

Risks to financial stability have increased since the April 2012 Global Financial Stability Report (GFSR), as confidence in the global financial system has become very fragile (Figures 1.1 and 1.2). Despite significant and continuing efforts by European policymakers, which have been essential in addressing investors' biggest fears, the principal risk remains the euro area crisis. Incremental policy-making has been insufficient to fully allay market tensions, despite the recent market rally since end-July. Imbalances in the United States and Japan are amenable to medium-term adjustment, but clarification now of necessary policy actions to be taken over the medium term would sustain confidence and preempt potential future market pressures. Emerging market economies have navigated well through increased global risks, but if spillovers were to intensify, rising domestic vulnerabilities and a reduction in policy space could pose increased challenges.

Status of Stability Indicators

Since the April 2012 GFSR, markets have been volatile, gyrating between extremes of disappointment and optimism (Figure 1.3). Confidence in policymaking has faltered, despite significant and continuing efforts by European policymakers. In addition, rising political risks elsewhere have postponed medium-term adjustment. These risks have spilled over to broader global economic conditions.

Note: This chapter was written by Peter Dattels and Matthew Jones (team leaders), Sergei Antoshin, Serkan Arslanalp, Eugenio Cerutti, Julian Chow, Nehad Chowdhury, Kay Chung, Sean Craig, Reinout De Bock, Martin Edmonds, Michaela Erbenova, Jeanne Gobat, Mehmet Gorpe, Kristian Hartelius, Sanjay Hazarika, Changchun Hua, Anna Ilyina, Patrick Imam, Marcel Kasumovich, William Kerry, Alexandre Kohlhas, Rebecca McCaughrin, Tommaso Mancini Griffoli, Peter Lindner, André Meier, Paul Mills, Nada Oulidi, Evan Papageorgiou, Jaume Puig, Jochen Schmittmann, Katharine Seal, Stephen Smith, Narayan Suryakumar, Takahiro Tsuda, Constant Verkoren, Chris Walker, Christopher Wilson, Lei Ye, and Jianping Zhou.

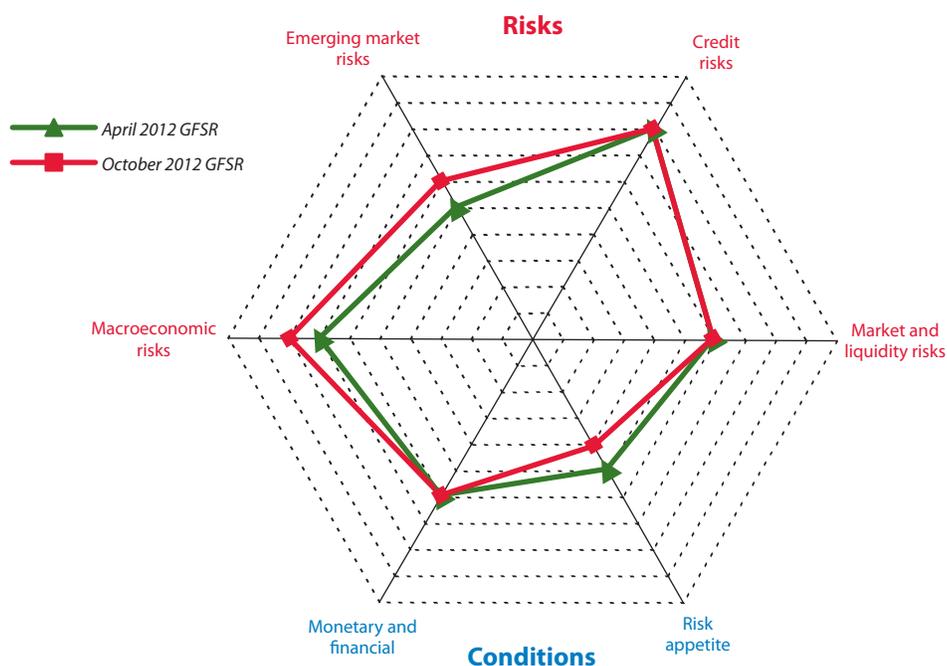
Notwithstanding recent market improvements in response to policy actions described below, conditions remain fragile after a prolonged deterioration in underlying trends. Flows into global bond funds have jumped since the April 2012 GFSR, with investors favoring safe-haven sovereign bonds and investment-grade corporate bonds amid concerns about tail risk outcomes (Figure 1.4).

The combination of lower *risk appetite*, a weakened outlook for growth (see the October 2012 *World Economic Outlook*), and persistently volatile and wide spreads in the euro area periphery has led to an increase in *macroeconomic risks*. *Emerging market risks* have also risen, as the prospects for these economies appear increasingly linked to the global cycle. In recent years, the resilience of emerging market economies amid the high-risk global environment has been evident in persistent investor flows seeking the relative safety of the sector's fixed-income assets. However, a further escalation of euro area stresses poses risks, especially for the countries in central and eastern Europe. A slowdown in economic activity heightens these risks, as some emerging market economies have only limited policy space to provide countercyclical stimulus and safeguard against external shocks.

Credit risks remain largely unchanged, albeit at high levels, as the renewed deterioration in the banking sector and growing deleveraging and credit pressures in the euro area periphery have been offset by some improvements in corporate and household balance sheets in advanced economies. Within the *euro area*, capital has continued to move out of the periphery, both to the core and to countries outside of the euro area altogether, as official measures to safeguard integration have so far proved insufficient to offset strong private sector forces for fragmentation.

A further deterioration in the euro area crisis is the biggest risk to global financial stability, but rising imbalances elsewhere are also a cause for concern. Safe-haven inflows to *Japan* have compressed govern-

Figure 1.1. Global Financial Stability Map



Source: IMF staff estimates.

Note: Away from center signifies higher risks, easier monetary and financial conditions, or higher risk appetite.

ment bond yields to near-record lows despite a more challenging sovereign debt load and a strengthening sovereign-bank nexus. While these imbalances are mostly a medium-term issue of fiscal adjustment, derivatives markets are pricing in risks of rising interest rates and currency volatility (Box 1.1).

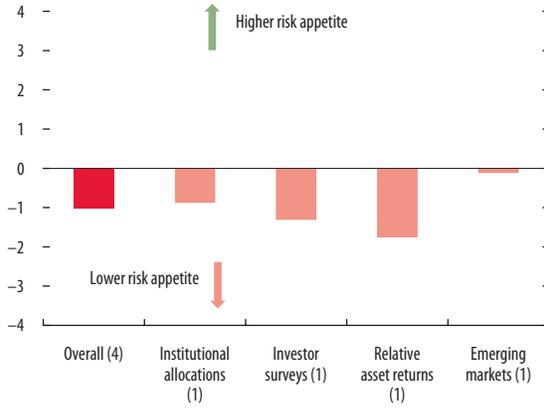
For the *United States*, safe-haven flows, central bank purchases, and balance sheet de-risking have also contributed to an unprecedented compression of credit risk premiums and yields. The looming debt ceiling, fiscal cliff, and related uncertainty are the main immediate risks, while unsustainable debt dynamics remain the key medium-term concern. If compressed credit spreads rise in a disorderly or rapid manner, longer-term fiscal risks could pose increasing stability challenges for the United States and the global financial system. Markets are not pricing in such an outcome (see Box 1.1), suggesting a degree of complacency, as reflected in extended long positions in Treasury bills across broad investor classes, in which interest rate risk, given near-zero policy levels, is essentially all one way. Meanwhile,

U.S. banks face structural challenges related to changes in their business models.

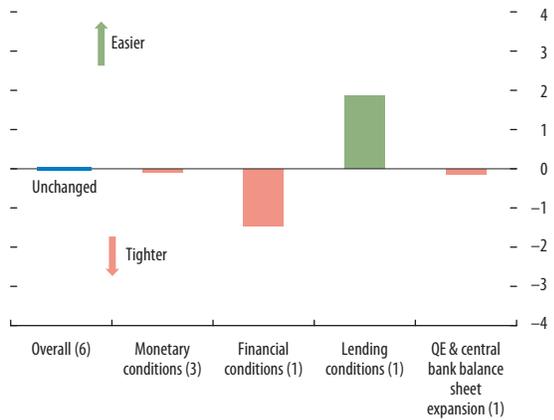
Monetary authorities have reacted to the elevated risks of financial instability and tighter credit conditions by maintaining a supportive policy stance, thus keeping overall *monetary and financial conditions* broadly accommodative. The European Central Bank's (ECB's) three-year LTROs (longer-term refinancing operations) eased bank funding strains and slowed the pace of deleveraging in the euro area in the first quarter. Lending conditions stabilized but then began to deteriorate again toward the end of the second quarter as the divergence between the euro area core and periphery continued to grow. However, a broad-based commitment from the ECB, beginning with a statement by ECB President Mario Draghi at the end of July to do "whatever it takes" to preserve the euro, and followed by the introduction in September of a program of Outright Monetary Transactions (OMT) to provide liquidity to sovereign debt markets in the euro area periphery, helped to reduce tensions and boost market recovery.

