The Banking System: Introduction

Filed Under » Commercial Banking, Retail Banking Commercial Banking, Retail Banking
By Stephen D. Simpson, CFA

Accounting for trillions in assets worldwide, the banking system is a crucial component of the global economy. While money-changing and money-lending may be as old as money, banking dates back to 15th century medieval Italy, and played a major role in the rise of the Italian city-states as world economic powers. Ever since, the health of an economy and the health of its banks have been interrelated; the global credit crisis, precipitated by the collapse of the subprime-fueled U.S. housing bubble, is only the most recent example.

Banks are just one part of the world of financial institutions, standing alongside investment banks, insurance companies, finance companies, investment managers and other companies that profit from the creation and flow of money. As financial intermediaries, banks stand between depositors who supply capital and borrowers who demand capital. Given how much commerce and individual wealth rests on healthy banks, banks are also among the most heavily regulated businesses in the world. (To learn more, see *The Evolution Of Banking*.)

The Banking System: Commercial Banking - What Banks Do

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Accept Deposits / Make Loans

At the most basic level, what banks do is fairly simple. Banks accept deposits from customers, raise capital from investors or lenders, and then use that money to make loans, buy securities and provide other financial services to customers. These loans are then used by people and businesses to buy goods or expand business operations, which in turn leads to more deposited funds that make their way to banks.

If banks can lend money at a higher interest rate than they have to pay for funds and operating costs, they make money. An illustration of this very basic concept can be found in the old "3-6-3 Rule," a tongue-in-cheek "rule" that said a banker would pay out 3% for deposits, charge 6% for loans and hit the golf course by 3 p.m.

Provide Safety

Banks also provide security and convenience to their customers. Part of the original purpose of banks, and the goldsmiths that predated them, was to offer customers safe keeping for their money. Of course, this was back in a time when a person's wealth consisted of actual gold and silver coins, but to a large extent this function is still relevant. By keeping physical cash at home, or in a wallet, there are risks of loss due to theft and accidents, not to mention the loss of possible income from interest. With banks, consumers no longer need to keep large amounts of currency on hand; transactions can be handled with checks, debit cards or credit cards, instead.

While banks do not keep gold or silver bullion as currency on hand anymore, many, if not most, banks still maintain vaults and will rent out space to customers, in the form of safe deposit boxes. This allows customers to keep precious or irreplaceable items in a secure setting and gives the bank an opportunity to earn a little extra money, without risk to its capital.

Act as Payment Agents

Banks also serve often under-appreciated roles as payment agents within a country and between nations. Not only do banks issue debit cards that allow account holders to pay for goods with the swipe of a card, they can

also arrange wire transfers with other institutions. Banks essentially underwrite financial transactions by lending their reputation and credibility to the transaction; a check is basically just a promissory note between two people, but without a bank's name and information on that note, no merchant would accept it. As payment agents, banks make commercial transactions much more convenient; it is not necessary to carry around large amounts of physical currency when merchants will accept the checks, debit cards or credit cards that banks provide.

The Banking System: Commercial Banking - Economic Concepts in Banking

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Banks both create and issue money. While commercial banks no longer issue their own banknotes, they are effectively the distribution system for the notes printed, and the coins minted, by the U.S. Treasury. The Federal Reserve buys coins and paper money from the Treasury and distributes them through the banking system, as needed. Banks effectively buy currency from the Fed, or sell it back when they have excess amounts on hand. (To lean more, see *How The Federal Reserve Was Formed*.)

Settle Payments
Every day there are millions of financial transactions in the United States, some conducted with paper currency, but many more done with checks, wire transfers and various types of electronic payments. Banks play an invaluable role in the settling of these payments, making sure that the proper accounts are credited or debited, in the proper amounts and with relatively little delay.

Credit Intermediation
Banks play a major role as financial intermediaries. Banks collect money from depositors, essentially borrowing the money, and then simultaneously lend it out to other borrowers, forging a chain of debts. This is especially significant when asset values decline. As asset values decline, those assets are less able to service debt, which in turn makes it more difficult for borrowers to borrow, and reduces lending capacity. What follows, is a decrease in the flow of credit from savers to spenders and a decline in economic activity. At the same time, banks often find that they must raise capital, and their capital needs compete with those available savings.

Maturity Transformation
Maturity transformation is part and parcel of what banks do on a daily basis. Many investors are willing to invest on a very short term basis, but many projects require long-term financial commitments. What banks do, then, is borrow short-term, in the form of demand deposits and short-term certificates of deposit, but lend long-term; mortgages, for instance, are frequently repaid over 30 years. By doing this, banks transform debts with very short maturities (deposits) into credits with very long maturities (loans), and collect the difference in the rates as profit. However, they are also exposed to the risk that short-term funding costs may rise much faster than they can recoup through lending.

Money Creation
One of the most vital roles of banks is in money creation. Importantly, money creation at the individual bank level is not the same thing as "printing money;" currency is just one type of money. Instead, banks create money through fractional reserve banking. Fractional reserve banking is a key concept to understanding modern banking and money creation.

Fractional reserve banking refers to the fact that banks keep only a small portion of their deposits on hand. When a customer comes into the bank and deposits $100, perhaps $10 of that will be kept on hand in the form of cash or easily-liquidated securities. The remaining $90 will be lent out to customers as loans, or used to acquire the stock or bonds of other companies. This phenomenon is known as the money multiplier and can be expressed as the formula: m = 1 / reserve requirement. If the reserve requirement is 10% (or 0.1), every dollar deposited with a bank, can become $10 of new money.

This is a key concept, because this is how banks increase the money supply and effectively create money. If banks simply acted as storehouses or vaults for money, there would be far less money available to lend.

The Banking System: Commercial Banking - How Banks Make Money

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As mentioned before, banks basically make money by lending money at rates higher than the cost of the money they lend. More specifically, banks collect interest on loans and interest payments from the debt securities they own, and pay interest on deposits, CDs, and short-term borrowings. The difference is known as the "spread," or the net interest income, and when that net interest income is divided by the bank's earning assets, it is known as the net interest margin.

Deposits
The largest source by far of funds for banks is deposits; money that account holders entrust to the bank for safekeeping and use in future transactions, as well as modest amounts of interest. Generally referred to as "core deposits," these are typically the checking and savings accounts that so many people currently have.

In most cases, these deposits have very short terms. While people will typically maintain accounts for years at a time with a particular bank, the customer reserves the right to withdraw the full amount at any time. Customers have the option to withdraw money upon demand and the balances are fully insured, up to $250,000, therefore, banks do not have to pay much for this money. Many banks pay no interest at all on checking account balances, or at least pay very little, and pay interest rates for savings accounts that are well below U.S. Treasury bond rates. (For more, check out *Are Your Bank Deposits Insured?*)

Wholesale Deposits
If a bank cannot attract a sufficient level of core deposits, that bank can turn to wholesale sources of funds. In many respects these wholesale funds are much like interbank CDs. There is nothing necessarily wrong with wholesale funds, but investors should consider what it says about a bank when it relies on this funding source. While some banks de-emphasize the branch-based deposit-gathering model, in favor of wholesale funding, heavy reliance on this source of capital can be a warning that a bank is not as competitive as its peers.

Investors should also note that the higher cost of wholesale funding means that a bank either has to settle for a narrower interest spread, and lower profits, or pursue higher yields from its lending and investing, which usually means taking on greater risk.

Share Equity

While deposits are the pimary source of loanable funds for almost every bank, shareholder equity is an important part of a bank's capital. Several important regulatory ratios are based upon the amount of shareholder capital a bank has and shareholder capital is, in many cases, the only capital that a bank knows will not disappear.

Common equity is straight forward. This is capital that the bank has raised by selling shares to outside investors. While banks, especially larger banks, do often pay dividends on their common shares, there is no requirement for them to do so.

Banks often issue preferred shares to raise capital. As this capital is expensive, and generally issued only in times of trouble, or to facilitate an acquisition, banks will often make these shares callable.This gives the bank the right to buy back the shares at a time when the capital position is stronger, and the bank no longer needs such expensive capital.

