FOR AGENDA

SM/12/296
Correction 1

December 19, 2012

To: Members of the Executive Board

From: The Secretary

Subject: **France—Selected Issues**

The attached corrections to SM/12/296 (12/7/12) have been provided by the staff:

Factual Errors Not Affecting the Presentation of Staff's Analysis or Views

Page 4, para. 1, line 1: for "French households allocate most of their savings"
read "French households allocate most of their wealth"

Page 4 para. 1, line 5: New footnote 2 inserted to read "French household financial wealth is defined as the sum of total bank deposits, life-insurance contracts and mutual funds (OPCVM) outstanding as in Bachellerie et al. (2012). In comparison, French households financial wealth stood at EUR 3.85 trillion at end-2011. After subtracting household debt (mainly related to housing credit), French household net wealth stood at EUR 2.7 trillion.)"
Subsequent footnotes renumbered accordingly

Page 4, para. 2, line 3: for "domestic savings" read "domestic wealth"
para. 2, text chart: replaced to change title
para. 2, line 13: for "their ownership of mutual funds"
read "their commercialization of mutual funds"

Page 5, Table 1: replaced to change title and heading
para. 3, line 5: for "savings, are mainly" read "wealth, are mainly"

Page 7, para. 8, line 3: for "in the US through the wholesale market to invest in the US through the shadow banking system."
read "in the US through the wholesale market in order to minimize their funding costs and, on the asset side, they invested in US mortgage backed securities and structured products, fueling the shadow banking."

Page 10, para. 15, fourth bullet: for "Greece and the other GIIPS"
read "Greece and the other high spread euro area countries exposure"

Page 14, para. 25, line 9: for "Provisioning against GIIPS"
read "Provisioning against high spread euro area countries"

Page 25, para. 15, line 1: for "France is particularly vulnerable to shocks from GIIPS"
read" France is particularly vulnerable to shocks from high spread euro area countries"

Page 35, para. 7, line 4: for "Ireland, Italy, Portugal and Spain (IIPS)"
read "Ireland Italy Portugal and Spain"
para. 7, line 7: for "and 20 percent for IIPS"
read "and 20 percent for Ireland, Italy, Portugal and Spain (hereafter: "high-spread euro area countries")".

Page 37, para. 8, line 1: for "sovereign claims of GIIPS"
read "sovereign claims of high-spread euro area countries"
para. 8, line 5: for "(other than Greece and IIPS)
read "(other than the high-spread euro area countries)"

Page 37, table replaced to eliminate an acronym.

Page 38, para. 9, line 3: for "claims on Greece and IIPS"
read "claims on high-spread euro area countries"

Page 38: text chart replaced to eliminate an acronym.

Page 38, para. 9, line 7: for "claims on Greece and IIPS"
read "claims on high-spread euro area countries"

Page 39: chart replaced to eliminate acronym.

Page 39, para. 10, line 4: for "GIIPS exposure" read "high-spread euro area countries exposure"

Typographical Errors

Page 23: paragraph 11 removed as it is a repetition of paragraph 10. Subsequent paragraphs are renumbered accordingly.

Page 57, para. 31, line 1: for "the labor tax wage" read "the labor tax wedge"

Questions may be referred to Mr. Gardner (ext. 35394) and Mr. Hallaert (ext. 39969) in EUR.

This document will shortly be posted on the extranet, a secure website for Executive Directors and member country authorities.

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Appendixes

References

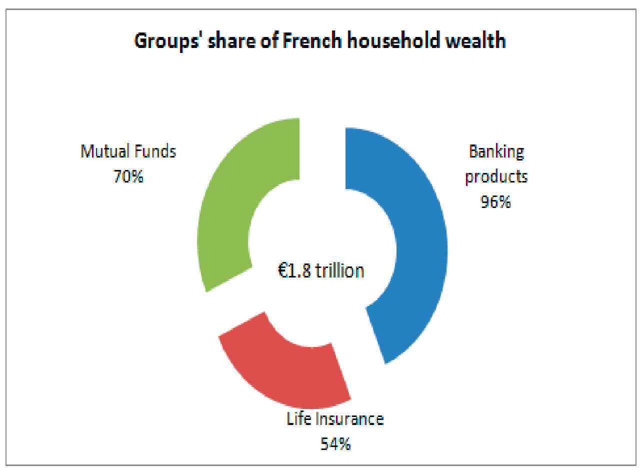
FRENCH BANKS: BUSINESS MODEL AND FINANCIAL STABILITY[1]

This note (i) provides an overview of the domestic context of the French banking sector; (ii) reviews developments leading to the 2007 to 2008 financial crisis; (iii) discusses challenges to French banks' business model during the Eurozone crisis; and (iv) discusses its adaptation with a view to assess vulnerabilities and risks to financial stability.

A. The Domestic Context

1. **French households allocate most of their wealth in life insurance and banking products.** Life insurance and banking products, mainly deposits, accounted for about 43 and 53 percent, respectively, of the €2.5 trillion in financial assets held by household at end-2011, with the balance invested in mutual funds (Table 1). Tax exemptions for life insurance and regulated deposits help explain the composition of households' financial assets[2].

2. **A few financial "supermarkets" intermediate about 75 percent of the domestic wealth.** At end-2011, six large bank-insurance groups (BNP Paribas, (BNP), Société Générale, BPCE, Banque Postale, Crédit Agricole, and Crédit Mutuel) collected about 96 percent of French households' deposits and other banking products, 54 percent of their life insurance products, and 70 percent of their placements in mutual funds (Table 1). The bancassurance groups typically have full ownership of insurance companies and use their banking arms' distribution channels to earn fee income from the selling of insurance products. Banks also earn fee income through their commercialization of mutual funds (OPCVM).



[1] Prepared by Amadou N. R. Sy (MCM).

[2] French household financial wealth is defined as the sum of total bank deposits, life-insurance contracts and mutual funds (OPCVM) outstanding as in Bachellerie et al. (2012). In comparison, French households financial wealth stood at EUR 3.85 trillion at end-2011. After subtracting household debt (mainly related to housing credit), French household net wealth stood at EUR 2.7 trillion.)

Table 1. France: Household Financial Wealth

(End-2011) Amount outstanding, EUR billions	Banking products	Life Insurance	Mutual Funds	Total Household Wealth
Bancassurance groups 1/	1018.8	712.4	81.5	1812.7
Other insurance companies		603.7		603.7
Other	43.5	0	35.1	78.6
Total	1018.8	1316.1	81.5	2416.4

Source: Banque de France
1/ BNPP, Societe Generale, Credit Agricole, BPCE, Banque Postale, Credit Mutuel

3. **Within the bancassurance industry, cooperative banks rely more on retail deposits than the other banks.** The three largest cooperative banks, Crédit Agricole Group, Crédit Mutuel, and BPCE, collect 56 percent of total retail deposits through their larger branch networks. Regulated bank deposits (mostly Livret A et Bleu), which account for about 9 percent of households' financial wealth, are mainly deposited in cooperative banks.[1] At end- 2010, Banque Postale, Caisse d'Epargne and Crédit Mutuel held 80 percent of such products. Until 2009, regulation allowed only these groups to collect Livret A deposits, the most popular type of regulated savings. Since then, all banks can offer such deposits. Cooperative banks also have a dominant share of the domestic loan market (59 percent of total in 2009), especially mortgages (72 percent of the total). Except for Crédit Agricole, the cooperative banks have not expanded their operations internationally. In addition, corporate and investment banking (CIB) operations in cooperative banks are as not as important as in BNP and Société Générale.