Figure 1.2. Global Financial Stability Map: Assessment of Risks and Conditions
(In notch changes since the April 2012 GFSR)

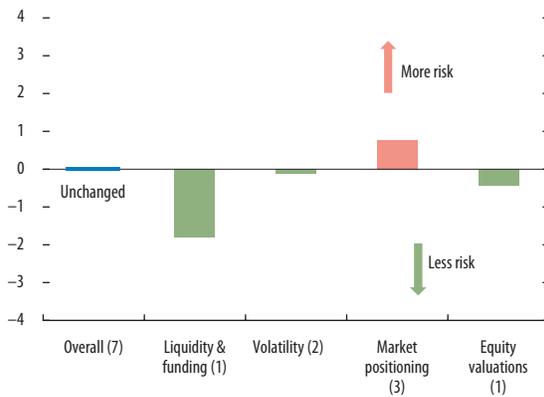
Risk appetite contracted across all measures, reversing the improvement in the beginning of the year.



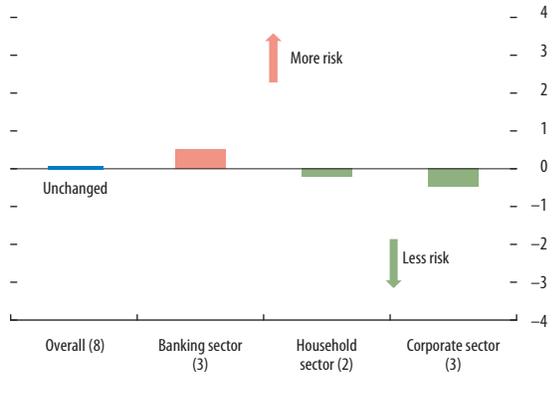
Lending conditions stabilized and financial conditions deteriorated, leaving overall **monetary and financial conditions** unchanged.



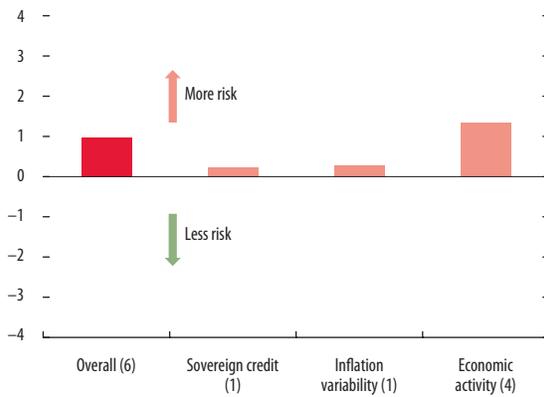
Easing liquidity strains helped **market and liquidity risks** remain steady despite bearish market positioning.



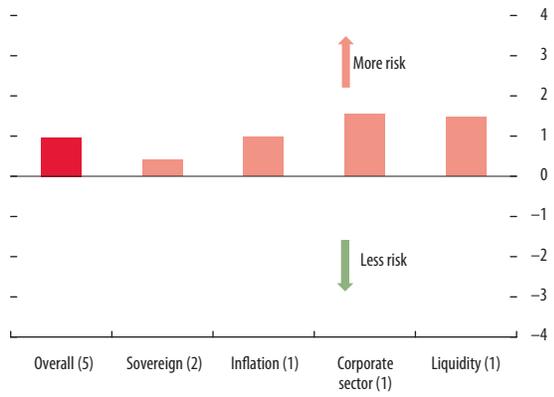
Credit risks remained at elevated levels, as improvements in nonfinancial sectors were offset by banking strains.



Macroeconomic risks increased due to deterioration in economic activity indicators.

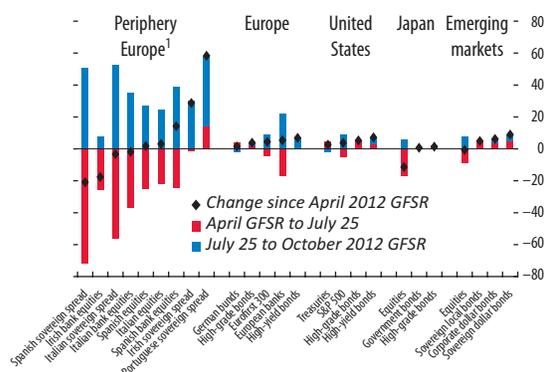


Emerging market risks increased as leading markets were increasingly affected by the global cycle.



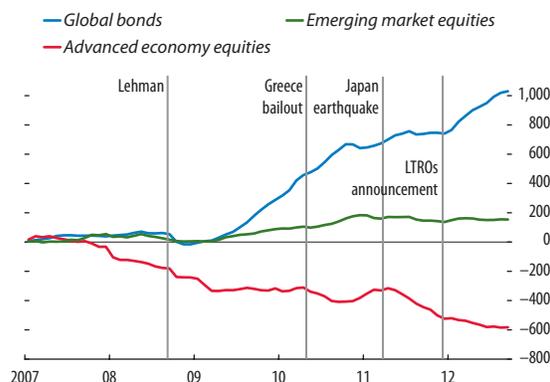
Source: IMF staff estimates.
 Note: Changes in risk and conditions are based on a range of indicators, complemented with IMF staff judgment; see Annex 1.1. in the April 2010 GFSR and Dattels and others (2010) for a description of the methodology underlying the Global Financial Stability Map. Numbers in parentheses denote the number of individual indicators within each subcategory of risks and conditions. The "overall" notch change in each panel is the simple average of notch changes in individual indicators in that panel. In the panel on monetary and financial conditions, a positive value for lending conditions represents slower pace of tightening or faster easing, and QE = quantitative easing.

Figure 1.3. Asset Price Performance since April 2012 GFSR
(Percent change)



Sources: Bank of America Merrill Lynch; Bloomberg L.P.; and IMF staff estimates.
¹Spreads are over bunds, inverted.

Figure 1.4. Cumulative Flows to Global Mutual Funds
(In billions of U.S. dollars)



Source: EPFR Global.
Note: LTROs = longer-term refinancing operations.

In response to the weakening outlook in the United States and persistent high unemployment, the Federal Reserve launched a new round of quantitative easing (“QE3”) in September. Also in September, the Bank of Japan, responding to weakened external growth prospects and persistent domestic deflation, enhanced monetary easing by increasing the size of its Asset Purchase Program. Together, these central bank actions boosted prices of risk assets and bank equities, while narrowing sovereign peripheral spreads in the recent period.

This GFSR welcomes the important steps taken by the European authorities and encourages strong implementation of announced policies along with further steps outlined in the *complete policies* scenario below that could act as a turning point in the crisis toward durable stability (see Box 1.2).

The rest of this chapter focuses on critical global stability risks and policy challenges. Chapter 2 assesses these financial risks in the sovereign, banking, and corporate sectors across regions of the world.

The Euro Area

The deepening euro area crisis has driven a wedge between the periphery and the core.

The euro area crisis has moved from a sudden stop into a capital-flight phase despite substantial policy interventions, as cross-border private capital is being

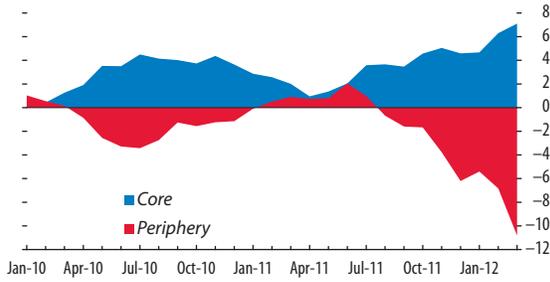
repatriated from the periphery back to the core of the currency union (Figure 1.5). Since domestic currency depreciation is impossible within the monetary union, higher risks have translated into rising credit spreads on the periphery’s sovereign and bank borrowers, particularly in Spain and Italy (Figure 1.6). As financial integration unwinds rapidly in this internal capital account crisis, the private capital leaving the periphery has been mostly replaced by large public sector flows, principally across central bank balance sheets (Figure 1.7).