Equity capital is expensive, therefore, banks generally only issue shares when they need to raise funds for an acquisition, or when they need to repair their capital position, typically after a period of elevated bad loans. Apart from the initial capital raised to fund a new bank, banks do not typically issue equity in order to fund loans.

Debt

Banks will also raise capital through debt issuance. Banks most often use debt to smooth out the ups and downs in their funding needs, and will call upon sources like repurchase agreements or theFederal Home Loan Bank system, to access debt funding on a short term basis.

There is frankly nothing particularly unusual about bank-issued debt, and like regular corporations, bank bonds may be callable and/or convertible. Although debt is relatively common on bank balance sheets, it is not a critical source of capital for most banks. Although debt/equity ratios are typically over 100% in the banking sector, this is largely a function of the relatively low level of equity at most banks. Seen differently, debt is usually a much smaller percentage of total deposits or loans at most banks and is, accordingly, not a vital source of loanable funds. (To learn more, see our *Debt Ratios Tutorial*.)

Use of Funds

Loans

For most banks, loans are the primary use of their funds and the principal way in which they earn income. Loans are typically made for fixed terms, at fixed rates and are typically secured with real property; often the property that the loan is going to be used to purchase. While banks will make loans with variable or adjustable interest rates and borrowers can often repay loans early, with little or no penalty, banks generally shy away from these kinds of loans, as it can be difficult to match them with appropriate funding sources.

Part and parcel of a bank's lending practices is its evaluation of the credit worthiness of a potential borrower and the ability to charge different rates of interest, based upon that evaluation. When considering a loan, banks will often evaluate the income, assets and debt of the prospective borrower, as well as the credit history of the borrower. The purpose of the loan is also a factor in the loan underwriting decision; loans taken out to purchase real property, such as homes, cars, inventory, etc., are generally considered less risky, as there is an underlying asset of some value that the bank can reclaim in the event of nonpayment.

As such, banks play an under-appreciated role in the economy. To some extent, bank loan officers decide which projects, and/or businesses, are worth pursuing and are deserving of capital.

Consumer Lending

Consumer lending makes up the bulk of North American bank lending, and of this, residential mortgages make up by far the largest share. Mortgages are used to buy residences and the homes themselves are often the security that collateralizes the loan. Mortgages are typically written for 30 year repayment periods and interest rates may be fixed, adjustable, or variable. Although a variety of more exotic mortgage products were offered during the U.S. housing bubble of the 2000s, many of the riskier products, including "pick-a-payment" mortgages and negative amortization loans, are much less common now.

Automobile lending is another significant category of secured lending for many banks. Compared to mortgage lending, auto loans are typically for shorter terms and higher rates. Banks face extensive competition in auto lending from other financial institutions, like captive auto financing operations run by automobile manufacturers and dealers.

Prior to the collapse of the housing bubble, home equity lending was a fast-growing segment of consumer lending for many banks. Home equity lending basically involves lending money to consumers, for whatever purposes they wish, with the equity in their home, that is, the difference between the appraised value of the home and any outstanding mortgage, as the collateral.

As the cost of post-secondary education continues to rise, more and more students find that they have to take out loans to pay for their education. Accordingly, student lending has been a growth market for many banks. Student lending is typically unsecured and there are three primary types of student loans in the United States: federally sponsored subsidized loans, where the federal government pays the interest while the student is in school, federally sponsored unsubsidized loans and private loans.

Credit cards are another significant lending type and an interesting case. Credit cards are, in essence, personal lines of credit that can be drawn down at any time. While Visa and MasterCard are well-known names in credit cards, they do not actually underwrite any of the lending. Visa and MasterCard simply run the proprietary networks through which money (debits and credits) is moved around between the shopper's bank and the merchant's bank, after a transaction.

Not all banks engage in credit card lending and the rates of default are traditionally much higher than in mortgage lending or other types of secured lending. That said, credit card lending delivers lucrative fees for banks: Interchange fees charged to merchants for accepting the card and entering into the transaction, late-payment fees, currency exchange, over-the-limit and other fees for the card user, as well as elevated rates on the balances that credit card users carry, from one month to the next.(To learn how to avoid getting nickeled and dimed by your bank, check out *Cut Your Bank Fees*.)

The Banking System: Commercial Banking - Business Lending

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Commercial lending - lending to businesses - is really a two-tier market in the United States. At the level of large corporations, bank lending is not as significant in the United States as in many other countries, as there are a larger number of accessible alternative sources of funds for businesses, like the bond market. For small businesses, though, bank lending is often a crucial source of capital.

Business lending includes commercial mortgages (loans used to purchase buildings), equipment lending, loans secured by accounts receivable and loans intended for expansion and other corporate purposes. Traditionally, the residential construction industry has been a major borrower; using bank loans to acquire land and pay for the construction of houses or apartments, and then repaying the loans when the dwellings are completed or sold. Many banks effectively "double dip" in their lending to the housing market, lending money to homebuyers as residential mortgages, and lending to developers and contractors engaged in building new homes.

Business lending can also take the form of mezzanine financing, project financing or bridge loans. Mezzanine lending is not all that common for most commercial banks, but bridge loans and project financing is often extended on a short-term basis, until the borrower finds a more permanent source of funds.

Buy/Hold Securities

Banks also frequently use their capital to acquire investment securities. Regulators in all countries require that banks hold back some percentage of capital as reserves. Debt securities issued by the national, state, and local governments are frequently treated as safe as cash, or close to it, by regulators. Therefore, banks will often hold these instruments as a way of earning some income on their reserves.

Many banks will also buy and hold securities as an alternative to lending. In cases where prevailing loan rates are inadequate to satisfy a bank's risk-weighted pricing, certain debt securities may be more attractive as alternate uses of capital. Accordingly, the bank sector is a major buyer of government debt securities. Banks are also frequent buyers of municipal bonds. In the case of so-called "bank qualified bonds," banks can earn interest that is free from Federal taxation.

It is less common for banks to hold common stock. Though many common stocks do pay dividends, U.S. regulators have traditionally punished equity holdings by giving them poor risk weightings.

It is much more common overseas for banks to hold equity. Many banks in Europe and Asia view their relationships with businesses as something akin to partnerships, and will hold equity for a variety of reasons, including both a stake in the upside of the company, as well as the influence that significant ownership can provide.

Non-Interest Income

In the past couple of decades, non-interest income has become a key component of the profits of many commercial banks in North America. As the name suggests, this is income that does not originate as interest on loaned funds. Non-interest income typically requires minimal risk for the bank and minimal capital. It is not fair to say that non-interest income is "free money," employees still have to be paid, for instance, but it is accurate to say that non-interest income often carries very attractive margins and returns on capital, and is a crucial source of income for many banks.

Fees On Deposits and Loans

Customers may revile bank service fees, but they are a large part of how many banks make money. Banks can charge fees for simply allowing a customer to have an account open, typically if, or when, the account balance is below a certain break-point, as well as fees for using ATMs or overdrawing accounts. Banks will also earn income from fees for services like cashier's checks and safe deposit boxes.

Banks also frequently attach a host of fees and charges when they make loans. While banks gamely try to defend these fees as important to defraying the costs of paperwork and so forth, in practice they're a honeypot of profits for the bank. Congress and has moved aggressively, in the wake of the subprime crisis, to restrict

some of the fees that banks can charge customers. In many cases these new rules simply mean that customers have to actively select and approve certain account features, like automatic "overdraft insurance," but there are increasing limitations on what services banks can charge for, and how much they can charge.

Business Operations – Insurance and Leasing
insurance is another surprisingly popular non-banking activity for many banks. Perhaps the popularity of insurance is due to its similarities to banking; both businesses are predicated on adequately evaluating and pricing risk, and supporting a large amount of liability on a thin layer of capital. Both businesses also happen to be highly regulated, though insurance is regulated almost exclusively at the state level.

