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SELECTED ISSUES

July 2018

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July 11, 2018

Approved By
European Department

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CONTENTS

CORPORATE DEBT IN FRANCE[1]

France's corporate debt has risen significantly since the global financial crisis and is among the highest in advanced economies, reflecting mainly an increase in intercompany loans and bonds. The increase in debt has financed real investments, as well as acquisition of financial assets and extension of intercompany loans. The increase in debt (and its level) appear less worrisome when debt is consolidated among non-financial corporations. Despite the increase in the stock of debt, debt service has increased moderately. A cross-country regression analysis reveals that French publicly listed firms are on average not more indebted and have not increased their debt more than peers in other countries, after controlling for firm and sector characteristics as well as common time effects. However, the increase in debt is concentrated among large firms with sizeable leverage in a few industries, raising questions about these firms' ability to service this debt when interest rates rise. Stress test scenarios of a large and sudden increase in interest rates suggest that corporate debt at risk could be significant at a macroeconomic level, but that cash buffers would mitigate the impact of the shock on debt service.

A. Introduction

1. Is the increasing corporate sector leverage a source of concern? The objective of this paper is to document the evolution of French corporate debt since the global financial crisis, analyze the use of this debt, and uncover the importance of heterogeneity across sectors and firms which may have implications at the macroeconomic level. The paper also undertakes a cross-country regression analysis to assess whether there are any France-specific factors that affect the capital structure of firms, or whether instead French firms are on average no more reliant on debt finance than firms in other countries after controlling for firm characteristics and sectoral and time common factors. By making use of stress test scenario analyses at the firm level, the paper also quantifies the impact of various interest hikes on the amount of debt at risk, and assesses whether such shocks are macroeconomically relevant. Such a cross-country study is particularly timely, given the recent decisions by the *Haut Conseil de Stabilité Financière* (HCSF) to set a limit to banks' exposures to individual large indebted corporates and to activate the countercyclical capital buffer. This paper also complements existing studies by the *Institut National de la Statistique et des Études Économiques* (INSEE), the HCSF and the Banque de France by highlighting the cross-country comparative dimension.[2]

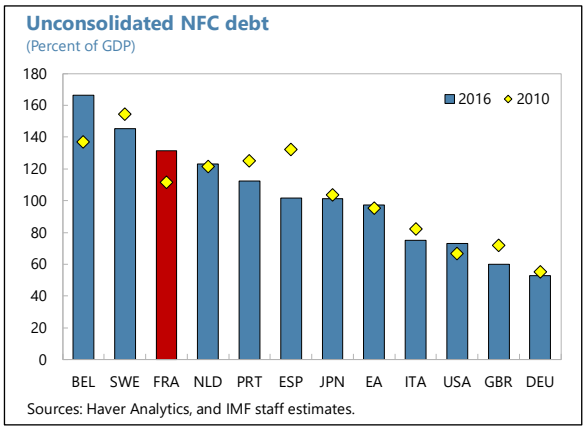
[1] Prepared by Luiza Antoun de Almeida and Thierry Tressel (EUR). The paper has benefitted from excellent research assistance provided by Tania Mohd Nor. We thank the authorities for very constructive and helpful discussions and comments.

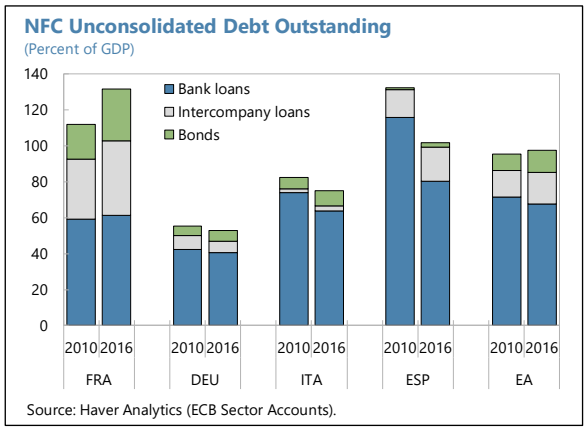
[2] The paper by the HCSF (2018) can be found at: https://www.economie.gouv.fr/hcsf. The paper by INSEE (2017) is published as a chapter of the *Note de Conjoncture* December 2017, available at: https://www.insee.fr/fr/statistiques/3292415. The paper by the *Banque de France* is a chapter of the *Banque de France* Bulletin No. 214 of November-December 2017.

2. The paper is organized as follows. Section B presents cross-country macroeconomic stylized facts on the level and evolution of corporate debt, while Section C focuses on the firm-level and sectoral composition of debt. Section D studies how the new debt has been used. Section E presents the cross-country regression analysis and Section F is devoted to stress scenario analyses. Finally, Section G concludes.

B. Cross-Country Stylized Facts

3. Unconsolidated nonfinancial corporate debt in France has increased by 20 percent of GDP between 2010 and 2017 and stands at 132 percent of GDP, among the highest in advanced countries. This contrasts with developments in other large euro area countries which have experienced either a stabilization of their corporate debt (Germany) or a significant decrease (Italy and Spain).[3] The increase in French corporate debt as a share of GDP since 2010 can be explained mostly by an increase in intercompany loans and bond financing, while bank credit to non-financial firms has increased more moderately. A particularity of French firms' corporate debt is that intercompany loans and bonds account for about half of non-financial companies' debt. This feature has been reinforced since the global financial crisis.

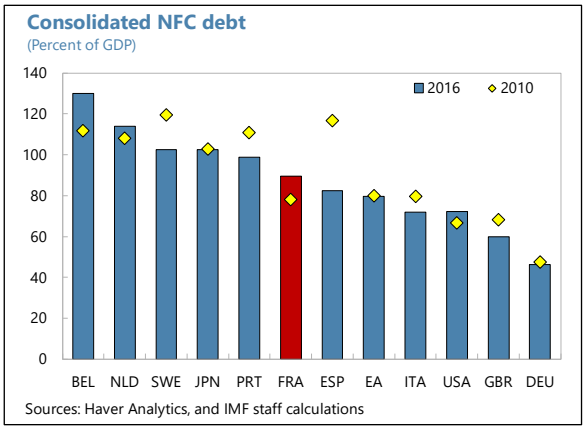


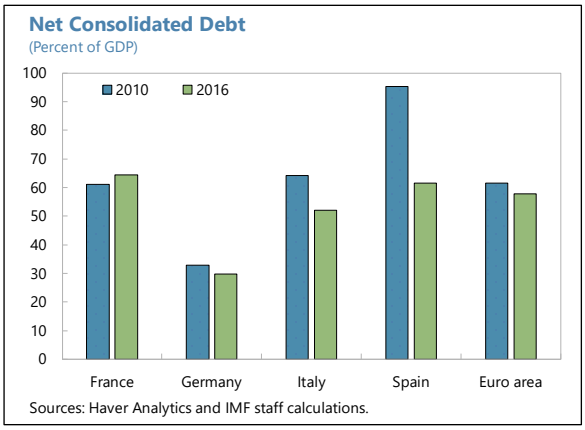


4. Netting out intercompany loans, consolidated corporate debt is much lower at 77 percent of GDP, and more in line with peers. Nonetheless, it has still experienced an increase of 12 percentage points of GDP since 2010, mainly resulting from net bond issuances. Subtracting cash holdings from consolidated debt, aggregate net consolidated debt has barely increased during the crisis and stands at 64 percent of GDP, close to the euro area average, suggesting that, in the aggregate, French firms used part of the proceeds to accumulate liquid financial assets, which also account for a larger share of their assets.[4]

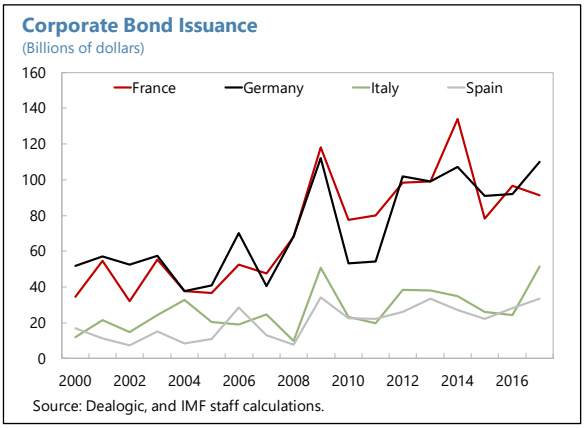
[3] In Spain, the decline reflects a correction after a pre-crisis credit boom.

[4] The measure of liquid assets includes only cash and deposits. Other liquid assets such as money market funds are not included.





5. Unconventional monetary policies, including quantitative easing programs, likely boosted the demand for corporate bonds. Corporate bond issuance has risen in euro area countries since the global financial crisis. The ECB's purchase of government bonds and asset-backed securities led investors into buying assets with similar characteristics but higher yields, such as corporate bonds, reducing the costs of bond financing. The ECB's corporate sector purchase programme (CSSP) initiated in mid-2016 brought corporate bond yields even further down.



6. More developed bond markets in France already at the onset of the crisis supported also a higher growth in issuance compared to peers. Bonds represented 13 percent of the unconsolidated corporate debt in France in 2008, against 9 percent in Germany, 5 percent in Italy, and 1 percent in Spain. This ratio has grown to 22 percent in 2017, against 11 percent in Germany and Italy, and 3 percent in Spain. French corporates are responsible for half of the corporate bonds outstanding in the euro area. Furthermore, French firms seem to have easier access to bond financing, as about 8 percent of the large French firms have issued a bond since 2010, against 4 percent of the large firms in other large euro area countries. On the other hand, the high and increasing reliance of French firms on intercompany loans could be explained by a higher importance of corporate groups in France with the parent company distributing liquidity to affiliates, while a higher centralization of cash management within corporate groups since the crisis may have also contributed to accentuating the trend.[5]

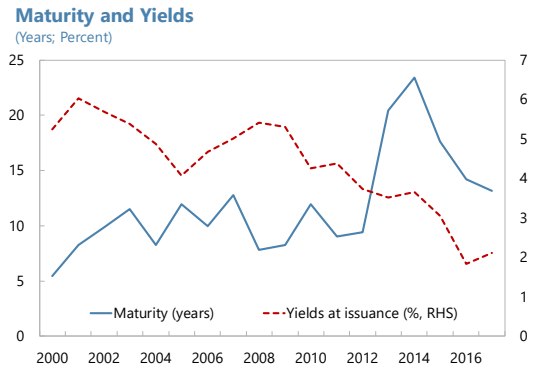
7. Bond issuance surged amid loosening financing conditions relative to the pre-crisis period (Figure 1). The average yield at issuance more than halved from 5 percent in 2007 to 2.1 percent in 2017, while the average maturity increased from 10 years in the period 2000–07 to 15 years in the period 2010–17, with a peak average maturity of 23 years in 2014. The access of

[5] In France, about ⅔ of employment is by firms that belong to a group (INSEE Premiere, March 2012, No. 1399).

firms to bond issuance seems also to have improved, as the share of high-yield issuance increased from a pre-crisis average of 5 percent to a post-crisis average of 15 percent. At the same time, while 73 percent of the issued bonds had a fixed rate prior to the crisis, this number has increased to 93 percent in the post-crisis period. In contrast, only about 50 percent of the outstanding corporate bank loans have a fixed rate. Around one third of the bond issuances was used to repay debt, while about 15 percent was used to finance mergers and acquisitions, with a peak of 30 percent in 2016. Market financing conditions have also improved in other large euro area countries.