Yet despite the significant public resources being deployed to the periphery, private sector confidence has remained low. Concerns over a possible euro area breakup have led to extreme fragmentation between funding markets in the core and the periphery (Figure 1.8). The announcement of the OMT program in early September has helped address such concerns and reduce sovereign spreads between the periphery and the core. However, periphery bank and corporate spreads have narrowed less, which may act as a brake on recovery. Banks, insurers, and nonfinancial corporations are trying to match assets, liabilities, and collateral in each country of the periphery as protection against redenomination risk. In turn, liquidity in core economy banks is not being recycled to the periphery but is instead being deposited at core central banks or in relatively safe government bonds.

Following a brief pause afforded by the ECB’s LTROs, deleveraging pressures on periphery banks

Capital flight from the periphery to the core...

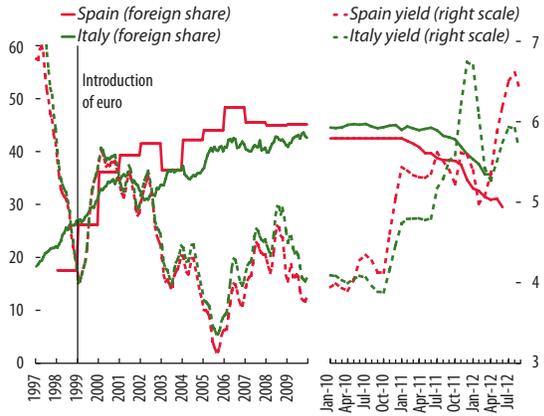
Figure 1.5. Portfolio and Other Investment Capital Flows in the Euro Area, Excluding Central Banks
(Cumulative from December 2009, in percent of GDP in preceding year)



Sources: Haver Analytics; and IMF staff estimates.
Note: To estimate the autonomous, private-sector-driven component of total flows, flows are calculated as the sum of net portfolio and other investment flows, excluding changes in TARGET2 balances at the central bank. Core = Belgium, France, Germany, and the Netherlands; periphery = Greece, Ireland, Italy, Portugal, and Spain.

...is widening sovereign spreads as foreign holdings of periphery debt fall...

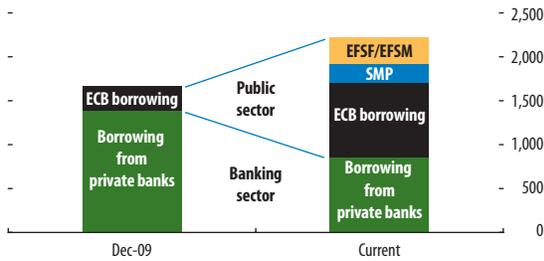
Figure 1.6. Spain and Italy: Changes in Foreign Investor Shares and Yields
(In percent)



Source: Bloomberg L.P.
Note: Share of nonresident investors in total debt stock, and generic yield of 10-year government bond. Yields are 3-month moving averages.

...and private borrowing is being replaced by public sector flows...

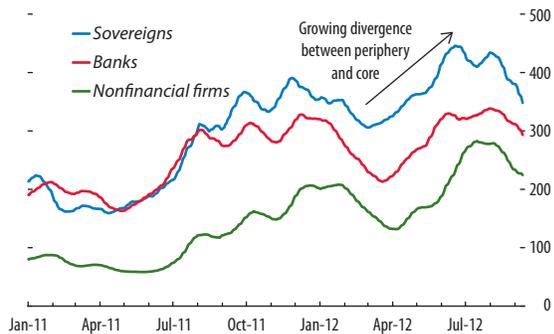
Figure 1.7. Euro Area Exposures to Greece, Ireland, Italy, Portugal, and Spain
(In billions of euros)



Sources: Bank for International Settlements (BIS); Bloomberg L.P.; European Financial Stability Fund; Haver Analytics; national central banks; and IMF staff estimates.
Note: Current exposures of the rest of the euro area to the periphery (Greece, Ireland, Italy, Portugal, and Spain) amount to €2.2 trillion; including cross-border lending by euro area banks reporting to the BIS on an ultimate risk basis (end-March 2012); periphery banks' borrowing from the Eurosystem, excluding emergency liquidity assistance; ECB purchases of periphery government bonds through its SMP; and EFSF and EFSM contributions to programs with Greece, Ireland, Portugal, and Spain. ECB = European Central Bank; EFSF = European Financial Stability Facility; EFSM = European Financial Stabilisation Mechanism; SMP = Securities Market Programme.

...resulting in a growing divergence in periphery-core funding costs and spreads...

Figure 1.8. Periphery Minus Core Credit Default Swap Spreads
(In basis points)



Sources: Bloomberg L.P.; Thomson Reuters Datastream; and IMF staff estimates.
Note: Data for sovereigns are weighted by GDP; for banks, by assets; and for nonfinancial firms, by outstanding bonds. Corporate spreads are calculated via option-adjusted bond spreads. Core = Austria, Belgium, Finland, Germany, and the Netherlands; periphery = Greece, Ireland, Italy, Portugal, and Spain.

have increased amid a sharp economic downturn, worsening funding conditions for both banks and sovereigns, and financial fragmentation within the euro area (see Box 2.3). The corporate sector could quickly become an additional force in this pernicious feedback loop, as downgrades of sovereign ratings threaten to drag investment-grade corporate debt down to the subinvestment-grade level. It is too early to tell whether the ECB's OMT program will relieve deleveraging pressures, as further measures at the national level are likely to be needed, as discussed below.

Restoring stability to reverse financial fragmentation within the monetary union remains the key policy challenge.

Restoring confidence among private investors is paramount for the stabilization of the euro area. Euro area policymakers are laying foundations to support that confidence, but numerous technical, legal, and political challenges remain. The urgency of the task is also increasing, as the fragmentation of funding markets remains intense despite the recent market rally, posing a risk of further damage to the

Box 1.1. Falling Confidence, Rising Risks, and Complacency

Investors are increasingly buying protection against extreme risks, even if investing in the instruments designed to provide the protection can be costly and may prove ineffective. Evaluating extreme risks can inform policymakers on threats to financial stability, by region, timing, and the structure of the protection. In Europe, markets point to some risk of currency redenomination. Reflecting medium-term fiscal challenges, markets are pricing in some upside risk to Japan's low interest rates. In contrast, U.S. markets are sanguine over both near- and medium-term risks from macro imbalances.

Rising Demand for Insurance against Global Tail Risks

The realization of extreme risk in 2008 led to a material alteration in investment strategies: strong demand for insurance against tail outcomes (the risk of low-probability but high-impact events). This demand has been relatively price insensitive in the recent past, indicative of a lasting structural shift in investment strategies. New instruments have emerged to satisfy investor demand, the most notable aimed at exploiting the inverse correlation between equity prices and the expected volatility of equity markets.

The S&P Volatility Index is an indicator of market expectations of future volatility and is widely used as a measure of global risk aversion. In January 2009, in the midst of the steep decline in global equity values, an instrument that tracks market expectations of volatility was introduced—the VXX. The demand

for such products has surged, and they now account for a significant share of the equity options market.¹ Demand is also strong despite poor performance (the VXX is down 60 percent on an average annualized basis), indicative of investor focus on extreme risks.

Global tail risks may emanate from one or more sources, such as the euro area crisis or U.S. and Japanese fiscal imbalances. Evaluating the source of specific risks provides policymakers with a guide to areas of potential instability discussed below.

Euro Area Risks: Currency Redenomination Risk

Risks in the euro area are dominated by balance of payments imbalances across member states. Creditor countries are repatriating capital from debtor nations even when the cost of doing so is high, as demonstrated by negative nominal shorter-term interest rates in various countries (Figure 1.1.1). Investors are willing to accept negative interest rates as the cost of guarding against a euro breakup and the introduction of national or subregional currencies (currency redenomination risk). Creditor countries expect to see their currencies appreciate substantially, more than offsetting the negative interest rate.

Redenomination risks can be evaluated against Denmark, a country with a long-standing currency peg to the German mark and now the euro. Figure 1.1.2 estimates the probability of the Danish kroner breaking the strong side of the European Exchange Rate Mechanism (ERM-II) peg to the euro in one year's time

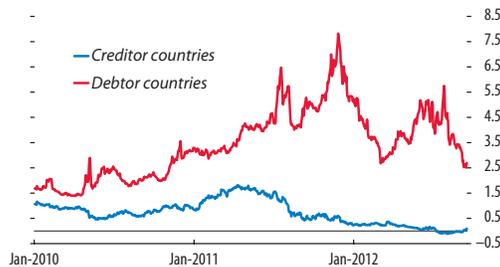
Note: Prepared by Marcel Kasumovich and Narayan Suryakumar.