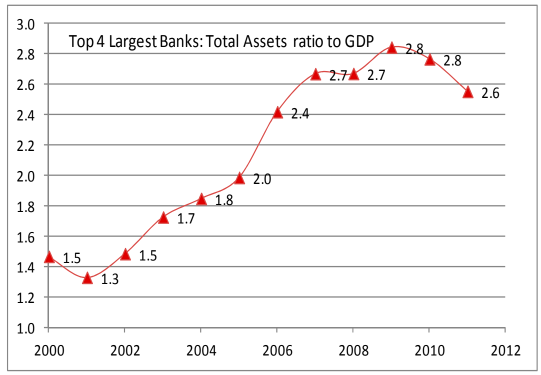
4. **Two of the largest French banks have large CIB operations, especially in fixed income currency and commodities (FICC) and equity derivatives**. The CIB split shows a reliance on FICC (32 and 26 percent of investment banking (IB) revenues for Société Générale and BNP) but also a strong presence in equity derivatives business which accounts for 32 and 18 percent of Société General and BNP IB revenues, respectively. The two banks are ranked first and second globally in several equity over-the-counter (OTC) derivatives products. These two banks are members of the

[1] The remuneration rate of the Livret A is set to the maximum of the average of the three-month Euribor and Eonia, or the inflation rate plus 25 basis points. About one third percent of the Livret A raised by banks are passed to the publicly owned Caisse des Dépôts et Consignations (CDC) to finance social housing.

largest 14 derivatives dealers group (G14) and as such are among the most globally interconnected banks. They are important players in other types of derivatives products, including interest rate andexotic equity (variance and volatility swaps). The CIB split also shows a reliance on euro-denominated debt and capital markets segment as well as financing especially relationships with corporate such as syndicated loans.

B. A Global Expansion Halted by the 2007 to 2008 Crisis

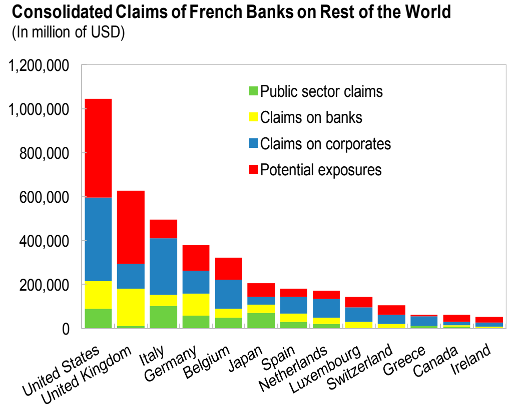
5. **The French banking sector grew rapidly in the pre-crisis period in line with those in the US and other European countries.** Total banking assets of the four largest banks grew rapidly to about 2.7x GDP just before the financial crisis from 1.5x in 2000. French banks have much larger balance sheets than most European peers and are among the largest in the world. Assets of the largest bank, BNP (BNP), were comparable to France's GDP at about €2 trillion at end-2010.



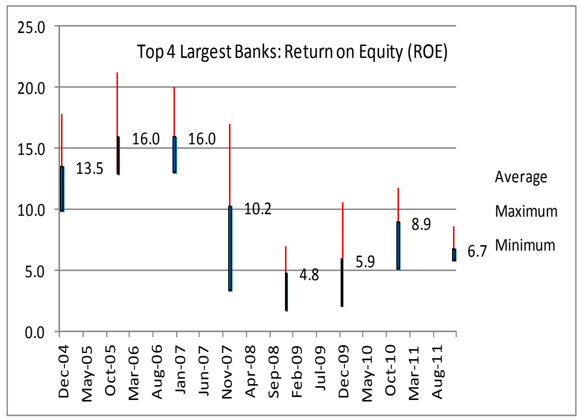
6. **Financial innovation was the main driver of asset growth.** Most of the asset growth was driven by banks' holdings of marketable securities and other short-term investments and financed mainly by short-term wholesale borrowings. As a sign of greater engagement in securities markets, Natixis was created through the merger of the investment banking units of two cooperative banks, which traditionally focused on the French retail market. Off-balance sheet assets also grew rapidly during the pre-crisis period, in part owing to the expansion of French banks' derivatives business. Asset growth was halted by the financial crisis in mid-2007 and subsequently reversed. Gross data from the BIS show that by 2007, French banks had increased their net foreign positions (assets minus liabilities) aggressively to about €800 billion, more than UK banks but less than German banks[1]

[1] See McGuire and von Peter (2009). Data are for large internationally active banks headquartered in France, which include branches and subsidiaries.

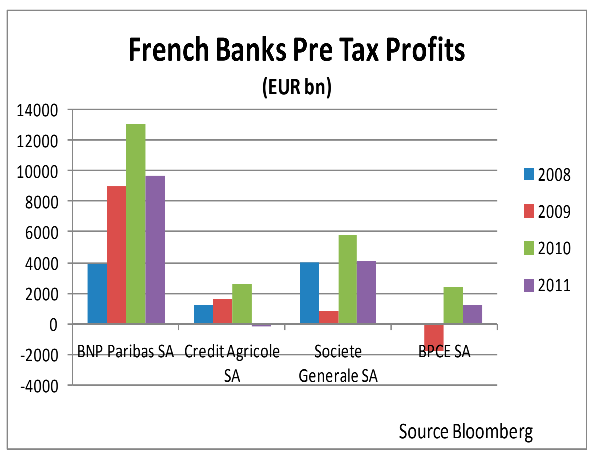
7. **A few pre-crisis large international bank acquisitions also increased the size of French banks' assets.** In particular, in 2006, Crédit Agricole Group acquired its Greek subsidiary (Emporiki) and BNP acquired its Italian subsidiary (Banca Nazionale del Lavoro). The international retail mix of French banks shows a large presence in Europe, and Italy in particular. In 2010, retail operations in Italy accounted for about half and 30 percent of total international retail business for Crédit Agricole and BNP, respectively; Greece accounted for about a quarter of Crédit Agricole's international operations; while retail operations in Belgium, Luxembourg, and the US reached 31 and 22 percent, respectively, for BNP. Société Générale's operations in the Czech Republic alone account for 23 percent of its international footprint, followed by Russia which accounts for 18 percent of international business.



Source: BIS Table 9E, Consolidated Foreign Claims & other Potential Exposure on an Ultimate Risk Basis, March 2011



8. **French banks' rapid global expansion was comparable to other European banks.** As other European global banks, French banks funded themselves in the US through the wholesale market to invest in the US through the wholesale market in order to minimize their funding costs and, on the asset side, they invested in US mortgage backed securities and structured products, fueling the shadow banking.[1] Three factors may explain the expansion of European and French banks. The first is that banks used securitization to circumvent the risk weights required under Basel I (Basel II was implemented in Europe only starting in January 2007). It is noteworthy that the magnitude of the increase in assets did not translate into a similar rise in risk-weighted assets for banks, and as



[1] See Shin (2012).

