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# Decline in profitability since 2005: French banks hold their own

In a context of low interest rates and the strengthening of regulatory requirements, the profitability of French and European banks deteriorated between 2005 and 2016. Conversely, the return on assets of US banks climbed back up to its initial level at the end of the period after adjusting for the differences in accounting standards. However, the return on equity also fell sharply.

French banks were significantly less affected than their European competitors by the 2008 financial crisis and the 2011 sovereign debt crisis. They have also improved their operational efficiency, especially since 2012. In addition, like for US banks, their levels of equity more than doubled but their balance sheet total grew faster. European banks, for their part, recorded a smaller increase in their equity (up by 66%) and their balance sheet total remained stable.

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JEL code
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### Between 2005 and 2016

#### Increase in capital levels

+109% for US banks

+66% for European banks

+97% for French banks

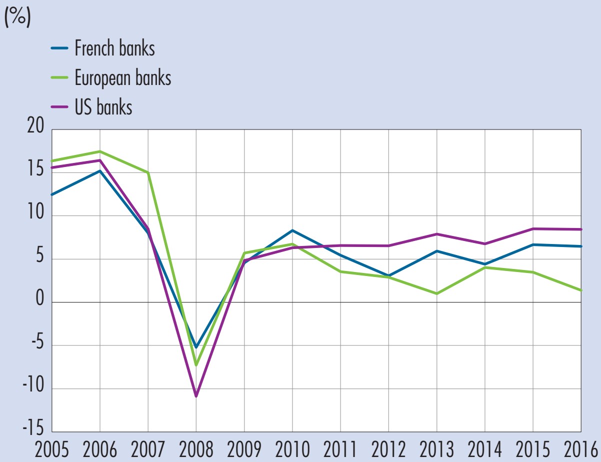
#### Increase in balance sheet total

+10% for US banks

+2% for European banks

+42% for French banks

### Return on equity




Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

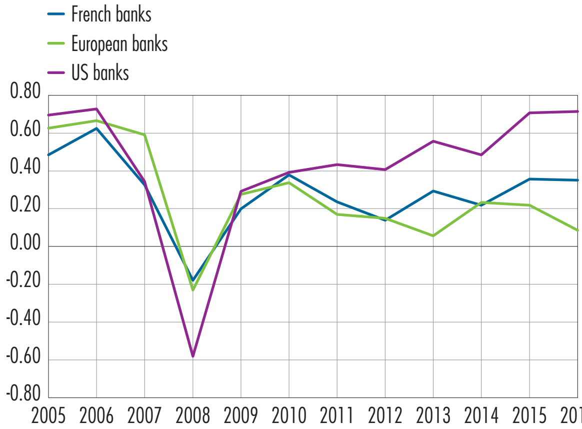
This article examines the changes in bank profitability, measured by return on assets (RoA) and return on equity (RoE), between 2005 and 2016, using a sample of 6 French banks, 15 European banks and 8 US banks including all the global systemically important banks in the three geographical areas considered (see methodological appendix). In particular, it seeks to measure the respective contributions of bank earnings, balance sheet size and equity levels to the observed changes.

## 1 The profitability of the banks in the sample has overall significantly declined since 2005

### While it has been stable for US banks, the return on assets of French banks has receded, but considerably less than that of European banks

C1 Return on assets

(%)




Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

The average RoAs of the three bank groups have seen mixed developments over the period (see Chart 1):

- the RoA of French banks has recorded a relatively limited decline (down by 13.4 basis points (bp) with a RoA in 2016 equal to 0.35%), even though it fell sharply during the crisis (-0.18% in 2008);
- European banks have been significantly affected, with their RoA decreasing by 54 bp to stand at 0.09% in 2016, compared to 0.63% in 2005, with a low of -0.23% in 2008;
- the ratio of US banks stood at 0.71% in 2016, returning to its 2005 level (0.70%), although it was the worst impacted by the crisis (-0.58% in 2008).

US banks continue to post a significantly higher RoA than their competitors; French banks have displayed a higher average RoA than that of other European banks since 2010, while their performance was slightly weaker before the crisis.