¹Instruments such as the VXX and other volatility-based products are roughly 40 percent of listed S&P 500 options.

Box 1.1 (continued)

Safe-haven flows have driven rates for creditor countries into negative territory...

Figure 1.1.1. Two-Year Yields of Creditor and Debtor Countries in Europe (Percent)



Source: Bloomberg L.P.

Note: Yields are weighted by nominal GDP. Creditor countries = Austria, Denmark, Finland, Germany, the Netherlands, and Switzerland. Debtor countries = Ireland, Italy, Portugal, and Spain.

from market prices, which has been rising and falling alongside strains in the euro area. This can be viewed as a proxy for the expectation that a stronger, northern euro bloc will emerge from the crisis where the Danish kroner peg is reset to the stronger-currency countries and appreciates against the weak-currency ones.

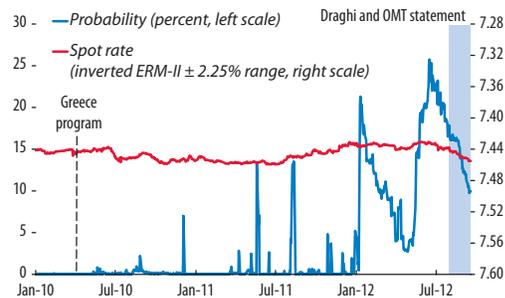
Longer-Term Risks Emerging in Japan

Japan's imbalances are unique in the context of history: very high government debt yet a very large external creditor position. The resolution of these imbalances could have significant implications for both interest rates and exchange rates. The natural expectation leans to a significant increase in bond yields. Interest rate markets do indeed reflect the potential for higher yields in the medium term.

The implications for foreign exchange markets are more complex. As seen during the March 2011 natural disaster in Japan, rapid currency appreciation may occur given the potential for the repatriation of foreign assets. Alternatively, the threat of an erosion of confidence in domestic policy, or, over the longer run, of a deterioration in the current account, might cause substantial depreciation. The market has resolved these two competing forces by anticipating a very high level of medium-term volatility in the dollar-yen exchange rate (as shown in Figures 1.1.3 and 1.1.4), well above realized volatility and high relative to past crises.

...while currency markets reflect euro redenomination risks.

Figure 1.1.2. Probability of the Danish Kroner Breaking the ERM-II



Sources: Bloomberg L.P.; and IMF staff estimates.

Note: ERM-II = European Exchange Rate Mechanism. The probability of breaking the strong side of the ERM-II boundary is estimated from the one-year euro-Danish kroner forward and volatility from option markets.

U.S. Risks: Complacency or Confidence?

The United States has a blend of the imbalances seen in the other major countries. U.S. government debt is high, though not as high as in Japan. The United States is an international net debtor, though not to the same extent as Spain and other countries in the euro area periphery. Nevertheless, markets have a benign expectation for the resolution of U.S. imbalances. Evidence of extreme risks in interest rate and currency markets is absent at virtually all horizons.

While the capacity of the U.S. government to repay its debt is not in doubt, continued growth in macro imbalances would raise the likelihood of a misalignment of policy incentives across internal and external creditors. If the expansion of the Federal Reserve balance sheet is the last-resort policy that prevents a large rise in bond yields, the clearest transmission mechanism is currency depreciation. Medium-term expectations have been, instead, leaning toward a U.S. dollar appreciation (Figure 1.1.5).

In the near term, the U.S. sovereign credit default swap curve suggests that the debt ceiling, as well as the fiscal cliff, will be resolved without issue (Figure 1.1.6). Uncertainty about a potential technical default as a result of the debt ceiling led to credit risk in short-term default swaps rising above those over longer horizons in July 2011. No such pattern has emerged this time around. In the longer term,

Box 1.1 (continued)

Markets are pricing in higher yen exchange rate volatility in the medium term...

Figure 1.1.3. Short- and Medium-Term Expectations of the Yen Exchange Rate Volatility
(Annualized percent)



Source: Bloomberg L.P.
Note: The medium term is derived from the difference between the 5-year and 10-year implied volatility in the yen versus the U.S. dollar and the euro. The short term is the historical 3-month volatility.

...and risk of higher interest rates in the medium-term in Japan but not in the United States.

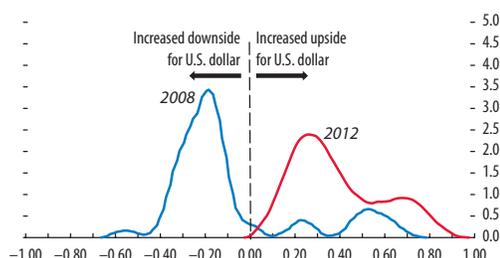
Figure 1.1.4. Relative Option Premiums on Long-Term Interest Rates
(In basis points, notional swaption value)



Sources: Bloomberg L.P.; and IMF staff estimates.
Note: A 10-year by 10-year swaption is a 10-year call or put option on a 10-year interest rate swap agreement. The option premium differential depicted here indicates the relative demand for insurance against the possibility that future interest rates will be higher than expected.

Medium-term expectations have been biased toward further U.S. dollar appreciation despite macroeconomic imbalances...

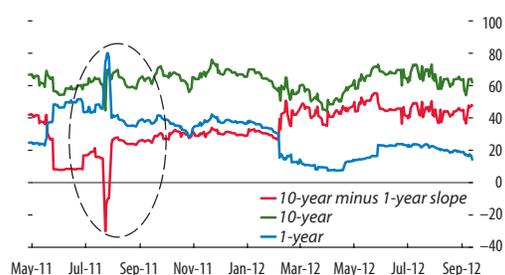
Figure 1.1.5. Index Measure of U.S. Dollar Appreciation-Depreciation Bias
(Trade-weighted dollar risk reversal index)



Sources: Bloomberg L.P.; and IMF staff estimates.
Note: Trade-weighted dollar risk reversal index is constructed using 5-year option risk reversals on the euro, yen, and British pound, indexed to a medium-term mean, reflecting investors' bias toward appreciation or depreciation. Data for 2012 are through August 31.

...while markets are sanguine about the near-term U.S. fiscal cliff and debt ceiling risks.

Figure 1.1.6. U.S. Credit Default Swap Spreads and Slope
(Basis points)



Sources: Bloomberg L.P.; and IMF staff estimates.

option markets are pricing far less fear of a rise in longer-term interest rates compared with Japan (as shown in Figure 1.1.4).

Financial Stability Implications

Evaluating extreme risks supports financial stability in three important ways. First, policymakers can disagree with the market assessment and provide targeted, logical foundations to the contrary both when there is too much and, importantly, too little

concern about future imbalances. Second, understanding strategies that attempt to insure against extreme risks can reveal potential vulnerabilities in the financial system. Seemingly effective hedges, such as long-term euro interest rate swaps, could further concentrate counterparty exposures, exacerbating risks when extreme events occur. Third, changes in investment strategies lead to financial innovation. New products, particularly fast-growing ones where risk diversification is likely to lag innovation, could lead to risks simply being transferred and concentrated, and therefore should be closely monitored.

Box 1.2. Recent Policy Initiatives, Developments, and Challenges in the Euro Area

Since the April 2012 GFSR, European policy-makers have announced further important policy measures aimed at reversing the fragmentation of euro area financial markets and strengthening the architecture underpinning the Economic and Monetary Union (EMU). To ensure maximum effectiveness, these measures will need to be followed by implementation at the national level, with further steps taken toward more complete integration.

June 29 European Union Summit

In addition to agreeing on up to €120 billion in European Union (EU) growth-enhancing initiatives, euro area leaders promoted measures to address the sovereign-banking nexus. These included removing the seniority of the European Stability Mechanism (ESM) loan to recapitalize Spanish banks once the European Financial Stability Facility (EFSF) loan rolls over; opening the possibility for the ESM to directly recapitalize Spanish banks once the single supervisory mechanism is in place; and restating the commitment to use EFSF/ESM interventions to stabilize secondary sovereign bond markets. Bond spreads in the euro area periphery narrowed sharply in the aftermath of the summit in the belief that these steps constituted a significant step toward spreading the liability for future bank rescues across the euro area.

German Constitutional Court

In a preliminary ruling on September 12, 2012, the German Constitutional Court stated that the ESM and the Fiscal Pact were consistent with the German Constitution, paving the way for Germany to ratify the ESM Treaty. The Court attached the condition that Germany's commitment to the ESM is capped at the currently planned €190 billion unless the lower house of parliament decides to approve additional funds. The court also ruled that both houses of parliament must be informed about ESM decisions and that granting it a banking license would be incompatible with primary EU law.