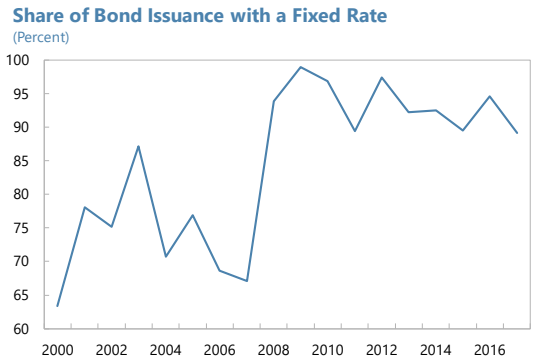
Figure 1. Characteristics of Bonds Issued

Maturity has risen and yields declined...



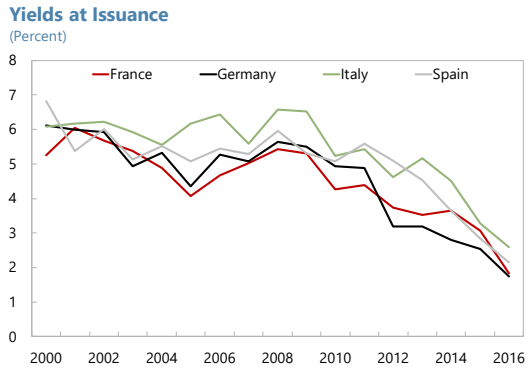
Sources: Dealogic and IMF staff calculations.

... a higher share of bonds issued at fixed rates.



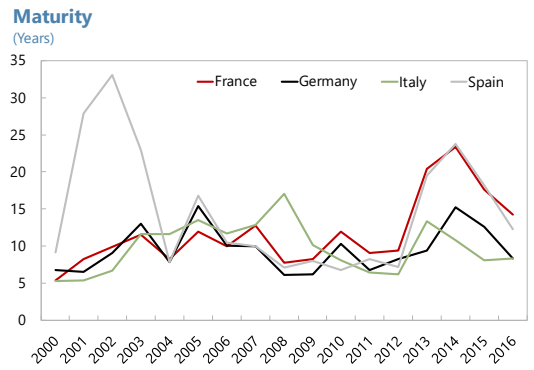
Sources: Dealogic and IMF staff calculations.

The decline in yields is common to large euro area countries...



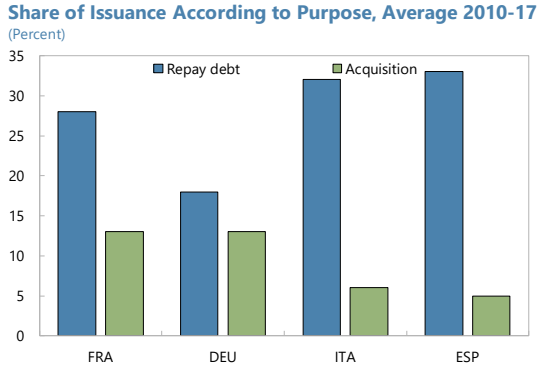
Sources: Dealogic and IMF staff calculations.

...but the increase in maturity is less clear.



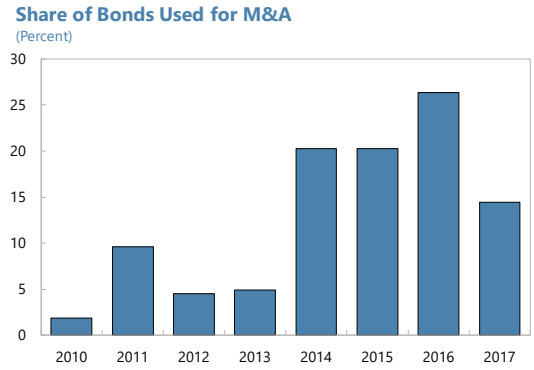
Sources: Dealogic and IMF staff calculations.

A large part of the issuance was used to repay debt...



Sources: Dealogic and IMF staff calculations.

...as well as to finance mergers and acquisitions.



Sources: Dealogic and IMF staff calculations.

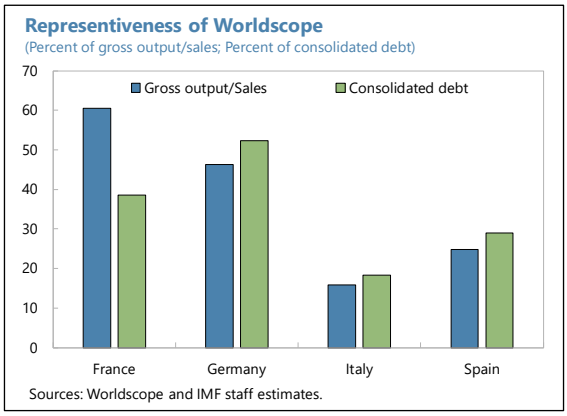
C. Sectoral and Firm-Level Composition of Debt

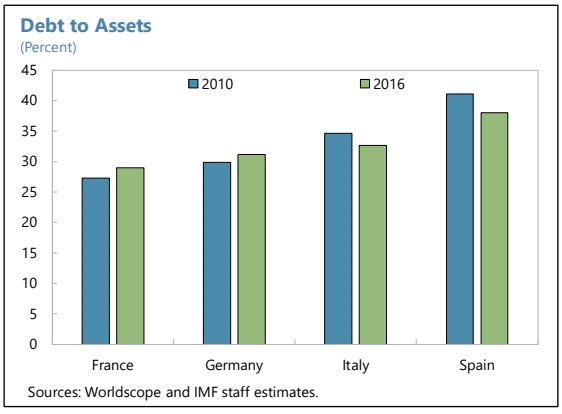
8. In this section, we rely on firm-level data to uncover potential heterogeneity in sectoral and firm-level indebtedness:

- *Sectoral considerations.* We aim to understand whether differences in corporate debt levels across countries result from differences in the sectoral composition of output and different propensities to borrow across sectors, or whether firms that belong to the same sector tend to display different debt levels across countries.

- *Broad-based versus concentrated leverage.* Making use of firm-level data is important because aggregate data could mask pockets of vulnerabilities that could be macroeconomically relevant if leverage is sufficiently heterogeneously distributed across firms and if there is some concentration of high and increasing leverage among a few sectors or large firms.

9. We rely on firm-level consolidated data from Worldscope on listed nonfinancial firms in France and in peer countries to analyze potential heterogeneity across firms and sectors. Worldscope is an adequate data source for cross-country comparisons because it contains comparable data on consolidated balance sheets and financial statements of listed companies.[6] In our dataset, we have 440 French firms (e.g. headquartered and listed in France) which represent around 60 percent of the total gross output of nonfinancial firms. To improve comparability, we add to the sample of listed firms the state-owned railway company, SNCF, which is not listed in France, contrary to railway companies in peer countries. The SNCF alone was responsible for 10 percent of consolidated debt, for an increase in consolidated debt to GDP of over 2 percentage points between 2010 and 2016, or 23 percent of the increase in consolidated debt in our sample of firms. The euro area peer countries are Germany, Italy, and Spain. Other countries considered also include Belgium, the Netherlands, the US and the UK. The Worldscope data are reasonably representative and account for about 40 percent of their total consolidated debt. According to Worldscope data, aggregate debt-to-asset ratios are close to 30 percent, which is below the corresponding ratios in the main peer countries.



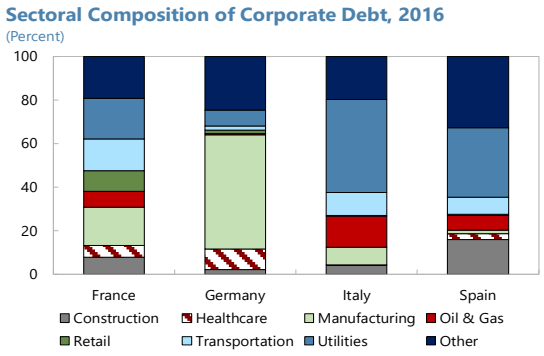


[6] The stylized facts presented in the paper are not directly comparable to others, including the study from INSEE which relies upon firm-level data on listed and non-listed French firms.

10. Our analysis shows that, as in other peer countries, the consolidated debt stock of listed firms as well as the post-crisis debt increase is concentrated in a few sectors (Figure 2). The manufacturing and utilities sectors account each for around 20 percent of the debt stock of listed firms in France and the transportation and retail sector each for about 10 percent. In Germany the manufacturing sector accounts for 60 percent of the debt stock, while network sectors account for over 60 percent of the debt stock in Italy and Spain. Similarly, the debt increase in the post crisis period was mainly caused by the transportation, oil and gas, manufacturing, healthcare and retail sector in France, while the manufacturing and healthcare sectors were responsible for the debt increase in Germany. The construction and utilities sectors contributed to the decrease in debt in Spain, while the utilities sector contributed to the decrease in debt in Italy. The concentration of debt to some extent reflects the distribution of assets and of output across sectors among listed firms.

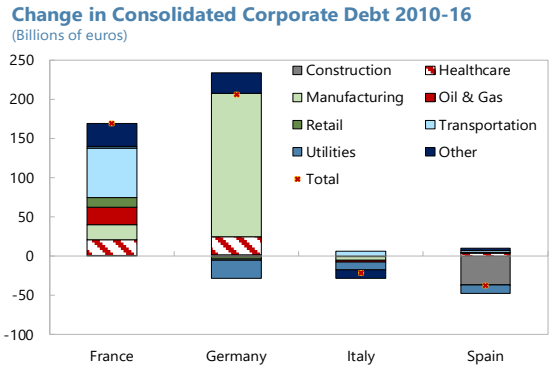
Figure 2. Distribution of Debt Stock

The debt stock is concentrated in a few sectors….



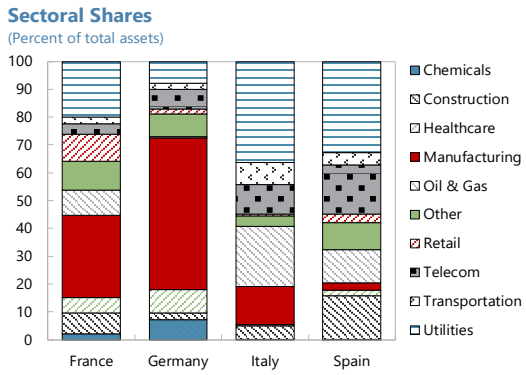
Source: Worldscope.

And the change in debt is also concentrated….



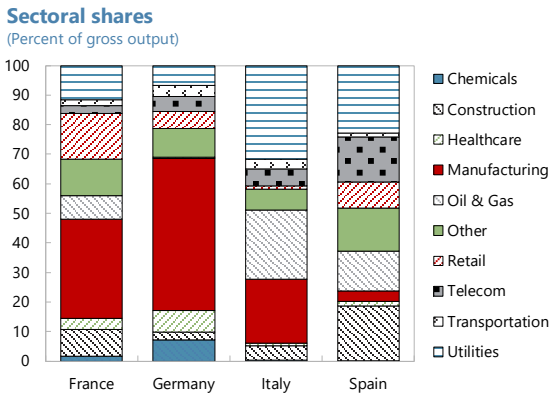
Source: Worldscope.

This concentration to some extent reflects the sectoral distribution of assets among listed firms…



Source: Worldscope.

… as well as the sectoral distribution of output

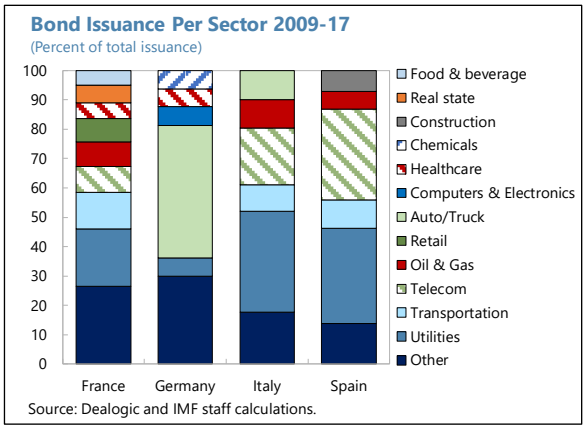


Source: Worldscope.