As regards French banks (see Chart 2a), the decline in the RoA can only be attributed to the rise in the balance sheet total between 2005 and 2016 (contribution of -11.8 bp), as their earnings increased slightly over the same period (contribution of 1.3 bp); in particular, the sharp rise in their net banking income (NBI)[1] offset the increase in management costs, the cost of risk, tax expenses and exceptional items.

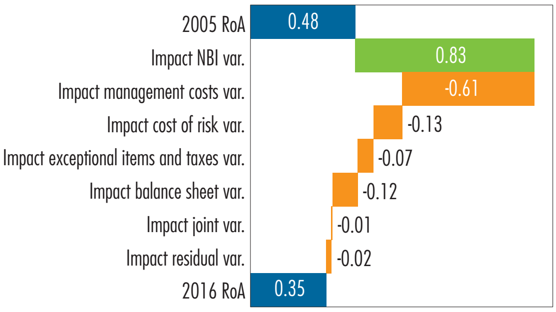
As regards the other European banks (see Chart 2b), the decline in the RoA reflects almost exclusively the decrease in earnings (contribution of -53.8 bp), even though the rise in the balance sheet total also had a slightly negative impact (contribution of -1.5 bp). The fall in earnings results from a drop in NBI, but especially from the increase in management costs and the very sharp rise in the cost of risk.

1 NBI is the gross income derived by a bank from its operations; this income can stem from a wide range of activities: traditional intermediation on deposits and loans, which generates net interest margins, the provision of customer services (including insurance and asset management activities), in exchange for commissions, and trading activities (on behalf of third parties or for own account) which may generate both interest, commissions and capital gains or losses (whether unrealised or realised on disposals).

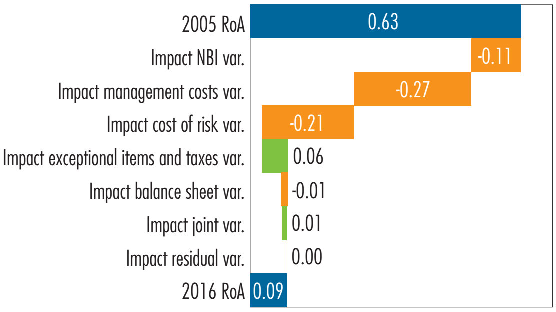
### C2 Contributions to changes in RoA

(%)

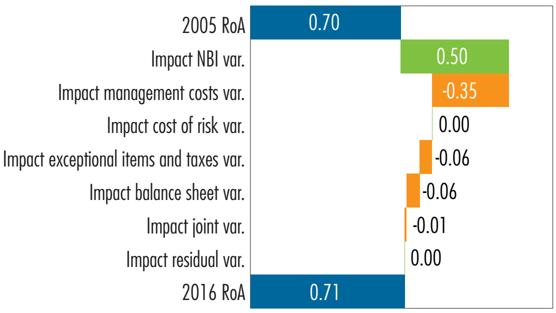
a) French banks




b) European banks




c) US banks




Note: RoE: return on equity and RoA: return on assets.
Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

The improvement in the profitability of US banks can be explained by a faster growth in earnings than that of the balance sheet total (with respective contributions to RoA growth of +8.8 bp and -6 bp); indeed, the rise in NBI exceeded that of management costs, the cost of risk, tax expenses and exceptional items (see Chart 2c).

## The fall in the return on equity reflects the decrease in financial leverage across banks

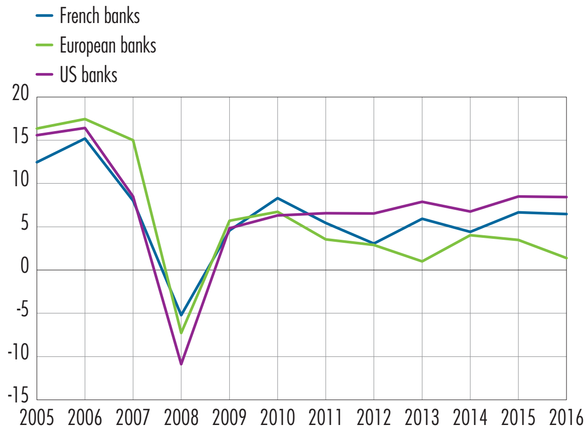
The average RoEs of the three bank groups (see Chart 3) are now well below the levels observed before the crisis. The fall in RoE was more than twice as fast for European banks (-15 bp with a RoE in 2016 equal to 1.4%) than for French banks (-5.9bp with a RoE at 6.5% in 2016) and for US banks (-7.2bp with a RoE at 8.4% in 2016).