ECB's Outright Monetary Transactions

Following its policy meeting on September 6, the European Central Bank (ECB) announced its

Outright Monetary Transactions (OMTs) program as a replacement for the Securities Market Programme (SMP).¹ The ECB will consider OMTs for countries under a macroeconomic adjustment or precautionary program with the EFSF/ESM, which should help to ensure that low policy rates transmit to borrowing costs in countries in the periphery with a program. In addition, it relaxed its collateral framework for sovereigns in an OMT program and for foreign currency collateral. OMTs are likely to be more effective than the SMP in slowing and reversing capital flight from the periphery due to:

- *Greater credibility.* By explicitly targeting intervention to address convertibility risk and the broken transmission mechanism, and by tying intervention to conditionality and shorter maturity bonds, the ECB gained near-universal acceptance that it is acting well within its mandate.
- *Operational lessons learned.* OMTs will not dilute existing bondholders by taking a senior position in the sovereign's capital structure, thereby lessening investors' incentive to sell as the ECB buys. Additional transparency will enable investors to assess the ECB's position in, and commitment to, OMT country bonds.
- *Easing of periphery bank liquidity and capital concerns.* An OMT program is likely to encourage domestic banks to continue to participate in sovereign primary bond markets as the ECB will act as a backstop buyer of one- to three-year bonds. The OMT announcement reopened the primary market for unsecured debt of periphery banks—if sustained, this will reduce liquidity concerns for banks.

¹OMT features include (1) conditionality: the assisted sovereign signs up for an ESM/EFSF program or precautionary credit line; (2) mode of intervention: unlimited, fully sterilized, short-dated (one to three years) ECB bond purchases in the secondary market with no formal yield target; (3) ranking of claim: pari passu ranking with other bondholders for OMT purchases of sovereign bonds; (4) transparency: OMT holdings and their market values to be published weekly and the average duration and country breakdown to be published monthly; and (5) collateral policy: minimum credit rating requirements for sovereign-issued collateral used for ECB liquidity operations are to be suspended for sovereigns eligible for the OMT program.

Box 1.2 (continued)

- *Potential reduction in sovereign bond volatility.* A credible OMT program, with potential backup support from the ESM in the primary market, should help anchor sovereign yields at the short end, encourage domestic banks to participate at longer maturities, and reduce volatility, thereby attracting external investors back.

The ECB's actions have eliminated a number of the potential "bad equilibria" arising from fears that a periphery sovereign and its banks will face an extreme liquidity crisis. By addressing many of the operational defects of the SMP and being more clearly within the ECB's mandate, the OMT program has greater credibility and is likely to be deployed with less hesitancy. However, the OMT program still faces significant political and implementation risks. Governments now need to ask for support under the EFSF/ESM, agree on conditionality, and implement reforms. Furthermore, steps need to be taken to put in place the other elements of the *complete policies* scenario—notably, moves toward greater fiscal integration, credible bank recapitalization and resolution, and a banking union. The OMT program does not give categorical assurance that debt sustainability will be restored given the uncertain impact of conditionality.

Banking Union

On September 12, the European Commission published its proposals for banking union within the euro area. These envisage rapid implementation of a Single Supervisory Mechanism (SSM) by Janu-

ary 2013, with the ECB empowered to act from that point on, taking over supervision for systemically important financial institutions in July 2013 and all banks from January 2014. EU countries outside the euro area can opt into "close cooperation" with the ECB, which will then issue guidelines and requests to these authorities and their banks. The European Commission envisaged adoption, by end-2012, of EU legislation harmonizing national prudential regulations, bank resolution, and deposit insurance, and steps toward a single bank recovery and resolution framework. It also proposed that the European Banking Authority's powers of "binding mediation" over national authorities be extended to the ECB.

Numerous issues with this ambitious plan now need to be resolved and agreed upon. These include the boundary of responsibility and delegation between the ECB and national supervisors, the balance between euro area and other EU regulators, the future of macroprudential policymaking across the EU, and the optimum timetable for implementation. Furthermore, these proposals, while important, are only preliminary steps in the creation of a full "banking union" with the aim of weakening the nexus between a sovereign and its banks. This will require, in particular, adequate pan-euro area backstops for deposit insurance and bank resolution, and a bank resolution mechanism. Without these, the cost of banks' capital will still be linked to their home country, while a sovereign's creditworthiness will remain tied to that of its banks.

financial system and the real economy. This report explores these policy challenges by updating and extending the euro area scenarios for *baseline policies*, *weak policies*, and *complete policies* introduced in the April 2012 GFSR.¹ Developed in detail in Chapter 2, these updated scenarios are briefly summarized below. Owing to mounting pressures on periphery banks since the April 2012 GFSR, the degree of

¹In the April 2012 GFSR, the *baseline policies* scenario was called the *current policies* scenario.

deleveraging stress under all three scenarios is now higher than it was in that report, rising to \$2.8 trillion under the *baseline policies* scenario, or as high as \$4.5 trillion under the *weak policies* scenario (Figure 1.9).

- The WEO/GFSR *baseline policies* scenario assumes a gradual restoration of confidence based on additional policy actions that demonstrate political commitment to closer integration. Specifically, it assumes that policymakers establish a single supervisory mechanism on

the current timetable and contain pressures on spreads, including potentially through the ECB's OMT program, and policymakers in periphery economies follow through with their adjustment programs. Under this scenario, policy credibility and confidence improves gradually, while capital flight from the periphery to the core slows. Activity would continue to contract in the periphery from still-elevated funding costs, while the core would see only very sluggish growth.

- Unless the policy actions under the baseline are taken, the euro area is likely to slide into a *weak policies* scenario. This scenario envisages current commitments remaining unfulfilled as the periphery's political resistance to reform grows, or support from the core wanes, or both. Strains in the euro area deepen as the forces of fragmentation increase and become entrenched (Box 1.3). Potential financing gaps widen, the degree of fragmentation and financial repression increases, capital holes in banking systems expand, and the increasing intra-euro area capital account crisis spills outward. These developments pose a far-reaching threat to the global financial system and the global economic outlook.
- To avoid rising economic and financial costs seen under the *baseline* scenario, the *complete policies* scenario envisages that euro area policymakers advance timetables for actions assumed in the baseline scenario. In addition, they present a clear roadmap to a banking union and fiscal integration and deliver a major down payment toward those goals. Examples might include putting in place a euro area deposit guarantee scheme and bank resolution mechanism with common backstops, or concrete measures toward fiscal integration, as anticipated in the "Four Presidents" report submitted to the euro area summit (European Council, 2012). Under this scenario, the euro area begins to reintegrate financially as policy credibility is restored and capital flight reverses. Funding costs in the periphery and core normalize by the end of 2013, credit channels reopen as banking strains dissipate, and economic growth returns to the periphery and picks up in the core.

Chapter 2 uses these scenarios to demonstrate that *unless additional policy measures are taken swiftly* to achieve the *complete policies* scenario, confidence will not be sustainably restored, and the result will be higher levels of deleveraging (Figure 1.9), a greater reduction in credit supply (Figure 1.10), leading to a sharp contraction in investment (Figure 1.11), a cut back in employment (Figure 1.12), and a steeper drop in output (Figure 1.13). The longer the crisis continues, the greater will be the public sector costs of its ultimate resolution—because of the transfer of rising credit exposures from the private sector to monetary and fiscal authorities—and the more difficult it will be to reintegrate the periphery with the core. Merely muddling through also imposes increasingly higher costs, as the unchecked forces of fragmentation continue to gather speed and undermine the very foundations of the union—a common monetary policy, and economic and financial integration within the single market. The existing strains in the markets require a leap to better policies if the euro area is to stabilize funding markets and reduce spreads, arrest capital flight, and begin to reintegrate financially (Figure 1.14).

What is needed to achieve the complete policies scenario?

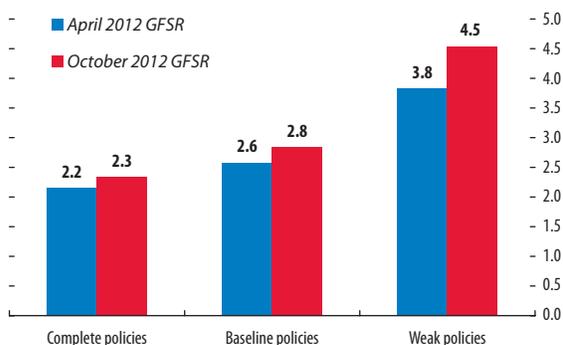
The *complete policies* scenario requires, first, regaining credibility through an unflinching commitment to implement already adopted measures. That credibility supplies the platform on which further actions, taken at both the national and euro area levels, can stabilize the current situation and facilitate a rapid move toward a more integrated union.

