GROUP OF TWENTY

GLOBAL RISK ANALYSIS

Annex to Umbrella Report for G-20 Mutual Assessment Process

Prepared by Staff of the

INTERNATIONAL MONETARY FUND*

*Does not necessarily reflect the views of the IMF Executive Board.

ANNEX 1: GLOBAL RISK ANALYSIS[1]

SUMMARY

Global risks have risen again. Notwithstanding exceptional actions that have been taken by European policymakers and have averted a systemic banking crisis, improvements in financial conditions are fragile and eroding quickly. Financial stress in Europe has reemerged—reminiscent of the conditions prevailing in the last quarter of 2011. Deleveraging by governments, financial institutions and households weighs on the recovery in advanced economies. Most emerging economies are expected to resume more robust growth.

Global growth momentum appears to be weakening and the global economy remains unusually vulnerable to key risks. The most immediate risk is a further escalation of financial stress in the euro area—gains following exceptional policy actions have been eroding until recently and the euro area crisis remains the most immediate threat to global growth. Should market participants' confidence in the ability or willingness of policymakers to implement needed policies diminish, the adverse feedback loops between weak sovereigns, banks and growth would resurface, hurting growth within and outside the euro area. Implementation of the euro area's five-point strategy for crisis response is essential for mitigating that risk.[2] Other key risks include the U.S. "fiscal cliff" in 2013 and, although market conditions and prices have eased, the possibility of a major spike in oil prices in an environment of limited spare oil capacity and geopolitical tensions.

Fragile conditions require further comprehensive and multilateral actions by policymakers to secure stability and support growth. In the *euro area*, recent strengthening of the firewall and steps toward external support for Spain are welcome but more is needed to secure stability and build a stronger monetary union: (i) continued emphasis on preserving bank capital buffers and resolving weak banks; (ii) reform of the euro area architecture via deeper fiscal and financial integration; and (iii) widespread product and labor market reform to improve cost competitiveness. In *advanced economies*, accommodative monetary policy and ample liquidity provision should continue. The pace of budgetary adjustment should be gradual but steady while allowing the automatic stabilizers to operate freely if growth weakens. *Japan* and *the United States* should urgently adopt ambitious and credible medium-term consolidation plans to anchor objectives. At the same time, the U.S. should avoid the excessive tightening scheduled to occur next year under current law. *Emerging economies* need to calibrate policies to address downside risks posed by advanced economies, while rebuilding policy space and managing volatile capital flows. Those with extended strong credit growth in past years need to ensure a soft landing.

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[1]Prepared by Vladimir Klyuev under the guidance of Hamid Faruqee, with the help of Min Kyu Song and Anne Lalramnghakhleli Moses.

[2] The strategy's main elements comprise strengthening firewalls; funding and recapitalizing banks; strengthening euro area governance; supporting growth through structural reform; and differentiated and "growth-friendly" fiscal consolidation.

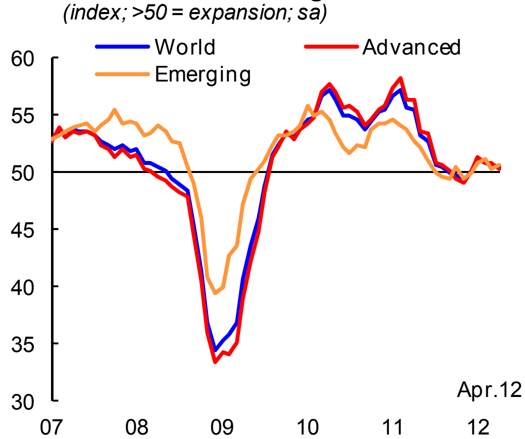
GLOBAL RISK ANALYSIS

Global risks have risen again. Renewed concerns about disorderly adjustment in the euro area periphery have replaced the cautious optimism that followed exceptional ECB liquidity provision and strengthening of the firewall earlier in the year, prompting further actions. In the United States, a sharp fiscal contraction or "fiscal cliff" is set to occur under current law that—if not avoided—would jeopardize recovery, while a few other economies will also need to manage fiscal risks next year. A supply shock from a sharp increase in the oil prices remains a risk given geopolitical uncertainty and limited spare capacity in production. Extended credit booms in several emerging economies may come to an abrupt stop. Comprehensive policies—including the five-point strategy adopted by euro area leaders last October—are essential to contain and manage the euro area crisis to secure stability, while exercising a measured approach to fiscal consolidation and continuing very accommodative monetary policies to support growth. Credible and ambitious medium-term consolidation plans need to be adopted in Japan and the United States to anchor sustained and steady adjustment and minimize risks down the road. Policy implications in emerging economies are more differentiated—depending on policy space, inflation risks, and volatile capital flows.

