

# Banker's Toolkit: Financial Institutions Group

## Introduction

As the backbone of the financial industry, the banking sector has always had a predominant role in worldwide economies. Over the last decades, banks have expanded their operations at a global scale, and imposed their presence in almost all economic activities. Understanding this vast sector requires dividing it into sub-sectors. More precisely, we can distinguish two main categories, that of commercial banks, and that of investment banks - both supervised by central banks.

Commercial banks mobilize deposits from households and businesses and make these funds available for investment either by lending or buying financial assets. By creating credit, they increase consumer spending, therefore boosting the economy. These banks usually have a physical presence, but in recent years, a few have decided to operate exclusively online.

These banks are regulated by the central bank of their country. A central bank is the financial institution that controls the production of its national currency. In modern economies, the central bank conducts the monetary policy and regulates banks. For instance, central banks impose reserve requirements on commercial banks so as to ensure stability of the financial system.

Investment banks on the other hand raise capital for their clients, through their underwriting services, by selling securities on the capital markets. They also facilitate M&A and restructuring deals by advising their clients. Most global banks cumulate both roles, and provide other financial services such as asset management, wealth management or equity research.

## US

The American banking sector is composed of almost five thousand commercial banks and saving institutions. The five largest, in terms of total assets, are JP Morgan Chase, Bank of America, Wells Fargo, Citigroup, and Goldman Sachs. These “assets” are items that the bank owns: loans, securities, and reserves. Let us now introduce these five firms in more details.

First in line, in terms of market share, comes JP Morgan Chase (see annex n°1). Headquartered in New York City, the firm is also the largest American bank by total assets: in 2022, they stood at \$3.8trn. The company operates in more than 60 countries, with more than 250,000 employees. Through its many subsidiaries, it serves a 62 million client-base, including 4 million small businesses. Its areas of predilection include investment banking, commercial banking, asset management, and private equity.

Then comes Morgan Stanley. Also headquartered in New York City, the firm has principal offices in London, Tokyo, Hong Kong, and employs over 60,000 individuals. Following the last financial crisis, Morgan Stanley was forced to convert to a bank-holding company to receive bailout funding. Last year's total revenues stood at \$60bn.

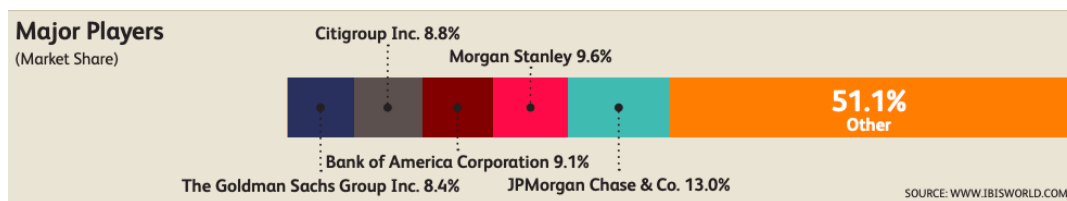
Bank of America Corporation, founded in 1904 as the Bank of Italy, comes third in line. Headquartered in Charlotte, North Carolina, it operates in more than 35 countries worldwide thanks to its 205,000 employees. Its balance sheet stands at \$3.2trn in total assets.

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Then, Citigroup. This diversified financial services corporation was formed by the merger of Citicorp and Travelers Group Inc in 1998. Headquartered in New York City, Citi has 220,000 employees and over \$2.4trn in total assets. It has one of the largest financial networks in the world, with 200 million customers and operations in more than 160 countries.

Lastly, the Goldman Sachs Group provides financial services to corporations, financial institutions, governments, and high-net-worth individuals. Founded in 1869, the company is headquartered in New York City and has offices in over 30 countries. Most of its 40,000 employees work outside the USA. Goldman Sachs divides its business into four divisions: investment banking, institutional client services, investing and lending, and investment management. In total, these segments generated \$60bn in total revenue in 2021, a 33% increase compared to 2020.



Source: IBISWorld

## Europe

### United Kingdom

The United Kingdom's 350 banks make it the largest banking sector in Europe, and the fourth largest globally. The four biggest banks are HSBC, Barclays, Lloyds Banking Group and NatWest Group.

HSBC Holdings is the largest European bank by total assets - \$3trn - and market capitalization - \$104bn. It serves its 40 million client-base by employing 220,000 individuals worldwide. HSBC provides services in commercial banking, retail banking, wealth management, and global banking.

Barclays, headquartered in London, is a universal bank operating in more than 40 countries and employing approximately 80,000 individuals. It offers consumer, corporate, and investment banking services.

Lloyds Banking Group stands third in the UK. The company's main business lines are retail and commercial banking, life and non-life insurance, and pension funds. It has many subsidiaries, such as Lloyds Bank, Bank of Scotland, and Halifax.

### France

The French banking sector is stable and well-organized. Its key feature is the presence of cooperative and mutual benefit banking groups, whose main characteristic is their inverted pyramid structure: the groups are held by cooperative banks, themselves owned by the cooperative member-shareholders.