At the national level, the first priority is to stabilize fragile balance sheets and address high burdens of legacy debt. Policymakers also need to build political support for the necessary pooling of sovereignty that a more complete currency union entails. Sovereigns and banks need to be made safer:

- For sovereigns, the top priority remains the continued implementation of well-timed medium-term fiscal consolidation strategies. Countries must continue the process of adjusting high debt burdens. To navigate short-term fluctuations,

... increasing pressure on banks to reduce assets and credit.

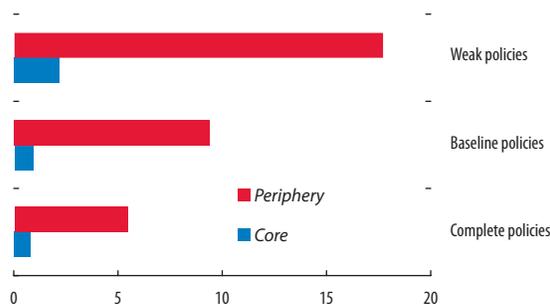
Figure 1.9. Total Deleveraging by Sample Banks
(2011:Q3–2013:Q4; in trillions of U.S. dollars)



Source: IMF staff estimates.

Periphery economies could face a deepening credit crunch ...

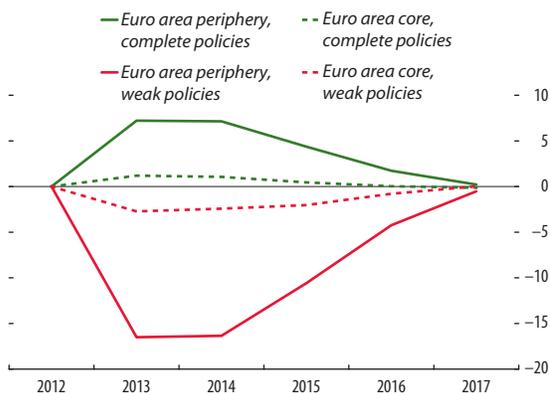
Figure 1.10. Reduction in Euro Area Supply of Credit under Alternative Policy Scenarios
(Cumulative for 2011:Q3–2013:Q4, in percent of total credit)



Source: IMF staff estimates.
Note: Core = Austria, Belgium, Finland, France, Germany, and the Netherlands; periphery = Greece, Ireland, Italy, Portugal, and Spain. Total credit includes domestic and direct cross-border credit supplied by banks.

... resulting in diverging investment ...

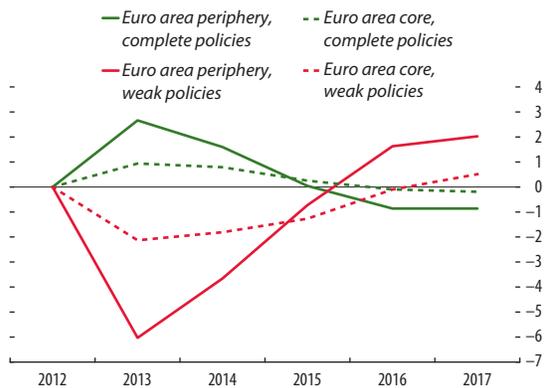
Figure 1.11. Impact on Investment from EU Bank Deleveraging
(Percentage point deviation from WEO baseline)



Source: IMF staff estimates.
Note: Core = Austria, Belgium, Finland, Germany, and the Netherlands; periphery = Greece, Ireland, Italy, Portugal, and Spain.

... and employment ...

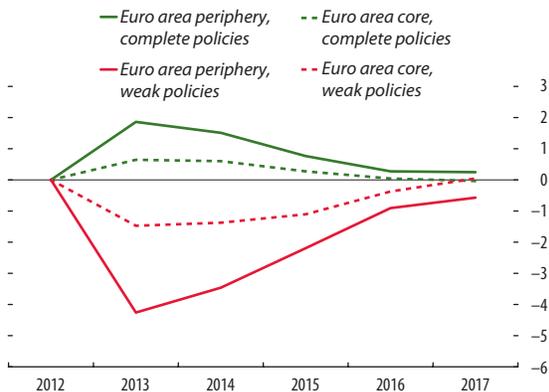
Figure 1.12. Impact on Employment from EU Bank Deleveraging
(Percentage point deviation from WEO baseline)



Source: IMF staff estimates.
Note: Core = Austria, Belgium, Finland, Germany, and the Netherlands; periphery = Greece, Ireland, Italy, Portugal, and Spain.

... and growth under the downside scenario.

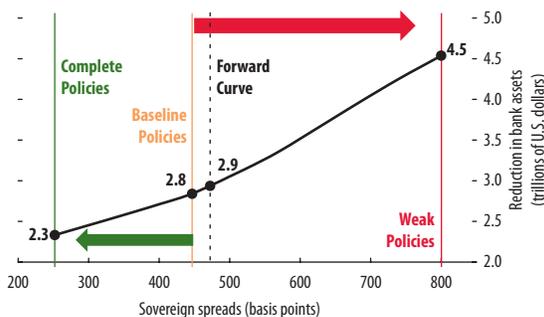
Figure 1.13. Impact on GDP from EU Bank Deleveraging
(Percentage point deviation from WEO baseline)



Source: IMF staff estimates.
Note: Core = Austria, Belgium, Finland, Germany, and the Netherlands; periphery = Greece, Ireland, Italy, Portugal, and Spain.

Reducing sovereign spreads would help relieve deleveraging stress.

Figure 1.14. Reduction in Bank Assets: Sensitivity to Periphery Sovereign Spreads
(2011:Q3–2013:Q4)



Source: IMF staff estimates.
Note: Periphery sovereign spreads are GDP-weighted average spreads of Greece, Ireland, Italy, Portugal, and Spain.

however, countries with fiscal space should let automatic stabilizers operate around a path of sustained fiscal adjustment (see the October 2012 *Fiscal Monitor* for further details).

- For the banking system, important steps must be taken to recapitalize or restructure viable banks where necessary and resolve nonviable banks. Conservation of public resources should require

burden sharing by shareholders and by subordinated debt holders in banks that receive significant injections of public capital. Full protection of bank liabilities by impaired sovereigns is likely to do more systemic harm than good by raising the credit risk premium for the whole economy through higher sovereign funding costs. In the case of resolution, other creditors may be subjected to bail-in, respecting the creditor hierarchy.

- Individual countries must address the issues that caused them to lose access to long-term market financing within the currency area. Wide-ranging, growth-enhancing structural and institutional reforms are needed to strengthen competitiveness and economic governance and to narrow external imbalances.

Steps taken at the euro area level to help dissolve the destructive sovereign-banking nexus are also urgently needed to support national efforts at stabilization:

- For the banking system, this should include continuing adequate funding for banks through the ECB's liquidity framework—supplemented with relaxed standards for collateral, as already announced in September. For countries facing a severe feedback loop between banks and sovereigns, banks need direct support from the existing crisis management facilities, namely the European Financial Stability Facility (EFSF) and its successor, the European Stability Mechanism (ESM), following the establishment of a single supervisory mechanism.
- Separating the sovereign debt issue from sovereign liabilities toward domestic banks will require decisive moves toward a banking union. Progress is needed on common regulations and supervision, as well as bank resolution and common safety nets, along with adequate backstops to both a joint deposit insurance fund and a single bank resolution authority. While current plans envisage the creation of the single supervisor, it is also essential to provide a clear timeline and detailed concrete steps toward creation of the resolution authority and joint deposit insurance, which will happen at a later stage. This is essential to guide market expectations and regain confidence.

Box 1.3. Resilience of the Euro, or Fragile Equilibrium?

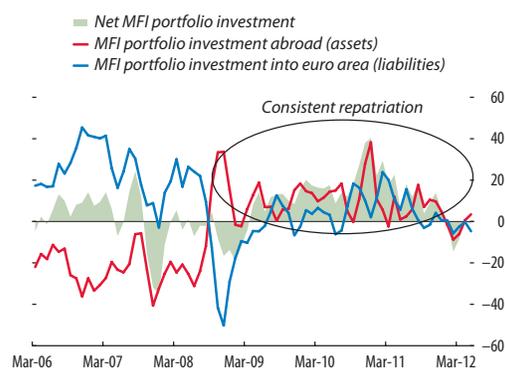
Since the start of the euro area crisis, the resilience of the euro has stood in contrast to the strong depreciation of other free-floating currencies during past periods of banking and sovereign stress (Table 1.3.1). While the euro has been supported by an overall favorable aggregate euro area balance of payments position and relatively favorable debt position, increased stress within the euro area and financial fragmentation could put pressure on the currency.