11. While network sectors and retail are the most leveraged sectors in France, there is no evidence that leverage is on average higher in France (Figure 3).[7] Sectoral debt to assets ratios constructed from aggregated firm-level data are not particularly high in France compared to peer countries, while network sectors tend also to be more leveraged in peer countries. A particularity of France is that highly leveraged sector (utilities, retail, and telecom) have also a high debt to income ratio, suggesting a low capacity to service the debt despite the low interest rate environment (see also Figure 4).

12. The debt stock and the increase in debt are concentrated among a few firms in France. In our sample, 15 out of 440 firms are responsible for 63 percent of the outstanding debt stock of publicly listed companies, while state-owned enterprises (SOEs) are responsible for 41 percent of this debt. Out of 280 firms increasing debt between 2010 and 2016, 15 firms account for 66 percent of the debt increase, while firms with the state as a shareholder account for 45 percent of the debt increase.[8] There is a large intersection between the listed firms which have increased debt the most in our sample and the largest bond issuers.

13. Bond issuance is concentrated among a few sectors in every large euro area country. In France, Italy, and Spain, network sectors (utilities, transportation, and telecom) and also the oil sector are the main bond issuers, while in Germany the auto-industry was responsible for almost half of the bond issuances. In Italy and Spain, the utilities and telecom sectors are responsible for more than half of the bond issuances. In France the utility sector is responsible for 20 percent of the issuance, followed by 12 percent from the transportation sector, and around 9 percent from the telecom, oil, and retail sectors each.



Source: Dealogic and IMF staff calculations.

14. As in other countries, gross bond issuance in the post-crisis period was highly concentrated among a few firms. The five largest issuers were responsible for almost half of the bond issuances in Germany, Italy, and Spain between 2009 and 2017, while in France the five largest issuers were responsible for 34 percent of the issuance. The largest issuer in Spain was responsible for almost one third of the issuance, while the largest issuer in Germany and Italy was responsible for around 15 percent of the issuance, and in France for 10 percent. French enterprises with any state-ownership were responsible for around one third of the bond issuance, while firms majority-owned by the state were responsible for 18 percent of the issuance.

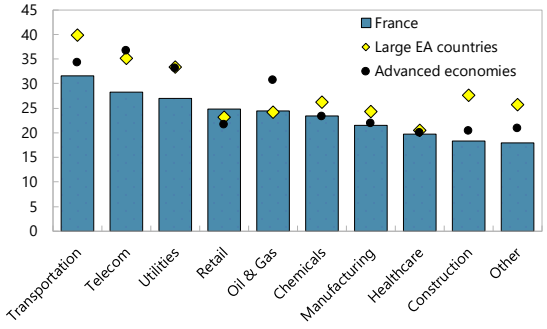
[7] The conclusions are drawn from our sample of listed firms.

[8] SNCF alone accounts for 10 percent of the debt stock and 23 percent of the debt increase in our sample.

Figure 3. Leverage and Buffers of Publicly Listed Companies

Debt to assets is in line with peers…

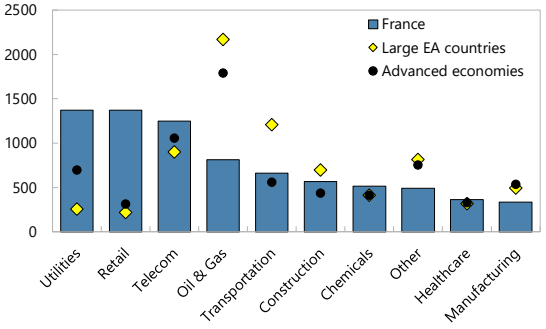
Average Debt to Asset, 2016
(Percent)



Sources: Worldscope and IMF staff estimations.

… but indebted firms in some sectors have a low capacity to repay.

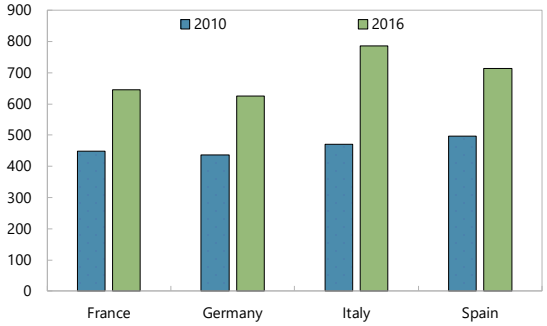
Debt to Income Ratio, 2016
(Percent)



Sources: Worldscope and IMF staff calculations.

The debt to income ratio has increased but is not higher than in peer countries….

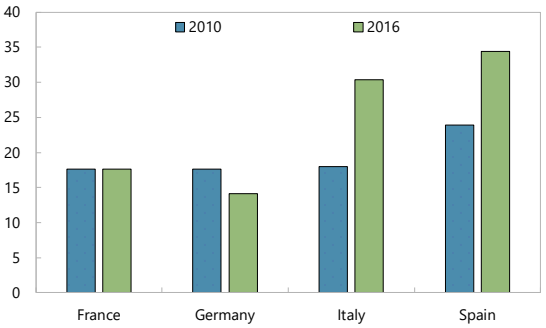
Debt to EBIT
(Percent)



Sources: Worldscope and IMF staff estimations.

And interest payments are on average well covered by earnings….

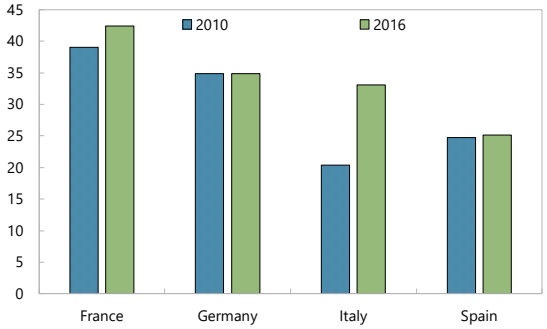
Interest Payment to EBIT
(Percent)



Sources: Worldscope and IMF staff calculations.

Cash buffers seem high on average…

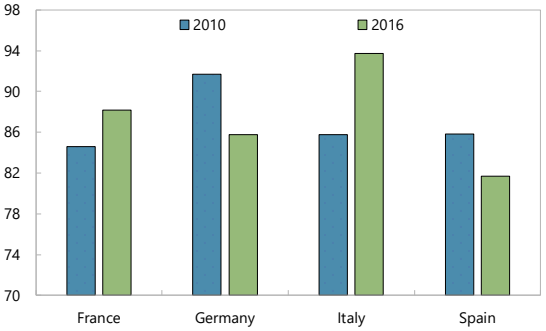
Cash to Debt
(Percent)



Sources: Worldscope and IMF staff calculations

… and the current ratio has improved.

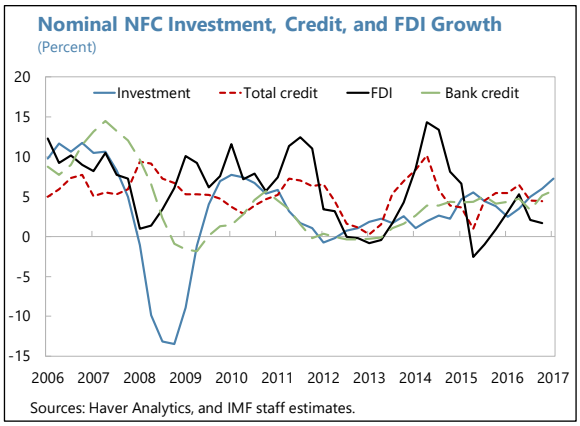
Current Assets to Current Liabilities
(Percent)

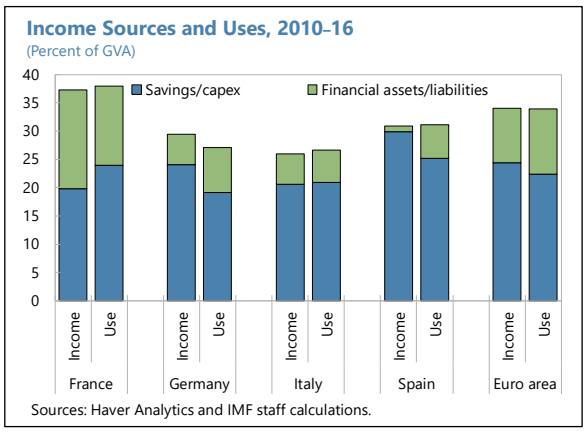


Sources: Worldscope and IMF staff estimations.

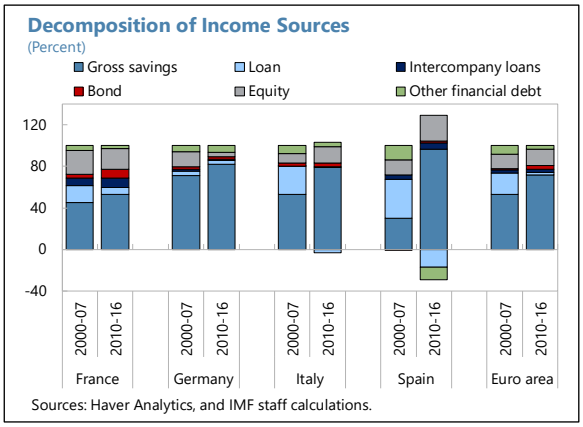
D. How Do Firms Use Their Debt Financing?

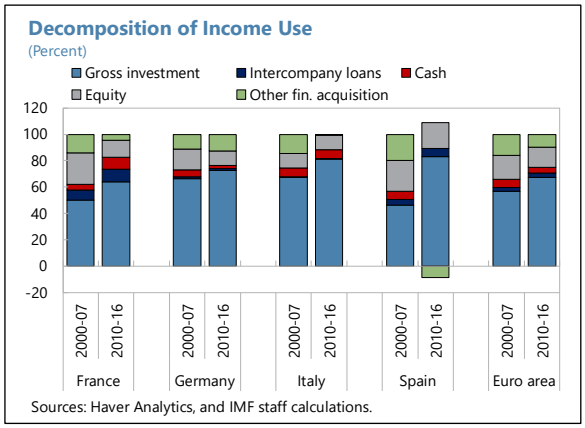
15. At the macroeconomic level, French firms tend to be more dependent on external financing for gross capital formation than their euro area peers. In France, there is a positive correlation between bank credit and investment in physical capital. While French firms had lower gross savings than corporates in other euro area countries in the period 2010–16 (20 vs 25 percent of GVA), they invested more in capex (24 vs 20 percent of GVA), which explains a higher need for external financing.