A. Conjuncture and Outlook

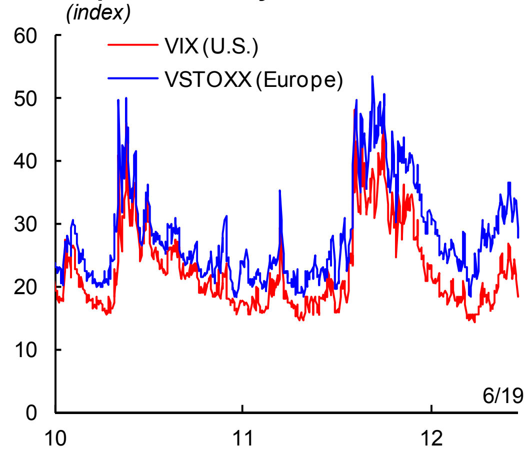
1. **Global recovery is proceeding in fitful fashion**. After slowing in the second half of 2011, the global economy appeared to regain momentum early this year, but the latest news firmly suggests that momentum is weakening again. In the euro area, amid the intensification of the sovereign and banking crisis, GDP was stagnant in 2012Q1 but variation among the member countries was appreciable, with contraction in the periphery continuing, while key core economies expanded. Job creation has slowed in the United States. On the other hand, growth has generally held up well in Asia and Latin America, although there have been recent signs of slower growth in key emerging economies.

Global Manufacturing PMI
(index; >50 = expansion; sa)



Source: IMF, *Global Data Source*.

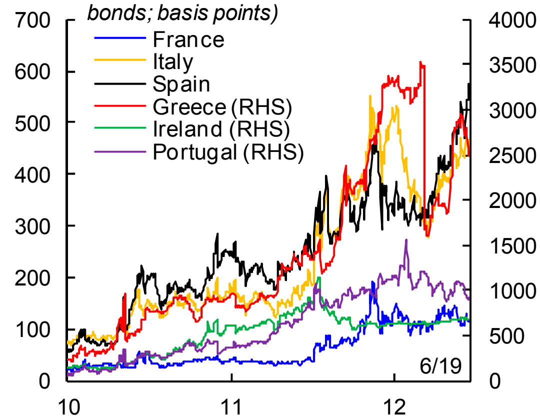
Implied Volatility
(index)



Source: Bloomberg, L.P.

2. **Financial conditions stabilized in early 2012, but stress has reemerged**. After an intense bout of volatility in late 2011—including soaring government bond yields, frozen bank funding markets, and adverse self-fulfilling dynamics—exceptional liquidity provision by the ECB in December (and again in February 2012), as well as other policy actions,[3] and a strengthened firewall (through the EFSF/ESM), restored some degree of stability to financial markets. Abundant central bank provision of three-year funding to a large set of euro area banks (covering much of their 2012 refinancing needs) eased funding strains and interbank spreads narrowed. Government bond yields in key euro area deficit economies also fell. At the same time, several major advanced and emerging economies undertook monetary policy easing (or postponed tightening). Robust policy response and brighter prospects supported confidence and equity markets and sparked a rebound in capital flows to emerging markets.

Government Bond Spreads
(10-year yield spreads over German bonds; basis points)



Source: Bloomberg, L.P.

3. **The salutary effects from earlier exceptional policy actions have faded, prompting further action in Europe**. While euro area crisis management efforts continue, recent developments have been worrying and underscore the need for further action. Foreign investors continued to reduce exposures to periphery bond markets and market focus on weaker periphery banks has been intense—exacerbating adverse feedback loops between vulnerable sovereigns and banks reminiscent of events in 2011Q4. Bank funding costs and sovereign spreads in the periphery remain noticeably elevated, while market sentiment indicators and equity prices in certain markets are sharply lower. Market anxiety about Greece's resolve to continue with fiscal and structural adjustment measures and possible euro exit, as well as concerns about the appropriateness of fiscal and banking policies in Spain unnerved investors—prompting renewed stress on financial markets. In response, Spain has sought external support (through the EFSF/ESM) to help recapitalize its banks—a welcome step. However, the difficulty in severing adverse feedback loops between weak banks and sovereigns in the periphery and wider challenges facing the euro area remain.