In addition, while US banks have posted a higher RoE than all European banks since 2012, the gap with French banks alone is less wide than in the case of the RoA. In addition, while they posted the highest RoE before the crisis, European banks are now on average far behind French banks.

The RoE can be defined as the product of RoA and financial leverage.[2]

### C3 Return on equity

(%)

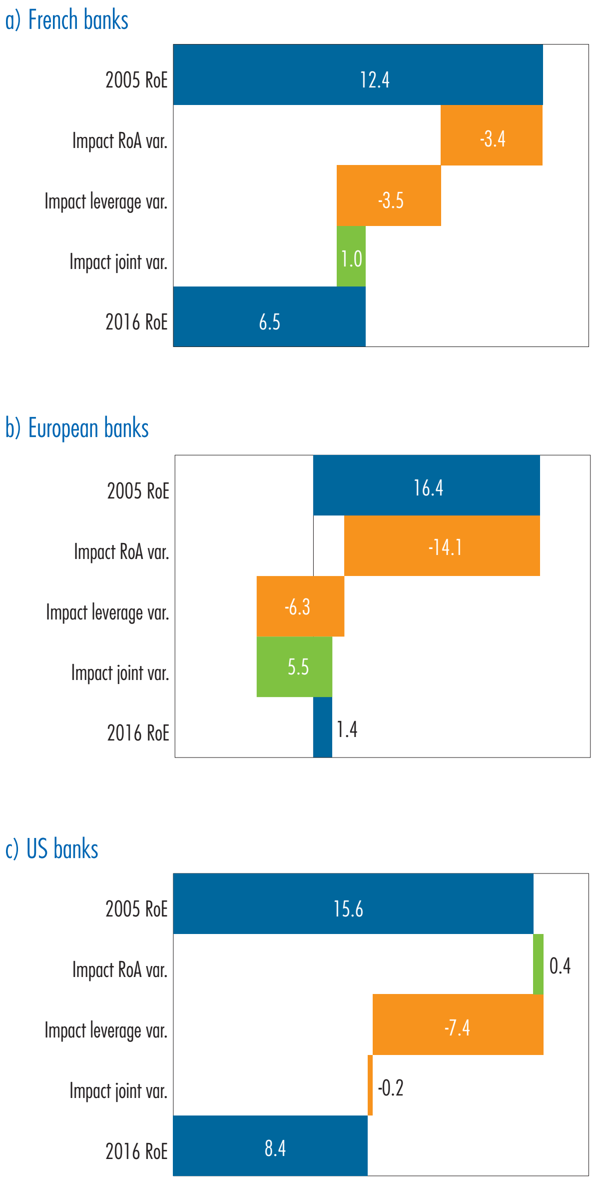



Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

2 Financial leverage, defined here as the ratio of the balance sheet total to book equity, measures a bank's leverage: the higher the ratio, the higher the bank's debt (its equity represents a small part of its balance sheet), and vice versa. Furthermore, the leverage ratio is defined as the reverse of financial leverage (i.e. the ratio of equity to the balance sheet total).

### C4 Contributions to changes in RoE

(%)




Note: RoE: return on equity and RoA: return on assets.
Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

As Chart 4 shows, these two variables have posted mixed developments across bank groups. However, in all cases, the decline in financial leverage has contributed significantly to the fall in RoE.

Despite being common to all three bank groups, the decline in leverage reflects very different trends.