16. A particularity of French firms is that a large part of their external financing is also used to acquire financial assets (such as equity and cash) or to extend intercompany loans. During the period 2010–16, external financing[9] of French firms (17 percent of GVA) was much larger than the net amount of 4 percent of GVA needed to finance their capex (24 percent of GVA) net of internal sources of funds (20 percent of GVA). This discrepancy between the actual external borrowing and net needs for external borrowing is much higher than in other large euro area countries. This is explained by the large investment of French firms in financial assets. Indeed, French firms invested on average 17 percent of their GVA in financial assets, double as much as other large euro area countries where corporate savings were higher than capex. On aggregate, for every €1 in new external financing, French firms spent 23 cents in capex, 20 cents in extending intercompany

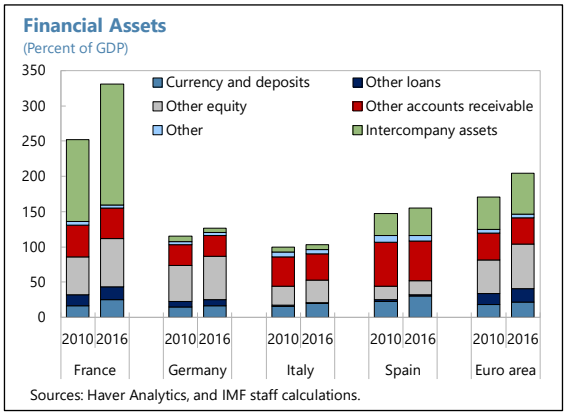


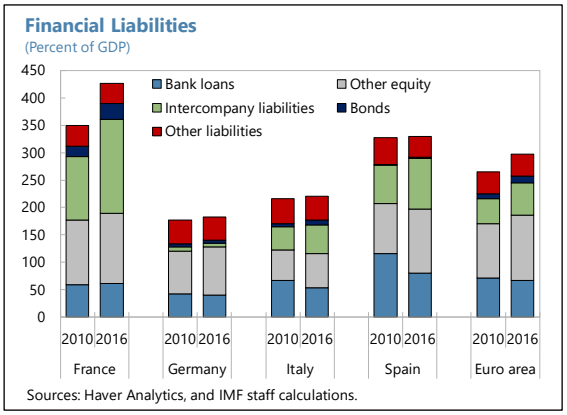


[9] External financing includes all incurring of financial liabilities, such as loans, bonds, and equity.

loans, 20 cents in cash, 27 cents in acquiring equity, and 10 cents in other financial assets. This particularity of French firms is not a consequence of the global financial crisis: even before French firms spent a high share of their external financing in financial assets, only Spanish firms had a similar behavior prior to the crisis. As a result, the ratio of cash to consolidated debt has increased from 22 to 28 percent despite the higher level of debt and now stands at the euro area average. Equity assets have also gained from positive valuation effect.

17. The high level of financial liabilities and assets of French firms is related to corporate structures with intercompany connections. According to unconsolidated sectoral accounts, almost 60 percent of the financial assets held by nonfinancial corporates are from other corporates and other corporates hold 45 percent of the corporate sector liabilities.[10] Specifically, 41 percent of the corporate loans were extended by other companies which also hold half of the corporate sector equity. The only other large euro area which presents a somehow similar but less financially interconnected corporate landscape is Spain.





18. In our dataset, publicly listed firms which have increased their debt the most have used the proceeds to increase their cash holdings and to invest. Two-thirds of the 15 firms with the highest debt increase have increased their cash holdings by at least 30 percent of their debt increase amount, while one third of them have increased their cash holdings by more than 70 percent of their debt increase amount. There is also a positive correlation between the incurrence of debt and investment in physical capital. Interestingly, the large firms with an interest coverage ratio (ICR) below 2.5 have used at least 40 percent of their borrowing to increase their cash holdings. This suggests that part of the borrowing has been used for precautionary purposes, potentially related to risks of faster than expected rise in interest rates. This behavior of borrowing to accumulate cash could also be related to carry-trade strategies.

19. On average, listed firms which increased their indebtedness between 2010 and 2016 do not appear particularly vulnerable (Table 1). They invested more and were more profitable than firms which did not increase their indebtedness. Around 60 percent of the listed firms in France have increased debt between 2010 and 2016. If we compare the balance sheet and performance of these firms with those which have not increased debt, we find that the former: (i) are more leveraged

[10] Equity accounts for most of the increase in intercompany liabilities in France between 2010 and 2016.

in 2016 but were less leveraged at the beginning of the crisis; (ii) are larger; (iii) have ICR which are comparable to the ones of firms which have not increased debt; (iv) have lower cash to debt ratios; (v) have invested more; (vi) had faster growing sales; and (vii) were more profitable.

Table 1. Characteristics of French Firms Which Have Increased Debt Between 2010–16

	Total debt<=0	Total debt>0
Debt to assets 2010 (%) - median	21.6	14.3
Debt to assets (%) - median	9.9	23.3
Net debt equity (%) - median	-3.7	25.4
Total assets (EUR m) - median	102.1	178.8
ICR - median	6.0	6.7
Dividend payout (%) - median	14.2	13.2
Cash to debt (%) - median	101.3	54.7
Change cash to debt 2010-16 (pp) -median	38.5	-14.9
Fixed assets to assets (%) -median	9.8	10.4
Capex 2010-16 to fixed assets 2010 (%) -median	143.1	221.2
Sales to assets (%) -median	93.4	78.3
Sales growth 2013-16 (%) -median	2.5	14.9
ROA 2013-16 (%) -median	8.1	9.2

20. However, the picture for large indebted firms appears less positive (Table 2). Large indebted firms are defined as large firms which have an ICR below 3 and a net debt to equity ratio above 100.[11] [12] Large indebted firms, whether they are French firms, or firms from peer countries, are more leveraged and have a substantially lower ICR than the other firms in our sample. They have lower cash to debt ratios than the rest of the sample, but their cash to debt ratios have increased more since the crisis. These firms have also invested less, had lower sales growth, and are less profitable than other firms.

Table 2. Characteristics of Large Indebted Firms

(medians)	Large vulnerable firms	Other French firms	Large vulnerable firms in peer countries	Other foreign firms
Debt to assets (%)	39.8	19	47.7	18.6
Net debt equity (%)	199.6	10.8	206.1	-3.4
Total assets (EUR m)	28,500	144.7	...	...
Interest coverage ratio	2.4	6.7	2.3	7
Dividend payout (%)	16.6	13.2	31.3	4.6
Cash to debt (%)	41.2	66.2	15.3	57.7
Change cash to debt 2010-16 (pp)	9.6	0.4	1.9	1.8
Fixed assets to assets (%)	28	10	31.5	18.4
Capex 2010-16 to fixed assets 2010 (%)	101.6	196.8	111.5	126.3
Sales to assets (%)	53.8	84.9	36.4	86.5
Sales growth 2013-16 (%)	0	10.1	-5.2	14.3
ROA 2013-16 (%)	7.1	9.2	9.4	9

[11] Large firms with an ICR below 3 and a net debt to equity above 100 in 2016 represent 24 percent of the debt in our sample (8 percent of GDP) and 9 percent of the assets in our sample (11 percent of GDP).

[12] We use same definition used by the *Haut Conseil de Stabilité Financière* in setting the macroprudential limit of banks' exposures to large indebted firms.

E. Is Corporate Debt a France Specific Issue? Cross-Country Econometric Analysis

Econometric Specifications

21. We perform two sets of regression analyses to understand the importance of firm-level characteristics and of country and sectoral factors in explaining the levels and evolution of corporate debt over time. The purpose is to uncover the extent to which firm-level indebtedness decisions are influenced by country characteristics, in particular in France, as well as the importance of firm-level characteristics and sectoral factors. As in previous sections, we rely upon consolidated balance sheet information and financial statements of publicly listed firms from Worldscope, covering the period 2010 to 2016, for France, Germany, Italy, the Netherlands, Spain, the UK and the US.

22. First, we aim at understanding the determinants of firm leverage, in particular whether firms are more (or less) indebted than their peers, after accounting for firm and sectoral observed or unobserved characteristics. We rely upon a simple panel regression analysis explaining a measure of firm leverage ($Y_{isj,t}$) of firm i, that belongs to country j and sector s at the end of year t by: its lagged value, a set of firm-level control variables, and a complete set of time dummies (D_t), sector fixed effects (G_s) and country fixed effects (F_j) to account for unobserved characteristics. Firm-level observed control variables are lagged by one period (vector $\boldsymbol{X}_{isj,t-1}$) and include profitability (return on assets), size (measured by total assets, relative to the average for all firms in a country), tangibility of assets (the ratio of fixed assets to total assets), availability of cash flows (the ratio of sales to total assets), growth opportunities (the annual growth rate of sales), and the dividend payout ratio. These variables are considered as standard determinants of firm indebtedness.[13] Specifically, we consider the following panel specification for the period 2010–2016, with standard errors robust to heteroscedasticity:

$$Y_{isj,t} = \propto Y_{isj,t-1} + \sum \beta \boldsymbol{X}_{isj,t-1} + D_t + F_j + G_s + \varepsilon_{isj,t} \quad (1)$$

23. Second, we aim at uncovering the determinants of the change in firm leverage between 2010 and 2016 to determine whether country characteristics mattered. A simple cross-sectional regression analysis relates the change in leverage (ΔY_{isj}) of firm i that belongs to sector s and country j between 2010 and 2016 to its initial debt-to-asset ratio in 2010 ($Y_{isj,2010}$), a set of firm-level characteristics averaged over 2010–2016 ($\boldsymbol{X}_{isj}$), country fixed effects (F_j) and sectoral fixed effects (G_s). The cross-sectional regression is specified as follows, with standard errors robust to heteroscedasticity:

$$\Delta Y_{isj} = \propto Y_{isj,2010} + \sum \beta \boldsymbol{X}_{isj} + F_j + G_s + \varepsilon_{isj} \quad (2)$$

[13] See for instance A. Demirguc-Kunt, M. Martinez-Peria, and T. Tressel, "The Impact of the Global Financial Crisis on Firms' Capital Structure", Policy Research Working Paper No. 7522, World Bank, Washington, DC, 2015.

Findings

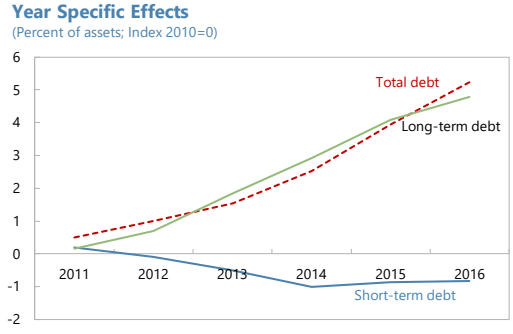
24. Firm-level characteristics, as well as country, time and sectoral fixed effects, help explain firm leverage (Table 3). In our regression analysis, we considered the following measures of firm leverage as dependent variables: the debt-to-asset ratio, the debt-to-equity ratio, the long-term debt-to-asset ratio and the long-term debt-to-equity ratio. We find that more profitable firms, firms offering higher dividend payouts, and with a higher proportion of fixed assets to total assets tend to have higher leverage, while firms with faster sales growth tend to be less indebted. These findings are driven by long-term debt defined as the portion of debt that has a maturity above one year. There is also very little persistence of firm indebtedness, as demonstrated by the coefficient on the lagged dependent variable, meaning that the debt level converges very fast to the value predicted by firm-level characteristics and various fixed effects. This result holds for each of the four measures of leverage considered. This suggests that firms in our sample have on average experienced notable changes in their capital structure during the period considered.

25. Our analysis uncovers very large effects related to time trends and sectoral effects:

- *Time trends*. Time effects common to all firms appear to be very significant economically, implying that debt-to-asset ratios are on average five percentage points higher in 2016 relative to 2010 (compared to an average debt-to-asset ratio of 30 percent in our sample). Debt-to-asset ratios and long-term debt-to-assets ratios are significantly different from their levels in 2010 from 2013 onwards. These time effects show that debt has increased significantly after the crisis after controlling for firm and sector characteristics. The better access of large firms to financing after the crisis could be related to the low interest rate environment and unconventional monetary policies by major central banks. These time effects also appear to be driven by the portion of debt with a remaining maturity above one year.
- *Sectoral effects*. The sector to which a firm belongs seems to significantly impact its leverage.[14] In particular, sectors such as telecommunication, transportation and utilities tend to be much more indebted than other sectors in all countries.

