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Debt Markets: Policy Challenges in the Post-Crisis Landscape

by

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Discussions at the 11th OECD-WBG-IMF Global Bond Market Forum focused on four key areas: i) the impact of crisis-related measures and the potential implications of exit; ii) the measurement of sovereign risk; iii) the determinants of investor demand; and iv) debt managers' response to the crisis.

Overall, participants felt that the steps taken to stabilise financial conditions had generally been effective and that conditions in financial markets were normalising. However, discussions highlighted a number of ongoing risks including: i) while credible consolidation plans were needed, fiscal and monetary policy would be tightened too soon; ii) managing investor uncertainty would prove critical in managing risk in the near-term; and (iii) regulatory changes might lead to a deterioration in conditions in primary and secondary markets and otherwise aggravate the challenges facing debt managers.

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I. Introduction

On 8-9 April 2010, the OECD, World Bank Group and IMF convened the 11th OECD-WBG-IMF Global Bond Market Forum in Washington D.C. Debt managers and central bankers from 23 advanced and emerging market economies came together with private sector representatives to discuss the post-crisis outlook for government bond markets. Discussions focused on four key areas: *i)* the impact of crisis-related measures and the potential implications of exit; *ii)* the measurement of sovereign risk; *iii)* the determinants of investor demand; and *iv)* debt managers' response to the crisis.

This note provides a summary of the discussions. To inform and stimulate discussions, a background note was prepared by IMF and OECD staff and circulated to participants in advance (see Annex).

Overall, participants felt that the steps taken to stabilise financial conditions had generally been effective and that conditions in financial markets were normalising. However, discussions highlighted a number of ongoing risks including: *i)* while credible consolidation plans were needed, fiscal and monetary policy would be tightened too soon; *ii)* managing investor uncertainty would prove critical in managing risk in the near-term; and *iii)* regulatory changes might lead to a deterioration in conditions in primary and secondary markets and otherwise aggravate the challenges facing debt managers.

II. The impact of crisis-related measures and implications of exit for bond markets

Meaningful improvement in market conditions

Some participants felt that there had been a meaningful improvement in market conditions. A number of market indicators such as Libor-OIS spreads, credit spreads and credit default swaps had normalised, and some central banks – for example, the Federal Reserve Bank of New York – were beginning to unwind some of the liquidity measures and asset purchase programs introduced at the height of the financial crisis. While some participants noted that there was now some upward pressure on interest rates, overall this pressure was range-bound.

Transition to higher yields with possible volatility in front-end yield curve pending recovery

However, some words of caution were also noted. In particular, 2010 would be a period of transition to higher yields, which could be tricky to navigate. While long-term expectations are relatively well anchored, some volatility might be expected in the front end of the yield curve until the economic recovery becomes fully embedded.

Company managers more optimistic than analysts

Nevertheless, there was a clear sense that the economic recovery is moving from fragile to sustainable. Interestingly, it was reported that CEOs and company managers appear to be more optimistic than analysts at this particular juncture. There has been an enormous amount of restructuring in the corporate sector and productivity gains are beginning to emerge. Fixed costs have been shed and labour costs have been more flexible; consequently, profits are improving, despite little change in the top line revenues.

Other participants were less sanguine and cautioned that conditions might actually become more challenging in two to three years – at which point the corporate sector will likely need to return to capital markets and most of the government guaranteed debt will mature. It was also pointed out that, while access to credit had generally improved, there were clear difficulties for small and medium enterprises (SMEs) and smaller financial institutions. Another particular area of concern was the asset-backed securities (ABS) market, where the recovery is still fragile and might stall once specific support measures are withdrawn.

Withdrawal policy stimulus and sovereign risk biggest concerns for investors

Possibility that financial crisis might evolve into a sovereign debt crisis

The withdrawal of the policy stimulus and sovereign risk were singled out as the two biggest concerns for investors over the next six months, whereas inflation was thought to be the least relevant. A number of participants focused on sovereign risk and the possibility that the financial crisis might evolve into a sovereign debt crisis. The public sector overreliance on short-term debt was highlighted with nearly a third of the US government debt falling due in 2010 and government guaranteed debt also weighing adversely on redemptions over the next two years. In contrast, despite the significant pick-up in net issuance, the position of the UK was deemed more favourable owing to the very long average maturity of its debt and the role of its domestic pension fund base. Participants expressed concern on the outlook for Greece and the risk of contagion to other sovereigns in the euro area and stressed the need of a prompt policy response.

Both timing of exit and credibility of fiscal consolidation of critical importance

The debate also addressed the issue of the timing and speed of exit. There was clear recognition of the need for fiscal consolidation and a reversal of monetary accommodation in the medium term, but participants cautioned against removing the economic stimulus too rapidly. In particular, it was highlighted that the lack of credibility in fiscal consolidation plans and in the course of monetary policy may have to bear an undesirably heavier adjustment burden.

III. Measurement of sovereign risk

Key challenges in measuring full extent of sovereign risk

This session discussed some of the key challenges in measuring the full extent of sovereign risk. In particular, it considered the approach and information content of different indicators of sovereign risk, and discussed whether investors had sufficient information to make a fully informed assessment. It also focused on the issue of investor behaviour and whether investor sentiment was being driven more by rumour and fear than by a careful assessment of underlying fundamentals. In that context, the issues of information dissemination and investor relations were also discussed.

No one sovereign risk indicator wholly satisfactory

The discussion highlighted a range of indicators that attempt to capture sovereign risk – from macroeconomic to financial to credit ratings. Participants generally felt that, while all had some strengths and weaknesses, no one indicator was wholly satisfactory. In particular, users needed to understand what each indicator was actually capturing as not all are intended to measure the same thing and some indicators would be influenced by factors

CDS spreads influenced not just by fundamentals

Notion of sovereign risk should be broader than expected risk of default

outside the scope of others. For example, while both credit ratings and credit default swap (CDS) spreads reflect the expected risk of default, the fact that CDS spreads are influenced not just by economic fundamentals but also by market factors of demand and supply means that there may be times when these indicators give conflicting messages. Also, the notion of sovereign risk should be broader than the specific notion of expected risk of default. For example, some participants noted that sovereign risk was not just an issue of longer-term debt sustainability but also of whether governments could readily finance themselves in the shorter term, *i.e.* the importance of liquidity and solvency was highlighted. In that respect, some participants expressed concern that, in volatile markets, multiple equilibria could exist and uninformed or irrational investors could move the market to an alternative, more detrimental, equilibrium where yields become so high that this would effectively lead to a self-fulfilling negative outcome.

Authorities should provide relevant, timely and quality information

However, while the need for authorities to facilitate a broader approach to measuring sovereign risk was strongly voiced, participants did not recommend that the authorities take a more prescriptive approach and endorse a specific model or approach. Instead, the authorities should ensure that they provide relevant, timely and quality information, *i.e.* the inputs to any model, but let investors and other stakeholders determine the approach that best suited their individual needs. Overall, participants noted that models, by their very nature, would always be wrong; consequently, having access to a range of information is helpful, provided it is used judiciously.

Concerns investors might be overly influenced by media coverage …

leading to increase in risk of contagion

There was some discussion of whether investors were becoming more discriminating and focusing more on underlying fundamentals, with some participants noting that investors appeared to be taking a more comprehensive approach to assessing sovereign risk. For example, the range of questions from investors was becoming more extensive, covering basic debt indicators through to the medium-term fiscal and economic outlook, demographic issues and the extent of contingent liabilities. Others, however, voiced concern that investors were generally not well versed in fixed income products, and may be moving into inappropriate investments, with the risk that this might destabilise the markets when they realise their mistake and need to readjust portfolios. In addition, there were some concerns that investors might be overly influenced by media coverage and make rapid decisions without a full assessment of the underlying facts. This behaviour would increase the risk of contagion, and is particularly challenging for the authorities to manage.