BNP Paribas, headquartered in Paris, operates in 65 countries with 200,000 employees. Largest French bank, it ranks second in Europe in terms of total assets. Its main business divisions are Commercial & Personal Banking, Corporate & Institutional Banking, and Investment & Protection Services.

Credit Agricole Group has a client base of more than 53 million and employs 147,000 individuals globally. Second largest bank in France, it's ranked third in Europe in terms of total assets. Credit Agricole is also the leading asset

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manager and bancassurance group in Europe, and the number one lender to French households and businesses. The firm recently acquired a 9.2% stake in Banco BPM, one of Italy’s largest banks, hoping to expand a strategic experience in bancassurance. Bancassurance is an agreement between a bank and an insurance company, that allows the insurance company to sell its products to the bank’s clients. Hence, the bank’s revenues rise since it sells more products, and the insurer expands his client base without additional costs. According to the latest news, Credit Agricole is only focused on Banco BPM’s bancassurance business.

Societe Generale, established in 1864, is also based in Paris. The Group offers services to almost 30 million clients, and employs over 130,000 individuals. The company’ domestic network includes almost 2,000 locations.

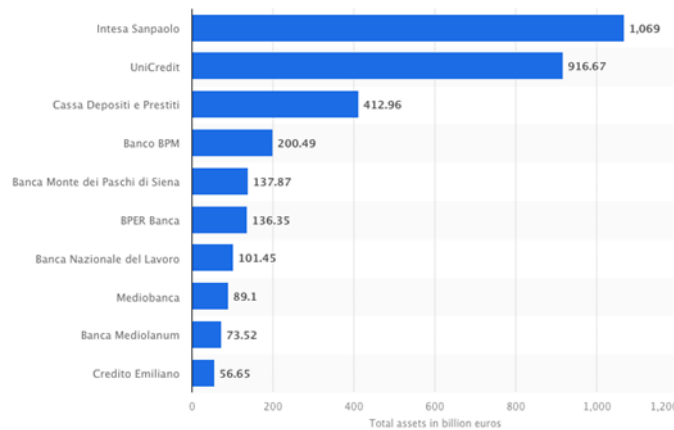
*Italy*

As of 2022, there are approximately 470 banks operating in Italy. They are either public limited banks (S.p.A), cooperative banks (Popolari), or subsidiaries from foreign banks. The largest three banks, by total assets, are Intesa Sanpaolo, UniCredit, and Cassa Depositi e Prestiti (CDP).

Intesa Sanpaolo S.p.A. comes first, both in terms of market capitalization and in terms of total assets. Headquartered in Turin, it is one of the biggest banks of the Eurozone, especially since it acquired its rival UBI last year for \$5.3bn. Its client-base in Italy is of about 15 million.

Unicredit Group, second largest, also serves about 15 million customers in Italy, Germany and Austria. Its 2021 total revenues stand at €18bn.

In Italy, the banking industry has been consolidating significantly over recent decades. This has been partly caused by French banks’ pressure on Italian domestic banks. As previously mentioned, following its acquisition of the Italian bank Credito Valtellinese in 2021 for €900m, Crédit Agricole has been trying to take control of Banco BPM’s bancassurance business. Banco BPM, which was itself formed by the merger of Banco Popolare and Banco Popolare di Milano in 2017. Today, it is the fourth largest Italian bank with 4 million customers and €200bn in total assets. It mostly operates in Lombardy, Veneto and Piedmont.



Source: IBISWorld

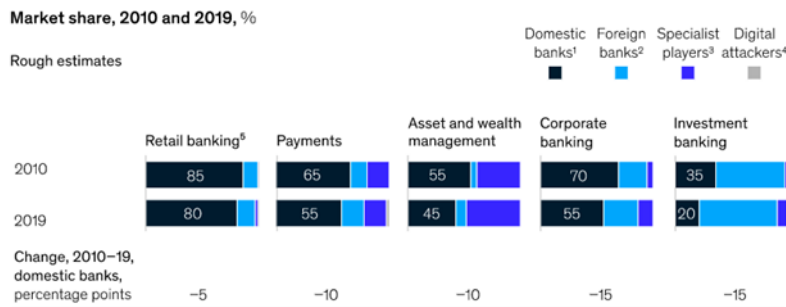
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## Germany

Germany’s banking system rests on three pillars: private commercial banks, cooperative banks, and public banks.

The private bank sector is dominated by Deutsche Bank, total assets of €1.32trn, and Commerzbank, total assets of €500bn. Commerzbank received €18bn in financial assistance from the German government in 2009, which gave it a 25% stake in the bank. Merger talks between Deutsche Bank and Commerzbank, a deal that would have created Europe’s third-largest bank, failed in April 2019. It is speculated that this could lead to the take-over of Commerzbank by a foreign bank.

### Revenues shifted sharply in the last decade, especially for domestic banks.



Source: McKinsey

## Industry Trends

To understand where the financial services industry is going, we must understand its development over the last decade. One main factor in the sector’s development has been the increased regulatory scrutiny it faced following the 2007-08 financial crisis, which culminated in the collapse of Lehman Brothers. The consensus opinion was that overleveraged and underregulated financial institutions took on irresponsible risks in the pursuit of profit and that this behavior had to be curtailed in the form of new regulation.