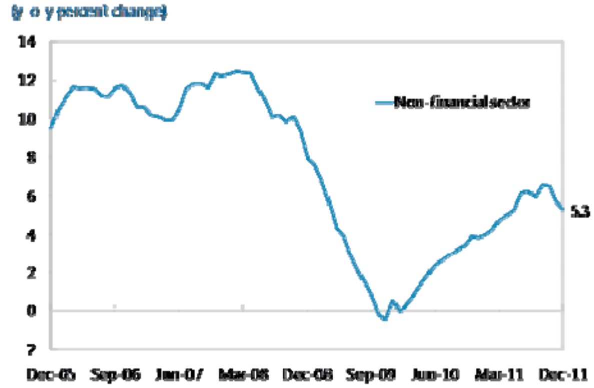
a consequence banks were able to expand without having to increase their capital as rapidly. The second argument is that the advent of the Euro was a catalyst for increased cross-border banking (within the euro zone). Finally, the prevailing low interest rate environment gave incentives for banks to engage in a search for yield.

9. **Asset growth generated higher but more volatile profitability.** Banks' return on equity (ROE) reached double-digit levels fueled by trading profits. ROEs were the highest for the French banks with higher exposures to capital markets. Median ROE increased to 16.0 percent in 2006 with Société Générale and BNP earning returns on equity (ROEs) of 20 and 17.5 percent, respectively compared to 13 percent for the cooperative and mutual banks, (Crédit Agricole and BPCE).

10. **The French financial system was resilient to the 2007 to 2008 crisis.** Despite large losses, most banks were able to maintain positive net profits, thanks to solid earnings from traditional domestic retail banking and asset gathering, which offset losses in other business lines.

11. **Public support to the banking system was significantly less than in the UK and the US.** Public support included (i) setting up the Société de Financement de l'Économie Française (SFEF) with government-guaranteed bonds equivalent to €77 billion (about 4 percent of GDP), which were on-lend to banks in proportion to market shares; (ii) setting up the Société de Prise de Participations de l'État (SPPE) for bank recapitalization purposes which injected about €20 billion into the six largest French banks in the form of subordinated debt securities and preferred shares; and (iii) supporting the creation of the BPCE group from the merger of Groupe Caisse d'Épargne and Groupe Banque Populaire, with a €5 billion capital injection by SPPE.[1] The French governments also participated (with the governments of Belgium and Luxembourg) in a €6.4 billion recapitalization of the Dexia Group.

Credit to Non-Financial Private Sector



Sources: Haver Analytics; ECB; and IMF staff calculations.

[1] All banks, except Dexia, have since repaid the state.

12. **In the aftermath of the crisis, French banks started a gradual process of balance sheet adjustment while preserving credit supply**. After sharp losses during the crisis, most banks started managing legacy assets as a run-off business to reduce their total exposures.[2] Credit growth remained resilient and has rebounded from a sharp drop in 2009.

C. The Eurozone Crisis: An Increasingly Challenging Operating Environment

13. **French banks face a more challenging operating environment.** Key changes in their operating environment include: (i) intense market stress, especially since summer 2011 in a volatile euro area environment; (ii) new banking regulations to improve the quantity and quality of capital and liquidity following the 2008 crisis; (iii) new policy measures targeted to globally systemically important financial institutions (G-SIFIs), and more recently (iv) a banking reform proposed by the government.

Increased Market Stress Since August 2011

14. **French banks raise large amounts of short-term wholesale funding to complement their customer deposits**. At end-2011, deposits from customers stood at about 32 percent of total liabilities for the largest banks as they relied heavily on wholesale funding, including interbank funding and US money market funds. French mutual funds are also a source of funding for banks, and a channel through which corporate treasury savings are invested in bank securities. As a result of their reliance on wholesale funding, banks' loan-to-deposit ratios are high and averaged 129 percent at end-2011.

15. **In August 2011, difficulties in rolling over US dollar funding from US money market mutual funds signaled key changes in French banks operating environment**. French banks which borrowed short-term US dollar funds from US prime money market funds (MMFs) had to suddenly roll over US$240 billion in very difficult market conditions as US MMFs sharply reduced both the size and maturity of their exposures. Funding costs increased, and share prices fell sharply (Table 2). Banks faced a more challenging operating environment as:

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[2] Legacy assets include toxic assets (monolines, CDO subprime, and U.S. RMBS and CMBS), ABS/CDOs, and LBOs. Cumulative losses through 2012 for the five largest French banks reached €34 billion.

- Wholesale funding risk increased significantly following the near closure of the US dollar funding market;
- The operating environment for earnings generation became more challenging with reduced profitability of CIB activities and increased market pressure to cover the cost of capital of such business lines;
- Market concerns also covered French banks' lower relative capital adequacy and liquidity positions as compared to peer banks and at the same time the cost of raising equity capital rose sharply;
- The euro zone crisis led to higher and, at times, indiscriminate risk aversion for banks that were most heavily exposed to Greece and the other high spread euro area countries exposure, notably French banks;
- At the same time, domestic macroeconomic growth slowed down, reducing prospects for higher loan growth.

Table 2. France: Daily Movements of Selected Financial Indicators

	Latest observation:	Change since:						
					2010-2011		Since 2000	
	12/5/2012	Last Closing	7 days ago	7/1/2011	Trough	Peak	Trough	Peak
				(Percent)				
CAC 40 Index	3590.5	0.3	2.5	-10.4	29.1	-13.6	49.4	-48.1
BNP Paribas Equity	43.4	0.6	3.0	-20.5	88.1	-27.2	108.8	-52.6
Crédit Agricole Equity	6.0	0.3	6.1	-44.0	109.9	-55.8	109.9	-81.5
Société Générale Equity	28.2	-1.1	4.3	-33.6	88.0	-46.0	88.0	-79.9
				(Basis points)				
3M Basis Swap Spread	-24.1	1.1	4.2	3.4	133.4	-16.4	185.9	-21.6
Euribor-OIS 3M Spread	12.4	-0.3	0.9	-9.2	2.0	-88.3	21.1	-194.6
Sovereign 10Y Yield Spread	65.2	1.3	-3.2	27.4	46.5	-124.9	66.6	-124.9
Sovereign 5Y CDS Spread	79.7	0.6	-4.6	0.3	50.0	-170.0	78.2	-170.0
BNP Paribas 5Y CDS Spread	143.7	-3.5	-18.8	30.7	93.6	-215.9	138.3	-215.9
Crédit Agricole 5Y CDS Spread	159.5	-0.9	-13.8	26.2	97.4	-244.3	153.7	-244.3
Société Générale 5Y CDS Spread	174.3	-2.8	-17.1	42.3	112.7	-265.9	168.4	-265.9

Sources: Bloomberg; and staff calculations.

v. The separation of retail and "speculative" business lines;

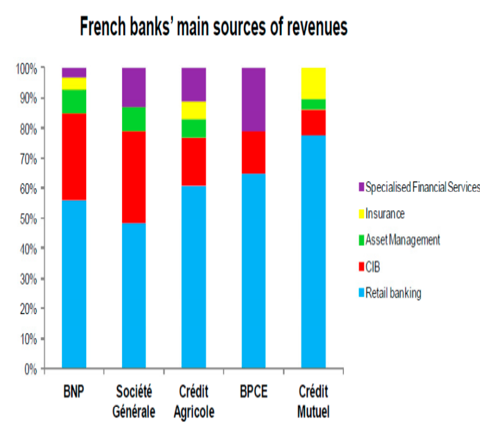
vi. The banning of "toxic" financial products and stock options; and

vii. Prohibition of bank operations in offshore tax havens.