Strong and consistent message on fiscal consolidation needed …

At this juncture, participants recognised the need to restore market confidence by adopting credible fiscal consolidation plans. However, establishing credibility would prove the key challenge and the authorities need to deliver a strong and consistent message on that consolidation. In that context, some participants drew parallels with the experience of emerging markets in the 1990s where, in order to establish credibility with the markets, policy makers had to effectively overshoot the required policy response, with a consequent slower recovery in growth. Some participants highlighted the danger that policy makers would feel compelled to tighten fiscal policy too early, cutting the economic recovery off before it was fully embedded. The *while avoiding too early fiscal tightening*

challenge of ensuring political commitment to fiscal consolidation was also recognised as a risk, with the political timetable in Europe highlighted as a particular challenge. This political channel should also be incorporated in any assessment of sovereign risk.

Managing investor and market uncertainty a key priority for near future

Overall, managing investor and market uncertainty was identified as a key priority for the near term. While some responsibility rests with the broader fiscal, monetary and regulatory authorities, debt managers play an important role in filtering key information used by investors and other market participants in assessing the degree of sovereign risk.

IMF, OECD and WB to develop a reporting template for sovereign risk

In this respect, a number of participants called on the multilateral institutions to develop a standardised but comprehensive reporting template, with clear definitions for key indicators (*e.g.* a common definition of average time to maturity).

IV. The determinants of investor demand

Post-crisis, there was clearly a large supply of high-quality paper in the market but also sufficient underlying liquidity and demand to purchase it. In the US, banks and pension funds were long on cash and looking for quality investments. As the Federal Reserve divests its holdings, it will provide additional high-quality investment outlets. However, at present, banks are looking to remain within two-year maturities as they do not want to risk having to use the discount window.

Nature of crowding out seems to have changed

Significant changes have occurred regarding concerns relating to crowding-out effects between mature market and emerging market issuers. The nature of crowding out seems to have changed: the pre-crisis division of the investor base between those interested in mature and in emerging market countries has been replaced by distinctions based on whether a country is investment or non-investment grade.

Credit quality key factor determining flow of money, followed by liquidity

Credit quality has become the key factor in determining cross-border investment flows, with liquidity consideration a close second. The evaluation of investment opportunities has become more country specific and more rigorous. In addition, the view that emerging market countries could pose a higher risk than mature markets has shifted, as many EMCs are recording strong and sustainable growth rates.

Capital flows to emerging debt markets rebounded

Many emerging market issuers faced financing challenges during the peak of the crisis as investment flows abated. However, capital flows to emerging debt markets have been rebounding, in some cases on a rapid basis. The Forum discussed the consequent risks this can raise for recipient countries. This is currently more an issue for equity than debt markets as inflows into equity markets have risen considerably, creating concerns about currency pressures. Some countries are starting to think about, or have reintroduced, capital controls to reduce the impact from these flows. Countries with deeper local bond markets and a strong domestic institutional investor base appear to have been able to withstand the macroeconomic spillovers of these significant inflows.

Withdrawals of QE programs, clearly announced and done gradually

The Forum also discussed the impact of using and withdrawing quantitative easing (QE) programs. Views were mixed on what will happen as these policies are unwound. There was a cautionary note expressed at the Forum that a lack of clarity could disrupt the market recovery process and that the withdrawals should be announced clearly and done gradually.

Concerns about impact of new financial regulations

Another strong concern is related to the ongoing reform of financial regulations. While the need to strengthen bank regulation was accepted, the Forum felt that regulators and other policy makers should keep in mind the broader capital market implications. For example, too severe liquidity and capital requirements would constrain the ability of banks to extend credit at a pace and at amounts needed to sustain economic growth and recovery.

Role of good debt management practices in moulding investor demand

The Forum emphasised the role good debt management practices can play in moulding investor demand and expectations. In an environment focused on credit quality and liquidity, with more attuned and engaged investors, there are several actions debt managers can take to attract investor interest. In this context, effective market communication was the most important element. Debt managers need to communicate their issuance plans, quality data on the broader macro and microeconomic factors, and relevant aspects of structural reforms that may affect market confidence.

Debt managers addressing liquidity concerns

In addition, to address liquidity concerns debt managers may want to consolidate benchmarks at different maturities along the yield curve, reduce fragmentation of instruments, and search for effective mechanisms to place large benchmarks with a diversified pool of investors who can support liquidity of these securities. Syndications (followed by re-openings through auctions) are already being used in several countries.

Distinction between foreign and domestic issues less evident

The Forum also noted that the distinction between foreign and domestic issues is less evident today. Domestic bonds are being bought by foreign investors and externally issued bonds by domestic investors. The key is how well the domestic market functions and whether it provides the same degree of legal and operational certainty relative to external markets.

Investors need high-quality information

Given the increased focus on individual sovereign credit risk, investors need to have and use better information and analytics to make appropriate investment decisions. Investors need quality information if they are to be more discerning about credit standings. Discussants felt that there is too much, rather than too little, information, and that ratings are not a panacea, as one piece of information is simply too incomplete.

Two challenges: (a) packaging information in usable way; (b) getting investors to use the information

Two particular challenges are making information available in a usable manner and getting investors to use the information. There was a view that investors are failing to fully evaluate investment options. A few Forum members felt that some institutional investors are locking themselves into positions that will cause problems in two to three years when rates are likely to rise. They will be holding the wrong types of securities and may find it difficult to exit from them.

V. Responding to the crisis: Changes in primary and secondary market procedures

How did debt managers cope with impact of global crisis?

Against the backdrop of a strong increase in sovereign risk associated with the most virulent financial crisis on record, the 2007-2009 global financial crisis, the session on "*Changes in Primary and Secondary Market Procedures*" reviewed experiences with public debt management by discussing how public debt managers coped with the impact of this global shock in the form of various policy responses in primary and secondary markets.

Circumstances were at times unprecedented

Less successful auctions can best be interpreted as "single market events"

Future could be more challenging

Debt managers reported that issuance conditions have worsened in some markets, with reports about weaker demand at auctions, leading to postponed, failed or cancelled auctions. Thus far, however, these less successful auctions can best be interpreted as "single market events" and not as unambiguous evidence of systemic market absorption problems. However, there was broad agreement that the future trend could be more challenging for the execution of borrowing programs, given that rising issuance is occurring hand in hand with increasing overall debt levels. These tougher issuance conditions, as well as conditions of overall financial instability (affecting the functioning of primary dealers), are the principal reasons why existing issuance procedures, primary dealer arrangements and portfolio management strategies have not always been working as efficiently as before the global financial crisis. Sovereign issuers had to operate in circumstances that were at times unprecedented.

Serious liquidity pressures also in secondary markets

There were also signs of serious liquidity pressures in secondary markets. Consequently, the information value of the yield curve of government bills and bonds became less reliable. Moreover, in several markets interbank trading (almost) disappeared. This in turn affected the market-making capabilities of primary dealers, transforming quote-driven markets into order-driven ones. Nonetheless, at the peak of the crisis in 2008, primary markets for government paper continued to function reasonably well, even in countries that were facing a major local banking crisis. As a result, during the crisis, auction results were the best sources of price discovery. However, in countries with extreme market turmoil, operations were for some time restricted to T-bill issuance while T-bond auctions were suspended. In almost all markets, the issuance of short-term debt increased significantly. Debt managers pointed out that this shift to short-term paper was driven by the need to raise significant funds at very short notice and at lowest borrowing costs. For example, many debt management offices (DMOs) had to raise funds at very short notice, which were used for capital injections or for recapitalisation operations of nationalised, insolvent banks.