4. **Notwithstanding welcome improvements earlier, the latest developments demonstrate that the European crisis is far from over**. The situation remains fragile and susceptible to shocks. Past relief has proven only temporary before the crisis intensified again—a pattern which may repeat. Specific issues center on the following:

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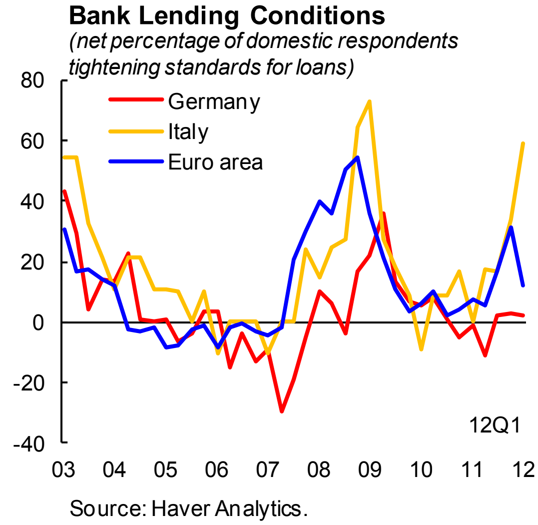
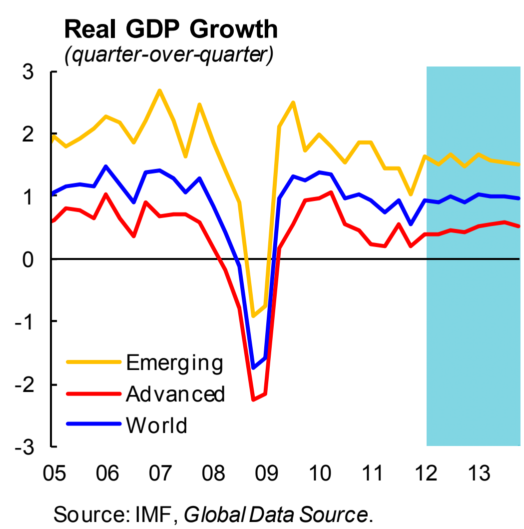
[3] Such as further fiscal adjustment measures in Europe, structural reforms, debt restructuring in Greece, and longer-term steps for strengthening monetary union (e.g., the Fiscal Compact).

- *Deleveraging by euro area banks is under way, both domestically and across borders.* Banks remain exposed to sovereign stress and the impact of weaker growth on asset quality. At the same time, high levels of leverage are no longer supported by private funding markets, while increased home bias (i.e., fragmentation along national lines) has reduced cross-border financing flows. The latest BIS data for 2011Q4 support this concern. While some balance sheet reduction is desirable, large-scale and synchronized deleveraging could be damaging for activity. Indeed, deleveraging pressures have led to tighter euro area lending standards and deceleration of credit growth, with considerable differentiation across countries. The ECB's recent actions have helped with a more orderly adjustment process and EBA guidance strives to ensure that capital-raising takes precedence over asset-shedding. Weakness in demand is also contributing to slow credit growth, particularly in some countries (e.g., Italy).



- *Political and economic constraints on the size and speed of fiscal adjustment loom large, unsettling investors.* The narrow path between too much adjustment—which would hurt growth—and too little adjustment—which would hurt confidence—appears difficult to navigate. With adjustment fatigue setting in the political feasibility of planned consolidation in certain euro area members has been called into question, triggering adverse market reaction. Structural reforms and changes in relative wages required to regain competitiveness in deficit economies can be painful in the short term and may be resisted by large constituencies.

5. **Assuming the euro area crisis is carefully contained, global growth should pick up gradually through the course of this year**. Overall, the WEO expects global growth to slow to 3½ percent at an annual rate in 2012 before reaccelerating again to about 4 percent next year—driven by emerging and developing economies, which are projected to expand by 5¾ percent in 2012 and 6 percent in 2013. Advanced economies are projected to grow only 1½ percent this year and 2 percent next year. Monetary policy remains very accommodative in advanced economies—with scope for further easing in some, but fiscal policy will tighten. As fiscal consolidation continues apace, a smooth hand-off from public to private sector demand is not assured.

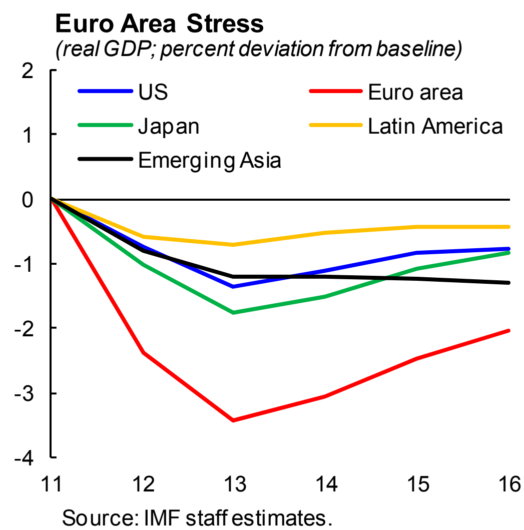


Thus, growth is likely to remain sluggish given legacies of the crisis. With slow growth, accommodative monetary policy in advanced economies, and swings in market risk perceptions, capital flows to emerging economies are likely to remain volatile.