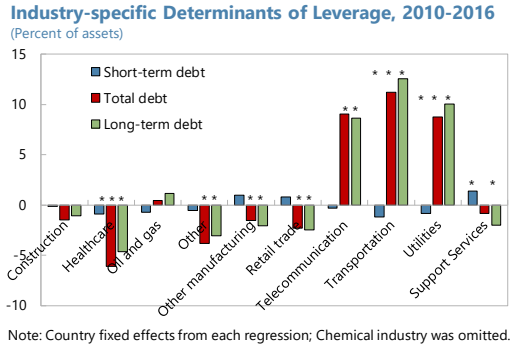
Figure 4 Impact of Common Time Effects and of Sectoral Effects on Firm Leverage

Common time effects appear economically large …



Note: Time dummies from panel regression
Sources: Worldscope and IMF staff calculations.

…and there is very large dispersion of leverage across sectors



Note: Country fixed effects from each regression; Chemical industry was omitted.
A * indicates significance at the 5 percent level.
Sources: Worldscope and IMF staff calculations.

[14] In each sector, our cross-country dataset involves between minima of 31 firms (in Telecom), 51 firms (in Transport) to maxima of 740 firms (in manufacturing) and 755 firms (in the residual unclassified "other" category).

Table 3. Determinants of Firm Leverage

Dependent variable:	Total debt / total assets	Total debt / equity	Long-term debt / assets	Long-term debt / equity
Firm level variables (t-1)				
Dependent variable	0.0356***	-0.000768	0.0458***	-0.000551
Divident payout ratio	0.00285*	0.0138	0.00201***	0.0201
ROA	0.00860**	0.323***	0.0172***	0.233**
Total assets	0.0170	1.390	0.0424***	1.485
Fixed assets, % of total assets	0.0113*	-1.260*	0.0105*	-0.887
Sales, % total assets	0.000357	-0.0181	0.000114	-0.0243
Sales growth	-1.02e-06**	2.92e-06	-9.97e-07**	-2.55e-06
Year indicator variables [1/]				
2011	0.503	-46.41	0.167	-36.81
2012	1.013**	-21.75	0.695	-5.190
2013	1.540***	68.09	1.850***	13.53
2014	2.526***	31.67	2.921***	53.60
2015	3.937***	-22.65	4.092***	-5.714
2016	5.230***	-24.69	4.786***	-7.494
Country indicator variables [2/]				
Germany	-0.223	-51.91	-0.592	-33.28
Italy	6.180***	54.65**	0.255	19.48
Netherlands	0.992	10.88	1.117	15.81
Spain	12.49***	358.2	7.509***	-6.871
U.K.	-4.002***	-40.54***	-2.612***	-25.78***
USA	3.108***	58.77	6.029***	65.72
Industry indicator variables [2/]				
Construction	-1.486*	384.3	-1.052	137.2*
Healthcare	-6.095***	-51.44	-4.662***	-35.52
Oil and gas	0.460	26.43	1.092	29.12
Other	-3.813***	24.89	-3.094***	37.89
Other manufacturing	-1.549**	17.66	-2.108***	14.73
Retail trade	-2.319***	62.81	-2.523***	54.03
Telecommunication	9.026***	80.28*	8.596***	103.3***
Transportation	11.17***	58.59	12.50***	94.47***
Utilities	8.725***	73.72**	10.04***	87.74***
Support Services	-0.879	40.26	-2.055***	34.41
Constant	19.04***	58.02	11.82***	30.33
Observations	19,035	19,369	18,674	19,070
R2	0.084	0.002	0.111	0.001
F tests of joint significance				
Firm level variables				
Year indicator variables				
Country indicator variables				
industry indicator variables				

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

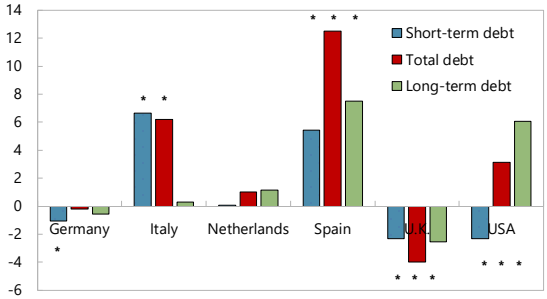
1/ Period of observation is 2010-2016, Fixed effect for 2010 omitted

2/ France is the country omitted and Chemicals is the industry omitted.

26. The evidence suggests that, once firm characteristics, sectoral and time effects are taken into account, French publicly listed firms are on average no more (or even less) leveraged at a consolidated level than firms from many countries:

- *Firms more leveraged than French firms.* Italian, Spanish and US firms appear significantly more leveraged than French firms once sectoral fixed effects, time fixed effects and firm characteristics are controlled for. For Italian firms, the difference seems to mainly reflect a higher reliance on short-term debt. For Spanish firms, the difference is significant both for short-term and for long-term maturities. For US firms, the difference seems to reflect a higher reliance on long-term debt than for French firms.

Country-specific Determinants of Leverage, 2010-16
(In percent of assets, relative to France)



Note: Country fixed effects from each regression; France is the omitted country; A * indicates significance at the 5 percent level.
Sources: Worldscope and IMF staff calculations.

- *Firms with comparable leverage.* Dutch and German firms have debt ratios that are not economically or statistically different from French firms.

- *Firms significantly less leveraged than French firms.* British firms are the only ones to appear to have debt ratios that are systematically lower than the ones of French firms, after controlling for the sector of operation, time effects, and observable firm characteristics.

27. A large share of the cross-sectional variation in the change in leverage is explained by country and sectoral fixed effects, but also by some firm characteristics (Table 4). Our regression specification explains about half of the cross-sectional variable in the change in leverage, mainly because the change in indebtedness is significantly negatively influenced by the initial leverage, so that a firm that has a leverage above (respectively below) the leverage predicted by its characteristics, country and sector, will experience a decline (respectively an increase) in its indebtedness. The change in leverage also appears to be significantly influenced by the country or sector it belongs to. This implies that some country and sector characteristics changed during the period of observation and contributed to the evolution of firm leverage.

28. Country and sector fixed unobserved effects have economically large impacts on the change in leverage, and suggest that French firms have not increased their leverage more than peers:

- *Country effects.* On average, French firms' indebtedness has not increased more than among firms in peer countries. In fact, the change in firm debt between 2010 and 2016, after controlling for the initial leverage, was larger in Italy, in Spain and in the US. The change in French firm's indebtedness was not significantly different than that of peers in Germany, the Netherlands and the UK.

- *Sectoral effects.* Firms operating in sectors such as telecommunications, transportation and utilities have increased their indebtedness more than firms operating in other sectors of activity. These sectors usually finance themselves via bonds and could profit from the looser bond financing conditions.

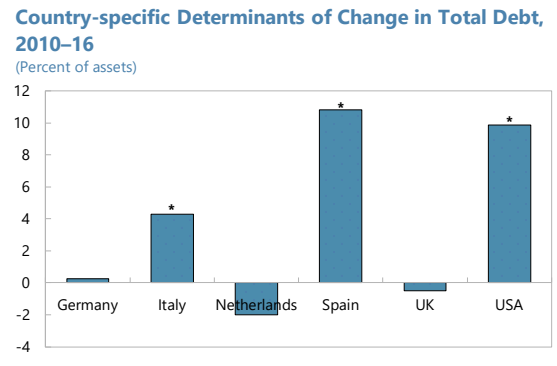
Table 4. Determinants of the Change in Firm Leverage

Dependent variable: change between 2010 and 2016	Total debt / total assets	Net debt / assets	Long-term debt / assets
Firm level variables [1/]			
Dependent variable level 2010	-1.025***	-1.014***	-1.013***
Divident payout ratio	-0.528	-0.206	-0.584
ROA	0.0776	0.220*	0.120*
Total assets	0.154	0.0229	0.132
Fixed assets, % of total assets	0.00157	0.220**	0.0237
Sales, % total assets	-0.0417**	-0.0306	-0.0422**
Sales growth	-5.16e-05	9.53e-05	-3.69e-05
Country indicator variables [2/]			
Germany	0.200	0.713	1.387
Italy	4.192**	6.346	-0.0845
Netherlands	-2.052	-2.179	-1.626
Spain	10.79***	13.57***	6.127***
U.K.	-0.729	-2.248	-1.251
USA	9.720***	10.20***	12.35***
Industry indicator variables [2/]			
Construction	-2.800	-3.309	-2.061
Healthcare	-4.728	-16.17***	-3.777
Oil and gas	2.440	7.172	1.746
Other	-1.234	-1.148	-1.066
Other manufacturing	-0.245	1.558	-1.790
Retail trade	-2.574	-2.078	-2.914
Telecommunication	13.79***	42.26	9.028*
Transportation	8.155**	15.26***	8.453**
Utilities	6.691**	15.65***	5.666*
Support Services	1.346	4.784	-0.602
Constant	26.35***	3.231	19.68***
Observations	1,288	1,260	1,233
R2	0.551	0.588	0.553
F tests of joint significance			
Firm level variables			
Country indicator variables			
industry indicator variables			

Robust standard errors in parentheses; averages over 2010-2016
*** p<0.01, ** p<0.05, * p<0.1
1/ period average unless otherwise noted
2/ France is the country omitted and Chemicals is the omitted industry

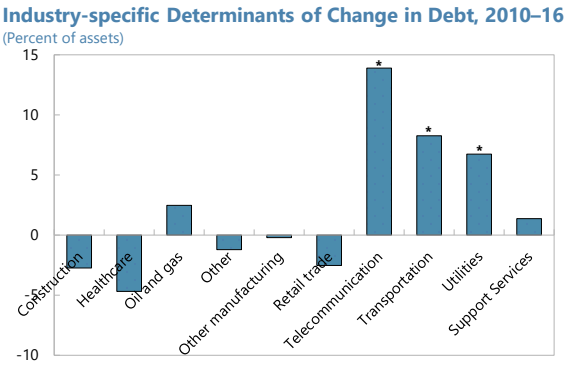
Figure 5. Impact of Country Effects and Sectoral Effects on the Change in Firm Indebtedness

French firms have not increased their debt more than peers…



Note: France is the omitted country. A * indicates significance at the 5 percent level.
Sources: Worldscope and IMF staff calculations.

… and there is very large dispersion of leverage across sectors



Note: Chemical industry was omitted. A * indicates significance at the 5 percent level.
Sources: Worldscope and IMF staff calculations.

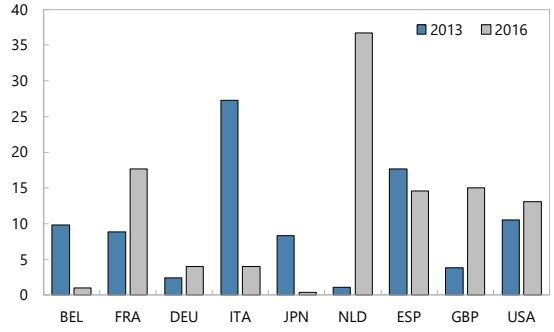
F. Risks Associated with High Corporate Debt

29. Financing costs have declined since the crisis, leading to a decrease in interest payments as a share of income despite higher debt levels (Figure 4). In our firm-level dataset, the effective interest rate (defined as the ratio of interest payments to the stock of debt) has declined from 4 percent in 2010 to 3 percent in 2016 and median ICRs (defined as EBIT over interest expenses) have increased over time. However, the ratios of consolidated debt and total debt service to income have risen in France in recent years due to the sheer amount of new debt and are above the ones of peer countries. The consolidated debt to income ratio has increased from 694 percent in 2007 to 885 percent in 2017. By the same token, total debt service of French firms has increased steadily since the global financial crisis, reaching more than 50 percent of income in 2017.