Issuance of short-term debt increased significantly

DMOs introduced changes in issuance procedures and techniques…

As an additional response to the crisis, and associated tougher issuance conditions, DMOs introduced changes in issuance procedures and techniques in primary markets. This type of policy response may have led to a somewhat greater diversity of primary market arrangements and portfolio management procedures.

driven by four factors

Debt managers identified four important influences of the financial and economic crisis on changes in borrowing strategies and sovereign risk in the OECD area. First, borrowing requirements and sovereign debt increased very rapidly, both in response to banking crises and the subsequent economic crisis. Second, liquidity conditions tightened initially, while there was a strong increase in demand for safe assets by many categories of investors. Ironically, later (starting with the recent Greek sovereign crisis), some of these "safe" sovereign assets came to be considered risky! Third, policy responses by central bankers and debt managers improved significantly liquidity conditions. Moreover, non-conventional measures by central banks[1] increased strongly the demand for government paper. Fourth, in countries with extreme turmoil, borrowing operations were for some time restricted to T-bill issuance, while T-bond auctions were suspended.

Changes in borrowing strategies in terms of maturity, currency and type of instruments

But DMOs remain committed to the minimisation of borrowing costs

These influences had been forcing debt managers to change or modify their borrowing strategies in terms of maturity (shorter), currency (an increase in foreign liabilities[2]) and type of instruments (more bills and notes). The response to crisis-related uncertainty also resulted in somewhat more opportunistic issuance programs. To some degree this is reflected in changes made in issuance procedures and techniques, such as more frequent auctions with an extra supply of short-term debt, notably bills.[3] More opportunistic borrowing programs created a greater need for good communications with the market but also for better communication procedures between DMOs and central banks (CBs). Although fund-raising strategies have become more flexible and somewhat more opportunistic, debt managers remain committed to maintaining a transparent debt management framework so as to minimise medium-term borrowing costs.

Response by DMOs to global crisis successful

All in all, the response by DMOs to the global crisis was considered fairly successful. But the situation can deteriorate rapidly, as evidenced by the sharp increase in both Greek borrowing costs in April-May 2010 and contagion risk. The Greek experience also demonstrates the importance of sound crisis management (including sending clear policy messages and maintaining good communication channels with the market) and a credible fiscal outlook.

Recent Greek problems show importance of sound crisis management

Looking ahead, debt managers confirmed that they continue to face dramatically increased borrowing needs.[4] As a result, sovereign issuers all over the world are facing increased competition in raising funds from markets, leading to higher expected borrowing costs. The rapid and massive surge in government issuance can be expected to push the prices of sovereign debt downs and yields (further) up. The issuance challenges for many DMOs are compounded by increasing debt levels – a trend already visible prior to the crisis.

At the time of the Forum meeting (in April 2010), the increase in longer-term rates was still quite muted as the savings rates of households and companies are relatively high in most advanced countries. However, over time, when the recovery gains further strengths, this is likely to change. Delegates noted that, indeed, a looming additional challenge is the risk that when the recovery gains traction and risk aversion fall further, yields will start to rise.

Policy conclusions include opportunities for improving policies and procedures

The discussion with participating debt managers resulted in the following policy conclusions. First, the crisis has created opportunities for improving policies and procedures. Some emerging market countries noted in this context that previous crises had encouraged the implementation of sound financial policies and a strong financial infrastructure. This situation helped them cope with the current crisis.

Need for more flexibility during crisis, while ensuring better communication

Second, during a crisis more flexibility is normally needed (for example, in terms of primary and secondary market procedures and practices). However, strong communication channels between DMOs, CBs and markets become even more important than during normal circumstances. The inevitable decrease in predictability associated with more flexibility can be compensated to some degree by ensuring better communication signals. A similar argument can be made for more transparent policies and procedures.

Possible broadening mandate of debt managers

Third, there are indications that it may be necessary (or beneficial) to broaden the mandate of debt managers by giving them the authority to engage in the smoothing of markets or to contribute explicitly to financial stability objectives. For example, it was noted that some countries have been engaged in massive front-lending operations to create big cash positions. These cash reserves acted as market signals that were considered beneficial from a financial stability perspective.

Maintaining markets, even when issuance not necessary …

Fourth, debt managers from former budgetary surplus countries noted the importance of maintaining well-functioning government securities markets, even when issuance was not strictly necessary. Re-entering the market during the crisis is very hard and may ultimately be very costly.

and maintaining good contacts with investors

Fifth, maintaining good contacts with domestic and foreign investors is important under all circumstances, but even more so during crisis periods. During a crisis one can normally observe an increase in home bias, especially in the countries of smaller issuers (with many foreign investors buying more debt from larger issuers).

ANNEX: BACKGROUND NOTE

DEBT MARKETS IN THE POST-CRISIS LANDSCAPE[5]

In response to the worst crisis since the 1930s, governments have provided substantial support for aggregate demand and for the financial sector. Sovereign balance sheets have expanded, fiscal balances have deteriorated and government debt has increased sharply. Critically, crisis-related interventions have also led to a significant rise in sovereign contingent liabilities that are not captured by traditional measures of fiscal risk. This note focuses on: i) key challenges facing bond markets as a consequence of the exit process; ii) the extent of the rise in sovereign risk and its pass through into government bond yields (and spreads); iii) the potential impact and general outlook for investor demand; and iv) how debt managers have adapted primary and secondary market procedures in response to the crisis.

Introduction

The financial crisis was characterised by significant reduction in liquidity in funding markets, accompanied by a noticeable increase in market uncertainty and global risk aversion. While conditions in markets began deteriorating in July 2007, it was the failure of Lehman Brothers in September 2008 that led to a sharp intensification of these factors (see Figures 1-4).

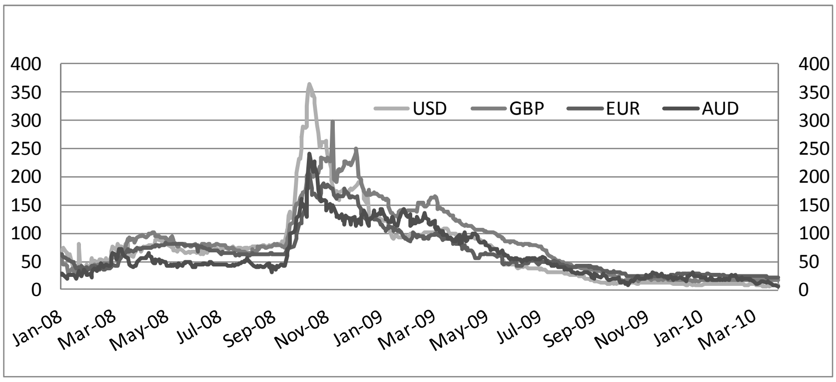
To help restore confidence in financial markets and normalise credit conditions, policy makers made a wide ranging series of interventions. These included: i) unprecedented amounts of liquidity injections; ii) credit and quantitative easing through purchases of credit instruments (such as commercial paper and corporate bonds) and government securities or through various collateralised funding facilities; iii) guaranteeing bank liabilities; iv) injecting capital into financial institutions; and v) in some cases, introducing schemes to relieve banks of their impaired assets.

While these actions did lead to an expansion of public sector balance sheets, they appeared to have helped restore calm to financial markets, with a marked improvement in general market conditions evident from early 2009. In particular, efforts to provide liquidity through modifications to central bank monetary policy operational frameworks to i) lengthen the tenors of monetary policy operations, ii) provide access to a broadened set of counterparties, and iii) extend the pool of eligible collateral have relieved tightness in money markets (see Figure 1). These operational changes have supported the general bias towards looser monetary policy.

Similarly, credit conditions appeared to have improved. Yields fell to historic lows and remain at relatively low levels (Figure 2). Credit default and swap spreads narrowed significantly. In addition, banks maintained access to wholesale funding markets, with sustained issuance of medium-term debt securities (Figure 5). Here, the reliance on the guarantee facilities is notable, with guaranteed issuance accounting for close to ¾ of total issuance in 2008 Q4 and 2009 Q1. In particular, the impact of the government guarantee on bank bond issuance was significant in the United Kingdom, where issuance of guaranteed paper replaced nonguaranteed issuance almost completely.