Balance of payments flows provided support to the euro during the 2008–09 financial crisis leading to the first Greek program, and in the subsequent period of euro area periphery stress (periods I and II in Table 1.3.1). From the beginning of the financial crisis the ongoing shrinkage of assets in the financial account due to portfolio investment repatriation, particularly from European monetary financial institutions (MFIs; red line in Figure 1.3.1), as well as resumption of foreign portfolio inflows by foreign MFIs (blue line in Figure 1.3.1) have reduced some of the pressure on the euro. Moreover, as the euro continues to be a major reserve currency, the increase in general portfolio investment liabilities during the first half of 2012 (foreigners' purchases of European bonds and equities) helped cushion the large drop in fixed-income portfolio investment assets by domestic investors over the same period. From a valuation perspective, the present interest rate configuration suggests that the euro is fairly valued, according to consensus analysts' forecasts and models.

Note: Prepared by Evan Papageorgiou.

Figure 1.3.1. MFI Portfolio Investments Abroad and into the Euro Area

(In billions of euros, three-month moving average)



Source: European Central Bank.

Note: The red line corresponds to European monetary financial institution (MFI) portfolio investment flows outside the euro area; the blue line is the portfolio investment flows into the euro area by foreign (non-euro area) MFIs.

Three broad pillars continue to instill confidence in the euro. First, the euro area as a whole compares favorably with other major economies on fundamental factors (see Table 2.1 in Chapter 2). Countries in the euro area periphery face serious challenges, but the core countries make up the majority of the euro area in output and overall economic standing. Second, the European Central Bank has acted to diffuse tensions in periods of acute risk aversion in the past and has pledged again to do “whatever it takes” to save the euro. Third, commercial bank deposits have stayed within the euro area so far, albeit with some recycling from the periphery to the core.

Table 1.3.1. Foreign Exchange, Equities, Credit and Real Growth Performance during Past Episodes of Stress

Country or Area	Period of Stress	Performance from Peak to Trough			
		Domestic currency versus U.S. dollar (percent)	Growth (percent)	Equities ¹ (percent)	Credit spreads ² (basis points)
Sweden	Jan 1992–Dec 1993	-40	-3.0	-39	...
Turkey	Jan 2001–Dec 2001	-60	-6.0	-38	414
United Kingdom	Mar 2008–Mar 2009	-35	-6.3	-46	157
Hungary	Jul 2008–Dec 2009	-43	-7.1	-67	664
Euro area I	Apr 2008–Jun 2010	-25	-4.7	-57	123
Euro area II	Jul 2010–Jul 2012	-19	-0.5	-35	234

Sources: Bloomberg L.P.; and Haver Analytics.

¹Equity performance in local currency terms. Euro area equities performance is based on the euro Stoxx 50 Blue Chip index.

²Increase of five-year credit default swap (CDS) spreads for Hungary and the United Kingdom, 10-year U.S. dollar bond Z-spread for Turkey, and GDP-weighted average of five-year euro area sovereign CDS spreads for the two euro area periods (excluding Greece).

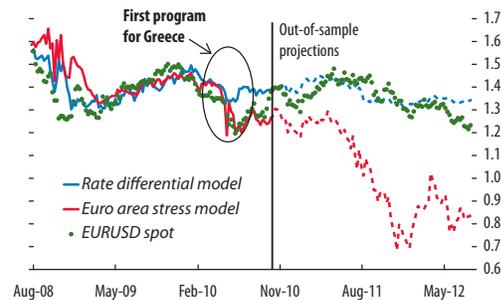
Box 1.3 (continued)

However, even though the euro has remained broadly resilient with the ebb and flow of “muddling through” measures, the existing equilibrium is precarious. One may think of the euro as a two-state regime. In periods of decreasing or stable tail risks, the aggregate performance of the euro area in terms of overall balance of payments improvement and the steady deposit base help to keep the euro stable.

In this state, typical interest rate fair value models describe adequately the evolution of the nominal exchange rate of the euro, as shown in Figure 1.3.2 (blue line). During periods of increasing risk aversion, the fragility of equilibrium in the euro area is highlighted by the disparities between core and periphery countries (see Table 2.1 for German, Italian, and Spanish macro variables relative to the euro area). Under such stressed conditions (as in May 2010 around the time of the first Greek program), a model incorporating sovereign and bank funding risks on the nominal euro-U.S. dollar exchange rate (red line in Figure 1.3.2) performs better, as questions arise about the sustainability of current policies and the possibility of a breakup of the currency union.

The resurgence of credit risks during the fourth quarter of 2011 and in May 2012 would be consistent with a much weaker euro under the euro area stress model, in contrast to results from typical

Figure 1.3.2. Euro-Dollar Nominal Exchange Rate: Spot Values and Results of Interest Rate Fair Value Model versus Euro Area Stress Model, August 2008–August 2012



Sources: Bloomberg L.P.; and IMF staff estimates.

Note: Fitted values until October 2010 are based on two-year rolling regressions of weekly observations. The rate differential model uses three-month interbank rate spreads, one-, two-, and five-year rate spreads between euro and dollar swaps. The euro area stress model uses GDP-weighted average 10-year bond spreads to Germany for the euro area, and one-year cross-currency euro-dollar basis. After October 2010, the lines correspond to out-of-sample predictions on the latest estimated coefficients.

interest rate fair value models, which track spot rates closely. A prolonged period of high tail risks may push the currency off its fragile equilibrium toward the state specified in the *weak policies* scenario especially should the strength of the three pillars listed above erode.

- Where market dynamics fail to reflect improved policies at the national level, thus compromising sovereign liquidity, some form of temporary support may be necessary. The ESM will be able to provide such support through purchases in sovereign debt markets. In addition, the ECB’s recently announced OMT program, which involves purchase of one- to three-year maturities in secondary sovereign bond markets, is aimed at restoring the transmission mechanism of monetary policy throughout the euro area. Encouragingly, the OMT framework incorporates explicit conditionality and greater transparency than the Securities Market Programme, and purchases through the OMT will not have seniority over private market creditors. (The OMT and other recent policy initiatives are summarized in Box 1.2.)

The process of further integrating the euro area as a monetary, fiscal, and financial union must be pushed forcefully ahead. Tangible commitments to the roadmap toward fiscal integration would help anchor expectations about the irreversibility of the euro area project. An immediate step toward greater risk sharing would be to provide a common fiscal backstop for a banking union. Common borrowing, with appropriate fiscal safeguards, could provide such a backstop, ensure market access for sovereigns under stress, and create safe assets for the banking sector.

The United States

Sovereign credit risk is also an important challenge to stability in the United States amid a

weak economy facing slow growth and inadequate demand. Unsustainable debt dynamics remain a medium-term concern, but the looming fiscal cliff, debt ceiling deadline, and related uncertainty also pose near-term risks—to the extent the accompanying unpredictable political process erodes confidence in policymaking and triggers market volatility. Given the very special role that U.S. Treasuries play in global capital markets, keeping them safe is of paramount importance, both for the United States and for the global financial system.

Safe-haven flows, central bank purchases, and balance sheet de-risking have contributed to an unprecedented compression of credit risk premiums and yields in the United States. This makes risk largely asymmetric or “one way,” since yields are close to record lows and are more likely to adjust upward. Fiscal imbalances are largely medium-term challenges, but if political discord in managing shorter-term issues or other stresses causes yields to rise in a disorderly or rapid manner, the consequences for global financial stability could be severe, given worldwide exposures to Treasuries. While perceptions could change, markets are currently not pricing in such an outcome (see Box 1.1).

There is little room for complacency in tackling these major policy challenges, even if markets are not yet signaling imminent concerns. The main priorities are to promptly define a gradual consolidation path to avoid the fiscal cliff, restore fiscal sustainability with a balanced approach to medium-term consolidation, and complete financial sector reforms. At its September 13 meeting, the Federal Open Market Committee agreed to extend its low interest rate guidance from late-2014 to mid-2015 and to undertake additional purchases of mortgage-backed securities at a pace of approximately \$40 billion per month, conditional on a substantial improvement in the labor market. While these measures have helped to boost prices of risk assets and reduce mortgage rates, additional steps may be needed to unclog the transmission mechanism and accelerate the repair of household balance sheets. Going forward, the focus should be on proactive policies that prevent near-term risks from materializing, that address medium-term sustainability, and that forestall the buildup of vulnerabilities.