6. **Inflation should remain subdued in general—though in emerging economies the picture is more differentiated**. Alongside considerable slack in advanced economies, headline inflation has eased; core inflation is low but positive; and inflation expectations are generally well anchored. Inflation behavior has been more diverse in emerging economies, given stronger growth and higher pass-through from recent past oil price increases. Given the impact of past policy tightening, some moderation in strong growth, lower non-oil commodity prices, and appreciating exchange rates, price pressures in emerging markets are expected to continue moderating (but with some exceptions). In a few economies, core inflation has remained elevated and some concerns over second-round effects from higher oil prices have emerged.

B. Global Risks

7. **The global economy remains highly vulnerable**. The most immediate threat is a further intensification of the euro area crisis. Other key near-term risks include an overly sharp fiscal tightening in the United States at the beginning of next year; and a large spike in oil prices triggered by fears over geopolitical tensions or supply disruptions. Over a longer term, unwinding of credit booms in some emerging economies may lead to a sharp slowdown and banking strains, particularly if potential growth rates have been overestimated. Given the absence of credible medium-term fiscal adjustment plans in Japan and the United States, one cannot discount completely risks of disruption in their bond markets. On the upside, stronger-than-assumed policy responses to the euro area crisis, and improved confidence could lead to faster growth.

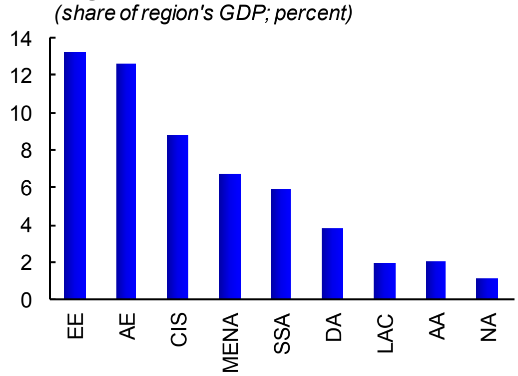


8. **Europe still remains in the danger zone amid elevated financial stress**. A key threat is a renewed escalation of adverse feedback loops between weak sovereigns, banks, and growth. Recent fragile gains have been eroding until recently due to these underlying dynamics. In a downside scenario, the pressures on sovereigns and banks would intensify and reinforce each other. Banks would jointly try to shore up their capital ratios by shedding more assets, which would lead to considerable credit contraction both

within and outside the euro area.[4] Loss of confidence, heightened risk aversion, and an expected growth slowdown caused by deleveraging would push sovereign spreads up (by 100 basis points on average in the euro area) and force several euro area governments to front load fiscal consolidation (on average by an extra one percent of GDP in 2012 and 2013). While the impact of intensified stress would be felt most acutely in Europe, the rest of the world would also be affected via financial and trade linkages.[5]

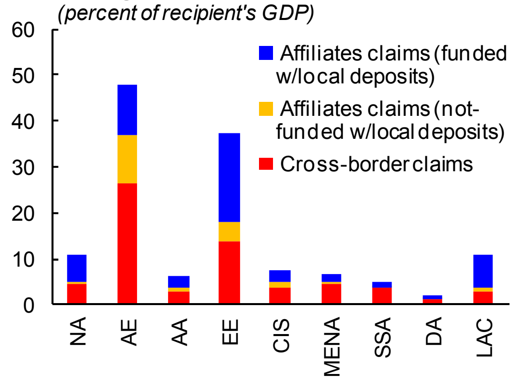
9. **Cross-border spillovers depend on trade and financial exposures**. Naturally, other European countries—both advanced and emerging—have the largest trade and financial links to the euro area. CIS, MENA and SSA also depend significantly on exports to the euro area. Exposures through financial linkages are limited outside Europe, although euro area banks play an important role in certain specialized areas such as trade finance. U.S. financial institutions could be affected by derivative exposures to Europe. The impact on growth could be larger if political or market constraints preclude countercyclical fiscal response.