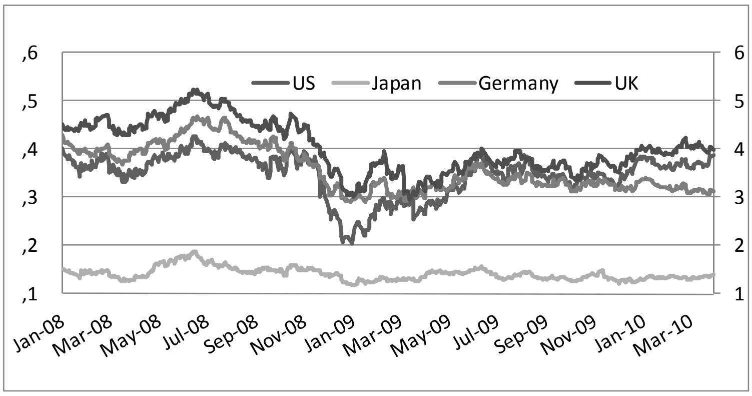
Nevertheless, with the intensity of the crisis past, new challenges are emerging. Policy makers and markets need to address the implications of unwinding this policy support and the overall economic stimulus at a time where financial markets may still be vulnerable and the global economic recovery may not yet be fully entrenched. In particular, as the full extent of the challenges to longer-term debt sustainability and the difficulties of fiscal consolidation is fully recognised, financial markets may lose confidence in the overall robustness of the support measures, posing a new threat to financial stability. This vulnerability will be amplified by any uncertainty as to policy makers' intentions with respect to unwinding expansionary policies.

Figure 1. Three-month LIBOR spreads to OIS (Overnight Index Swap, bps)



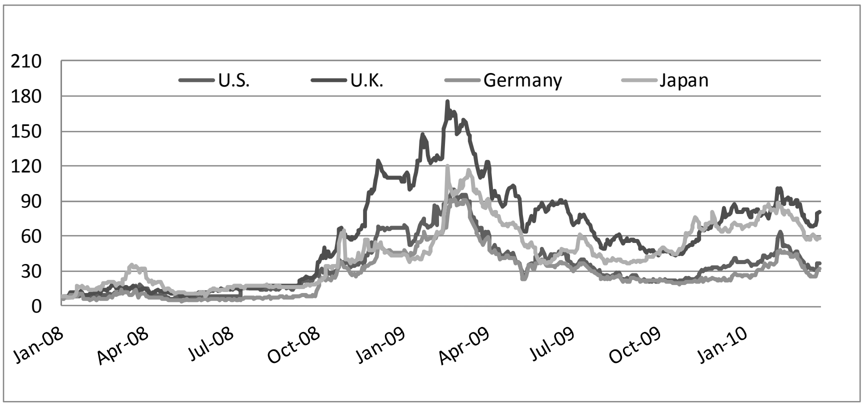
Source: Bloomberg.

Figure 2. Mature market ten-year government bond yields (%)



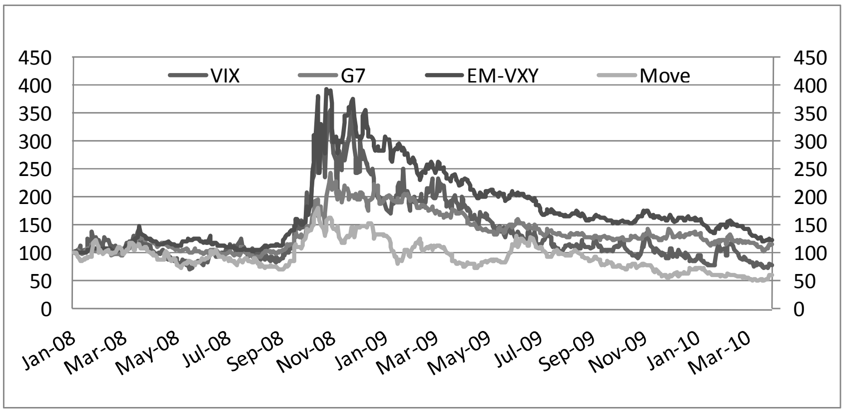
Source: Bloomberg.

Figure 3. Credit default swap spreads (5-year, bps)



Source: Datastream.

Figure 4. Implied volatility indices (1/1/2008 = 100)



Source: Bloomberg.

I. The implications of exit for bond markets

As noted above, several temporary measures were put in place by policy makers to support the functioning of financial markets. At some point these mechanisms need to be unwound. However, the potential impact of this unwinding on financial markets, and in particular on fixed income markets, is unclear. In particular, reversing these interventions will affect the relative prices of various securities, including government bonds, and could add volatility at those particular points of exit. Where it also reflects a change in the monetary policy stance, then the level and slope of the yield curve could also change quite rapidly. Care will be needed to avoid the risk of a premature withdrawal of support when conditions are still fragile.

In particular, quantitative and credit easing programs provided a significant support to demand, especially for government bonds in large advanced economies. For example, the Bank of England acquired holdings of government bonds representing close to 10 percent of GDP. There were also significant purchases by the Federal Reserve (the Fed). Similarly, both the European Central Bank (ECB) and the Fed acquired significant amounts of mortgage-related securities outright, with the Fed also acquiring various commercial paper and other asset-backed securities through its funding facilities. Overall, these programs were focused on reducing longer-term interest rates (Figure 2) and narrowing credit spreads in specific markets. Not only did they contain debt servicing costs for those issuers directly affected, but they also favoured any issuers that would price relative to those securities (*e.g.* issuers in international capital markets).

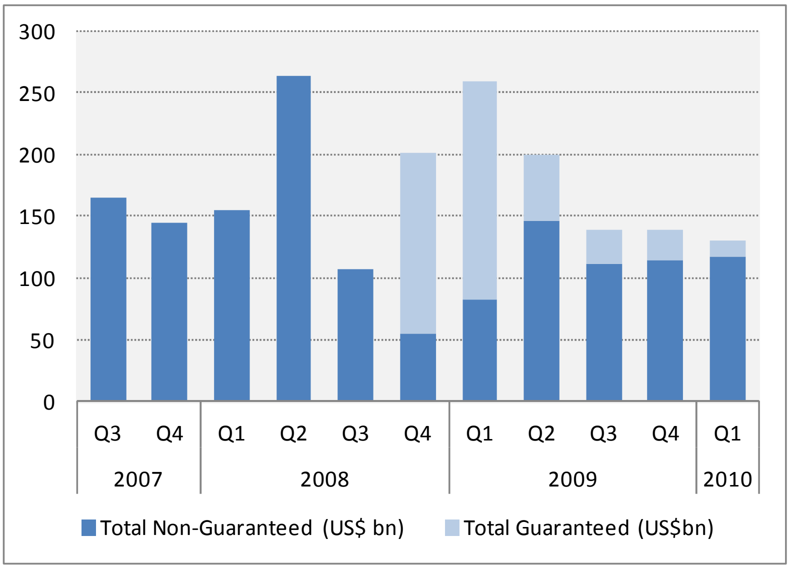
These programs are now, by and large, closed, and the absence of the monetary authorities as an investor is likely to put upward pressure on yields. This would not only increase borrowing costs for governments (and other directly affected issuers) in those markets, but would also lead to a general increase in yields for other issuers. These effects would be aggravated by any sale of these securities from their stock of holdings. While such sales may not be immediately necessary, particularly as government bonds can be used in open market operations, they would need careful management. This highlights the need, in particular, for central bankers and debt managers to consult and coordinate with each other in advance of any significant moves on this front.