## 2 French banks have developed and diversified their activities

### French banks have improved their operational efficiency and benefited from a lower cost of risk

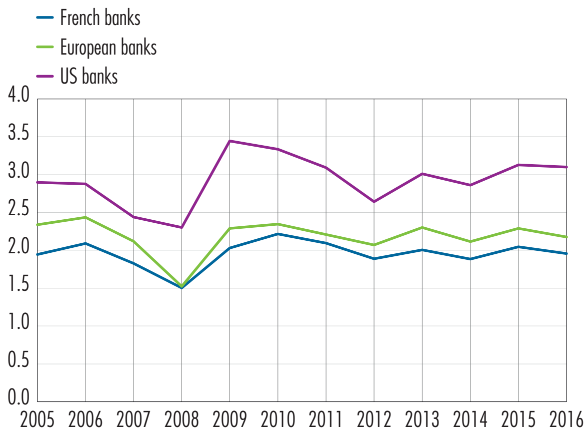
#### Relatively low net banking income for French banks

The analysis of the ratio of net banking income to the balance sheet total (NBI ratio) highlights the relatively low gross profitability of French banks: except in 2009, their NBI ratio is always 20 to 40 bp lower than that of their European competitors and much lower than that of US banks (see Chart 5). However, the net banking income ratio of French and European banks appears particularly stable over the long term if we omit the financial crisis, but more volatile for US banks, whose gross profitability has been rising since 2012.

The relatively low gross profitability of French banks, compared to European and US banks, is observed for almost all components of NBI (see Chart 6).

### C5 Net banking income

(as a % of balance sheet total)




Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

## C6 Components of net banking income

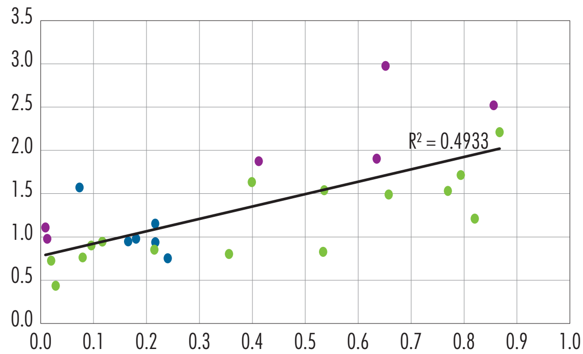
(as a % of balance sheet total)


Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

Although French banks' net interest margin (NIM)[3] reached the same level as that of European banks between 2010 and 2012, it has since continued to fall while it has risen again in the rest of Europe and in the United States; however, the relatively low NIM of French banks goes hand in hand with a lower cost of risk (see Chart 7), reflecting the improved quality of their loan portfolios.

## C7 Link between net interest margin and cost of risk

(x-axis: net margin ratio/balance sheet total; y-axis: cost of risk/balance sheet total; 2005-2016 averages, in %)