Exports of Goods to Euro Area by Region, 2010 1/
(share of region's GDP; percent)



Sources: IMF, *Direction of Trade Statistics;* and IMF staff calculations.
1/ AA: Advanced Asia; AE: Advanced Europe excluding euro area countries; CIS: Commonwealth of Independent States; DA: Developing Asia; EE: Emerging Europe; LAC: Latin America and the Caribbean; MENA: Middle East and North Africa; NA: North America (Canada and US); SSA: Sub-Saharan Africa.

Exposure to Euro Area Banks' Foreign Claims, September 2011 1/
(percent of recipient's GDP)



Sources: Bank for International Settlements (BIS); Cerutti (2011); and IMF staff estimates.
1/ AA: Advanced Asia; AE: Advanced Europe excluding euro area countries; CIS: Commonwealth of Independent States; DA: Developing Asia; EE: Emerging Europe; LAC: Latin America and the Caribbean; MENA: Middle East and North Africa; NA: North America (Canada and US); SSA: Sub-Saharan Africa.

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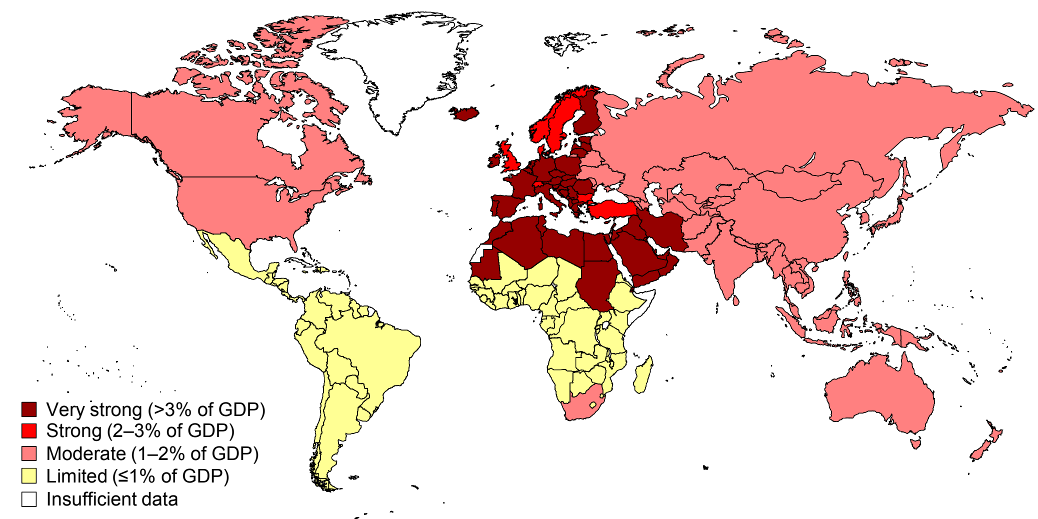
[4] Additional deleveraging is assumed to equal that in the April GFSR "weak policies" scenario relative to the baseline, translating into cutbacks of lending by EU banks of about $0.7 trillion, with roughly half of that falling within the euro area.

[5] Simulations of the adverse scenarios were performed using a 6-region Global Economic Model (GEM). Credit tightening was translated into higher corporate spreads for the purposes of simulation. In the map below, the stylized impact on the rest of the world was distributed by country using satellite models or in proportion to the weight of cross-border claims of euro area banks in their banking systems.

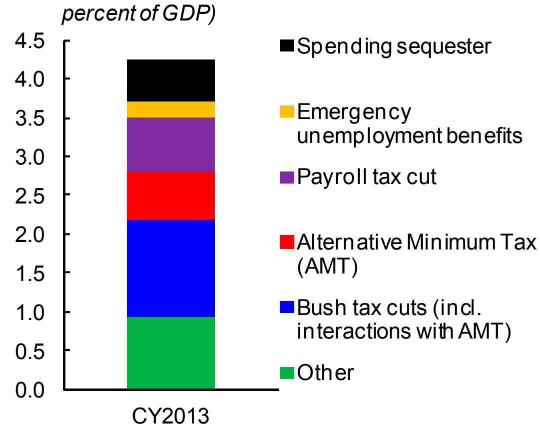
The Effects of an Intensified Euro Area Crisis on Various Regions
(peak deviation of output from WEO baseline)



Source: IMF staff estimates.