Similarly, markets are likely to react quickly to any indication that central banks are moving to a tightening bias. While reverting to a more normal operational framework, such as reducing the tenors of liquidity operations, might not necessarily imply tighter liquidity conditions, it might add to nervousness in the markets. In addition, any changes in the pool of eligible collateral are likely to affect relative demand conditions. For example, the market appeared to calm following the decision by the ECB not to change its minimum credit rating for collateral in the near term, with spreads of European peripherals narrowing on the news.

More specific signals that liquidity has been withdrawn will have an immediate effect on short-rates. The extent to which this is passed through to long-rates and is reflected in the shape of the yield curve will depend on the overall perception of fiscal and monetary risks. For this reason, it is imperative that central banks clearly communicate their policy intentions and anchor inflation expectations.

In a similar vein, policy makers, particularly financial regulators, need to consider the impact of the loss of the guarantee facilities on the ability of banks to fund themselves at reasonable rates. As most guarantee schemes are fee-based, there is a natural mechanism that should see their usage decline as conditions normalise. Indeed, there has already been a significant decline in their usage (Figure 5). This suggests that the impact of the expiry of these facilities on market conditions is likely to be relatively muted. Nevertheless, there has been some evidence of tiering in the use of these guarantees. For example, while the top tier of banks in the United States ceased issuance of guaranteed bonds in 2009 Q3, more vulnerable banks continue to use this facility, with up to a third of their issuance at the end of 2009 comprising guaranteed bonds. Consequently, banks in some jurisdictions may remain vulnerable to bad news or may be especially vulnerable to a sharp change in market conditions. A related factor might be the impact of the change from secured to unsecured lending on the credit rating of the individual security, and whether that will affect the demand from any specific investor groups, again aggravating any difficulties particular banks might face in accessing funding. This suggests that there may be some ongoing benefits in maintaining these facilities, despite the potential negative impact on competition, or replacing them with a more targeted support for weaker financial institutions.

Figure 5. G7 bank bond issuance



Source: Dealogic.

II. The measurement of sovereign risk

On the back of the economic and financial crisis, fiscal balances have deteriorated, government debt has increased sharply and sovereign balance sheets have expanded. Critically, crisis-related interventions have also led to a significant rise in sovereign contingent liabilities that are not captured by traditional measures of fiscal risk. Moreover, with the public sector stepping in heavily to support financial institutions, long-term solvency risk has been projected into short-term liquidity concerns, which have been exacerbated by a rise in global risk aversion and growing fears of spillovers across sovereigns. This section will try to disentangle these various drivers and discuss the measurement of sovereign risk and how it has evolved during this crisis.

Sovereign debt vulnerability indicators

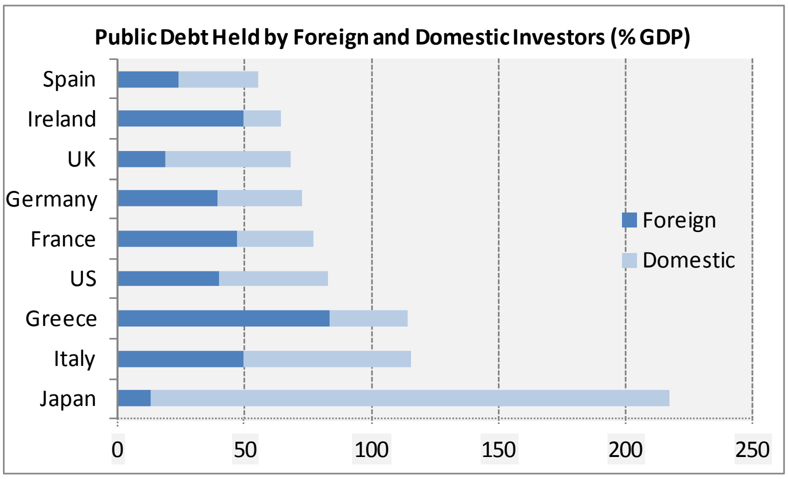
Sovereign risk may be defined as the risk that a country, unable or unwilling to meet its financing needs and payment obligations, will default on its debt. Traditional debt sustainability analysis suggests that ultimately this risk will be a function of the country's primary balance, as well as the interplay between the growth of the economy and the average cost of funding. This definition fits well with most of the crisis that hit emerging markets during the 1980s and the 1990s.

However, crisis-related interventions and fiscal stimulus packages have led to an unprecedented expansion in sovereign balance sheets, particularly among advanced countries. Even in those countries where liabilities appear to be on a long-term sustainable trajectory, sovereign risk may be affected by a number of other factors: assets may register a significant contraction in their value, announced lending facilities may still be used or guarantees may be called. In addition, the positive actions policy makers have taken to support their banking sector may have led to a sharp increase in the level of implicit contingent liabilities. Overall, these developments warrant a re-definition of sovereign risk, with greater emphasis on a balance sheet approach, taking account of off-balance-sheet items such as guarantees and other contingent liabilities, including implicit guarantees.

Just like private banks that relied heavily on leverage, sovereigns have also proven vulnerable to funding pressures. As the volume of government bond issuance fails to abate, doubts have emerged about the ability of the market to absorb this large amount of new paper. While incidents of "failed auctions" are relatively infrequent and do not appear to pose a systemic threat, looking forward investors may demand increasingly larger concessions, resulting in structurally higher yields and steeper yield curves.

Measures of sovereign risk should fully reflect key vulnerabilities in debt portfolios, such as significant dependence on short-term borrowing or excessive reliance on foreign capital. The absence of a deep domestic buyer base for government debt introduces heavy reliance on foreign demand, which is naturally more attuned to sovereign risk than local sources (see Figure 6). A debt maturity profile with disproportionate near-term rollover requirements can also accelerate the transformation of solvency concerns into funding problems. Increased dependence on short-term borrowing can rapidly balloon future interest costs for debt rollover, particularly where inflationary expectations are also changing. In addition, the exchange rate regime plays an important role in determining the extent of any rollover challenges.

Figure 6. Reliance on foreign capital



Source: IMF Staff.

Measures of sovereign risk during various phases of the crisis

Several empirical studies have documented that market measures of risk, such as credit default swaps or swap spreads, start to move as credit quality deteriorates or improves well ahead of a rating action. This implies that the market often leads decisions by rating agencies and calls into question the information value of credit ratings. This has led to suggestions that, rather than relying on credit rating agencies, debt managers, investors and policy makers should focus on market measures of risks.

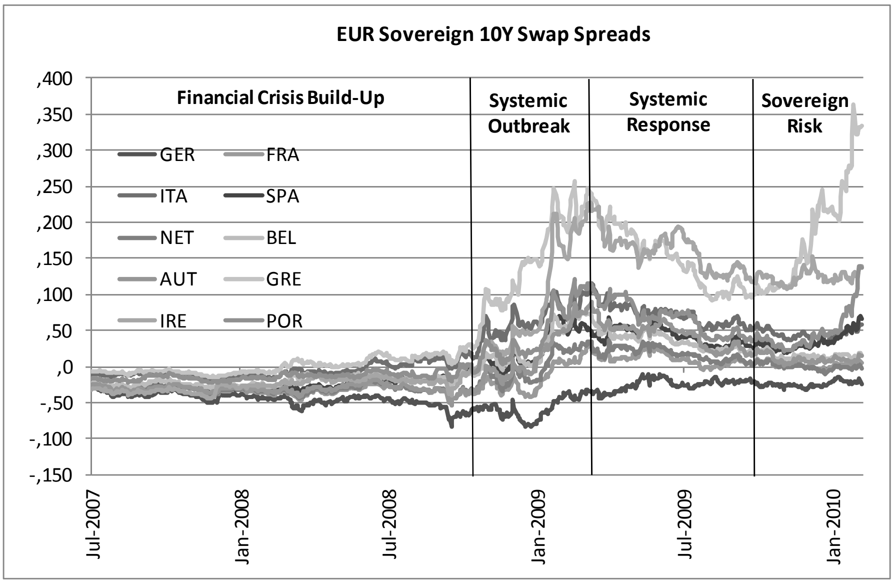
These measures, however, should also be implemented with caution. For example, sovereign CDS are widely used to generate probabilities of default.[6] Yet, these spreads, just as any other asset price, depend on the global level of risk aversion in addition to the actual probability of default of the sovereign. It is very likely that over the past two years risk-adverse investors may have revised the price they were willing to pay for receiving income in such difficult times. This development has likely weighed on the price of sovereign protection, without implying any relation to higher default probabilities.