Likewise, given the similarities between lending and leasing, it is perhaps not surprising that many banks establish leasing operations. Relatively few banks look to take ownership of the underlying assets, but many banks look to form financing relationships with equipment dealers, paying a small fee to the dealer for every leasing agreement signed, and then collecting interest on the lease. In effect, these operations allow banks to expand their business lending, while leveraging the infrastructure of other businesses such as the equipment dealers, for example.

Treasury Services
Treasury services are a broad collection of services that banks will offer to corporate/business clients, such as company CFOs or treasurers. In addition to simple services like deposit-gathering and check writing, banks will also help companies manage their accounts receivable and accounts payable. Managing working capital and payroll is a significant headache for many companies, and while banks charge for these services, many customers find that the charges are less than the cost of fully staffing and operating their own treasury functions.

Payment Services
arger banks can also earn non-interest income from payment processing services. Banks will help merchants, frequently small or mid-sized businesses, set up payment systems that will allow them to accept debit and/or credit cards, handle checks electronically, convert currency and automate much of the back-office work, to ensure faster payment and less hassle.

Along similar lines, banks can help businesses set up automated/electronic payment networks that make invoicing and supplier payments faster and less of a hassle. Of course, the banks charge for these services, often earning a small amount on every transaction that they handle or help process. Given that a single network can support large numbers of clients with minimal incremental expenses, these services can be very profitable for a bank, once they have reached a certain scale.

Loan Sales
Although making mortgage loans and collecting the interest is certainly part of everyday "interest income" operations at banks, there are aspects of lending that fall into the non-interest income bucket. In some cases, banks are willing and able to lend money, but not especially well-equipped to manage the back office tasks that go into servicing those loans.

In situations like this, a bank can sell the rights to service that loan, collecting and forwarding payments, handling escrow accounts, responding to borrower questions, etc., to another financial institution. While this can be done for almost any kind of loan, it is most common with mortgages and student loans; mortgage servicing rights (MSR) constitutes a multi-billion dollar industry. (For more, check out *The New Mortgage Business: More Than Just Loans*.)

Other Sources of Income
In their drive for additional sources of income, most commercial banks have expanded into offering various investment and retirement products to banking customers. In many cases, banks will offer an array of products like mutual funds, annuities and portfolio advice. Larger banks may actually operate these funds themselves, through a subsidiary, but others will simply act as a commission-gathering agent.

Although the deposit guarantees that cover bank deposits do not extend to retirement accounts, many investors are under the misconception that they do, and will buy securities from banks under the misconception that they are less risky.

The Banking System: Commercial Banking - Operations

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Retail Banking
Retail banking is the banking that almost every reader will find most familiar. Retail banking is the business of making consumer loans, mortgages and the like, taking deposits and offering products such as checking accounts and CDs. Retail banking generally requires significant investment in branch offices, as well as other customer service points of contact, like ATMs and bank tellers.

Retail banks frequently compete on convenience, the accessibility of branches and ATMs for example, cost such as(interest rates, and account service fees, or some combination of the two. Retail banks also attempt to market multiple services to customers by encouraging customers who have a checking account to also open a savings account, borrow through its mortgage loan office, transfer retirement accounts, and so on.

Business Banking
Business banking is not altogether that different than consumer retail banking; operations still revolve around collecting deposits, making loans and convincing customers to use other fee-generating services.

One of the primary differences is that business customers tend to have somewhat more sophisticated demands from their banks, often leaning on banks for assistance in managing their payables, receivables and other treasury functions. Business banking also tends to be less demanding in terms of branch networks and infrastructure, but more competitive in terms of rates and fees.

Private Banking
There is a shrinking number of independent financial institutions that focus exclusively on private banking, as it is increasingly conducted as a department of a larger bank. Private banking is a euphemism for banking and financial services offered to wealthy customers, typically those with more than $1 million of net worth.

In addition to standard bank service offerings, like checking and savings accounts and safe deposit boxes, private banks often offer a host of trust, tax and estate planning services. Perhaps not surprisingly, the bank secrecy laws of countries like Switzerland have made them attractive locations for conducting private banking. (For more, see *How Do I Open A Swiss Bank Account And What Makes Them So Special?*)

Investment Banking
Since the repeal of Glass-Steagall, the law that forced entities to separate commercial and investment banking

activities after the Great Depression, many commercial banks have acquired investment banks. Investment banking is a very different business than commercial banking, but is nevertheless a major source of revenue and profits for many of the largest banks in the United States.

Investment banks specialize in underwriting securities (equity and/or debt), making markets for securities, trading for their own accounts and providing advisory services to corporate clients. Although underwriting derivatives can expose an investment bank to significant risks, as seen in the cases of Bear Stearns and Lehman Brothers, investment banking is generally a high-margin, but volatile, enterprise. (To learn more, see our case study on *The Collapse Of Lehman Brothers.*)

The Banking System: Commercial Banking - How Banks Are Regulated

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The 2007-2008 mortgage bubble in the United States, and worldwide credit crisis, highlighted why banks are so heavily regulated; with such a key role in the economy, malfeasance or mismanagement among banks can produce far-ranging waves when they fail.

There are multiple levels of bank regulation in the United States conducted at the federal and state levels. Banks can choose to operate under a state charter or a national charter, and while the differences between the two are seldom important, or even noticeable, to everyday customers, it has a significant impact on the regulation of the bank.

State banks receive their charter from, and are regulated by, an agency of the state in which they operate, often called a "Department of Banking" or "Division/Department of Financial Institutions." At this level, regulators can establish rules on permitted practices and restrict the amount of interest banks can charge for loans. State agencies are also responsible for auditing and inspecting banks, and periodically reviewing their compliance with regulations as well as their financial performance.

State banks can also choose to belong to the Federal Reserve System. Participation in the Federal Reserve System brings certain advantages to a bank, including greater access to capital, but also greater regulation. Also, any bank that carries FDIC insurance, which is the vast majority, also falls under the regulatory supervision and authority of the FDIC. Consequently, almost every state bank submits to some degree of federal supervision and regulation.

Alternatively, banks can choose the option of going with a national charter. Generally speaking, the decision to become a national bank exempts a bank from many state banking laws and regulatory activities, particularly those that pertain to usury laws. Even still, the Supreme Court has ruled that certain state regulations, generally those pertaining to fair lending laws, do apply to national banks.

The history of the U.S. has included many fits and starts when it comes to a national bank, or a central bank, and banking regulation. The current national bank system can be traced back to President Lincoln and the passage of the National Currency Act in 1863, and the National Bank Act in 1864. Now there are over 2,000 banks in the national banking system, under the supervision of theOffice of the Comptroller of the Currency.

The OCC charters and regulates both national banks and branches of foreign banks. In addition to monitoring bank capital levels, liquidity and asset quality, the OCC also monitors bank sensitivity to market and interest rate risk, and the adequacy of banks' compliance and IT systems.

Another level of supervision and regulation exists through the Federal Deposit Insurance Corporation.Established in response to the bank failures of the Great Depression, the FDIC offers deposit insurance, guaranteeing that depositors' funds will be protected up to a state amount, in the event of a bank failure. The FDIC is run by a five-member board with three of the members appointed by the President of the United States.

Through its insurance operations, the FDIC effectively acts as another layer of regulation and supervision over U.S. banks. The FDIC categorizes banks by their capital ratio and reserves the right to force changes in management or bank policies, if the risk-based capital ratio falls below 6%. If a bank becomes "critically undercapitalized" (2% or below) the FDIC can declare the bank insolvent and take it over, often facilitating the sales of the bank's assets to another bank.

The National Credit Union Association supervises and insures both federal and state credit unions. While the Office of Thrift Supervision previously oversaw savings and loan institutions, the Dodd-Frank Act of 2010 mandated that the OTS's functions be merged into, and taken over by, the OCC, FDIC, Federal Reserve Board, and Consumer Finance Protection Bureau.

The Federal Reserve is also a major regulatory body within the U.S. banking system and worthy of its own separate discussion, later in this tutorial. (For one side of the argument, see *The Pitfalls Of Financial Regulation*.)