10. **Near-term fiscal risks could jeopardize the recovery**. In the United States, fiscal policy is scheduled to contract markedly under current law, largely due to expiring tax provisions (e.g., the Bush tax cuts, alternative minimum tax threshold changes, payroll tax cut, and many others) and activation of automatic spending cuts (i.e., spending sequester). These measures amount to roughly 4 percent of GDP in 2013—a so-called "fiscal cliff." For now, a lack of political agreement keeps uncertainty about the fiscal roadmap unresolved. Although bond yields remain low, when contentious political decisions—such as raising the debt ceiling—have come due in the past, uncertainty about the outcome led to unfavorable market reactions. In the euro area, while steady consolidation must continue, there are risks of overdoing fiscal tightening in a few countries next year in an environment of weak growth. Synchronized fiscal retrenchment poses risks of reinforcing dampening effects on global demand (via trade spillovers).

U.S.: The Risk of "Fiscal Cliff"
(impact on federal balance relative to CY2012; percent of GDP)

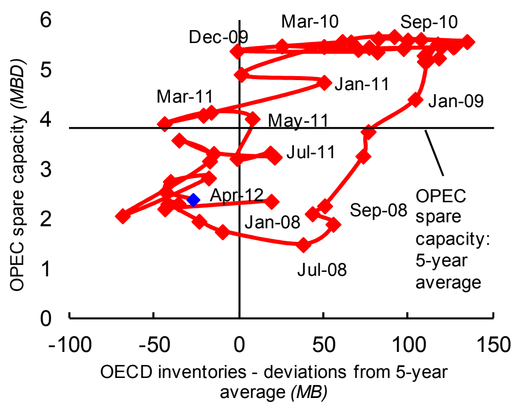


Source: IMF staff calculations.

11. **Another key risk is an oil supply shock given reduced policy space**. Although oil market risks appear to have eased recently, a major disruption in oil supply related to geopolitical tensions could have a large impact on oil prices and economic activity given limited spare capacity and lack of policy space. Traditional buffers against supply disruptions—OPEC spare capacity and OECD oil inventories—are *below* to historical averages. Precautionary oil demand appears to be part of these developments. While spot prices have eased some from

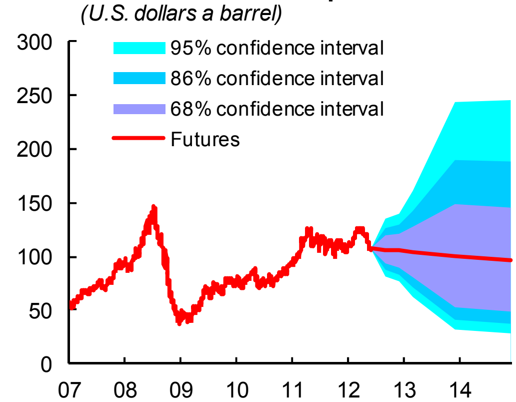
their recent peak in March 2012, option markets still show upside risks to oil prices despite weaker global growth (see fan chart), indicating inter alia that risks from a reduction in Iran's oil exports or closure of key transportation routes would be difficult to offset. Oil supply responses to rising prices have been stubbornly slow despite many years of higher prices, and bringing new oil capacity to markets remains a challenge for numerous technical reasons. Inelastic oil markets without large buffers are thus vulnerable to shocks.

Oil Market Buffers
(data from Jan. 08 through Apr. 12)



Sources: International Energy Agency; and IMF staff calculations.

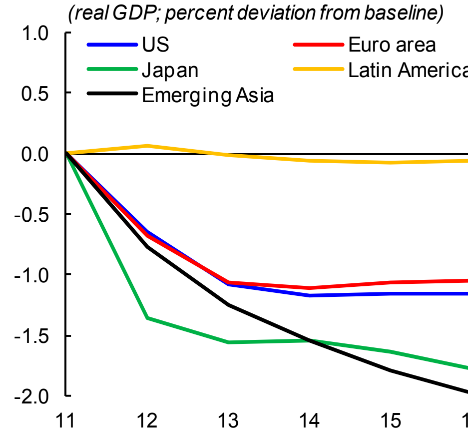
Brent Oil Price Prospects 1/
(U.S. dollars a barrel)



Sources: Bloomberg, L.P.; and IMF staff calculations.
1/ Derived from prices of futures May 29, 2012.

12. **A major shock would have a large impact on oil importers through prices and income**. In an adverse oil shock scenario, the real price of oil is assumed to rise 50 percent and then settle gradually at 40 percent above the baseline. This supply shock raises production costs, eroding profitability, and reduces the growth of real household income. But policies are constrained to support activity given monetary policy constraints and the lack of fiscal policy space to support demand. As a result, consumption and investment fall relative to the baseline, except in oil exporting countries, and global output is reduced by about 1 percent. It should be noted that the scenario does not consider the potential impact of an international conflict that might have added deleterious effects on consumer and business confidence, and stock prices.

