARKET DISLOCATION

In addition to meeting larger financing needs and addressing short-term liquidity problems, sovereign debt managers may need to actively engage in domestic market management operations as a result of COVID-19. Large movements in secondary market yields, shortages of collateral, or stress at specific points in the yield curve may require active intervention by the debt manager. Responses to market dislocation would have to be tailored to the specific situation. Debt managers may find that they need to intervene in the market to buy-back or exchange specific securities that have seen a significant exit of investors and, conversely for those securities that have been subject to potential squeezes, issuers may seek to issue as appropriate, or utilize existing or new securities lending facilities, to ease market dislocation. Where appropriate, such interventions require coordination with the central bank.

#### **Use of Market Management Tools**

Sovereign debt managers will need to undertake an evaluation of whether their existing set of market management tools is adequate to address possible situations of distress. In particular, debt managers may consider the feasibility of using, or expanding, securities lending facilities as a means to manage market dislocations without compromising their funding approach. Relaxation of market making obligations of primary dealers, e.g., widening bid-ask spreads, reducing minimum quoting requirements, and minimum primary and secondary market shares, may also be necessary to maintain liquid markets and support price discovery.

Buybacks in some segments of the yield curve may help alleviate temporary market pressures, noting that such operations necessitate cash resources, where emergency spending takes priority over market interventions. Debt managers with access to a cash buffer (or an option to tap into public sector funds, ideally on market terms), can partially redeem maturing debt in cash or repurchase existing debt at market prices. This is suitable only if it provides a path towards returning to normal funding conditions as soon as possible. Caution is required in engaging in significant net buyback operations during times of high market uncertainty.

Other measures may also be required to alleviate problems with market liquidity. These may include changing the volume of securities available through securities lending programs and close coordination with central banks to amend collateral policies that influence liquidity premiums.

Use of any market management tools requires appropriate communication with market participants. Given the potential of misunderstanding arising from the debt manager's intervention in the domestic debt market, the use of market-management arrangements and their distinction relative to funding operations has to be well explained and extensively communicated to market participants, central bank and regulatory authorities.

#### V. MONITORING OTHER RISKS: CONTINGENT LIABILITIES

Enhanced monitoring of existing contingent liabilities is critical during crisis periods. With increased financing requirements arising from COVID-19, the crystallization of existing contingent liabilities could significantly add to the stock of debt liabilities and increase near-term debt servicing costs, placing further pressure on available liquidity. Monitoring of existing liabilities, including their debt servicing profile, is critical at this time. This presents an opportunity for the debt manager to assess the adequacy of current recording of contingent liabilities, including guarantees, ensuring that their respective triggers are properly understood and taken into account when undertaking financing or cash flow forecasting exercises.

Debt managers will also need to take into account the potential impact of any new contingent-liabilities entered into as part of COVID-19 response and their potential impact on future cash and debt liabilities. Risks relating to exposures that may arise from government offers to guarantee the debts of private sector entities, sub-central governments and state-owned enterprises will warrant analysis and monitoring.

Given the primary responsibility of the debt manager to raise finance for the government, extensive monitoring of contingent liabilities may be difficult in the context of capacity constraints during a crisis period. In that context, monitoring large liabilities, or those likely to crystallize, should be prioritized, and undertaken in conjunction with other parts of government, including fiscal risk units, where operational.

#### VI. SUMMARY: AN ACTION PLAN FOR CRISIS RESPONSE

Drawing together the issues discussed within this note, key elements of a crisis response can include the following actions:

- Address immediate liquidity risks: in close cooperation with the cash manager/treasury function
  identify potential areas of liquidity risk: short-term cash needs, revenue shortfalls, debt servicing needs,
  unexpected cash needs from SOEs, sub-national entities or triggers of continent liabilities.
- Coordinate within government: coordinate with fiscal, monetary, regulatory and other relevant internal partners to identify and prioritize key challenges.
- Consult with external stakeholders: consult with external stakeholders to understand market risk
  appetite, or work with official creditors and IFIs as appropriate to access additional financing resources.
- Revise the Debt Management Strategy and Borrowing Plan: using the debt management strategy framework, make changes to the issuance strategy, adapting the issuance mix and methods as appropriate.
- Use market management tools where possible: support the secondary market through the use of relevant market management tools, whilst stewarding cash resources effectively.
- **Enhance risk monitoring:** undertake increased monitoring of the debt portfolio and contingent liabilities.
- Communicate proactively: communicate with external stakeholders on all changes to issuance plans, market practices and financing strategy.
- Be responsive and adapt plans as appropriate: recognize that financing plans may need further revision or adaptation as market conditions change.