Japan

The present difficulties in the euro area provide a cautionary tale for Japan, given the latter’s high public debt load and interdependence between banks and the sovereign that is expected to deepen over the medium term. Japan has been a beneficiary of safe-haven inflows as a result of the crisis in Europe; these flows have pushed government bond yields to near record lows, facilitating easy financing of the nation’s high public debt. However, safe-haven flows have also driven the yen exchange rate to near historic highs, impacting Japanese exports and domestic production. In turn, this has added headwinds to the economic outlook, leading to continued weakness in credit demand from the private sector. Banks have responded by increasing their holdings of government bonds.

The rising concentration of government bond risk in the domestic banking system is a central financial stability concern in Japan. Since 2008, demand from the traditional investor base for Japan’s sovereign debt has waned, and domestic banks have become the dominant buyers. Stress tests of the major banks reveal that, over the near term, they are able to handle moderately large shocks to government bond prices. But a potential sharp rise in government bond yields in the medium term could pose sizable risks to Japan’s regional banks (see Chapter 2 and Box 1.1).² Measures to induce banks to take greater account of the risks inherent in large holdings of government bonds may help control this risk, particularly in the case of regional and smaller banks.

Emerging Markets and Other Economies

Emerging market economies need to guard against potential further shockwaves from the euro area while managing a slowdown in growth that could raise domestic financial stability risks. Thus far, flows into their bond markets have continued as fears about sovereigns in the euro area have esca-

²Chapter 2 projects that domestic regional banks will raise their holdings of government debt from 24 percent of assets in 2011 to 30 percent by 2017. At that point, an increase of 100 basis points in the yield on the debt would reduce the Tier 1 capital of those banks by one-fourth.

lated. However, local markets could come under strain in an adverse scenario of acute global stress that precipitates large-scale capital outflows.

Policy priorities vary significantly, depending on domestic conditions, external vulnerabilities, and available policy space. Overall, countries in central and eastern Europe are the most vulnerable of the emerging market economies, because of their direct exposures to western Europe and some vulnerabilities shared with countries in the euro area's periphery. In broad terms, many economies in central and eastern Europe remain focused on resolving the legacy of past credit and asset price booms that have left them with large external debt burdens and limited space for expansionary macroeconomic policies.

The Achilles' heel of many economies in central and eastern Europe is a banking system struggling with deleveraging pressures, worsening asset quality, and slow growth. At the same time, the region is most exposed to headwinds from the euro area. This challenging constellation argues for continued efforts to reduce vulnerabilities. In particular, authorities should push ahead with coordinated debt resolution policies—such as debt workout plans or loan modification schemes—that allow borrowers a path back to sustainable finances in close coordination with their creditors. Bank regulators simultaneously need to require full loss recognition and adequate capitalization to lay the groundwork for a recovery in credit supply. These domestic efforts must be supported by cooperative approaches from home regulators in the euro area, notably under the Vienna II Initiative.

Emerging market economies in Asia and Latin America generally appear more resilient, but several key economies are prone to late-cycle credit risks following an extended period of rising leverage and

property prices. Meanwhile, the scope to provide fresh policy stimulus is limited in several economies, especially where strong recent credit expansions argue against a loosening of financial policies. Policymakers must therefore keep their guard high and deftly navigate their country-specific challenges to avert external and domestic threats to financial stability. The priority for them, therefore, is to build additional buffers in balance sheets—private and public—to withstand possible setbacks, as the cycle may turn downward in the near future.

More broadly, policymakers in emerging market economies are well advised to continue developing local capital markets so as to reduce their vulnerability to reversals of capital flows. The still-limited scale of domestic asset managers in many emerging market economies heightens the risk of disruptive shocks from capital flows. Promoting capital market development is therefore a key priority.

Regulatory Reform

There is a need for a continued strong commitment to the regulatory reform agenda. Implementation of reforms in the current environment, in which banks are facing reduced profitability amid persistent legacy problems, poses considerable challenges. Debates have arisen over the timeliness and difficulty of reforms, and many countries are struggling to implement international agreements in full, as set out in Box 1.4. As documented in Chapters 3 and 4, the reform agenda seeks to improve the resilience of institutions. Without more resilient institutions, recovery will continue to lag. Momentum to carry through with the agenda, in full, should not be lost.

Box 1.4. Regulatory Reform: From Rulemaking to Implementation

The focus of the regulatory reform agenda has shifted from the development of standards to rulemaking and implementation.¹ An April progress report by the Basel Committee on Banking Supervision (BCBS, 2012a) shows that some countries are much further behind than others in the implementation process, raising the possibility that some may miss the January 2013 deadline for the national rules to be in place. Among the G20 countries, according to the report, only India, Japan, and Saudi Arabia had published their final rules for implementation. China subsequently published its final rules for a phased implementation commencing in January 2013. The United States also released its consultative package but did not announce an implementation date.

The liquidity requirements under Basel III—the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR)—are still some time away from implementation, with the LCR and NSFR currently within the observation period. Although the LCR rules will be clarified by early 2013, the final shape of the NSFR is less certain, as the implementation date is further out, in 2018.

Agreement has been reached on the identification of global systemically important banks (G-SIBs) and on the different buckets of capital surcharge applicable to them. Discussions are now focusing on extending the framework to domestic SIBs and to nonbanks, including global systemically important insurers (G-SIIs). In a consultation paper, the International Association of Insurance Supervisors (IAIS, 2012) has proposed a methodology for identifying G-SIIs that places greater emphasis on nontraditional and noninsurance activities and interconnectedness. The BCBS has released draft guidance on a principles-based approach to identifying domestic SIBs and applying related systemic risk charges (BCBS, 2012b). Implementation is targeted for 2016.

The end-2012 deadline for trading all standardized derivatives contracts through exchanges or elec-

tronic trading platforms and clearing them where appropriate through central counterparties (CCPs) is likely to be missed because of lagging implementation at the national level. International guidance is largely complete, with some work remaining on capital requirements for banks' exposures to CCPs and margining requirements for non-centrally cleared over-the-counter derivatives.²

The various groups examining shadow banking activities and entities within the Financial Stability Board (FSB) are expected to deliver their reports and policy recommendations over the next six months. Recommendations are expected in the near term on money market funds, securities lending and repos, and enhancements to the regulation of banks' interactions with shadow banks. The work on other entities that could be considered shadow banks (ranging from hedge funds to finance companies) is going at a slower pace, in large part because such entities vary across jurisdictions.

The extraterritorial implications of the Dodd-Frank Act and the Foreign Account Tax Compliance Act (FATCA) adopted in the United States are still being evaluated by other jurisdictions and the market. The full implementation of both pieces of legislation continues to evolve. FATCA has potentially far-reaching effects on the compliance obligations of banks, and parts of the Dodd-Frank Act, such as the Volcker rule, would alter the business model of dealer banks.

Implementing effective domestic and cross-border resolution regimes remains a key component of the reform agenda. The FSB published "Key Attributes of Effective Resolution Regimes for Financial Institutions" in November 2011 (FSB, 2011). It also set out an ambitious timetable, including the preparation of recovery and resolution plans by end-2012 for all designated global systemically important financial institutions, conducting their resolvability

Note: Prepared by Christopher Wilson and Michaela Erbenova.

¹See Chapter 3 for a more complete assessment of the potential effects of regulatory reforms on financial structures.

²For example, the Committee on Payment and Settlement Systems (CPSS) and the International Organization of Securities Commissions (IOSCO) in April released the final version of the "Principles for Financial Market Infrastructures," which contains standards for "all systemically important payment systems, central securities depositories, securities settlement systems, central counterparties and trade repositories" (CPSS-IOSCO, 2012).

Box 1.4 (continued)

assessments, and concluding institution-specific cross-border cooperation agreements in the first quarter of 2013. A methodology to assess country compliance with the Key Attributes is on track to be completed in 2013. FSB members have begun the first of an iterative series of thematic peer reviews on the implementation of these items. These peer reviews are expected to provide a fuller picture of progress toward implementing the new standard and emerging challenges. Standard setters are also

at work on the application of the methodology and resolution tools for G-SIIs (the IAIS) and financial market infrastructures (the CPSS and IOSCO).

Crisis management groups have been established for nearly all the designated G-SIBs. Progress in developing resolution plans is less advanced and uneven as many jurisdictions lack the necessary statutory tools for resolution. Legal reforms to align national resolution regimes with the FSB Key Attributes are under way in many jurisdictions.

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