Oil Price Shock
(real GDP; percent deviation from baseline)

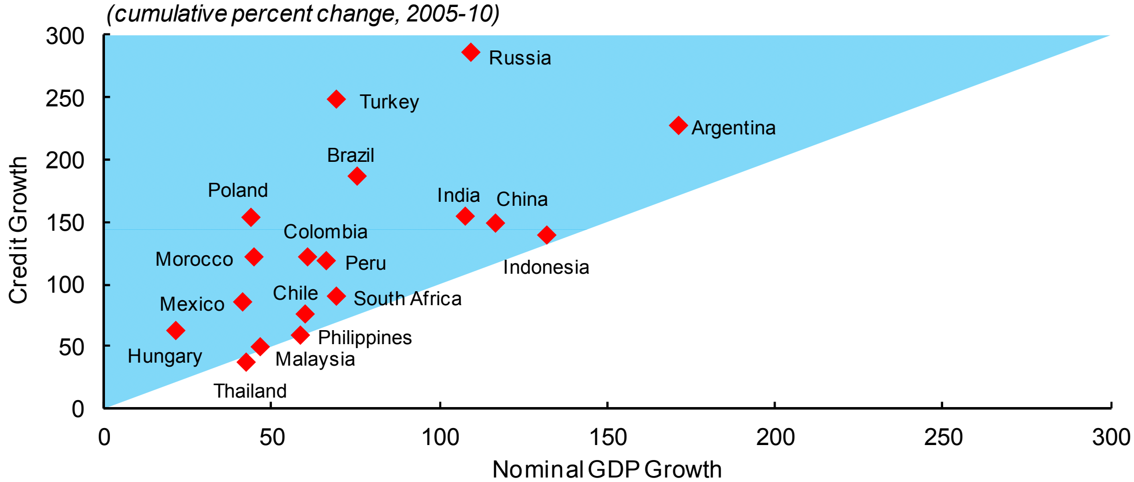


Source: IMF staff estimates.

13. **Rapid credit expansion may have pushed output growth above sustainable rates in some emerging economies**. Benign financial deepening may well be part of the story, but historically episodes of high credit and GDP growth were usually followed by much lower growth. Credit quality tends to deteriorate during expansions, leading to a spike in nonperforming loans during subsequent downturns. In addition, a booming economy may lead to an overly optimistic assessment of the potential growth rate. An eventual reevaluation of growth may frustrate

expectations and amplify the boom-bust cycle. Bank loan growth has slowed in China and India, amid concerns about deteriorating loan quality. Elevated loan growth is, to varying degrees, raising concerns in other G-20 emerging economies as well (Argentina, Brazil, Indonesia, and Turkey).

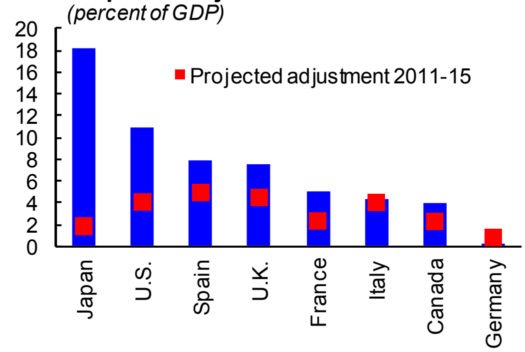
Credit and GDP Growth
(cumulative percent change, 2005-10)



Sources: IMF, *Global Data Source;* IMF, *International Financial Statistics;* and IMF staff estimates.

14. **A less proximate risk is linked to fiscal sustainability concerns in major advanced economies**. Investor confidence in rising sovereign debt in Japan and the United States cannot be taken for granted. Throughout the global crisis, these countries have retained their safe haven status. However, repeated failure to adopt credible and ambitious medium-term consolidation plans may eventually unnerve investors. Given the level of indebtedness, particularly in Japan, even a relatively minor increase in the interest rate would put substantial pressure on public finances. A disruption to Japan or U.S. sovereign bond markets, given their size and special role as benchmark and reserve assets, could affect stability in global financial and currency markets, with severe implications for economic activity.

Required Adjustment 1/
(percent of GDP)



Sources: IMF, *World Economic Outlook;* and IMF staff estimates.
1/ Blue bar reflects cyclically adjusted primary balance adjustment needed by 2020 and maintain through 2030 to bring the debt ratio to 60 percent of GDP by 2030. For Canada and Japan, the scenario assumes net debt targets (for Japan, a reduction in net debt to 80 percent of GDP, corresponding to a gross debt target of about 200 percent of GDP). These calculations, explained in the April 2012 *Fiscal Monitor*, adjust now also for the impact of debt levels on the interest-rate growth differential.