Other Rules and Regulations

Banks are not only regulated in terms of their balance sheet and capital ratios, but their conduct as well. Banks have to abide by the same anti-discrimination laws as any other business, (due in large part to the Equal Credit Opportunity Act of 1974, but banks get additional scrutiny in this regard. The Community Reinvestment Act of 1977, and its numerous amendments over the years, effectively forced banks to lend more to lower-income communities.

Likewise, there are rules in place to ensure that banks adequately disclose the rates, costs and terms for loans (Truth In Lending Act), disclose the terms for savings accounts (Truth In Savings), and conduct themselves transparently with electronic transactions (Electronic Fund Transfer Act). Banks also must abide by state laws limiting the statutory rates of interest they may charge.

International Regulation

As markets and economies tend to be interdependent, countries have sought to harmonize some of the standards between them. The Basel Committee was formed in 1974 by the Group of Ten, to develop guidelines for bank regulations and best practices recommendations.

The first Basel Accord (Basel I), came out in 1988 and largely dealt with recommended capital ratios and risk weightings. The Basel Committee published Basel II in 2004 and was intended to introduce international standards for minimum capital requirements, supervisory review and disclosure requirement. In response to the perceived gaps, loopholes and deficiencies of the Basel II system, new regulations called Basel III are on the way. Broadly speaking, Basel III is going to increase bank capital requirements, place additional limitations on leverage and improve liquidity.

The proposed Basel III rules will more than double the requirement for common equity (4.5% versus 2%), increase Tier 1 capital requirements by 50% (from 4 to 6%), introduce a minimum 3% leverage ratio, and create additional buffers to reduce the likelihood of bank runs and liquidity traps, in the future.

There is no requirement for any country to adopt the Basel standards, wholly or in part. That said, regulators in most of the developed world are broadly supportive of the Basel proposals. One complicating factor in implementing the standards is the risk that the banks of a country that do not implement the regulations, or use a less conservative version, will have a competitive advantage over those that do.

While there is a counterargument that the debt and equity market will enforce a uniform level of discipline, by charging a premium for the credit default swaps of less-regulated banks, for instance, the reality is that banks have to abide by the rules of each country and any cross-border "competitive advantage" is limited. (To learn more, check out *Understanding The Basel III International Regulations*.)

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State banks receive their charter from, and are regulated by, an agency of the state in which they operate, often called a "Department of Banking" or "Division/Department of Financial Institutions." At this level, regulators can establish rules on permitted practices and restrict the amount of interest banks can charge for loans. State agencies are also responsible for auditing and inspecting banks, and periodically reviewing their compliance with regulations as well as their financial performance.

State banks can also choose to belong to the Federal Reserve System. Participation in the Federal Reserve System brings certain advantages to a bank, including greater access to capital, but also greater regulation. Also, any bank that carries FDIC insurance, which is the vast majority, also falls under the regulatory supervision and authority of the FDIC. Consequently, almost every state bank submits to some degree of federal supervision and regulation.

Alternatively, banks can choose the option of going with a national charter. Generally speaking, the decision to become a national bank exempts a bank from many state banking laws and regulatory activities, particularly those that pertain to usury laws. Even still, the Supreme Court has ruled that certain state regulations, generally those pertaining to fair lending laws, do apply to national banks.

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Through its insurance operations, the FDIC effectively acts as another layer of regulation and supervision over U.S. banks. The FDIC categorizes banks by their capital ratio and reserves the right to force changes in management or bank policies, if the risk-based capital ratio falls below 6%. If a bank becomes "critically undercapitalized" (2% or below) the FDIC can declare the bank insolvent and take it over, often facilitating the sales of the bank's assets to another bank.

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The Federal Reserve is also a major regulatory body within the U.S. banking system and worthy of its own separate discussion, later in this tutorial. (For one side of the argument, see *The Pitfalls Of Financial Regulation*.)

Other Rules and Regulations

Banks are not only regulated in terms of their balance sheet and capital ratios, but their conduct as well. Banks have to abide by the same anti-discrimination laws as any other business, (due in large part to the Equal Credit Opportunity Act of 1974, but banks get additional scrutiny in this regard. The Community Reinvestment Act of 1977, and its numerous amendments over the years, effectively forced banks to lend more to lower-income communities.

Likewise, there are rules in place to ensure that banks adequately disclose the rates, costs and terms for loans (Truth In Lending Act), disclose the terms for savings accounts (Truth In Savings), and conduct themselves transparently with electronic transactions (Electronic Fund Transfer Act). Banks also must abide by state laws limiting the statutory rates of interest they may charge.

International Regulation

As markets and economies tend to be interdependent, countries have sought to harmonize some of the standards between them. The Basel Committee was formed in 1974 by the Group of Ten, to develop guidelines for bank regulations and best practices recommendations.

The first Basel Accord (Basel I), came out in 1988 and largely dealt with recommended capital ratios and risk

weightings. The Basel Committee published Basel II in 2004 and was intended to introduce international standards for minimum capital requirements, supervisory review and disclosure requirement. In response to the perceived gaps, loopholes and deficiencies of the Basel II system, new regulations called Basel III are on the way. Broadly speaking, Basel III is going to increase bank capital requirements, place additional limitations on leverage and improve liquidity.

The proposed Basel III rules will more than double the requirement for common equity (4.5% versus 2%), increase Tier 1 capital requirements by 50% (from 4 to 6%), introduce a minimum 3% leverage ratio, and create additional buffers to reduce the likelihood of bank runs and liquidity traps, in the future.

There is no requirement for any country to adopt the Basel standards, wholly or in part. That said, regulators in most of the developed world are broadly supportive of the Basel proposals. One complicating factor in implementing the standards is the risk that the banks of a country that do not implement the regulations, or use a less conservative version, will have a competitive advantage over those that do.

While there is a counterargument that the debt and equity market will enforce a uniform level of discipline, by charging a premium for the credit default swaps of less-regulated banks, for instance, the reality is that banks have to abide by the rules of each country and any cross-border "competitive advantage" is limited. (To learn more, check out *Understanding The Basel III International Regulations*.)

The Banking System: Commercial Banking - Bank Crises And Panics

Filed Under » Commercial Banking, Retail Banking Commercial Banking, Retail Banking
ByStephen D. Simpson, CFA

It is not altogether unreasonable to say that the history of banking in the United States is a history of panics and crises. Most history books cite at least ten distinct bank panics in the 1800s alone, and bank crises in 1907, 1929, and 2007-2009 had significant impacts on the U.S. economy.

In many respects, most banking crises are quite similar. Banks make increasingly risky lending decisions during economic expansions and fail to rein in their activities before a turn in the economy. Eventually businesses struggle during the downturn, fail to repay their loans, a few banks collapse and then depositors run to get their money out before their bank collapses. With the sudden outflow of money, banks curtain their lending activity, the business cycle continues to worsen, more loans go bad and more banks go bust.

The Great Depression was quite possibly the greatest of all bank crises. Economists and historians still argue about the root causes of the Depression, but certain facts are widely accepted by all camps. There was a large expansion in bank lending in the 1920s, declining credit standards and a credit-fueled boom in asset prices. When the economy began to slow, assets could no longer support the debt, leading those assets to be sold quickly and at distressed prices. Those distressed prices caused further problems for borrowers who, in turn, had to sell their assets at distressed prices.

Ultimately, banks found their borrowers unable to repay and the loan collateral worth far less than the loan amounts on the book. Banks pulled back on lending, cutting companies' access to capital, and nervous depositors rushed to get their money out of the banks. Stuck between plunging collateral values, rampant loan defaults and deposit flight, many banks failed entirely, which in turn, cut credit availability even further and

triggered still more panic.

The Great Depression made a lasting impact on U.S. policy towards banks. New attitudes emerged with respect to the gold standard and proper monetary policy. Likewise, a host of new banking regulations went into effect: rules that separated commercial and investment banks, (a rule later repealed in the 1990s), rules concerning capital adequacy, risk weighting and reserve requirements, and new programs like the FDIC and its deposit insurance. (To learn more, see *What Caused The Great Depression?*)

If there is a constant theme throughout bank panics, it is in how banks lower their lending standards and underwrite asset bubbles while regulators take a passive stance. The Great Depression was arguably fueled by excessive lending for stock market speculation. The S&L crisis of the 1980s seems to have stemmed in part from a lessened regulatory burden and excessive lending to real estate developers. The U.S. housing crisis of the 2000s was underpinned by overly aggressive home lending.