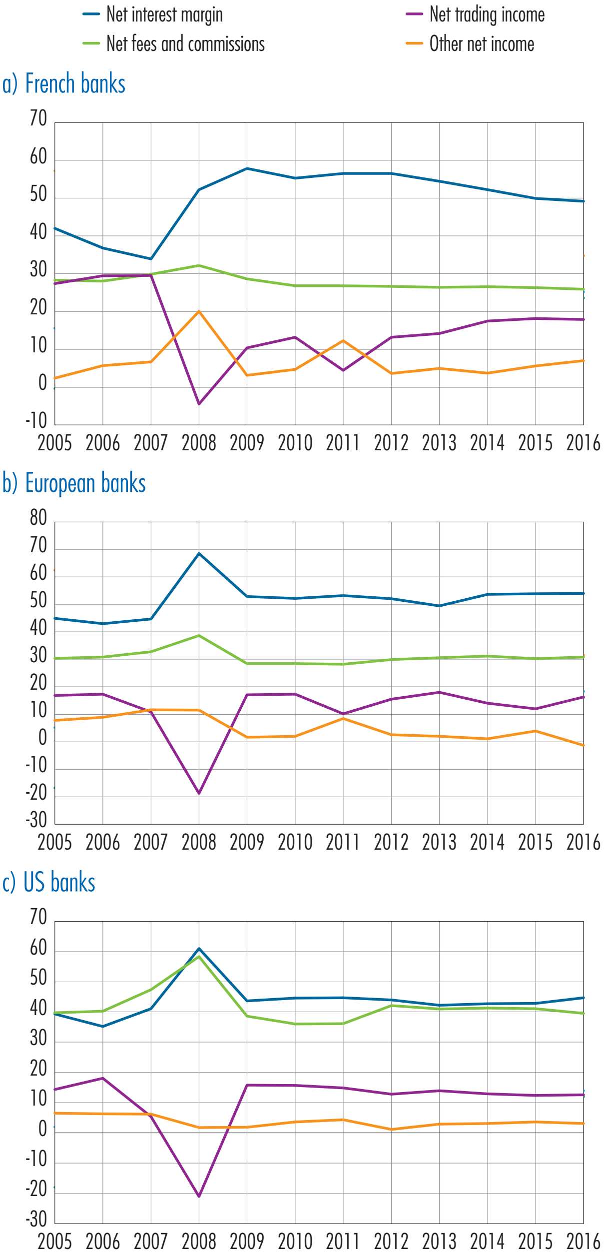



Note: French banks are in blue, European banks in green and US banks in purple.
Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

3 The net interest margin is the difference between the interest earned by the bank (on loans issued, investments with other banks, securities, etc.) and the interest paid on all its resources (customer deposits, loans from other banks, securities issued, etc.).

### C8 Changes in the structure of net banking income

(%)




Sources: Financial disclosure and Banque de France-ACPR calculations.

Only other net bank operating income of French banks, which includes insurance (investment income, net inflows and cost of claims) and asset management activities, has been significantly higher than for European banks since the crisis and has been at a level close to or slightly above that of US banks since 2008.

The relative stability of the gross profitability of French banks masks changes in the structure of their income: in particular, since 2012, the decline in the net interest margin has been offset by the increase in net trading income and the rise in other net bank operating income, even if their weight is still modest (see Chart 8a). Conversely, the NBI structure of European banks (see Chart 8b) and US banks (Chart 8c) is relatively more stable.

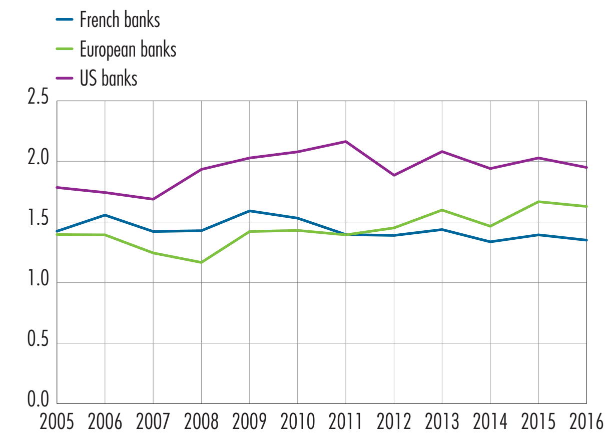
## Management costs under control and declining cost-to-income ratios

While the gross profitability of French banks has remained stable, their management costs relative to the balance sheet total have declined. Since 2012, they have been lower than those of European banks and even more so than those of US banks (see Chart 9).

Similarly, an analysis of the changes in the cost-to-income ratio[4] shows that since 2012 the management costs of French banks have been kept under control compared to those of their European competitors: they have decreased by 3.6 bp for the former and increased by 4.9 bp for the latter (see Chart 10).

### C9 Management costs

(as a % of balance sheet total)

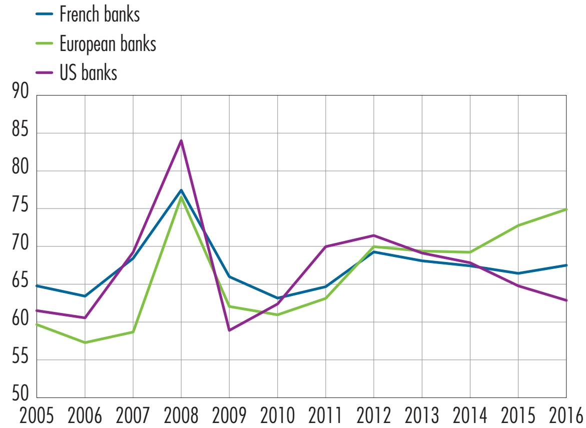



Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

4 The cost-to-income ratio measures the share of NBI absorbed by management costs.

### C10 Cost-to-income ratio

(%)




Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

US banks have recorded a sharp reduction in their cost-to-income ratio over the last five years (down by 8.6 bp), which has enabled them, like French banks, to return to pre-crisis levels.