C. Policy Implications

15. **Euro area policies should secure financial stability, support economic growth, and lay the foundation for a stronger, more resilient monetary union**.

- *Containing and managing the crisis is an imperative*. Recent policy steps have opened a "window of opportunity" to get ahead of the crisis but the window may be closing. Providing ample liquidity to the financial system remains essential. A stronger firewall, as agreed by the euro area in March, is indispensable for containing the crisis—and prompt ratification of that agreement is needed to make it operational. In some cases, there will be need for official support using pan-European funds to help vulnerable banks to rebuild capital and for a mechanism at the central level to ensure that support does not jeopardize fiscal sustainability of national governments.

- *Appropriate macroeconomic policies are crucial to support economic and financial recovery*. To counter an expected decline in inflation below 2 percent and avoid deflation in periphery countries pursuing internal devaluation, monetary policy should be eased by using the remaining space for rate reduction and further embarking on unconventional measures. This would support activity (given appreciable slack) and the financial system (given stability risks). Sufficient fiscal adjustment is in train in most euro area economies. In case of small negative shocks, countries should adhere to their announced measures, but not necessarily to nominal targets (thus allowing automatic stabilizers to operate where financing allows). Thus consolidation paths should be defined in cyclically-adjusted terms. In a few countries, where the nominal deficit limit is binding in 2013, near-term adjustment plans appear overly ambitious. Euro area members under financial assistance must remain vigilant in fully implementing agreed reforms.

- *Stability-oriented financial policies should support bank restructuring*. While critical for relieving funding pressures, ECB actions (i.e., 3-year LTROs) can only be temporary. Keeping these policies in place too long can have undesirable side-effects—including support for non-viable banks and risks to the eurosystem balance sheets. Thus, efficient bank resolution mechanisms and maintaining a cooperative process of deleveraging (through EBA monitoring and macroprudential oversight) that avoids excessive credit tightening is important. The more the outlook deteriorates, the more important it will be to ensure that banks rebuild capital buffers via capital increases rather than via deleveraging.

- *Finally, governance and structural reform can help create a better functioning monetary union*. These reforms are discussed in Annex 2.

16. **Many other advanced economies are facing similar, if less acute, challenges**. An effective risk management approach to macroeconomic policies is important given the dangers.

- On fiscal policies, the pace of consolidation will depend on circumstances and getting the pace right is essential. The current pace of fiscal consolidation appears broadly appropriate, though there are a few exceptions. In case of negative shocks, automatic stabilizers should be allowed to operate freely. If conditions worsen substantially, policies might need to be recalibrated to be more supportive of growth. Near-term fiscal risks in the United States will need to be managed carefully by agreeing on tax and spending plans very soon, with the overarching objective of gradually stabilizing and reducing the public debt ratio. At the same time, *Japan and the United States* should urgently adopt credible and substantial medium-term consolidation plans. Stronger fiscal institutions and rules would support the adjustment in some economies.

- Monetary policy should be kept very accommodative, including through unconventional measures, in line with the objective of maintaining price stability. Some countries should consider additional easing given current conditions and fiscal policy constraints. Abundant liquidity should be readily available. At the same time, weaker banks need to be restructured or resolved and stronger financial institutions recapitalized. Financial regulation and supervision need to be improved, particularly over shadow banks, and cross-border cooperation of supervisory authorities must be strengthened.

17. **Emerging economies are generally in good shape, but facing a difficult balancing act**. While activity is generally strong, domestic demand is moderating with downside risks emanating from advanced economies. Volatile capital flows in the current environment complicate macroeconomic management. Appropriate policy responses will vary depending on key aspects.

- Where inflation pressures have eased, but fiscal fundamentals are weaker, monetary policy can be used to support activity if necessary, with macro-prudential measures employed as needed to prevent asset bubbles;

- Where inflation is under control, public debt is modest, and external surpluses are large (e.g., China), fiscal consolidation may be deferred in the near term, and poorer households could be supported through expanded social spending;

- Where inflation and public debt are high (e.g., India), focus should be on rebuilding policy space, with caution toward policy easing unless growth materially weakens.

- Should oil price risks materialize, central banks should take heed to avoid translating the shock into broader inflation pressure through “second-round” effects into wages and prices—a task made easier by lower food prices; using fiscal space to support activity may be an option though many are constrained; and budgetary pressures from higher oil prices (through fuel subsidies) create another complication in some economies.