30. The share of debt owed by vulnerable firms ("debt at risk") has doubled in France in recent years. Vulnerable firms are defined to be those with an interest coverage ratio below two for three consecutive years. The share of debt owed by vulnerable firms in France is the second highest in our sample, behind the Netherlands. In our dataset of listed firms, the share of debt owed by vulnerable French firms has increased from 9 percent in 2013 to 18 percent in 2016 (in terms of GDP, from 3 percent in 2013 to 6 percent in 2016). Since debt is concentrated among a few large firms, the ratio of debt under risk is often driven by few large firms. The ratio of debt under risk has also increased in Germany, the Netherlands, UK, and US.[15]

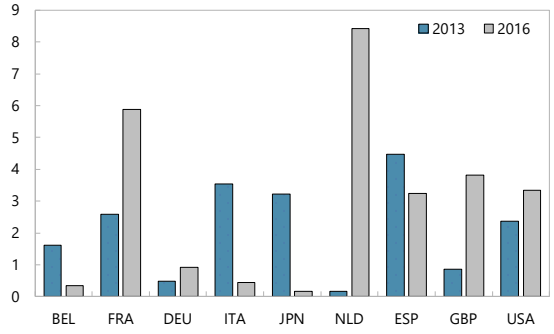
[15] SNCF was flagged as a vulnerable firm in 2016 but not in 2013. SNCF's debt alone represents 3.4 percent of GDP in 2016. Similarly, the considerable increase in the Netherlands is caused by the inclusion of one company in the sample of vulnerable firms which owes a relatively large share of total debt.

Share of Debt Owed by Firms with an ICR<2
(Percent)



Sources: Worldscope and IMF staff calculations.

Debt Owed by Listed Firms with an ICR<2
(Percent of GDP)

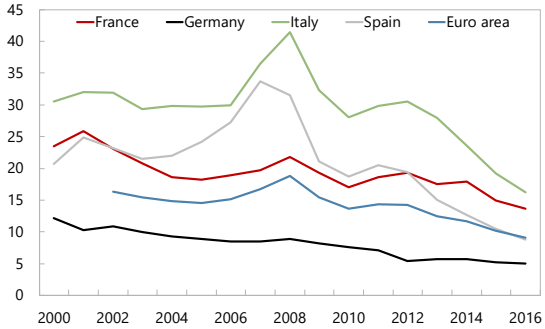


Sources: Worldscope and IMF staff calculations.

Figure 6. Debt Serviceability

The share of income going to interest payments has declined…

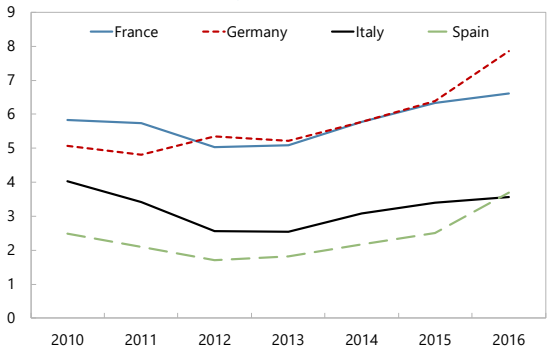
Non-Financial Corporation Interest Payments
(Percent of income)



Source: Haver Analytics and IMF staff calculations.

…and firms' median ICRs have increased.

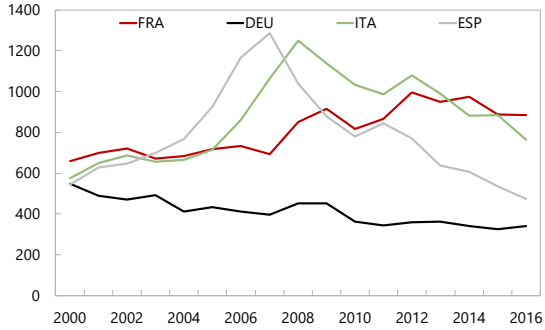
Median Interest Coverage Ratio (ICR)



Source: Worldscope and IMF staff calculations.

However, the debt stock to income ratio has increased…

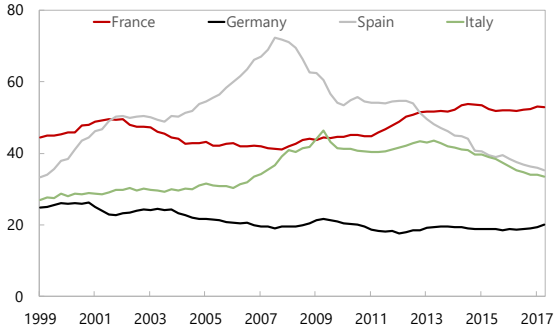
Consolidated Debt
(Percent of income)



Sources: Haver Analytics and IMF staff estimations.

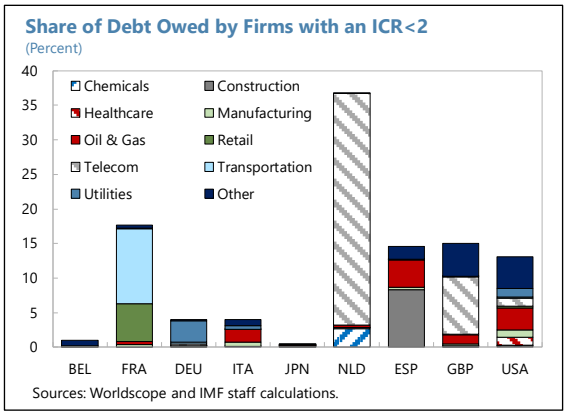
…and so has total the debt service to income ratio.

Non-Financial Corporations Debt Service
(Percent of income)

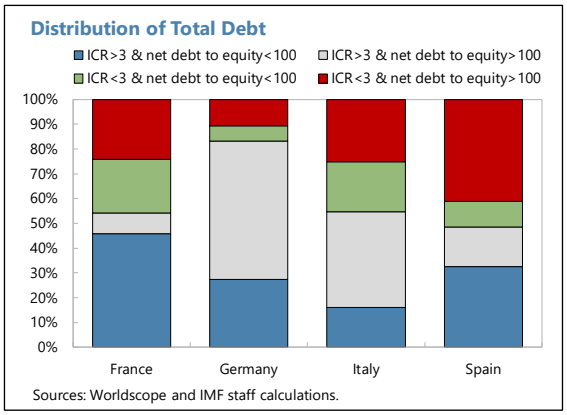


Source: BIS.

31. French corporate debt at risk is concentrated in the transportation and retail sectors. In general, only four firms are responsible for 90 percent of the debt at risk in France in our dataset, and SNCF's debt at risk accounts for 10 percent of total consolidated debt (text chart). In the Netherlands and UK, the telecom sector accounts for a large share of the debt at risk, while the oil and gas sector accounts for a large part of the debt at risk in Spain, Italy, and the US. In Spain the construction sector also contributes to a large part of the debt at risk, while the utilities sector has a more prominent role in debt at risk in Germany.

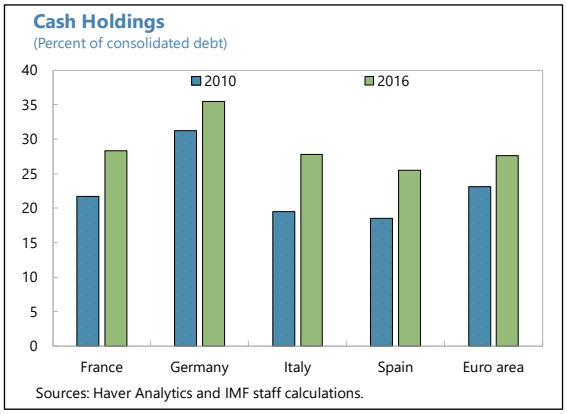


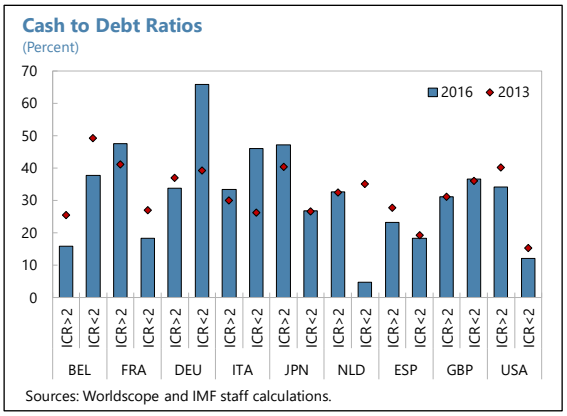
32. A large share of debt in France is owed by firms which have a low interest coverage ratio and a high net debt to equity ratio.[16] A high net debt to equity ratio may be the consequence of a financing choice of large firms which have ample access to cheap borrowing and does not necessarily reflect a risk to service its debt. However, a large net debt to equity ratio and at the same time a low ICR signals that the firm concerned has chosen a capital structure that is vulnerable to shocks to interest rates. The share of debt owed by listed firms with a net debt to equity ratio above 100 percent is lower in France than in other large euro area countries. However, the concern is that, in France (as in Italy and Spain), a large share of these firms which have chosen a high net debt to equity ratio also have also have low ICR ratios.



33. A risk mitigating factor is that firms have used their debt to increase their buffers of liquid assets. Aggregate data show that the ratio of cash holdings to consolidated debt has increased in all large euro area countries. In France, this ratio has increased from 22 percent in 2010 to 28 percent in 2016. However, our firm-level dataset on listed firms shows that the cash to debt ratio of vulnerable firms in France is lower than the cash to debt ratio of nonvulnerable firms, 18 vs 48 percent. In addition, this ratio has decreased recently for vulnerable firms while it has increased for nonvulnerable firms.

[16] A low ICR is defined as an ICR below 3 and a high net debt to equity ratio is defined as a net debt to equity ratio above 100. This is the definition of large indebted firms used by the *Haut Conseil de Stabilité Financière* (HCSF) in its macroprudential policy to limit banks' exposures to vulnerable firms.





34. Shock scenarios show that an increase in interest rate could increase considerably the amount of consolidated debt under risk, but that risks are reduced through the holdings of liquid assets.[17] We shock the data in 2013–16. We consider that a firm is vulnerable if its ICR falls below two in all three years. We consider the following four scenarios:

- a 200 basis points increase in interest rate on total debt;[18] [19]
- a 200 basis points increase in interest rate on total debt and a 100 bps increase in interest rate on liquid assets;
- a 200 basis points increase in interest rate on total debt and on liquid assets; and
- a 200 basis points increase in interest rate on total debt and on liquid assets, combined with a 10 percent increase in profits (if these are positive).

35. Debt at risk can increase substantially and become macroeconomically relevant, but cash buffers and other liquid assets could significantly attenuate the extent of the shock. An increase in the interest rate on debt of 200 bps (shock 1) double or more than double the amount of debt at risk in all countries, with the exception of the Netherlands which has already a high ratio under the baseline. The share of debt owed by French listed firms at risk increases from 18 to 35 percent, or from 6 percent of GDP to 12 percent of GDP.[20] However, given that firms own a considerable amount of liquid assets, considering a concomitant increase in interest rates on liquid assets (shocks 2 and 3) decreases the ratio debt at risk considerably in France, Germany, Italy, UK,

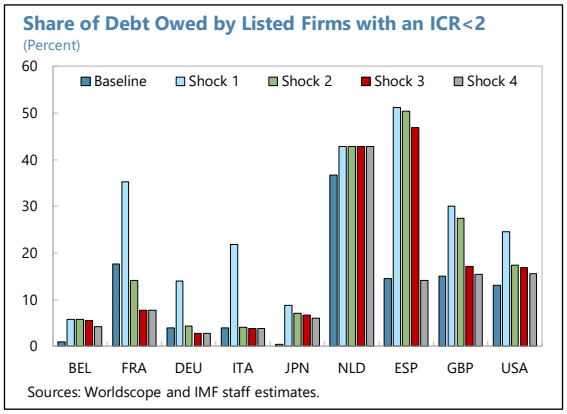
[17] These shock scenarios do not take into account that part of the debt is under a fixed interest rate and would be thus not immediately affected by an interest hike. Hence the results presented are upper bounds of the effects of the shocks.