Given the stability of their NBI, keeping their management costs under control has enabled French banks to post a gross operating income[5] relative to their balance sheet total very close to that of their European competitors, and even slightly higher since 2015 (see Chart 11).

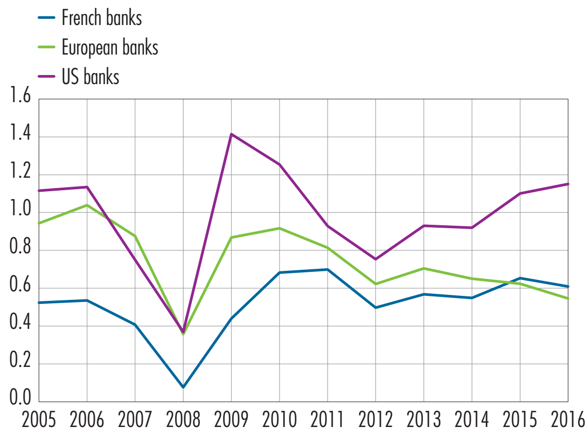
In addition, since 2010, and still relatively to their size, French banks have managed, unlike European banks, to generate a higher gross operating profitability than in the pre-crisis period. Despite significantly higher management costs than those of European and French banks, US banks continue to be much more profitable; in addition, the gap with their competitors has widened significantly since 2012.

## A lower cost of risk

Lastly, French banks have benefited from a much lower cost of risk over the entire period than their European competitors (see Chart 12); in addition, even though the cost of risk of French banks has been slightly higher than that of US banks since 2013, it has continued to fall in France (down by 9 bp over the last four years) while it has risen slightly in the United States (up by 4 bp); lastly, the situation of European banks has further deteriorated since 2014, with the cost of risk relative to the balance sheet total climbing by 8 bp over the last three years.

### C11 Gross operating income

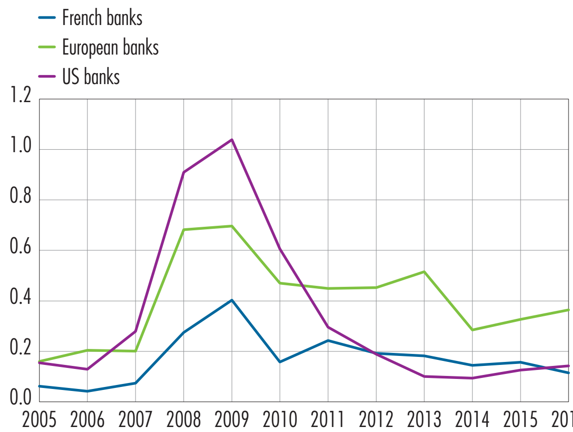
(as a % of balance sheet total)




Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

### C12 Cost of risk

(as a % of balance sheet total)

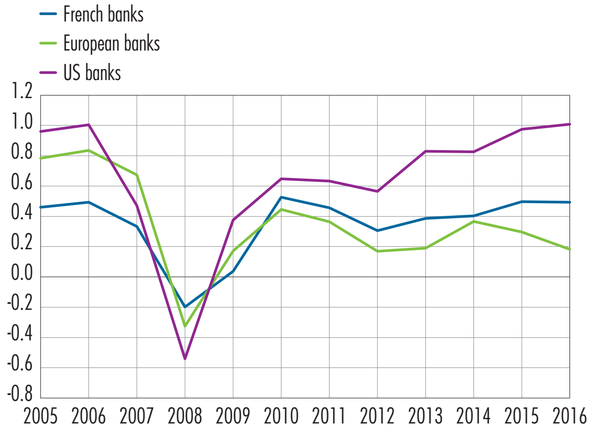



Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

5 The difference between NBI and management costs.

C13 Operating income

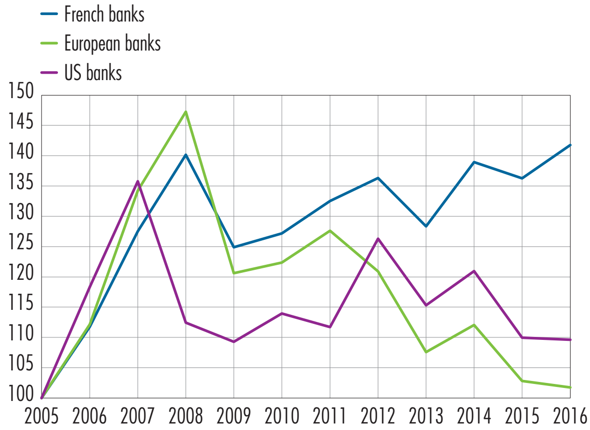
(as a % of balance sheet total)




Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

C14 Balance sheet total

(2005 = 100)




Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

Lastly, thanks to their greater operational efficiency and their low cost of risk, French banks have achieved, since 2010, a much higher operating profitability[6] than that of their European competitors and have returned to similar levels as those observed before the crisis (see Chart 13); US banks, which have benefited from a lower cost of risk since 2013, continue to post significantly higher operating profitability, which has returned to pre-crisis levels, while the performance of European banks is still well below its start-of-period level.

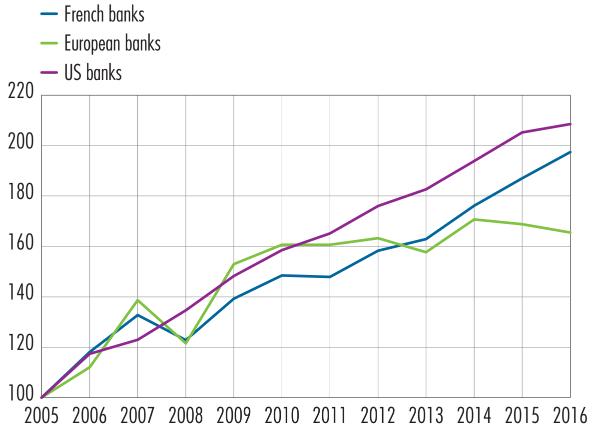
## French banks have deleveraged despite strong balance sheet growth

The prudential framework having been strengthened after the crisis, banks have been forced to deleverage. They have implemented different strategies to meet these requirements:

- the balance sheet total of French banks has grown significantly over the period, while the increase has been much more contained for US banks and almost zero for European banks (see Chart 14). For example, since the 2011 sovereign debt crisis, French banks have recorded diametrically opposed developments to those of other European banks, which have almost constantly reduced the size of their balance sheets;
- European banks have been characterised by a virtual stability of their capital levels since 2010, while French and US banks have recorded almost equivalent and linear growth (see Chart 15).

C15 Equity capital

(2005 = 100)



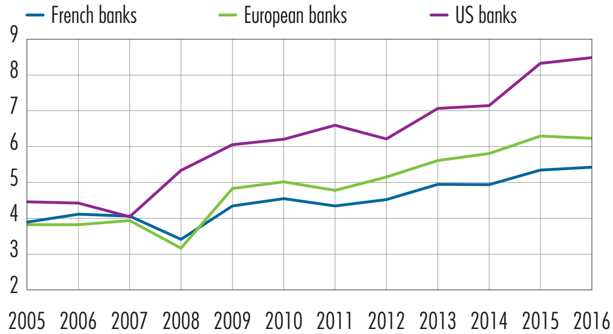

Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

6 Operating profitability is defined as the difference between NBI, operating expenses and the cost of risk. It does not take into account exceptional items and tax expenses.

European banks have thus managed to increase the ratio between their capital and their balance sheet total (i.e. their leverage ratio) at a slightly higher pace than French banks at the cost of a sharp decrease in their total assets since the crisis. Conversely, the increase observed in France reflects a faster growth in capital than that of the balance sheet total (see Chart 16). The average leverage ratios of US banks, which were close to those of their competitors at the start of the period, have risen sharply since the crisis, given the relative stability of their balance sheet total, and are now much higher than those of the other banks in the sample.

**C16 Leverage ratio**

(%)




Sources: Financial disclosure, Federal Deposit Insurance Corporation (FDIC) and Banque de France-ACPR calculations.

All in all, while their profitability was affected by the crisis and by the strengthening of regulatory requirements, like that of their competitors, French banks have continued to expand their business since 2009 and to generate the capital necessary for their development.