Global Crises

The U.S. is in no way unique in its history of bank crises and panics. The very nature of banking, a huge amount of lending underpinned by a thin sliver of equity, means that any large mistakes will have very large impacts, and every country with a banking system has a history of panics and crises.

Japan faced a lending bubble fueled by soaring real estate values and complicated by long-standing ties between banks, major corporations and the government. Banks were discouraged from "embarrassing" corporations by foreclosing on bad loans, and could not adequately clear their balance sheets and recapitalize. Crippled by loans carried on the books for far more than the underlying property was worth, the Japanese banking sector underwent two decades of stagnation and the Japanese economy largely followed. (To learn more, see *Lessons Learned: Comparing the Japanese and US Bubbles*.)

Europe's current debt crisis is just the latest example. The crisis was arguably triggered by unsustainable practices in countries like Iceland. Iceland is a very small country, but its banks saw an opportunity in accepting deposits from Europeans and turning them around for loans to hot markets, like Iberian real estate. As in the case of prior American bank crises, banks got too aggressive and lackadaisical in lending into an asset bubble.

Making matters worse for Europe, the Eurozone currency union led irresponsible governments and financial institutions to borrow excessively. The European currency union had the effect of granting much lower interest rates, and much higher access to capital, for countries like Greece, Spain, and Ireland, than would otherwise have been possible. This essentially let them take advantage of the stronger fiscal condition of fellow union members, like Germany and France.

Easy access to cheap money was too tempting for many governments and they borrowed extensively to fund a variety of public welfare programs. As the easy money period ended, though, these countries found themselves saddled with extensive levels of debt and without the ability to generate enough income to support repayment. Since 2010 there were repeated panics in countries like Greece, Ireland and Spain, as governments struggled to restructure their debt obligations and secure public acceptance of austerity programs, designed to facilitate eventual debt repayment.

The Banking System: Commercial Banking - Key Ratios/Factors

Filed Under » Commercial Banking, Retail Banking Commercial Banking, Retail Banking
ByStephen D. Simpson, CFA

As banks have very different operating structures than regular industrial companies, it stands to reason that investors have a different set of fundamental factors to consider, when evaluating banks. This is not meant as an exhaustive or complete list of the financial details an investor needs to consider, when contemplating a bank investment.

Loan Growth
For many banks, loan growth is as important as revenue growth to most industrial companies. The trouble with loan growth is that it is very difficult for an outside investor to evaluate the quality of the borrowers that the bank is serving. Above-average loan growth can mean that the bank has targeted attractive new markets, or has a low-cost capital base that allows it to charge less for its loans. On the other hand, above average loan growth can also mean that a bank is pricing its money more cheaply, loosening its credit standards or somehow encouraging borrowers to move over their business.

Deposit Growth
As previously discussed, deposits are the most common, and almost always the cheapest, source of loanable funds for banks. Accordingly, deposit growth gives investors a sense of how much lending a bank can do. There are some important factors to consider with this number. First, the cost of those funds is important; a bank that grows its deposits by offering more generous rates, is not in the same competitive position as a bank that can produce the same deposit growth at lower rates. Also, deposit growth has to be analyzed in the context of loan growth and the bank management's plans for loan growth. Accumulating deposits, particularly at higher rates, is actually bad for earnings if the bank cannot profitably deploy those funds.

Loan/Deposit Ratio
The loan/deposit ratio helps assess a bank's liquidity, and by extension, the aggressiveness of the bank's management. If the loan/deposit ratio is too high, the bank could be vulnerable to any sudden adverse changes in its deposit base. Conversely, if the loan/deposit ratio is too low, the bank is holding on to unproductive capital and earning less than it should.

Efficiency Ratio
A bank's efficiency ratio is essentially equivalent to a regular company's operating margin, in that it measures how much the bank pays on operating expenses, like marketing and salaries. By and large, lower is better.

Capital Ratios
There are a host of ratios that bank regulators and investors use to assess how risky a bank's balance sheet is, and the degree to which the bank is vulnerable to an unexpected increase in bad loans. A bank's Tier 1 capital ratio takes a bank's equity capital and disclosed reserves and divides it by the bank's risk-weighted assets, (assets whose value is reduced by certain statutory amounts, based upon its perceived riskiness).

The capital adequacy ratio is the sum of Tier 1 and Tier 2 capital, divided by the sum of risk-weighted assets. The tangible equity ratio takes the bank's equity, subtracts intangible assets, goodwill and preferred stock equity, and then divides it by the bank's tangible assets. Although not an especially popular ratio prior to the 2007/2008 credit crisis, it does offer a good measure of the degree of loss a bank can withstand, before wiping out shareholder equity.

Capital ratios can be thought of as proxies for a bank's margin of error. Nowadays, capital ratios also play a

larger role in determining whether regulators will sign off on acquisitions and dividend payments.

Return On Equity / Return On Assets
Returns on equity and assets are well-established metrics long used in fundamental analysis across a wide range of industries. Return on equity is especially useful in the valuation of banks, as traditional cash flow models can be very difficult to construct for financial companies, and return-on-equity models can offer similar information.

Credit Quality
The importance of credit quality ratios is somewhat self-explanatory. If a bank's credit quality is in decline because of non-performing loans and assets and/or charge-offs increases, the bank's earnings and capital may be at risk. A non-performing loan is a loan where payments of interest or principal are overdue by 90 days or more, and it is typically presented as a percentage of outstanding loans. Net charge-offs represent the difference in loans that are written off as unlikely to be recovered (gross charge-offs) and any recoveries in previously written-off loans.

The Banking System: Federal Reserve System

Filed Under » Commercial Banking, Retail Banking Commercial Banking, Retail Banking
ByStephen D. Simpson, CFA

The central bank of the United States is the Federal Reserve System. The Federal Reserve System came into being in 1913, after the passage of the Federal Reserve Act and largely in response to the bank panic of 1907. Since the formation of the Fed, Congress has passed numerous additional laws adding or altering the powers and responsibilities of the Fed, including: the Glass-Steagall Act, the Bank Holding Company Act, the Federal Reserve Reform Act, the Gramm-Leach-Bliley Act and the Dodd-Frank Act.

While arguably initially created to enhance the stability of the banking system and the economy, the Federal Reserve serves many different simultaneous functions. The Fed is the means by which the United States conducts monetary policy, as well as a regulator of banks, and a service provider to the financial system and government of the United States. Although the Fed is supposed to be an independent body, and its decisions are not ratified by the President or Congress, there is often a large degree of consultation and cooperation between the bodies. (To learn more, see our tutorial on*The Federal Reserve*.)

Federal Reserve Board
The Federal Reserve System is run by a board of governors and the Chairman. The Federal Reserve Board includes seven members and all members, including the Chairman, are appointed by the President of the United States, confirmed by the Senate and serve automatically on the FOMC. While the Board's functions and responsibilities overlap with the FOMC, the Board establishes key policies, like the discount rate and the reserve requirements.

FOMC
The Federal Open Market Committee (FOMC) determines monetary policy. The committee includes a seven-member board of governors and five reserve bank presidents. While four of these five seats rotate among reserve presidents in one-year terms, the president of the New York Federal Reserve Bank has a permanent seat on the committee. The eight annual meetings of the FOMC are closed to the public, but minutes and vote records are made available after the meetings.

Federal Reserve Banks

There are 12 regional Federal Reserve banks that assist in controlling the money supply and executing Fed policy. The 12 banks are located in Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis, New York, Philadelphia, Richmond, St. Louis and San Francisco. Perhaps not surprisingly, the New York Federal Reserve bank is the largest of the 12, in terms of assets.