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# **ANNEX 1. Debt Management Responses to the Global Financial Crisis**

The following tables are reproduced from IMF (2011), which summarizes the operational response of those debt managers with market access to the crisis. It present a cross-country sample of actions taken. This generally involved three broad approaches: (i) changing the issuance mix; (ii) adapting financing methods and (iii) stepping up market management operations.

**TABLE 1. Advanced Economy Responses** 

Country	Adjusted instrument mix	Adapted primary issuance technique	Steps to support market functioning	Other noteworthy developments
Belgium	Introduced an EMTN program in 2008; initially increased issuance of short-term instruments (including in FX).	Increased tapping of long- term debt. Increased proportion of syndication and private placements (including through greater issuance of State notes and BTBs). Temporarily doubled number of auctions in first half of 2009.	Adapted primary dealers quoting obligations, initially under the provisions for exceptional market circumstances but then moved to a permanent adoption of a peer performance measurement.	Treasury made responsible for administering State guarantees of banks; regular meeting of a monitoring committee established to assess the risk that the guarantees will be called.
Germany	Increased tapping of long-term debt; increased foreign currency issuance.		Maintains a continuous presence in the secondary market that allows it to mitigate temporary market dislocations on an ongoing basis.	
ltaly		In the uniform price auctions the Treasury moved from announcing a fixed size to be issued to an issuance range. The width of this auction range is calibrated according to market conditions.	Off-the run bonds offered as a response to highly volatile market conditions. The timing of reopening of bonds to PDs at noncompetitive prices also extended.	
U.K.	Initially increased the proportion of short-term instruments but has subsequently	Introduced a post- auction option facility (PAOF); introduced mini-tenders to supplement the core	Partnered with the Bank of England on implementing the Special Liquidity Scheme; coordinated	Coordinated with the U.K. Treasury on the implementation and operation of the credit guarantee scheme

	refinanced these with long-term bonds.	auction program; increased the proportion of issuance through syndication.	with the Bank on the bond purchase scheme.	and asset-backed guarantee scheme for banks.
U.S.	Reintroduced the 3- year tenor; initially increased the proportion of short- term instruments; from 2009 has increased the proportion of inflation- linked and longer tenors.		Coordinated with the Federal Reserve on the bond buyback program.	Coordinating with the Federal Reserve on the management of the toxic assets acquired from AIG and Bear Stearns.

**TABLE 2. Emerging Market Responses** 

Country	Adjusted instrument mix	Adapted primary issuance technique	Steps to support market functioning	Other noteworthy developments
Brazil			Engaged in ad hoc debt buybacks and exchanges. Introduced regular buy-back program of longer-term fixed-rate bonds.	
Hungary	Stopped issuing long- dated fixed rate bonds; introduced floating-rate notes; introduced new inflation-linked instrument targeted at retail investor; increased proportion of FX issuance.	More flexibility in the amounts offered and in the auction calendar (bi-weekly bond auctions with dates but without tenors in calendar). Noncompetitive auction facility introduced.	More frequent buy- back auctions, particularly in longer- dated bonds. More frequent reopening/ taps of off- the-run bonds.	Introduction of direct, regular meetings with institutional investors.
Korea	Stopped issuance of inflation-linked bonds; initially limited issuance of long-term bonds.	Single price format of auctions was changed to a multiple price format.	Offered buy-back facility for inflation-linked instruments. Conversion offers also introduced.	
Mexico			Engaged in market management operations through	

			buybacks and debt exchanges.
Turkey	Initially reduced issuance of nominal fixed rate bonds; introduced innovative revenue-linked bond to broaden the investor base; subsequently introduced a new 10-year fixed rate bond (2009).	Revenue linked bond sold through private placements.	Increased scale of debt exchange program, i.e. bonds made available to primary dealers for switching at time of new issues.