22. **The envisaged separation of retail and "speculative" will not lead to an overhaul of French banks' business model.** The authorities have indicated that banks will be required, by July 2015, to create subsidiaries to ring-fence businesses from "market activities that are not directly dedicated to the financing of the economy," including proprietary trading, investment in hedge funds, and private equity funds. However, under the draft proposal, French bank will continue their market making businesses. The French reform is scheduled to be implemented in advance of the envisaged European Commission process related to the Liikanen Group proposals. The key difference between the two proposals is the treatment of market making. While the Liikanen report mandates this business to be conducted by the trading subsidiary outside the retail ring-fence, the French proposal would bring it back inside.

D. Adapting to the New Environment

23. **French banks are universal banks earning a diversified mix of revenues.** Net interest income accounts for about half of total revenues for the four largest groups. Through asset liability management strategies, French banks have been able to benefit from the long-term stability of low paying domestic retail deposits. In addition, banks earn a quarter of their revenues through fees and commissions. These relatively stable sources of income complement the more volatile revenues from trading and other income.



24. **French banks have adapted their business model in response to challenges they have faced.** The 2007 to 2008 and euro zone financial crises have shown the limits of their global expansion. As a result, French banks have reduced some segments such as specialized financial services and CIB that are more expensive in capital or funding and have become less profitable. Banks have avoided selling "non-core" assets at fire sales price and used retained earnings to improve their solvency. They have also withdrawn from their international retail activities in Greece. Key questions going forward are (i) how capital intensive are the remaining business lines? (ii) how expensive are business lines in terms of funding? and (iii) how profitable are business lines?

25. **Current strategies are on the right direction.** French banks are actively implementing a strategy which includes:

- Increasing liquidity and reducing their dependence on short-term wholesale funding, including through deposit raising, diversifying funding sources, and deleveraging;
- Raising solvency ratios mainly by plowing back some or even all of retained earnings;
- Maintaining profitability in French retail and asset gathering activities and reorienting their business model to reduce activities that are relatively more expensive in terms of capital and funding or less profitable;
- Provisioning against high spread euro area countries exposure and reducing exposures including through sales.

26. **Deleveraging plans are well advanced for French banks.** Both Crédit Agricole and Société Générale sold their Greek subsidiaries (Emporiki and Geniki, respectively) in October 2012. Reduction of capital intensive CIB activities has allowed banks to reduce their risk weighted assets (RWA). As of June 2012, BNP completed 90 percent of its €79 billion RWA reduction target and Crédit Agricole reached 97 percent of its €35 billion target. In addition, Société Générale achieved about 57 percent of its €30 billion CIB reduction target. BPCE and Crédit Agricole announced that they met about 75 percent of their funding needs target of €25-35 billion and 50 billion, respectively. Data for the three largest banks show that liquidity and funding buffers cover 100 percent or more of funding needs. Nonetheless, banks' assumptions are less stringent than the Basel III liquidity coverage ratio (LCR) and net stable funding ratio (NSFR).

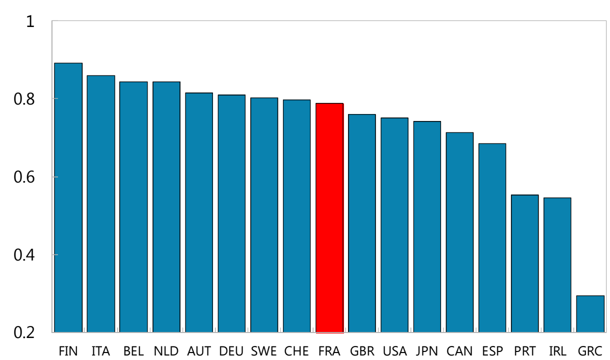
27. **The adaptation of the business plan has not so far had a significant impact on the financing of the domestic economy.** Credit growth to nonfinancial corporate slowed down to 1.9 percent (yoy) in October 2012 from 4.6 percent in January 2012 driven mainly by short-term unsecured loans for cash flow management (crédits de trésorerie). Mortgage financing remains healthy at 3.6 percent in October (6.8 percent in January 2012). From a longer term perspective, credit growth which was briefly negative at end-2009 has recovered since then albeit to about half its pre-2008 crisis level.

28. **Lending surveys confirm banks' willingness to lend domestically.** Results from the October bank survey indicate that (i) corporate lending standards remained unchanged and (ii) corporate demand slowed down. In the case of consumer credit and mortgages, lending criteria for consumer credit remain relatively unchanged. Demand for housing decreased while demand for consumer credit remained stable.

foreign shocks have contributed to French output volatility to similar degree as in France's neighbors.

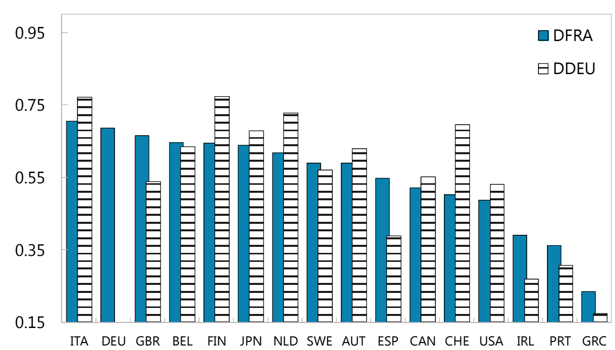
9. **French output co-moves considerably with countries in the EU, but less so with non-euro area countries.** French output co-moves fairly significantly with a global output shock—measured by the first principal components of the growth rates of the 17 countries in the sample, but the magnitude of its co-movement is smaller than many of its euro peers, including Finland, Italy, Belgium, Netherlands, and Germany. In terms of pair-wise correlation, French output co-moves most with Italy, followed by Germany and Belgium. Output co-movement with euro-area countries is generally high for France and for a number of euro countries—notably Greece, Portugal, and Spain—pair-wise co-movement with French output is higher than that with German output. In contrast, French output co-moves less significantly with the rest of the world than does German output, reflecting the significance of trades with non-euro countries in the German economy.