The Federal Reserve banks act as depositories for federal money and act as payment agents for government transactions. These banks play a role in distributing currency to commercial U.S. banks, make loans to smaller member banks and oversee the regulation of commercial banks in their region.

Fed Operations

The Fed can alter the money supply through open market operations, that is, buying or selling government securities. When the Fed wishes to increase the money supply, it goes into the market and buys bonds from banks; those banks can then lend out that cash. On the flip side, the Fed can sell bonds to these banks and drain money from the market.

Second, the Fed can change the reserve requirements for banks. As previously mentioned, the money supply is tied directly to the percent of deposits that banks hold as reserves. If the reserve rate is increased, the money supply decreases, and vice versa. Banks do not always loan out the maximum amount that they are allowed to, and alterations to the reserve requirement can create instability in the banking sector, to say nothing of taking some time to go into effect. Consequently, this is not an especially commonly used method by the Federal Reserve.

Lastly, the Federal Reserve can impact the money supply through interest rates. The Fed does not directly determine what an individual borrower pays for a mortgage or new car loan, but interest rates, by and large, flow from whatever the Fed charges. Consequently, if the Fed raises rates, those rates typically work down through all levels of banking and ultimately result in higher lending rates, and less lending activity. (Learn more in *How The Federal Reserve Manages Money Supply*.)

The Fed is also a lender of last resort within the banking system, a regulator and a data gathering and analysis operation.

Controversies About the Fed System

The validity and utility of the Federal Bank is certainly not universally accepted. There has always been a debate about the constitutionality of a national bank, and the extent to which the federal government plans or controls the economy through that bank. Throughout the bank's history there have also been frequent criticisms of particular Fed policies. Some argue that the Fed's monetary policy is too tight and creating unemployment and others argue that monetary policy is too loose, and stokes inflation and dollar depreciation.

Contrary to the experience of bank panics every decade in the 1800s, throughout most of which the U.S. did not have a central bank, some believe that the Fed cannot adequately manage the monetary policy of the country and actually increases instability. Likewise, while some believe that the Fed is too willing to accommodate political administrations and allows asset bubbles to inflate and continue, others believe the Fed interferes too much in the economy of the United States.

Central Banks Around the World

Despite the controversy around the role, or even the existence, of the Federal Reserve System, most developed countries in the world now have functional central banks. As is the case with the U.S. Federal Reserve, most

central banks have responsibility for executing monetary policy and overseeing the banking system.

There are certainly differences from country to country in how the central banks operate and the extent to which they are independent of, or beholden to, the ruling administration. One additional notable difference is that some central banks explicitly target a certain inflation rate and base their policy decisions on that target. While some argue that this approach sacrifices economic growth for stability, it does lend predictability to the interest rate outlooks.

The Banking System: Non-Bank Financial Institutions

Filed Under » Commercial Banking, Retail Banking Commercial Banking, Retail Banking
ByStephen D. Simpson, CFA

Savings and Loans

Savings and loan associations, also known as S&Ls or thrifts, resemble banks in many respects. Most consumers don't know the differences between commercial banks and S&Ls. By law, savings and loan companies must have 65% or more of their lending in residential mortgages, though other types of lending is allowed.

S&Ls started largely in response to the exclusivity of commercial banks. There was a time when banks would only accept deposits from people of relatively high wealth, with references, and would not lend to ordinary workers. Savings and loans typically offered lower borrowing rates than commercial banks and higher interest rates on deposits; the narrower profit margin was a byproduct of the fact that such S&Ls were privately or mutually owned.

Credit Unions

Credit unions are another alternative to regular commercial banks. Credit unions are almost always organized as not-for-profit cooperatives. Like banks and S&Ls, credit unions can be chartered at the federal or state level. Like S&Ls, credit unions typically offer higher rates on deposits and charge lower rates on loans, in comparison to commercial banks.

In exchange for a little added freedom, there is one particular restriction on credit unions; membership is not open to the public, but rather restricted to a particular membership group. In the past, this has meant that employees of certain companies, members of certain churches, and so on, were the only ones allowed to join a credit union. In recent years, though, these restrictions have been eased considerably, very much over the objections of banks.

Private Banks

While there used to be a significant number of independent private banks operating in the United States, the independent dedicated private bank is all but extinct. Private banks are increasingly part of larger commercial banks and international financial institutions. Almost every nationally known bank and financial services firm has a division that caters to wealthy clients.

Private banks target high net-worth individuals and do not encourage, or in many cases accept, people of lesser means opening accounts. Private banks look to provide a host of services beyond simple checking and savings accounts. Wealthy individuals often spend considerable resources sheltering their incomes and assets from the tax collector; tax planning, as well as the creation and sale of tax-minimizing investment projects, is a major service of private banks.

Investment and Merchant Banks

While investment banks may be called "banks," their operations are far different than deposit-gathering commercial banks. Complicating matters further, many major commercial banks bought investment banks, and some investment banks have reorganized themselves as commercial banks, in many cases to make themselves eligible for government-funded bailouts.

Investment banks are principally involved in underwriting debt and equity offerings, trading securities, making markets and providing corporate advisory services. Investment banks are also active counterparties in a variety of derivative transactions. Confusing matters further, some investment banks, including those without true bank subsidiaries, will engage in bank-like activity. It is not uncommon for investment banks to provide bridge loans and stand-by financing commitments formergers and acquisitions.

Generally speaking, investment banks are subject to less regulation than commercial banks. While investment banks operate under the supervision of regulatory bodies, like the Securities and Exchange Commission, FINRA, and the U.S. Treasury, there are typically fewer restrictions when it comes to maintaining capital ratios or introducing new products.

Merchant banking has changed more than perhaps any other category of banking. Merchant banks used to exist to finance international trade, providing financing, letters of introduction and credit, for ocean-going voyages. Merchant banks then evolved into something more like what private equity is today; very few institutions call themselves "merchant banks" today.

Shadow Banks

The housing bubble and subsequent credit crisis brought attention to what is commonly called "the shadow banking system." This is a collection of investment banks, hedge funds, insurers and other non-bank financial institutions that replicate some of the activities of regulated banks, but do not operate in the same regulatory environment.

The shadow banking system funneled a great deal of money into the U.S. residential mortgage market during the bubble. Insurance companies would buy mortgage bonds from investment banks, which would then use the proceeds to buy more mortgages, so that they could issue more mortgage bonds. The banks would use the money obtained from selling mortgages, to write still more mortgages.

Many estimates of the size of the shadow banking system suggest that it had grown to match the size of the traditional U.S. banking system by 2008.

Apart from the absence of regulation and reporting requirements, the nature of the operations within the shadow banking system created several problems. Specifically, many of these institutions "borrowed short" to "lend long." In other words, they financed long-term commitments with short-term debt. This left these institutions very vulnerable to increases in short-term rates and when those rates rose, it forced many institutions to rush to liquidate investments and make margin calls. Moreover, as these institutions were not part of the formal banking system, they did not have access to the same emergency funding facilities. (Learn more in *The Rise And Fall Of The Shadow Banking System*.)

Islamic Banks

Islamic banks exist to fill the need for financial services that are compliant with Islamic rules concerning interest. Sharia law forbids the charging, or acceptance, of interest or other fees related to borrowing money. In the place of interest, Islamic banks make use of profit sharing arrangements, "safekeeping" agreements, joint

ventures, leasing and cost-plus accounting to extend credit in a way that is compliant with Sharia.

As an example, an Islamic bank would not loan money to someone who wished to borrow a house or car. Instead, the bank might buy the asset itself, agree to resell it to the would-be borrower at a higher price and take the payments in installments. In practice, then, it is almost identical to how a regular mortgage or equipment loan works, as most mortgage borrowers pay equal fixed amounts for the duration of the loan, but there is no formal interest involved.

Many Islamic countries have regular banks operating in their borders, but this is nevertheless a growth market. If nothing else, many of these businesses are creative in how they establish workable business models that comply with rules on interest, and so on. Not surprisingly, Iran, Saudi Arabia, Malaysia, and UAE are among the leading nations in terms of assets managed by Islamic financial institutions.