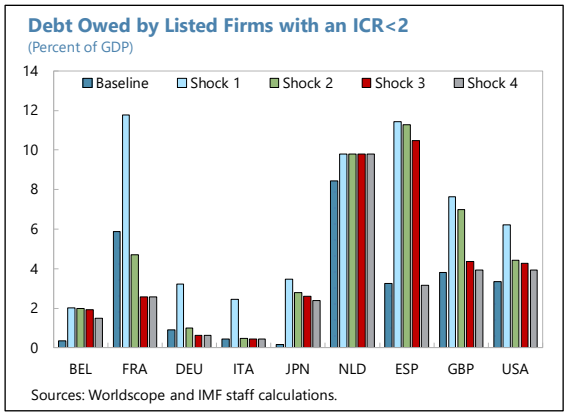
[18] A 200 basis points increase in interest rate corresponds to halving the decrease in interest rates since the onset of the global financial crisis.

[19] In a variation on the main scenario, we shocked only the debt that is under variable interest rates (estimates suggest that only about 65 percent of total debt).

[20] If only the debt under variable rate is shocked, the share of debt owed by vulnerable listed French firms would increase to 23 percent (instead of 35 percent).

and US. In France the ratio of debt at risk under shock scenarios 2 and 3 are even lower than under the baseline due to firms' large holdings of liquid assets. Finally, with the exception of Spain, there is no difference between the results of scenario 3 and 4, when we assume an increase in profits in addition to the interest rate increase.





36. In more complete scenarios, additional risk factors could add to the stress experienced by leveraged firms. A weakening of growth would adversely impact firms' cash flows and their ability to repay their debt. Moreover, sudden increases in interest rates beyond the "normal" increase related to the expected normalization of monetary policy would be associated with additional shocks, such as decompression of risk premia and a decline in stock market value which would increase debt-to-equity ratios, while firms may face pressure to distribute dividends to support stocks (also, the value of new goodwill accounted for in recent years could decline). Last, the value of financial assets other than cash would decline, limiting the ability to use them to offset cash outflows.

G. Conclusions

37. Corporate debt has increased significantly in France since the financial crisis, in contrast to other large euro area countries. The increase in corporate debt as a share of GDP can be mostly explained by an increase in intercompany loans and bond financing. The increase in debt is concentrated among a few sectors (network sectors and retail) as in peer countries, and among firms with the state as a shareholder have contributed to this increase. Firms have used their borrowing to invest in physical capital, but also to accumulate financial assets (mainly equity and cash) and to extend intercompany loans.

38. Regression analyses show that, after controlling for firm characteristics and sectoral and time fixed effects, French firms are not more indebted than comparable firms in peer countries. Moreover, they have not increased their leverage more than peers. In general, listed French firms which have increased their indebtedness since the crisis do not appear particularly vulnerable: they invested more and were more profitable than firms which did not increase their indebtedness. However, there are some pockets of vulnerabilities among large indebted firms which have high interest rate payments relative to their income and are less profitable.

39. Interest payments as a share of income have decreased since the crisis due to lower interest rates, but a faster-than-expected increase in interest rates could make it difficult for firms to service their debt. The share of debt owed by vulnerable listed French firms (those with an ICR below 2 for three consecutive years) has doubled from 3 percent of GDP in 2013 to 6 percent of GDP in 2016. Shock scenarios performed on publicly listed firms show that this ratio can increase up to 12 percent of GDP after an increase in interest rates. However, the fact that many firms have invested part of their debt to boost cash buffers mitigates the risks from a rate hike.

40. The authorities should remain vigilant to prevent the build-up of imbalances in the corporate sector that could have spillovers to the banking system. In this context, they should consider:

- Building buffers in the banking system to limit potential spillovers. The decision to limit bank exposures to large indebted corporates and the activation of the countercyclical capital buffer are welcome decisions.
- Continuing to rely on communication tools to raise awareness of market participants.
- Further reducing tax incentives favoring debt relative to equity.

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STRUCTURAL REFORMS IN FRANCE: WHERE DO THEY STAND?[1]

Important structural reforms have been implemented in France over the last 3–4 years, and the authorities have an ambitious agenda for this year and next. The recent and planned reforms cover a broad spectrum of labor, education, product, and service market measures, which complement and build on each other. While their effects will take time to percolate through the economy, these reforms, if implemented resolutely, monitored carefully, and enhanced as needed, could help support a job-rich and long-lasting recovery.

A. The First Wave of Reforms: 2015–2016

1. The global crisis exposed some of France's key structural weaknesses. France's real growth averaged around ½ percent per year during 2008–17, while its external position deteriorated from a surplus to a deficit during this period. Employment growth was meager, averaging only about ¼ percent per year, and the unemployment rate increased from 7½ percent in 2007 to a peak of 10½ percent in 2015 (with the unemployment rate for youth exceeding 25 percent). These weak economic outcomes reflected, in part, France's lack of product and labor market flexibility, which hampered the economy's ability to respond to external shocks within the currency union.[2]

2. In response, two key reforms were enacted in 2015–16, aiming at improving labor market flexibility. The laws were directed at simplifying the social dialogue, increasing negotiation flexibility at the firm level, and reducing employment protection, so as to allow French firms to better tailor working conditions to economic circumstances. Specifically:

- **Rebsamen Law (2015):**[3] The law aimed at simplifying the social dialogue by: (i) allowing joint consultations with the (three) employee representative bodies; (ii) reducing mandatory consultations between employer and employee representative bodies from seventeen to three; and (iii) consolidating the areas of negotiation in three blocks covering wages/working time, work conditions/gender equality, and career management. The law also increased job flexibility by enhancing the scope of and renewal possibility for fixed-term and temporary contracts.

[1] Prepared by Nicoletta Batini and Simon Voigts (EUR).

[2] Also see N. Batini, "Structural Unemployment—Causes and Potential Remedies", Selected Issues Paper, International Monetary Fund, 2016 and T. Tressel, "Revisiting the Competitiveness Problem," *Selected Issues Paper*, International Monetary Fund, 2017.

[3] See *LOI n° 2015-994 du 17 août 2015 relative au dialogue social et à l'emploi*.

- **El-Khomri Law (2016):**[4] The law aimed at enhancing negotiating flexibility at company level by allowing company-level flexibility in setting working hours and some benefits. At the same time, the law re-regulated overtime pay and allowed branches to define the areas for which less favorable company-level agreements cannot be signed. Finally, the law provided a clear legal definition of justified economic redundancy, including firm termination and reorganization.

3. These reforms were complemented by a product and service market reform (Macron law) aimed at supporting competition and investment.[5] The law took steps to deregulate a number of restricted service and product markets, including: (i) legal professions (e.g. notaries); (ii) retail trade (to include evenings and Sundays in international tourist areas); (iii) bus and coach services; (iv) mobile networks; (v) retail banking (making it easier to change banks); and (vi) investment licensing (through a single authorization process for industrial and urban projects). In addition, the law included labor-market measures to facilitate employee' share-ownership schemes and provided an indicative scale for indemnity payments to reduce judicial uncertainty around dismissals.

B. The Second Wave of Reforms: 2017–2018

4. The government has taken advantage of recently improving economic conditions and a fresh political mandate to press ahead with a second wave of structural reforms. Activity in France grew at a robust pace of 2.3 percent in 2017, on the back of strong domestic investment and exports. These outcomes were likely supported by the recent reforms, but have also benefitted from a favorable global trade environment and an accommodative monetary policy in the Euro Area. In its first year in office, with broad political support, the Macron government took further steps to build on and deepen the structural reforms taken by previous administrations to ensure that the recovery is job rich and long lasting.

5. A reform of the labor code was enacted in the fall of 2017. The reform takes further steps toward decentralizing collective bargaining, simplifying social dialogue, and reducing judicial uncertainty around dismissals so as to provide further flexibility for firms to respond to economic conditions and thus support competitiveness. Specifically:

- *Collective bargaining:* The reform expands the scope of firm-level negotiations to additional areas, including variable pay. While the reform also expands the areas for negotiation at the branch level (including base wages and the rules governing fixed term and temporary contracts, among others), branch-level agreements are no longer automatically extended to all companies. Instead, a council of experts has been created to advise to government on the appropriateness of such extensions, taking into account their impact on competitiveness.

[4] See *LOI n° 2016-1088 du 8 août 2016 relative au travail*.

[5] See *LOI n° 2015-990 du 6 août 2015 pour la croissance*.

- *Simplification and strengthening of social dialogue:* A new employee representative body will be created, merging the three existing bodies. Small firms have been allowed to negotiate directly with staff representatives or directly with the employees (in very small firms).

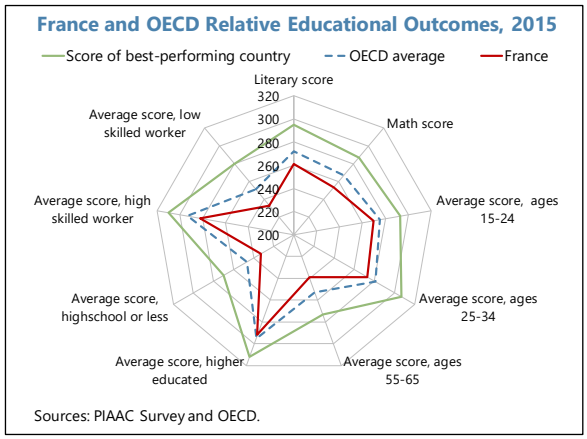
- *Reduction of judicial uncertainty around dismissals:* The new reform facilitates voluntary collective dismissals. While severance pay has been increased, the reform also introduces a compulsory scale governing minimum and maximum severance payments for unfair dismissals, and reduces the time limit for appeals against terminations of job contracts.

6. At the same time, the government legislated measures to reduce the labor-tax wedge. These measures, which have been included in the 2018 budget, aim to reduce the cost of labor for employers and improve incentives to work for employees, reducing France's high labor tax wedge relative to peers. Specifically:

- *Employers' social security contributions:* The Competitiveness and Employment Tax Credit (CICE), introduced in 2012, was replaced by a permanent reduction in employers' payroll contributions.[6] While this measure will be economically globally neutral for the affected firms, it will produce a reduction in France's measured tax wedge (for workers earning up to 2½ percent of the minimum wage) in cross country comparison by about 8 percentage points.[7]

- *Employees' social security contributions:* The unemployment and sickness contributions were replaced by an increase in the generalized social contribution (CSG) on all types of income (including labor, pensions and capital income). This measure is estimated to reduce France's labor tax wedge by around 1½ percent.

7. An overhaul of the education system has also started since 2017. This reform is aimed at improving prospects and opportunities for vulnerable groups by tackling early education, while also addressing high drop-out rates in tertiary education. Key steps, which are now being implemented, include:



- *Primary education*: The measures include a gradual halving of 1st grade and 2nd grade classes in disadvantaged neighborhoods; in addition, school timetables and curricula will be better tailored to local context to raise education effectiveness.

[6] The CICE is a tax credit amounting to 7 percent of gross payroll for remuneration equal to or below 2½ times the minimum wage.

[7] In effect, this reduction occurred in 2012, when the CICE was introduced, but it was not captured by standard OECD measures of the tax wedge.

- *Baccalauréat (BAC):* The reform aims to improve learning efficiency and reduce dropout rates by basing the BAC on results of the last two years as well as on a reduced number of tests, in line with European peers.

- *Higher education*: The reform envisages restricting university access by: (i) allowing students to make a limited number of *non-ranked* university choices; (ii) requiring high school teachers to provide orientation and offering recommendations; and (iii) better linking university entry with qualifications.