Pairwise correlation: first principal component
(2001Q1-2012Q2)



Sources: OECD, IMF WEO and IMF staff calculations

Pairwise correlation: quarterly output growth
(2001Q1-2012Q2)

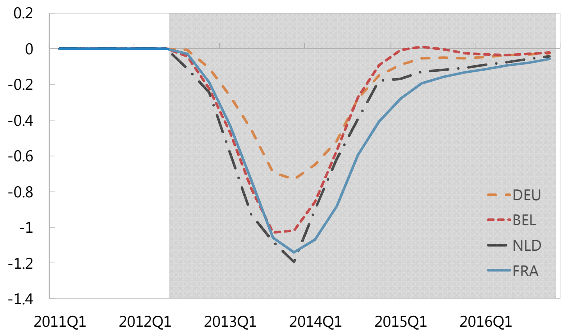


Sources: OECD, IMF WEO and IMF staff calculations

10. **Simulation exercises suggest that France could face a relatively significant spillover effect from a shock originating from high-spread euro countries—consisting of Greece, Ireland, Italy, Portugal, and Spain.** The shock to the domestic demand in the high spread euro countries could cause an output contraction in France by 0.8-1 percentage point in 2013 and by about 1- 1.2 percentage points in 2014. The impact in France is greater than the impact in Belgium, Germany, and the Netherlands.

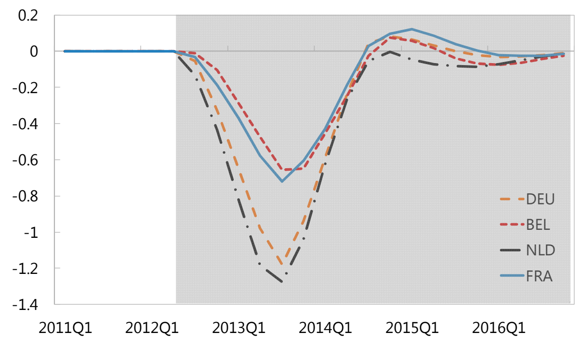
11. **Interestingly, the impact of a non-euro shock would be much lower for France compared to high-spread euro countries shock**. By contrast, the non-euro shock would have a far greater growth impact in Germany, and the Netherlands than in France. This is likely to reflect that Germany and the Netherlands are far more open and more integrated into the global economy than is France.

Output growth comparison - (High-Spread euro countries shock in 2013)



Sources: IMF WEO, OECD, Poirson and Weber (2011)

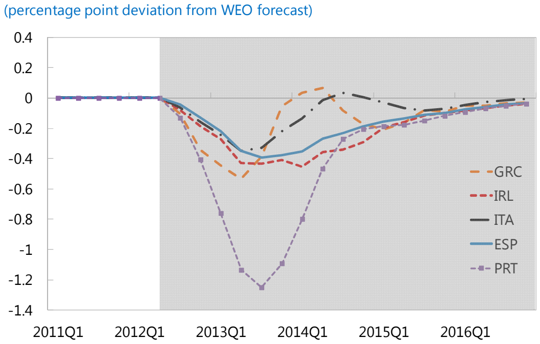
Output growth comparison - Non-Euro shock in 2013)
(percentage point deviation from baseline WEO)



Sources: IMF WEO, OECD, Poirson and Weber (2011)

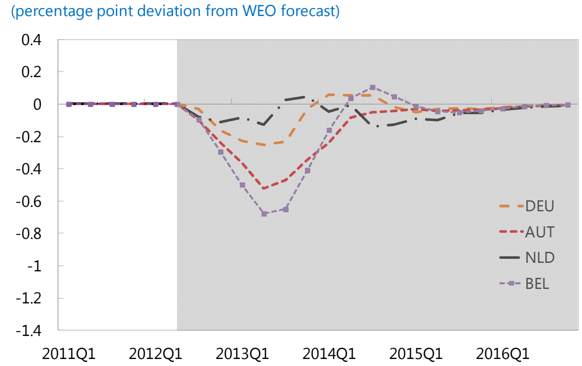
12. **France could have significant outward growth spillovers to its neighbors, particularly small open economies in the euro area.** Assuming a 1 standard deviation reduction in the French growth rate during 2013, output of Austria, Belgium, Ireland, Greece, and Portugal could be lowered by ½ to 1 percentage point relative to the WEO baseline during 2013 to 2014. The impact on larger economies—such as Italy and Spain—is smaller but still discernable.

Output growth comparison France 2012/13 shock
(percentage point deviation from WEO forecast)



Sources: IMF WEO, OECD, Poirson and Weber (2011)

Output growth comparison - France 2012/13 shock
(percentage point deviation from WEO forecast)



Sources: IMF WEO, OECD, Poirson and Weber (2011)

D. Conclusion

13. **France is likely to face moderate inward spillovers from ongoing fiscal consolidation in partner countries.** It is subject to important and localized inward growth spillovers, particularly from Italy and Spain. Based on prevailing estimates of fiscal multipliers, fiscal consolidation is likely to take a heavy toll on the French economy in the period ahead, but the domestic effect is likely to dominate the spillover effect.

14. **France is particularly vulnerable to shocks from high spread euro area countries**. While the relatively lower degree of trade linkages with non-euro countries has helped France to weather the 2008 to 2009 financial crisis—originated in the United States—better than its peers, trade linkages and proximity to several high spread countries—particularly Italy and Spain—imply France's high vulnerability to shocks in these countries.

15. **France has important outward spillovers to its neighbors, particularly small open economies in the euro area**. In particular, France's fiscal consolidation plan in 2013 to 2014 is likely to have a significant adverse impact on Belgium and the Netherlands. A negative demand shock in France will also affect significantly a number of small euro-area countries.

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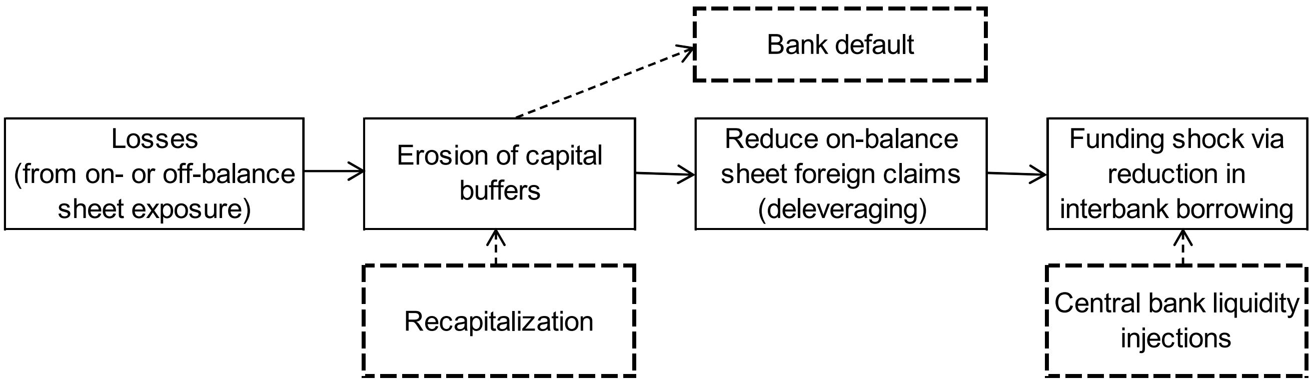
Ivanova, A and S. Weber, 2011. "Do Fiscal Spillovers Matter?" IMF Working Paper 11/211, Washington, DC: International Monetary Fund.