In addition, the size and liquidity of the sovereign CDS market remains relatively small. While liquidity conditions have improved significantly over the past two years, and some sovereigns are now among the biggest single names traded in the CDS market, the size of the market and amounts of sovereign CDS protection are small compared to trading volumes and government debt outstanding. Most important, a number of factors have introduced distortions in the pricing of sovereign CDS and therefore in implied default probabilities.

Other factors have also potentially introduced some distortions into the pricing of sovereign CDS. Notably, deleveraging and balance sheet constraints have raised the cost of borrowing sovereign bonds in the repo market. As a result, several investors have turned to sovereign CDS to replicate positions typically built in the cash market. This development has likely weighed on the price of sovereign protection, without necessarily implying higher default probabilities.

The information content of market measures of risk may also vary significantly over time. Over the past year, euro area sovereign spreads have exhibited an unprecedented degree of volatility (see Figure 7). Recent empirical work seeks to explore how much of these large movements in spreads reflects shifts in the market price of risk or a change in country-specific risks, either directly as a consequence of deteriorating fundamentals or indirectly as a consequence of spillovers originating in other sovereigns.[7] The analysis shows that the surge in global risk aversion was a significant factor influencing sovereign spreads earlier in the crisis; however, more recently country-specific factors have started playing a more important role. The source of contagion itself has changed. Previously, it could be found among those sovereigns hit hard by the financial crisis, such as Austria, the Netherlands and Ireland, whereas lately the countries putting pressure on euro area government bonds have been primarily Greece, Portugal and Spain, as the emphasis has shifted towards short-term refinancing risk and long-term fiscal sustainability.

Figure 7. Market measures of sovereign risk



Note: Swap spreads are quoted as 10-year bond yields minus 10-year swap yields.

Sources: IMF Staff, Bloomberg, DataStream.

Potential uses

No single statistic can provide a comprehensive measure of sovereign risk. Only a full set of indicators can offer debt managers, investors and policy makers valuable guidance in assessing over time the creditworthiness of a sovereign.

Debt sustainability and appropriate management of sovereign balance sheets are necessary conditions for preventing sovereign risk from feeding back into broader financial stability concerns. Rising sovereign risk requires credible medium-term fiscal consolidation plans as well as a solid public debt management framework. Debt managers and policy makers should give emphasis to the presence of significant contingent risk on sovereign balance sheets. In addition, policy makers need to clearly commit to gradually disengaging from a number of measures supporting the financial sector, including those measures discussed in Section I but also the provision of direct capital support.

While credible medium-term reforms are implemented, policy makers need to focus on how to reduce the risk that longer-term sovereign credit concerns will turn into short-term financing concerns. Debt managers across the world have already turned to a broad range of strategies in order to alleviate this intense funding pressure, including adding new instruments to their debt portfolios and changing their primary market operations (*e.g.* by increasing the use of syndication techniques, along with increasing the size and frequency of auctions or revising their format (see Section IV). These efforts should be pursued further.

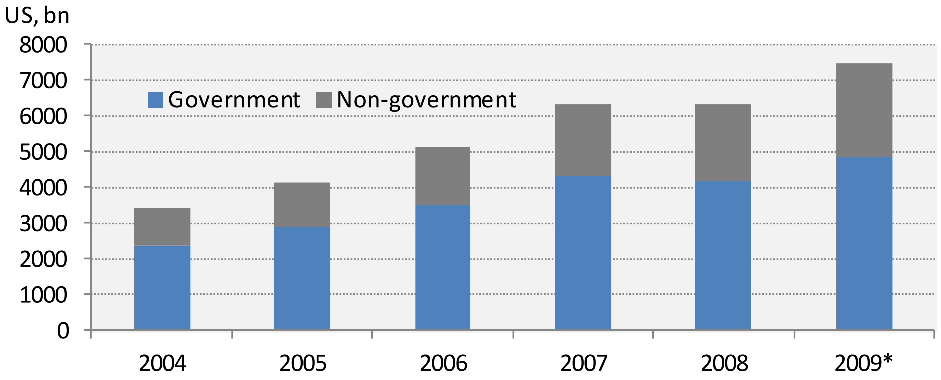
III. The determinants of investor demand

The impact of the crisis has led to an unprecedented increase in sovereign borrowing, both to support the financial sector and to support economic activity more generally. In many cases, sovereigns have had to rely on external sources of financing, which represents an important vulnerability going forward. This section will discuss potential trends in investor demand and challenges that debt managers will face in ensuring continued access to a robust investor base to meet their ongoing financing needs.

Unprecedented increase in sovereign borrowing requirements

Crisis-related interventions and fiscal stimulus packages have led to an unprecedented increase in sovereign borrowing requirements, particularly among advanced countries. Compared to pre-crisis years, the levels of outstanding debt in both emerging markets (EM) and mature markets (MM) have risen substantially, as illustrated in Figures 8 and 9. These levels will likely remain high in the near future, given projected fiscal positions. Debt managers therefore need to focus on maintaining access to a robust investor base in order to secure the required financing without disrupting markets.

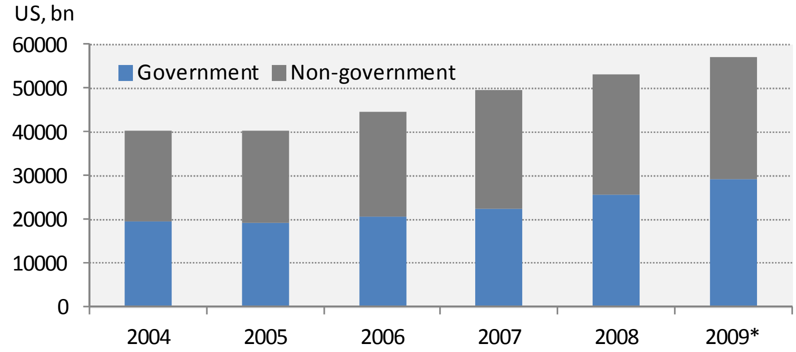
Figure 8. Emerging market domestic debt securities outstanding



Note: Emerging markets include Argentina, Brazil, Chile, China, Colombia, Croatia, Czech Republic, Hungary, India, Indonesia, Lebanon, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Russian Federation, Slovak Republic, South Africa, South Korea, Taiwan (China), Thailand, Turkey, Venezuela.
*: Sep. 2009.

Source: BIS.

Figure 9. Mature market domestic debt securities outstanding



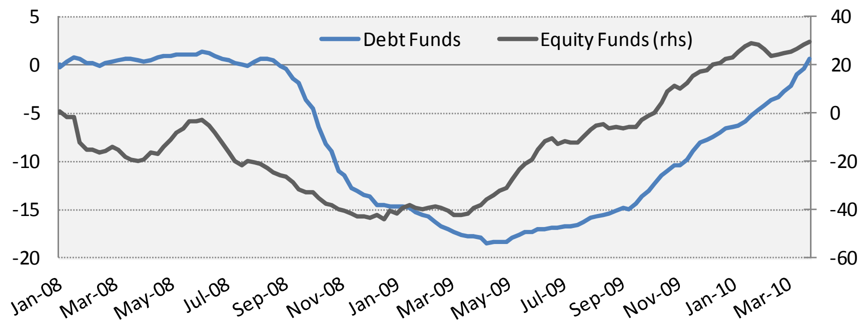
Note: Mature markets include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong (China), Iceland, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, United Kingdom, United States.
*: Sep. 2009.