Industrial Banks
Industrial banks are a special category of financial institution that exists for very specific purposes. Industrial banks are financial institutions owned by non-financial institutions.

As they are able to lend money, industrial banks are often used by their parent companies to facilitate financing for customers. Not all of these banks engage in lending; sometimes companies create industrial banks, simply to improve payment settlement efficiency and to reduce the costs of managing working capital accounts.

The Banking System: Conclusion

Filed Under » Commercial Banking, Retail Banking Commercial Banking, Retail Banking
ByStephen D. Simpson, CFA

Banking systems have been with us for as long as people have been using money. Banks and other financial institutions provide security for individuals, businesses and governments, alike. Let's recap what has been learned with this tutorial:

In general, what banks do is pretty easy to figure out. For the average person banks accept deposits, make loans, provide a safe place for money and valuables, and act as payment agents between merchants and banks.

Banks are quite important to the economy and are involved in such economic activities as issuing money, settling payments, credit intermediation, maturity transformation and money creation in the form of fractional reserve banking.

To make money, banks use deposits and whole sale deposits, share equity and fees and interest from debt, loans and consumer lending, such as credit cards and bank fees.

In addition to fees and loans, banks are also involved in various other types of lending and operations including, buy/hold securities, non-interest income, insurance and leasing and payment treasury services.

History has proven banks to be vulnerable to many risks, however, including credit, liquidity, market, operating, interesting rate and legal risks. Many global crises have been the result of such vulnerabilities and this has led to the strict regulation of state and national banks.

However, other financial institutions exist that are not restricted by such regulations. Such institutions include:

savings and loans, credit unions, investment and merchant banks, shadow banks, Islamic banks and industrial banks.

PENGENALAN RATIO KEUANGAN BANK

Di dalam dunia perbankan ada aspek-aspek yang mana sangat berguna untuk menentukan kondisi bank. Ada beberapa kondisi / rasio yang harus dipenuhi oleh bank bila bank tersebut dikatakan bank yang aman atau sehat menurut Bank Indonesia. Diantaranya adalah :

1. **Legal Reserve Requirement (LRR) :**

Reserve Requirement adalah ketentuan bagi setiap bank umum untuk menyisihkan sebagian dari dana pihak ketiga yang berhasil dihimpunnya dalam bentuk giro wajib minimum, berupa rekening giro bank yang bersangkutan pada bank Indonesia atau lebih dikenal juga dengan likuiditas wajib minimum adalah sejumlah tertentu alat likuid yang harus tetap berada di bank untuk memenuhi likuiditas bank tersebut. Ketentuan likuiditas wajib minimum ini dibedakan dalam dua kategori perhitungan yaitu likuiditas wajib dalam rupiah dan likuiditas wajib dalam valuta asing.

2. **Loan to Deposit Ratio (LDR)**

Loan to Deposit Ratio (LDR) adalah rasio antara besarnya seluruh volume kredit yang disalurkan oleh bank dan jumlah penerimaan dana dari berbagai sumber. Pengertian lainnya LDR adalah rasio keuangan perusahaan perbankan yang berhubungan dengan aspek likuiditas. LDR adalah suatu pengukuran tradisional yang menunjukkan deposito berjangka, giro, tabungan, dan lain-lain yang digunakan dalam memenuhi permohonan pinjaman (loan requests) nasabahnya. Rasio yang tinggi menunjukkan bahwa suatu bank meminjamkan seluruh dananya (loan-up) atau realtif tidak likuid (illiquid). Sebaliknya rasio yang rendah menunjukkan bank yang likuid dengan kelebihan kapasitas dana yang siap untuk dipinjamkan *(Latumaerissa,1999:23).*

Penyaluran kredit merupakan kegiatan utama bank, oleh karena itu sumber pendapatan utama bank berasal dari kegiatan ini. Semakin besarnya penyaluran dana dalam bentuk kredit dibandingkan dengan deposit atau simpanan masyarakat pada suatu bank membawa konsekuensi semakin besarnya risiko yang harus ditanggung oleh bank yang bersangkutan.

Menurut Mulyono, rasio LDR merupakan rasio perbandingan antara jumlah dana yang disalurkan ke masyarakat (kredit) dengan jumlah dana masyarakat dan modal sendiri yang digunakan. Rasio ini menggambarkan kemampuan bank membayar kembali penarikan yang dilakukan nasabah dengan mengandalkan kredit yang diberikan sebagai sumber likuiditasnya. Semakin tinggi rasio ini semakin rendah pula kemampuan likuiditas bank. Praktisi perbankan menyepakati batas aman dari LDR suatu bank adalah sekitar 85% dan toleransi berkisar antara 85%-100% atau menurut *Kasmir (2003:272),* peraturan pemerintah batas aman adalah maksimum 110 %. Dengan kata lain LDR digunakan sebagai suatu indikator untuk mengetahui tingkat kerawanan suatu bank.

Penyebab LDR Rendah :

Perbankan nasional pernah mengalami kemerosotan jumlah kredit karena diserahkan ke BPPN untuk ditukar dengan obligasi rekapitalisasi. Begitu besarnya nilai kredit yang keluar dari sistem perbankan di satu sisi dan semakin meningkatnya jumlah DPK yang masuk ke perbankan, maka upaya ekspansi kredit yang dilakukan perbankan selama sepuluh tahun terakhir sepertinya belum berhasil mengangkat angka LDR.

Fungsi LDR :

LDR berfungsi sebagai indikator intermediasi perbankan. Begitu pentingnya arti LDR bagi perbankan maka angka LDR pada saat ini telah dijadikan persyaratan antara lain :

1) Sebagai indikator penilaian tingkat kesehatan bank.
2) Sebagai indikator kriteria penilaian Bank Jangkar (LDR minimum 50%)
3) Faktor penentu besar-kecilnya GWM (Giro Wajib Minimum) sebuah bank.
4) Salah satu persyaratan pemberian keringanan pajak bagi bank yang akan merger.

3. **Capital Adequacy Ratio (CAR)**

CAR(Capital Adequacy Ratio) adalah rasio kecukupan modal yang berfungsi menampung risiko kerugian yang kemungkinan dihadapi oleh bank. Semakin tinggi CAR maka semakin baik kemampuan bank tersebut untuk menanggung risiko dari setiap kredit/aktiva produktif yang berisiko. Jika nilai CAR tinggi maka bank tersebut mampu membiayai kegiatan operasional dan memberikan kontribusi yang cukup besar bagi profitabilitas.

4. **Perhitungan Legal Lending Limit (LLL)**

Perhitungan Legal Lending Limit (LLL) adalah faktor Permodalan (Capital), Kualitas Aktiva Produktif (Asset), Manajemen, Rentabilitas (Earning) dan Likuiditas. Analisis ini dikenal dengan istilah Analisis "CAMEL" :

a) ASPEK PERMODALAN (CAPITAL)

Penilaian pertama adalah aspek permodalan, dimana aspek ini menilai permodalan yang dimiliki bank yang didasarkan kepada kewajiban penyediaan modal minimum bank.

b) ASPEK KUALITAS AKTIVA PRODUKTIF (ASSET)

Aktiva produktif atau Productive Assets atau sering disebut dengan Earning Assets adalah semua aktiva yang dimiliki oleh bank dengan maksud untuk dapat memperoleh penghasilan sesuai dengan fungsinya

c) ASPEK KUALITAS MANAJEMEN (MANAGEMENT)

Aspek Kualitas Manajemen berfungsi untuk menilai kualitas manajemen akan mengajukan 250 pertanyaan yang menyangkut manajemen bank yang bersangkutan.

d) ASPEK RENTABILITAS (EARNING)

Penilaian aspek ini diguankan untuk mengukur kemampuan bank dalam meningkatkan keuntungan.

e) ASPEK LIKUIDITAS (LIKUIDITY)

Aspek Likuiditas Bank adalah suatu bank dikatakan likuid, apabila bank tersebut mampu membayar semua hutangnya dan juga bank harus mampu memenuhi semua permohonan kredit yang layak dibiayai.