Poirson, H and S. Weber, 2011. "Growth Spillover Dynamics from Crisis to Recovery", IMF Working Paper 11/218, Washington, DC: International Monetary Fund

Propagation methodology: Bank losses and deleveraging



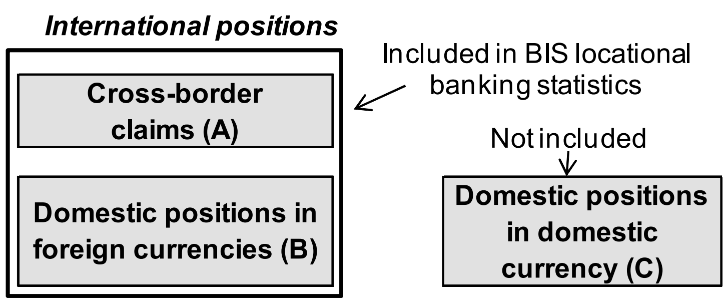
7. **Shock scenarios**. An illustrative scenario simulates the impact on banking systems of sovereign distress originating in the euro area periphery. It is calibrated on the premise of a 70 percent drop in the value of sovereign claims on Greece, and 20 percent of sovereign claims on Ireland, Italy, Portugal, and Spain. To get a sense of the sensitivity of losses to additional stress, two additional scenarios are constructed: in one case, by adding another 10 percent in losses of sovereign claims on other European countries and in the second case, by allowing additional losses in claims on the private-sector, set at 15 percent for Greece and 20 percent for Ireland, Italy, Portugal, and Spain (hereafter: high spread euro area countries).

Box 1. Understanding International Banking Statistics of the BIS. [1/]

This paper uses BIS *locational* and *consolidated* international banking statistics.

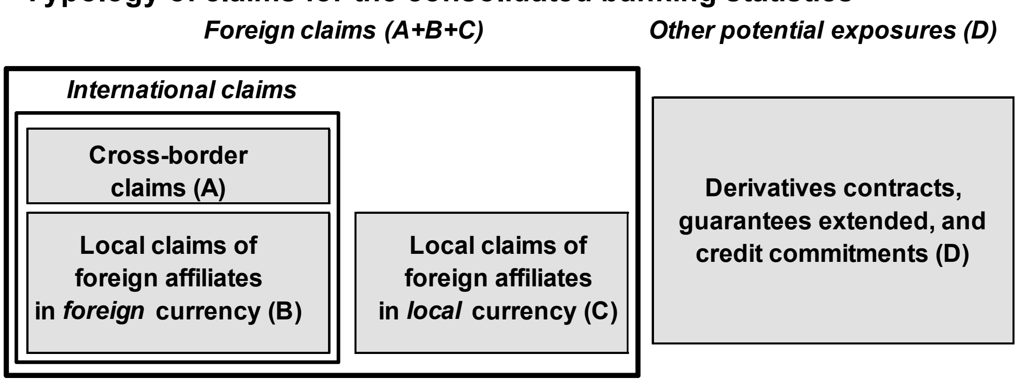
- *Locational banking statistics* (LBS) report international claims and liabilities based on the residency of banks (i.e., regardless of whether those banks are domestic or foreign), so are conceptually similar to balance-of-payments data.
- *Consolidated banking statistics* (CBS) aim to capture consolidated cross-border claims of domestic banking groups: domestic banks that have their head office in the reporting country and their foreign affiliates (branches and subsidiaries). Foreign claims consist of cross-border claims and local claims of foreign affiliates (in foreign and local currency). Other potential exposures comprise derivatives, guarantees, and credit commitments. The CBS can be reported on immediate borrower basis and on ultimate risk basis, the latter being the country of the ultimate guarantor of the claim.

Typology for the locational banking statistics



Source: BIS (2009).

Typology of claims for the consolidated banking statistics



[1/] Based on BIS (2009). "Guide to the international financial statistics."

Illustrative Deleveraging Simulation—Findings

8. **Results**. The model simulations suggest that a shock to the sovereign claims of high spread euro area countries of the magnitude described above would create losses in French banks equal to about 21 billion euros, which corresponds to some 8.2 percent of Tier I capital and about 1 percent of GDP. The scenario implies a small deleveraging of 1.2 percent of GDP. The simulations also suggest that the impact on the French banking system would be relatively more severe (other than high spread euro area countries) compared with other countries such as the United Kingdom and Germany, although the Belgium banking sector would lose relatively more in terms of Core I capital.

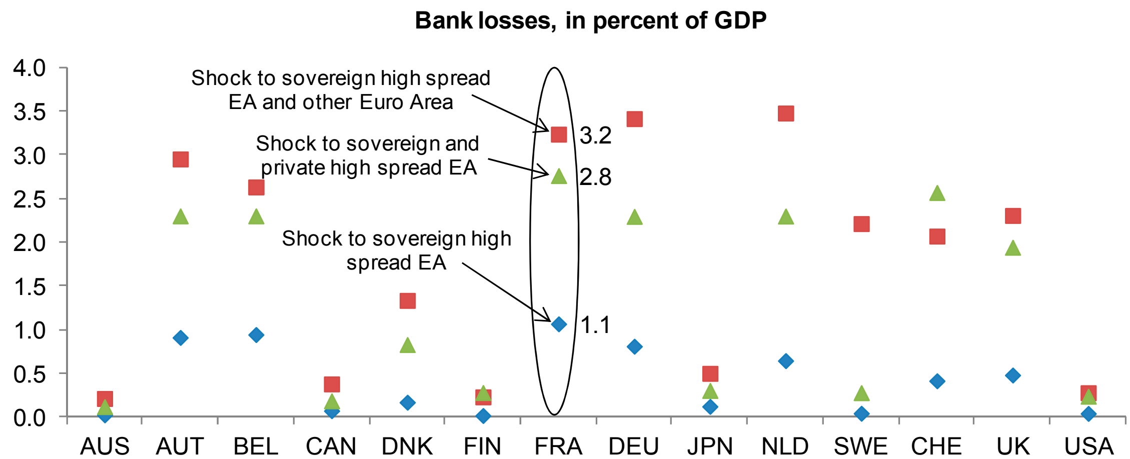
Table. Bank Losses from Shock to Sovereign Claims 1/