Source: BIS.

To date, this increased borrowing has been relatively well absorbed by markets. This partly reflects the fact that many advanced countries benefited from a "flight to quality" effect as investors switched out of equity and other "risky assets". For example, there was initially a significant flow of funds out of emerging markets, although there has been a subsequent strong rebound (Figure 10).

Figure 10. Cumulative net flows to emerging market funds from 2007

(In billions of US dollars)



Source: EPRF Global.

Looking ahead, the supply of government debt across advanced economies will likely remain elevated over the medium term. In 2010-2011, projected financing needs for both the euro area and the United Kingdom are well above previous IMF staff assessments. More generally, the supply of debt from emerging markets and other developing economies will also remain relatively high given the fiscal stimulus that many countries have had to adopt to support economic activity.

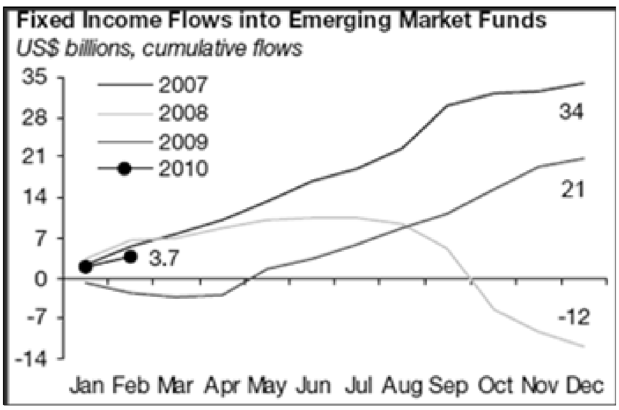
Evolving trends in investor preferences for advanced relative to emerging market debt securities

One possible implication of the unprecedented level of debt to be issued by advanced economies is that it may lead to greater competition among sovereigns. This presents the risk of crowding out of emerging market debt. Traditionally, there has been a high degree of segmentation between the investor base for mature and emerging market assets. However, severe funding pressures in advanced markets may lead to renewed global risk aversion, which would eventually weigh adversely on the demand for risky assets and thus emerging market debt.

Alternatively, more promising growth prospects by EMs may actually lead to a greater preference for EM debt. Several indicators have highlighted increasing signs of convergence in credit risk between mature and emerging markets. This challenged the dichotomy between the two asset classes and the traditional approach to pricing sovereign risk. In January 2010, Moody's confirmed that the average rating of the 39 issuers that make up the benchmark EM sovereign bond index had moved up one notch from high yield to the lowest rank of the investment grade group. According to Standard & Poor's nearly 45 percent of the issuers of its sample of 43 EM sovereigns now belong to the investment grade universe, a 12 percentage point increase as compared to six years earlier. This steady improvement in credit quality accelerated in the second half of 2009, when the total number of EM sovereign upgrades (31) almost doubled the number of negative rating actions (16). The opposite held true for advanced economies, which saw ten downgrades and only one positive rating action over the same period.

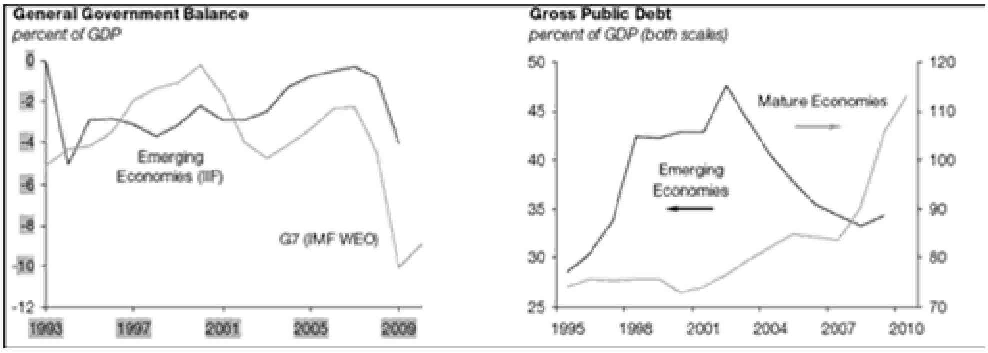
While some EM issuers found it difficult to issue bonds in their domestic markets during the crisis, particularly as foreign investors withdrew, there has been a renewed global interest in EM bonds. According to Institute of International Finance (IIF), capital flow to emerging markets appears to have been rebounding quicker than expected (Figure 11, IIF 2010a). Those markets with a strong local institutional investor base seemed to have been more robust than the others. According to the IIF,[8] in recent years, there has been an obvious reversal between emerging economies and mature economies with regard to relative budget debts and deficits (Figure 12). This trend is not expected to reverse in the near future, which could further promote capital flows to EMs.

Figure 11. Fixed income flows into emerging market funds



Source: IIF (2010a).

Figure 12. General government balance and gross public debt



Source: IIF (2010a).

The re-pricing of sovereign risk has been even clearer in debt markets, both in cash and in derivatives. The JPMorgan EMBI Global Index and all its regional components have seen yields falling sharply. The contrasting evolution of credit default swaps in developing and advanced economies confirms a similar trend. Increased resilience, sounder fundamentals and policy frameworks, as well as positive returns seem to be underpinning this reassessment of EM as an asset class.

The role of emerging markets as capital exporters instead of capital importers continues to increase. The importance of these capital exports challenges further the traditional relationship between mature and emerging market economies. According to IIF projections, net capital exports from emerging markets should settle at about $1.2 trillion in 2010-2011, down from the peak in 2007 but in line with the average since 2006. The bulk of these exports will continue to come from the public sector in emerging economies, particularly from the Asian economies, in the form of official reserve accumulation. Consequently, recipients of this capital are likely to be the government bond markets in mature economies.

As a result, the traditional line between EM and MM is likely to diminish and might be replaced by a differentiation between investment and non-investment grade markets.

Investor preferences for sovereign versus corporate debt

This elevated supply of government debt also poses a challenge for corporates' ability to tap the debt markets. Even though EM corporates remained active in the bond markets through 2009, overall we are likely to see increased demand for capital from corporates to rebuild inventories and finance other investment, as the economic outlook becomes clearer. Given the fact that bank credit may not be as forthcoming as in the past, accessing the capital markets may become an increasingly important option for corporate financing. However, potential crowding out by the public sector might increase the required rate of return to such a point that investments will be delayed. This would dampen overall growth and slow the speed of fiscal consolidation.

Nevertheless, the market's assessment of corporate credit risk is currently relatively positive. Corporate debt has been trading tight to sovereign debt. So long as this is maintained, this could help mitigate any negative impact of crowding out on corporate financing costs. However, if the general economic outlook deteriorates as a consequence of a failure to address broader sovereign risks, then this relatively benign situation is unlikely to be sustainable.

Investor composition

Data on flow of funds in advanced markets point to three stylised facts:

- Foreign official institutions have been a significant and steady source of funding for the sovereign market over the past two years. This reflects the growing importance of emerging markets as investors;

- Domestic private investors have also been large buyers of sovereign bonds as flight-to-quality channelled demand away from risky assets towards government securities;

- Finally, central banks were an important source of funds, especially in the United States, the United Kingdom and Japan.

The position of EMs is similar but with two additional facts:

- The number and diversity of investors has increased, with Asian investors, in particular, growing in importance.

- Private equity and real estate firms have significant presence in EMs with debt allocation of 5 percent and 3 percent, respectively.

As discussed above, quantitative easing programmes acted as a strong tailwind to the demand for government securities in 2009. Their absence will be an important test in 2010, and will make the role of other institutional investors, foreign official institutions and domestic private investors even more critical. Although there may be a low probability that the global level of risk aversion will decline further, the overall change in the outlook for different economic sectors could channel capital flows back towards more traditionally risky assets, thus exacerbating sovereign funding imbalances.