Disamping penilaian analisis CAMEL, kesehatan bank juga dipengaruhi hasil penilaian lainnya, yaitu penilaian terhadap :

a) Ketentauan pelaksanaan pemberian kredit Usaha Kesil (KUK) dan pelaksanaan Kredit Eksport
b) Pelanggaran terhadap ketantuan Batas Maksimum Pemberian Kredit (BMPK) atau sering disebut dengan Legal Lending Limit.
c) Pelanggaran Posisi Devisa Netto.

5. **Non Performing Loan (NPL)**

Non Performing Loan adalah kredit yang masuk ke dalam kualitas kredit kurang lancar, diragukan dan macet berdasarkan kriteria yang telah ditetapkan oleh Bank Indonesia *(SE No. 7/3/DPNP).* NPL yang digunakan dalam penelitian ini merupakan angka perubahan NPL bulan Desember 2008 dan Januari 2009, dengan kategori 1 =

meningkat, 0 = menurun atau tetap. Variabel Kebijakan Bank Indonesia (KBI) mempengaruhi NPL secara signifikan. *KBI No. 7 Tahun 2005*menyebutkan bahwa adanya pengharusan dilakukannya penyeragaman penilaian dan pengategorian kualitas aktiva produktif oleh bank. Hasil pengolahan nilai signifikansi variabel KBI adalah 0,016. Hal ini berarti KBI signifikan mempengaruhi NPL pada tingkat kepercayaan 95% karena nilai signifikansi lebih kecil dari 0,05 dan terjadi perbedaan yang nyata antara NPL setelah diterapkannya KBI dengan NPL sebelum diterapkannya KBI.

Capital Adequacy Ratio - CAR

Definition of 'Capital Adequacy Ratio - CAR'
A measure of a bank's capital. It is expressed as a percentage of a bank's risk weighted credit exposures.

$$\text{CAR} = \frac{\text{Tier One Capital} + \text{Tier Two Capital}}{\text{Risk Weighted Assets}}$$

Also known as "Capital to Risk Weighted Assets Ratio (CRAR)."

Investopedia explains 'Capital Adequacy Ratio - CAR'
This ratio is used to protect depositors and promote the stability and efficiency of financial systems around the world.

Two types of capital are measured: tier one capital, which can absorb losses without a bank being required to cease trading, and tier two capital, which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors.

Bank capital to assets ratio (%)

Bank capital to assets is the ratio of bank capital and reserves to total assets. Capital and reserves include funds contributed by owners, retained earnings, general and special reserves, provisions, and valuation adjustments. Capital includes tier 1 capital (paid-up shares and common stock), which is a common feature in all countries' banking systems, and total regulatory capital, which includes several specified types of subordinated debt instruments that need not be repaid if the funds are required to maintain minimum capital levels (these comprise tier 2 and tier 3 capital). Total assets include all nonfinancial and financial assets.

Bank Efficiency Ratio

What It Is: A **bank efficiency ratio** is a measure of a bank's overhead as a percentage of its revenue.
How It Works/Example:
The formula varies, but the most common one is: ***Bank Efficiency Ratio = Expenses* / Revenue***
*not including interest expense

For example, if Bank XYZ's costs (excluding interest expense) totaled $5,000,000 and its revenuestotaled $10,000,000, then using the formula above, we can calculate that Bank XYZ's efficiency ratio is $5,000,000 / $10,000,000 = 50%. This means that it costs Bank XYZ $0.50 to generate $1 of revenue.

As we said earlier, the formulas vary but the idea is to look at costs as a percentage of revenue. Costs include

salaries, rent and other general and administrative expenses. Interest expenses are usually excluded because they are investing decisions, not operational decisions.

Revenue includes interest income and fee income, though some banks exclude their provision for loanlosses from revenue or add their tax equivalent net interest income to revenue when calculating the efficiency ratio.

Why It Matters?
The *bank efficiency ratio* is a quick and easy measure of a bank's ability to turn resources intorevenue. The lower the ratio, the better (50% is generally regarded as the maximum optimal ratio). An increase in the efficiency ratio indicates either increasing costs or decreasing revenues.

It is important to note that different business models can generate different bank efficiency ratios for banks with similar revenues. For instance, a heavy emphasis on customer service might lower a bank's efficiency ratio but improve its net profit. Banks that focus more on cost control will naturally have a higher efficiency ratio, but they may also have lower profit margins.

In addition, the more a bank generates in fees, the more it may concentrate on activities that carry highfixed costs (and thus create worse efficiency ratios). The degree to which a bank is able to leverage its fixed costs also affects its efficiency ratio; that is, the more scalable a bank is, the more efficient it can become. For these reasons, comparison of efficiency ratios is generally most meaningful among banks within the same model, and the definition of a "high" or "low" ratio should be made within this context.

How are Banking Ratios Compiled ?

Financial institutions such as banks, financial service companies, insurance companies, securities firms and credit unions have very different ways of reporting financial information. This guide gives you the most pertinent information to analyze a financial service company's financial statements.

Analyzing Banking Data	
Return on Assets	USBR calculates Return on Assets (ROA) by dividing net operating income by total assets. ***Return on Average Assets = (Net Operating Income/ Total Assets)***
Retun on Equity	***Return on Equity = (Net Income/Stockholder Equity)*** Return on Equity is determined by dividing net income (minus preferred dividends) by average common stockholders equity to get the return on equity.
Rate Paid on Funds	The Rate Paid on Funds is determined by dividing total interest expense by total earning assets. The formula is as follows: ***Rate Paid on Funds = Total Interest Expense / Total Earning Assets*** This indicates what percentage or rate of interest is paid from assets.
Gross Yield on Earning Assets (GYEA)	The gross yield on average earning assets measures the total average return on the banks earning assets. The gross yield on earning assets is computed as follows: ***GYEA = Total Interest Income / Total Average Earning assets*** Essentially, the gross yield on earning asset ratio is really just the rate paid on funds (RPF) plus the net interest margin which equals the GYEA. Rate Paid on Funds + Net Interest Margin = Gross Yield on Earning Assets

Risk Ratios	
Net Interest Margin	Net interest margin is computed by dividing net interest income by total earning assets. ***Net Interest Margin = Net Interest income/ Average Earning Assets***
Provision for Loan Losses	This important figure is a reserve account to cover unexpected defaults on loans by borrowers. These are generally referred to as nonperforming loans. **Reserve as a percentage of loans: (Reserve/ Total loans)** **Chargeoffs as percentage of loans: (Charge-offs/ Total Loans)** The higher the nonperforming loan and charge-off percentages, the higher the provision for loan losses should probably be. Consequently, this would reduce net income and earnings per share.
Long Term Debt to Total Liabilites and Equity	The higher this figure, the more difficult it would be for a bank to borrow more funds.This figure is determined as follows: **Long Term Debt to Total Liabilities and Equity = (Long Term Debt / Total Liabilities plus Equity)**
Loans-to-Assets	The loans to assets ratio measures the total loans outstanding as a percentage of total assets. The higher this ratio indicates a bank is loaned up and its liquidity is low. The higher the ratio, the more risky a bank may be to higher defaults. This figure is determined as follows: **Loans to Assets = (Loans / Total Assets)**
Capital Ratios	
Leverage Ratio	The Leverage Ratio measures the banks equity to total average assets which is a common measure used to analyze capital adequancy of a bank. This figure is determined as follows: **Leverage Ratio = (Stockholders Equity / Average Total Assets)**.
Equity-to-Loans	Equity to Loans reflects the degree of equity coverage to outstanding loans. This figure is determined as follows: **Equity to Loans = (Average Common Equity / Average Total Assets)**
Tier 1 Capital	Banks must maintain a ratio which is within the guidelines set by the FDIC guidelines. This figure is determined as follows: **Tier 1 Capital = (Stockholder Equity/ Risk-Adjusted Assets)**
Total Capital	Total Capital includes Tier I and the reserve for loan losses (up to 1.25 % of Risk Adjusted Capital) plus subordinated notes (to 50 percent of Tier I capital). This figure is also set by FDIC guidelines.