One could write books about the different types of regulation that ensued in the early 2010s, but we will focus on some core new rules that were brought together under the Basel III accord. This accord was made in late 2010 by a group of central banks and is still in the process of being implemented. The first important change that this brought was higher capital requirements for banks, taking down their leverage ratios. Specifically, banks are now required to have at least 10.5% of their risk weighted assets in Tier 1 and 2 capital. Then, banks are also now required to hold more of their capital in higher quality assets, which is Tier 1 capital. This consists of the shareholders’ equity of the firm, as it is reported on the financial statements. Tier 2 capital is riskier and includes things such as subordinated debt. The percentage of capital that had to be Tier 1 increased from 4% to 6%.

As the higher capital requirements left the banks less levered, it was harder to earn the pre-financial crises returns on equity. A second development, namely the era of low interest rates, made this decrease in leverage even harder to stomach. In traditional banking, the bank makes money through the spread between the rate at which it borrows and lends money. When interest rates fall, this spread shrinks, leading to decreasing profit margins. As interest rates were lower in Europe than the US, banks in Europe were more adversely affected.

In addition to the lack of interest, the 2010s were characterized by relatively moderate economic conditions. Whilst there was little growth in western economies, there were also no recessions. This meant that there were none of

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the booms and busts that previously spurred investment banking and trading revenues that could have compensated for the lack of interest income. Hence, banks had to look elsewhere to generate revenues.

As low interest rates pushed down the discount rates for all financial assets, asset prices saw an unparalleled bull run. Banks, who could no longer invest their own capital as freely in private equity or proprietary trading as was previously possible, now tried to find other ways to profit off higher asset prices. The two most popular ways to do this was moving into the fee-based businesses asset and wealth management. As assets appreciated, assets under management for both businesses swelled, increasing revenues firms made from these areas. One notable example of a firm that moved away from investment banking and strongly into wealth management is UBS. It started off the 2010s as a firm heavily focused on investment banking. Today, its investment bank branch is a shadow of its former self, and its wealth management business is the largest in the world.

Moving to the outlook for the financial services industry, the most obvious thing to discuss is inflation and higher interest rates. Despite higher interest rates having been the thing that the financial services industry had been hoping for for years, it is unclear whether they will truly benefit banks in the short run. As central banks are racing to push up interest rates, economies are slowing down and the amount of non-performing loans are increasing. A recent example of this is investment banks taking large losses on the debt they underwrote for leveraged buyouts. With the interest rates on mortgages more than doubling in the US since January, it is only a matter of time until the consumer facing side of banks will also feel the effects of interest rates slowing down the economy, when people start defaulting on their variable-interest mortgages. Hence, it appears as though banks will go through a further period of stress before higher interest rates can create revenue banks can profit off.

An additional thing to mention when discussing the future of financial institutions is the advent of financial technology firms, or FinTechs as they are colloquially known. These are disrupting industries such as banking and payments, exposing the incumbents to competitive pressures they have not experienced in a long time. With online banks such as Revolut providing a great user experience, due to not having to deal with the legacy technologies that older banks deal with, big banks see the competition of FinTechs as their main threat in the future. J.P. Morgan controversially committing to spend \$12bn annually on technology reflects how seriously the incumbents take their startup competitors.

## Valuation Primer

When valuing financial institutions, we have to remember that banks earn income through the spread between their cost of borrowing and the interest they can charge when they lend. This means that we cannot use valuation methods that don't consider interest.

When looking at comparable companies or precedent transactions for financial institutions, we like to use the Price to Earnings or Price to Tangible Book Value ratios. We use Price to Book Value, rather than Enterprise Value to EBIT or EBITDA, as if we were to use an EBIT(DA) multiple, we would be excluding the Net Interest Income of the bank, which is often its largest source of revenue. An additional benefit of the P/E ratio is that it uses the Equity Value instead of the Enterprise Value. This is beneficial, as banks sometimes have negative Enterprise Values, due to the large amount of cash they hold on their balance sheets. Price to Tangible Book Value is a measure that compares the equity value of the firm to the tangible book value, which is the Book Value of the firm minus the Intangible Assets. We look at this measure to see whether a firm is 'cheap' relative to its book value. Many, if not most, banks trade at Price to Tangible Book Values of less than one, due to investors believing that the liabilities of the firm are understated. For some banks this investors pessimism goes very far, with Deutsche Bank, for example, trading at a 0.25 Price to Tangible Book Value ratio.

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The same issue of us having to consider the net interest income a bank makes also applies to the Discounted Cash Flow analysis. When we value a company in such a way, we discount its unlevered Free Cash Flow. This, in turn, is calculated by going off of EBIT. Hence, the net interest income would be ignored in a normal DCF. Therefore, we instead use the dividend discount model, discounting the future dividends we anticipate the firm to pay out. Dividends act as a good proxy to for the Free Cash Flow the bank generates, because the portion of its net income it pays out in dividends is its 'free' cash flow.

TAGS: FIG, Bank, Central Bank, Investment Bank, Commercial Bank, FinTech, Financial Institutions

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