More generally, the relative importance of certain investor types may also be changing. For example, while it is difficult to determine the full extent that leverage played in providing demand in government bond markets, going forward the purchasing power of certain investor types (*e.g.* hedge funds) is likely to be much less. On the other hand, retail or individual investors may have provided an important source of demand in these recent times, which could be sustained going forward.

A step change in banks' demand may be imminent as a consequence of increased regulation of liquidity. While the actual implementation of new global regulation is probably years away, banks will likely build up appropriate liquidity buffers well ahead of it. This demand could provide an important substitute with the unwinding of various central bank securities' purchase programs. For example, in the United Kingdom, the FSA has calculated that liquidity buffer requirements could be as large as 12 percent of total bank balance sheets. This could provide an important source of support for the gilt market, particularly as the Bank of England withdraws from the market.

Going forward, it is clear is that debt managers will need to carefully consider what strategies can be employed to attract sufficient investors to cover their increased funding needs. This will require an active approach, potentially involving tailored instruments and issuance mechanisms, to meet investors' needs. This may be especially true for smaller, more peripheral issuers. However, given the scale of the funding challenge facing larger advanced countries, they may also need to revisit how they manage their relationships with investors, including their communications strategy.

IV. Changes in primary and secondary market procedures

Over the course of the crisis, debt managers have had to adapt to more volatile and illiquid market conditions. In many instances, they have introduced important changes in their operational frameworks – modifying and introducing innovations to their primary issuance techniques and choice of instruments, and actively providing support to ensure the continued functioning of secondary markets. In addition, they have had to look again at the balance of benefits and obligations set in their primary dealer frameworks. These changes have longer-term implications for what might be perceived as "best practice" in debt management operations and might influence the approach to bond market development in the future.

Impact of tougher issuance conditions and financial instability

As a consequence of the tougher issuance conditions faced by debt managers, given the surge in government borrowing needs and overall financial instability, existing issuance procedures and portfolio management strategies did not appear to work as efficiently as in the past. In addition, the weakened position of primary dealers called into question the sustainability of existing primary dealer arrangements. Over the course of the crisis, debt managers reported a softening of demand at some auctions, leading to postponed, failed or cancelled auctions and various distortions in primary markets. There were also signs of liquidity pressures in secondary markets.

In response, DMOs implemented a range of changes in existing issuance procedures and policies. These changes may have led to a somewhat greater diversity of primary market arrangements and portfolio management procedures. As indicated above, the explosion in the supply of public debt instruments (Figure 8) and looming market absorption problems has linked these changes firmly to the need to stabilise and strengthen the investor base.

Changes in issuance procedures in response to greater risks in primary and secondary markets

The potential increase in competition between advanced and emerging markets, and the associated market absorption concerns, highlight the need to review and potentially change issuance procedures. The worsening of issuance conditions manifests itself via greater risks i) in primary markets in the form of less successful auctions and greater auction tails; and ii) in secondary markets in the form of liquidity pressures, more risk-averse behaviour of investors and price distortions. These (potential) problems are encouraging debt managers to move to less traditional issuance methods in domestic debt markets, including the use of syndications, Dutch Direct Auction (DDA) procedures, mini-tenders and private placement. In particular, the use of syndications has increased significantly. This selling method facilitates a high initial volume of issue, with better placing certainty, reducing the execution risk relative to auctions. This may, in turn, lead to higher liquidity and lower borrowing costs. However, syndication also has some potential downsides, including a more limited reach across potential buyers, less commitment of risk capital by primary dealers and higher intermediation costs.

Many DMOs in the OECD area are operating more frequent auctions, with auction schedules having become more flexible and somewhat opportunistic. In addition, debt managers have resorted to a wider range of financing instruments, including greater reliance on short-term bills and notes and a growing use of foreign liabilities.

Changes in selling procedures and funding instruments and the need to strengthen the investor base

Changes in issuance procedures and funding instruments have been implemented against the backdrop of concerns about (future) market absorption problems. As discussed above, the reliance on foreign investors poses a significant risk going forward. Consequently, it is crucial that changes in issuance procedures and funding instruments are linked to efforts to maintain, strengthen or even expand the investor base. This, in turn, makes it essential that the preferences of foreign and domestic investors are taken into account when making decisions about the modalities of new supply/issuance programs, especially when broadening the (wholesale and retail) investor base and when new products are planned to be introduced.

Although issuance programs have become somewhat more opportunistic, transparent debt management procedures remain at the core of good relationships with the market. To that end, and given the scale of the challenges facing debt managers going forward, direct contact with investors (including via road shows for large (foreign) investors) is more important than before, in particular to explain the changes in the overall situation and the policy framework. All forms of communication are of importance, including high-quality websites. In this context, the principal job of primary dealers is to sell debt, while the principal task of DMOs is to explain how they (and the government more generally) operate.

How urgent is the need to review primary dealer arrangements?

The impact of the global financial crisis has raised questions about the capacity of primary dealers (PDs) to commit capital to debt markets. This has potentially constrained their ability to provide underwriting support in auctions and/or otherwise fulfil their PD arrangements. The surge in borrowing needs of governments has aggravated the pressure on the operational and balance-sheet capacity of several PDs.

Moreover, in some jurisdictions, the effectiveness of market making (MM) obligations is under discussion. This debate is fuelled by the influence of the recent global financial crisis and the associated volatility seen in markets, and may lead to (or has led to) changes in the current market infrastructure, including the manner in which market making obligations are determined and the use of electronic trading platforms.

In addition, in several countries, recent events have accelerated a longer-term trend of a reduction in the number of (active) primary dealers in several countries.

This raises the following policy issues: i) the risk of lower competition in the primary market, possibly weakening the price discovery process; ii) the risk of dominance in the government securities market by a few large banks; and iii) the risk of overall higher funding costs to finance government operations.

Addressing new risks in issuance strategies

Changes in primary and secondary market arrangements, while understandable, may create new risks. As debt managers become more opportunistic, issuance programs are becoming less predictable. That may not be desirable in the long term as it is likely to lead to higher borrowing costs. It is essential that DMOs continue to operate a transparent debt management framework supported by a strong communication policy. Transparency and predictability are instrumental in reducing the type of market noise that can unnecessarily increase borrowing costs and adversely affect liquidity. Nevertheless, the lesson from recent events suggests that, within a framework of transparency and predictability, there exists scope for flexibility.

NOTES

[1] Central banks in Europe, the US and Japan introduced so-called quantitative and credit easing measures.

[2] Many DMOs, however, are using currency swaps to eliminate the risks associated with the resulting foreign currency exposure.

[3] Debt managers noted that in times of extreme risk aversion and high uncertainty, short-term issuance is the major vehicle for governments to raise extra funds at short notice while providing liquid and secure instruments to the market.

[4] Earlier assessments were based on OECD surveys conducted among delegates of the OECD Working Party on Public Debt Management (WPDM), public information from official sources, OECD Central Government Debt, Statistical Yearbook 1999-2008, and OECD Economic Outlook 86 database.

[5] This background note, circulated at the 11th OECD-WBG-IMF Global Bond Market Forum, has been prepared by Vincenzo Guzzo and Allison Holland of the Sovereign Asset and Liability Management Division, Monetary and Capital Markets Department, IMF; Hans Blommestein, OECD; and Alison Harwood and Yibin Mu, Global Capital Market Development Department, the World Bank Group. For any citation, please contact Udaibir S. Das (udas@imf.org), Hans Blommestein (Hans.BLOMMESTEIN@oecd.org), or Alison Harwood (aharwoo@ifc.org).

[6] By simply dividing the level of the swap spread by its recovery rate.

[7] See Caceres, Guzzo, and Segoviano (2010).

[8] IIF (2010a).

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