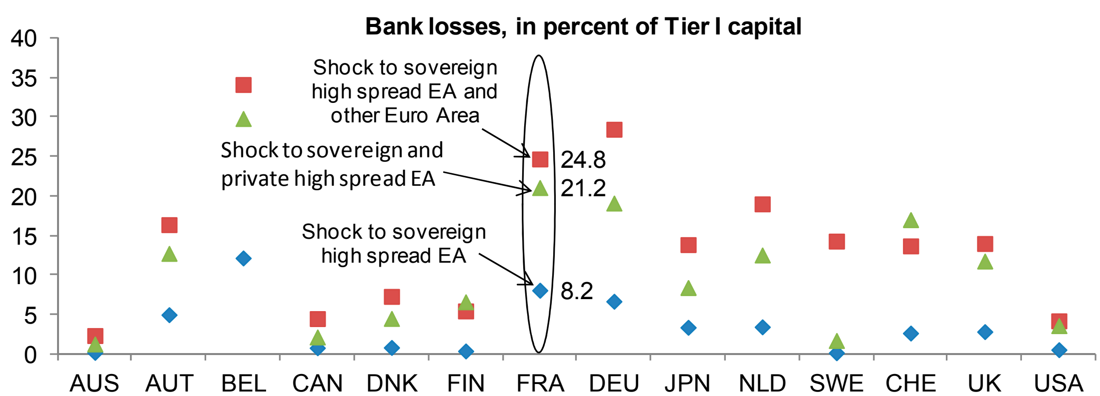
Country	In billions of Euros	In percent of GDP	In percent of Tier I capital
Australia	0.3	0.0	0.3
Austria	2.7	0.9	5.1
Belgium	3.5	0.9	12.3
Canada	1.0	0.1	0.9
Denmark	0.4	0.2	1.0
Finland	0.0	0.0	0.5
France	21.8	1.1	8.2
Germany	21.2	0.8	6.8
Japan	5.4	0.1	3.5
Netherlands	4.0	0.6	3.6
Sweden	0.2	0.0	0.3
Switzerland	1.8	0.4	2.8
United Kingdom	8.9	0.5	3.0
United States	5.1	0.0	0.7

Source: BIS, Central Banks, Bankscope, and staff estimations.

1/ Based on BIS Consolidated Banking Statistics (as of Sept. 2011). Assumes losses in the value of sovereign claims on Greece (70 percent) and Italy, Ireland, Portugal, and Spain (20 percent).

9. **Additional scenarios**. While such banking sector losses appear manageable, additional losses could pile up if private-sector claims were also affected by broader Euro Area sovereign stress or if shocks to claims on high spread euro area countries extended to private-sector claims. The results of the two alternative scenarios suggest that total losses for French banks could be in the order of 55 to 65 billion euros, which is about 21–25 percent of Tier I capital and 2.8–3.2 percent of GDP, should one of those materialize. Deleveraging would also be more severe in those cases, at





Source: Bank for International Settlements (BIS), Central Banks, Bankscope, and staff estimations.

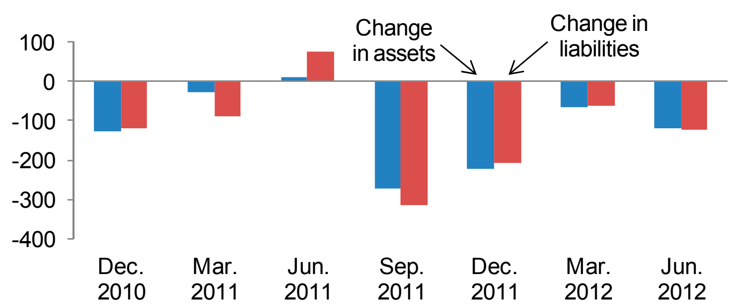
1/ Results based on the bank contagion module developed in the IMF's Research Department with BIS banking data statistics for 2011Q3 and scenarios with the following premise on the severity of shocks:
(a) Shock to sovereign high-spread Euro Area countries: 70% reduction in value of sovereign claims on Greece, 20% on Ireland, Italy, Portugal, and Spain;
(b) Shock to sovereign high-spread Euro Area countries and other Euro Area: 70% reduction in value of sovereign claims on Greece, 20% on Ireland, Italy, Portugal, and Spain; 10% on other Euro Area;
(c) Shock to sovereign and private high-spread Euro Area countries: 70% reduction in value of sovereign claims on Greece, 20% on sovereign claims on Ireland, Italy, Portugal, and Spain; and a corresponding reduction in value of private claims of 15% and 20%, respectively.

around 14 percent of GDP if losses from private-sector claims on high spread euro area countries were included and around 17.5 percent of GDP if reductions in sovereign claims were extended to the broader Euro Area.

Bank Deleveraging So Far

10. **The large internationally active French banks are implementing a strategy of orderly deleveraging with a focus on retrenchment of external activities**. Among other things, this strategy consists of reducing dependence on international short-term wholesale funding and of high-spread euro area countries exposure through planned sales.[1] The execution phase of these plans is now well underway, and BIS data suggests that the retrenchment in international assets and liabilities of French banks has continued in the first half of 2012, while the divestment of the Greek subsidiaries Emporiki and Geniki in October 2012 are examples of more recent actions.

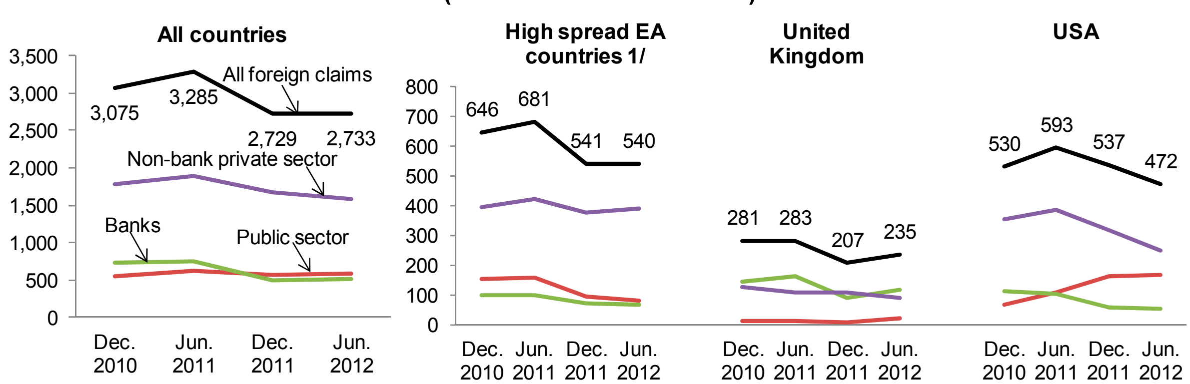
France: Change in international positions of French banks, Dec. 2010–Jun. 2012 (in billions of U.S. dollars) 1/



Source: Bank for International Settlements.

1/ Changes adjusted for estimated exchange rate changes.

France: Consolidated foreign claims of French banks on ultimate risk basis, Dec. 2010–Jun. 2012 (in billions of U.S. dollars)



Source: Bank for International Settlements.

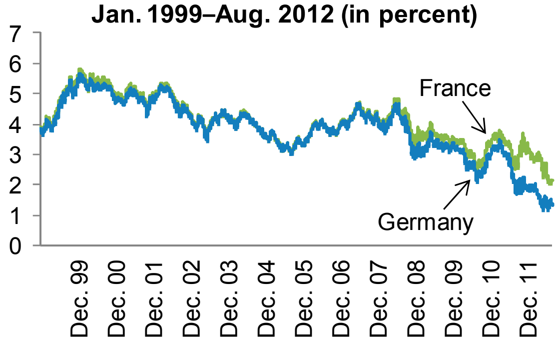
1/ Consists of Greece, Ireland, Italy, Portugal, and Spain.

[1] See the Selected Issues Paper "French Banks: Business Model and Financial Stability" for a fuller discussion of the banks' strategy.