8. The authorities have continued to simplify administrative burdens. Circulars published in mid-2017 and early 2018 allow for a simplification of regulations to improve the business environment. Moreover, around 1500 new notaries offices have opened boosting competition in the sector following the Macron Law.

9. More recently, the government legislated a reform of the public railway system (SNCF) aiming to restructure the company as the sector is opened up to competition. The state-owned railway company that has held a monopoly in the domestic passenger market is heavily indebted and loss making. To make it economically viable and prepare it for the opening of the market to EU competition in 2023 (required by EU regulation), the reform, legislated in June 2018, which follows similar reform in Germany and Italy, includes the following:

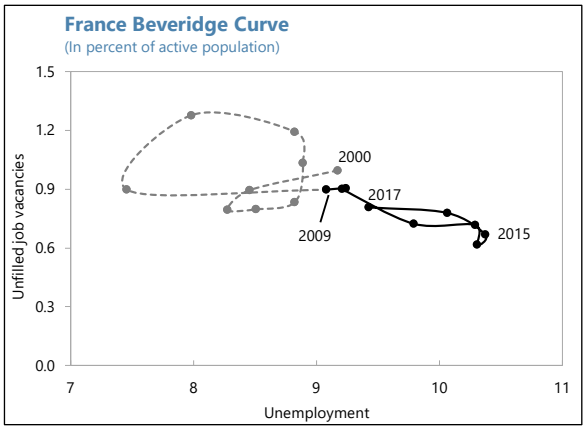
- *Corporate reorganization*: SNCF will become two public limited companies (networks and train and stations) under the umbrella of SNCF holding and will be restructured. Moreover, the state has committed to take over a large part of SNCF's debt in the medium term.

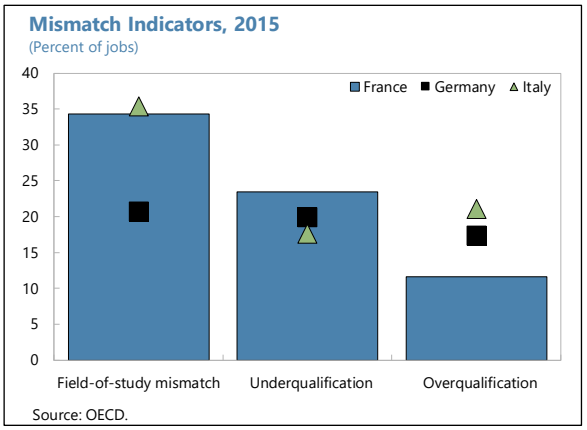
- *Status of employees*: The overly generous employment conditions for railway sector employees will be terminated, while grandfathering rights for existing SNCF employees.

- *Liberalization*: All regional and national railway sector routes will be gradually opened to competition by end-2023, in line with the relevant EU regulation.

C. A Third Wave of Planned Reforms: 2018–2019

10. Looking forward, the government plans a further wave of labor and product market reforms aimed at improving workers' skills and supporting business growth and innovation. The recently legislated reforms described in the previous section are expected to be beneficial for employment, investment and growth, but will likely take time to percolate through the economy. In the meantime, the government plans to pursue further reforms aiming to support the business environment and tackle remaining obstacles to growth, including skills mismatches, which are already apparent in business surveys indicating difficulties in recruiting qualified workers.





11. A new professional training reform is expected to improve training quality and simplify the system. The professional training system in France is inefficient, with a large number of training providers (more than 76,000),[8] a complex funding scheme, and a lack of regulation and monitoring of the quality of training, which, have led to a generalized low quality of training.[9] The new law, which has been submitted to parliament and is expected to be enacted this summer, aims to address these problems by overhauling professional training along three key dimensions:

- *Quality of training*: A new agency (*Agence France Compétences*) will be created to regulate the professional training market and monitor the quality of training and award certificates.
- *Putting the individual at the center*: Personal training accounts introduced in 2015 will be simplified to be denominated in euros (rather than hours) and to favor low-skilled workers. A smartphone application will be introduced to provide an easy overview of available courses, as well as information on the quality of training through individual reviews.
- *Governance:* Collection and management of the funding of professional training will be transferred from the social partners to the social security system and the *Agence France Compétences*.

12. A parallel reform of the apprenticeship system aims at strengthening skills of young workers. Unlike Germany (Box 1), France's apprenticeship system is predominantly school based, with two-thirds of vocational students training exclusively in professional schools, while only one third being able to combine training in a company with part-time schooling. Moreover, the system does not benefit those who most need it: while the number of apprentices doubled during 1986–2012 (from 220,000 to about 440,000), this increase was driven primarily by students with upper secondary education or higher. The new law, which is also expected to be enacted this summer, aims to make the system more accessible to both potential employees and firms, even as it did not go as far as reforming professional high-schools and promoting a dual apprenticeship system at this stage. Key measures include:

[8] As of 2014, according to the *Delegation Générale a l'Emploi* et *á la Formation Professionelle*.

[9] See *Cour de Comptes*, *Rapport Public Annuel*, 2017.

- *Aligning training with business needs*: To strengthen the role of firms in designing training, the task of running training centers (CFAs) will be transferred from regional authorities to professional branches.

- *Providing incentives for apprentices*: Apprentices' pay and the age threshold for eligibility will be raised to make apprenticeships more appealing and accessible to the young. At the same time, the law will simplify the rules to lay off apprentices, which is expected to support their hiring.

- *Strengthening governance*: Similar to the training reform, the funding will be collected by the social security system, which will make the funding scheme more transparent.

Box 1. The German Dual Apprenticeship System

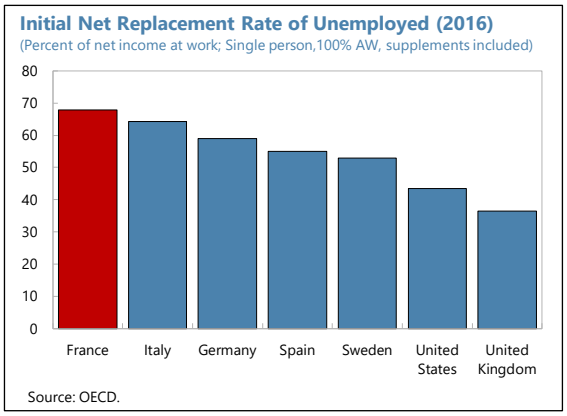
The apprenticeship system in Germany is widely credited as one key factor behind its low rate of youth unemployment and serves as an example for effective vocational training. The German apprenticeship system combines classroom teaching conducted in special types of schools ("Berufsschulen") with on-the-job training and work experience. Apprentices typically sign a 3-year contract with a firm and alternate between school- and firm-based training. About two thirds of the youths completing secondary schooling enter the dual apprenticeship system, which is the main path of transition into work.

The system relies on its good standing in society, as well as on the support of employers, trade unions and the government. Unions accept apprenticeship contracts which are paid below standard contracts as they recognize the commitment of employers to offer practical training. The government provides funding for special vocational schools and "pre-apprenticeship"-programs, which prepare low-qualified people to enter system.

The benefits of such a system are evident. For young employees, compared to individuals who only received schooling, graduates of the dual apprenticeship system enjoy more stable employment relationships),[1] often staying in the firm that provided their training. Firms across almost all sectors of the economy provide apprenticeships, indicating that the costs of providing workplace training and paying the apprentices' standardized salary is in general outweighed by the benefit of accumulating firm-specific human capital, using it as a screening device, and demonstrating social commitment.

[1] Adda, J., Dustmann, C., Meghir, C. and Robin, J.M., 2006: *Career progression and formal versus on-the-job training*. IZA Discussion Paper No. 2260.

13. A limited initial reform of the unemployment insurance system has been planned, but did not focus on the system's generosity. Unemployment benefit replacement rates in France are higher than in peers, and the system is very generous in other dimensions, including eligibility, rate of accumulation of benefits, weak job search requirements and limited sanctions (France is the only OECD country that has no penalty for the first refusal of a suitable job offer, and the criteria for an offer to be suitable are strict), creating



disincentives to work.[10] The initial reform plans to strengthen job-search monitoring and sanctioning, including by increasing the number of inspectors, revamping of penalties, and tightening criteria for job offers. However, there are no measures to reduce the system's generosity; in addition, the reform plans to extend the coverage of unemployment benefits to workers who resign and to self-employed who liquidate their activities.

14. The government is also working on a new law (*Loi PACTE*)[11] designed to support companies to innovate, transform, grow and create jobs. The draft of the *Loi PACTE* will be examined by Parliament in September 2018 and is expected to be legislated by end-2018 or early 2019. The law proposal presented to the Council of Ministers in mid-June includes the following:

- *Ease of firm entry and exit:* The law provides for an online one-stop-shop for business registration, which is expected to simplify business start-ups. At the same time, the time and costs of bankruptcy proceedings will be reduced and their predictability improved, while a simplified liquidation procedure will be introduced for small firms, aimed at facilitating debt restructuring and a fresh start.

- *Administrative burden:* The law will continue to simplify business regulations, including by reducing the number of thresholds defining administrative and fiscal obligations from three to two and creating a new legal environment that is more conducive to SME growth.

- *Export promotion*: A one-stop shop for the fulfilment of exports formalities will be created in regions to facilitate SME's exporting.

- *Employees' profit- and shareholding*: The reform aims to incentivize performance bonuses and profit-sharing with employees (thorough reduced social security contributions on these forms of employee compensation), which is expected to further help firms align compensation with productivity at the firm level.

- *Saving and investment incentives*: The law aims to: (i) increase the portability of the numerous pension products;[12] incentivize voluntary pension savings by making them tax deductible; and (iii) providing for an increase of savings going to equity finance in life insurance products.

[10] A person working on ultra-short (less than a month) work contracts for the minimum wage (SMIC) for 46 percent of the time and tapping unemployment insurance between them, topped up with other benefits, can make an income equal to 83 percent of someone who works full time for SMIC (Cahuc and Prost, 2015).

[11] *Plan D'action Pour La Croissance et la Transformation des Entreprises*.

[12] Retirement saving vehicles in France include: (i) PERCO: Company-sponsored collective DC pension plan; pays out lump sum or annuities; savings may be subject to lifestyle management by default; (ii) PERE: Company-sponsored collective DC pension plan; pays out annuities only; lifestyle management is possible but not by default; (iii) PERP: Individual retirement saving scheme; (iv) Madelin: Individual retirement saving scheme for the self-employed members of the workforce; (v) Life assurance contracts: Operates like a savings account; when the person insured dies, the beneficiary receiving the proceeds pays inheritance tax only over €152,500; savings are predominantly held in bonds.

- *Privatizations and innovation:* Further privatizations of state-owned firms are envisaged (notably the ADP Group in charge of Paris airports; Engie, a large utility company; and FDJ, an enterprise in charge of state lotteries). Proceeds from privatization will be used to financing a state innovation and research fund.

D. Conclusions

15. The recent and planned structural reforms in France are expected to support France's potential growth in the long run. The three waves of reforms discussed in this paper, which are unfolding over a five-year period, cover a broad range of areas, from collective bargaining, to employment protection, training, education, and as well as product, service markets and the business environment. Such reforms are expected to create synergies supporting growth in the medium and long run by boosting labor-force participation, investment, and productivity.[13] However, their effects are difficult to quantify ex ante, and their impact will need to be carefully monitored over time. Should they not produce a tangible reduction in the still high structural unemployment, an improvement in France's competitiveness, or durable growth, the reforms will need to be reinforced and deepened, including, for example, by expanding firm-level flexibility in setting base wages, restricting the scope of the mechanism governing minimum wages, facilitating dual apprenticeship, addressing the generosity of the unemployment system, and further opening up product and service markets to competition.

[13] Also see OECD 2014, "France: Structural Reforms: Impact on Growth and Options for the Future."

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