# Appendix
Methodology

## Analysis of the changes in return on assets and return on equity

Return on assets (RoA) and return on equity (RoE) are defined as the ratio of annual net income (including minority interest) to total assets and shareholders' equity (including minority interest) at year-end. Although these figures are calculated using a consistent method from one bank to the next, they may differ from those disclosed by banks, which most often take into account various adjustments (interest on equity securities, etc.).

In addition, this study is based on the analysis of banks' financial reporting, which may differ across banks, in particular between European and US banks. As far as possible, adjustments have been made to correct these differences, which concern the identification of provisions and the cost of risk, the distinction between cost of risk and exceptional losses, and the classification of goodwill impairment.

### Bank sample

The study is based on data from a sample of 6 French banks, 15 European banks and 8 US banks from 2005 to 2016:

- French banks: BNP Paribas, Société Générale, Groupe Crédit Agricole, Groupe BPCE, Groupe Crédit Mutuel and La Banque Postale;
- European banks:[1] BBVA (ES), Santander (ES), Deutsche Bank (DE), Commerzbank (DE), ING (NL), Nordea (SE), Intesa Sans Paolo (IT), Unicredit (IT), Crédit Suisse (CH), UBS (CH), Barclays (UK), Lloyds Banking Group (UK), Royal Bank of Scotland (UK), HSBC (UK) and Standard Chartered (UK);
- US banks: Bank of America Merrill Lynch, Bank of New York Mellon, Citigroup, Goldman Sachs, JP Morgan Chase, Morgan Stanley, State Street and Wells Fargo.

The analysis neutralises, where possible, the consequences of the large number of restructurings that took place over the period by adding to the accounts of the banks of the sample active in 2016 those of their competitors that were absorbed.

### French banks

- reconstitution of BPCE over the 2005-2008 period using balance sheet and income statement data of Banques Populaires and Caisses d'Epargne, as well as those of Natixis.
- absorption of the Belgian and Luxembourg activities of Fortis by BNPP in June 2009.

### European banks

- Santander: integration of part of ABN AMRO's activities in 2007.
- Deutsche Bank: restatement of the acquisition of Deutsche Postbank in 2010.
- Commerzbank: restatement of the acquisitions of Eurohypo in 2005 and Dresdner Bank in 2009.
- Intesa San Paolo: restatement of the acquisition of Sans Paolo IMI in 2006.
- Unicredit: restatement of the acquisition of Capitalia in 2007.

1 Given that European banks publish accounts in euros, Swiss francs, pounds sterling and US dollars, the data have been aggregated on the basis of the average annual exchange rate of foreign currencies with the euro.

- Lloyds Banking group: restatement of the acquisition of HBOS in 2009.

- Royal Bank of Scotland: acquisition of part of ABN AMRO's activities in 2007.

### US banks

- Bank of America Merrill Lynch: restatement of the acquisition of Merrill Lynch in 2009.

- Bank of New York Mellon: restatement of the acquisition of Mellon Financial Corporation in 2007.

- JP Morgan Chase: restatement of the acquisitions of Bear Stearns and Washington Mutual in 2008.

- State Street: restatement of the acquisition of Investors Financial Services in 2007 (aggregation of the balance sheet and income statement data of the three banks).

- Wells Fargo: restatement of the acquisition of Wachovia in 2009.

## Taking account of differences in accounting standards

The differences in accounting standards are likely to lead to significant biases in the analysis: the data published each half-year by the Federal Deposit Insurance Corporation (FDIC) since mid-2012 for US global systemically important banks (G-SIB)[2] show that balance sheet totals can be significantly different depending on whether reference is made to US accounting standards (US GAAP)[3] or international standards (IFRS).[4] These differences are particularly acute in the case of banks with major trading activities (Goldman Sachs, Morgan Stanley), which have a high «multiple IFRS» ratio (i.e. the ratio between the IFRS balance sheet total and the US GAAP balance sheet total) compared to other banks.

In order to correct this bias, the study takes into account the IFRS balance sheets of US banks as published by the FDIC from mid-2012, as these figures are estimated empirically for the previous maturities based on the balance sheet structure of the institutions concerned.

2 *https://www.fdic.gov/about/learn/board/hoenig/global.html*, « Global Capital Index » section.
3 United States generally accepted accounting principles.
4 International financial reporting standards.

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