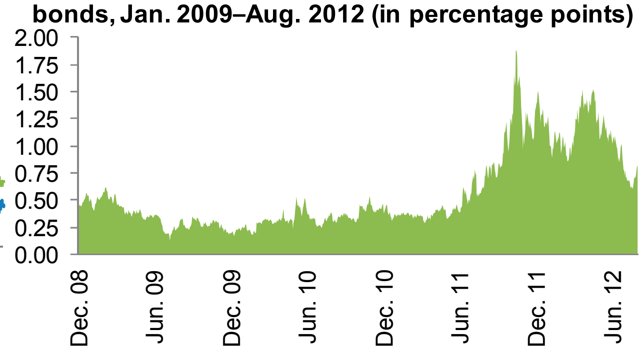
B. Sovereign Interest Rate Spillovers

11. **Background.** Yield differentials of 10-year sovereign bonds with German bonds have risen since the start of the global financial crisis. Spreads between the French and German sovereign bonds were minimal for much of the decade following the adoption of the euro—below 0.2 percentage points in several years. The yield differential has been higher since 2009, breaching 0.5 and 1.0 percentage point in January 2009 and October 2011, respectively. Sovereign spreads of other euro area countries against the German benchmark, which also had been small for much of the previous decade, have risen too, though to varying degrees. These spreads have remained small for Finland and the Netherlands, followed by France and Austria, then Belgium.

Yield of 10-year government bonds, Jan. 1999–Aug. 2012 (in percent)

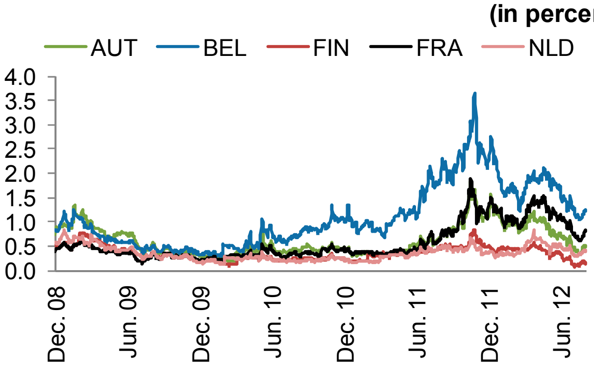


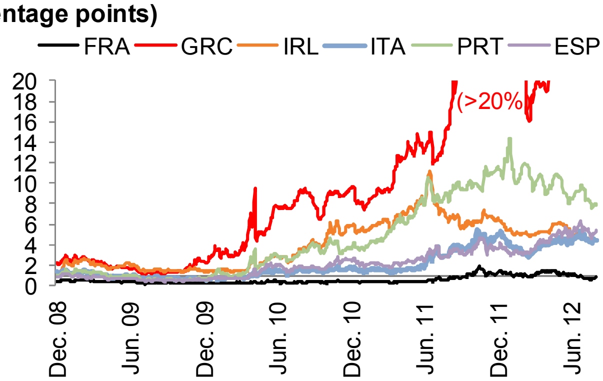
French-German spread of 10-year government bonds, Jan. 2009–Aug. 2012 (in percentage points)



Source: Datastream.

Spread of 10-year government bonds vis-à-vis Germany, Jan. 2009–Aug. 2012 (in percentage points)





Source: Datastream.

Table 6. Impact of Structural Reforms on France's Exports and Current Account

Reforms	World Export market share (2011)		Additional exports in 2011		Current account balance (in percent of GDP)	
	Projected	Actual	in bn US dollars	In percent of GDP	Projected [1/]	Actual
Collective dismissal	3.36	3.30	12	0.44	-1.8	-2.2
Labor tax wedge	3.72	3.30	75	2.72	0.0	-2.2
Innovation	3.47	3.30	32	1.14	-1.3	-2.2
All three reforms	3.97	3.30	119	4.30	1.3	-2.2

1/ Assuming the import content of export is equal to the last available data.

Source: Author's calculation.

Labor Taxation Reform

30. **During the 2000s, France labor tax wedge was one of the highest of our sample of advanced countries** (Figure 6). Moreover, the labor tax wedge was in 2011 at the same level than in 2000, while it declined on average by 6 percent in the 32 other countries of the sample and by 3 percent in the 20 other EU members of the sample.

Figure 6: Labor tax wedge at average wage [1/]

(In percent of wage, average 2000-11)

Sources: OECD and author's calculation.

1/ Average wage means the average annual gross wage earnings of adult, full-time manual and non manual workers in the industry (ISIC C to K).

31. **If, during the period 2000 to 2011, the labor tax wedge had been at 31.7 percent (the average of the 26 countries considered in the regression) instead of 49.6 percent, France's**

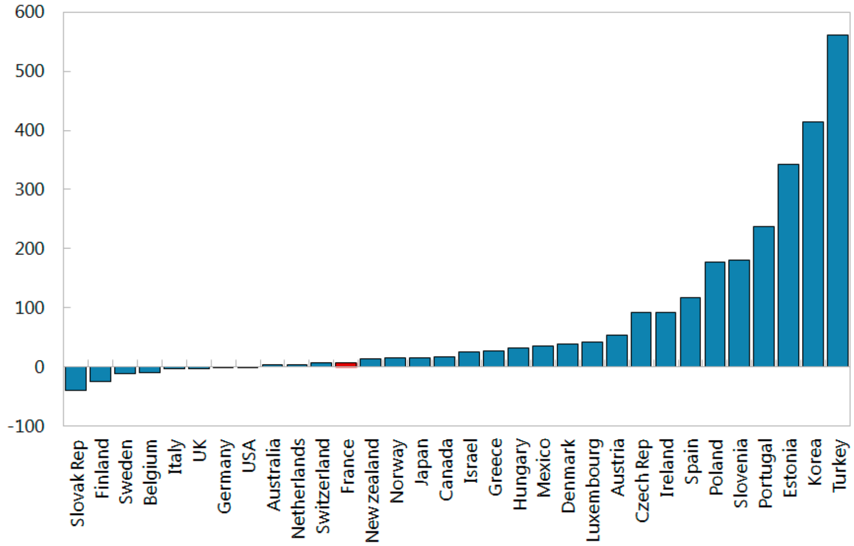
share in world merchandise exports would have reached 3.72 percent in 2011 instead of 3.30 percent. This represents additional exports worth about 2.7 percent of GDP and a balanced current account compared to an actual deficit of 2.2 percent of GDP (Table 6).[1]

Innovation Policy

32. **An increase in triadic patent similar to the average of other 26 OECD countries of the sample would have a large effect on France export performance because France increase in triadic patent over the period 1997 to 2009 is relatively low** (Figure 7). Using the results presented in column 3b of Table 5, France's share in world merchandise exports would be 3.47 percent in 2011 instead of 3.30 percent. This represents additional exports worth about 1.1 percent of GDP and current account deficit of 1.3 percent of GDP compared to an actual deficit of 2.2 percent of GDP (Table 6).

Figure 7 - Growth in Triadic Patents

(In percent, 1997-2009)



Sources: OECD and author's calculation.

[1] The specification of Table 4 (column 2) is used. It is preferred to the specification of Table 6 (column 3b) as it has a better fit for France. Using this alternative specification leads to a market share of 3.66 percent, additional exports worth 2.4 percent of GDP, and a current account deficit of 0.3 percent of GDP.