Introduction to Finance

mthree Alumni Training

- Types of Banks
- Investment Banking Details

Objectives

- The objective of this course is to give you a good foundation in the finance industry and the various business lines that operate within a bank.

- You should also understand various financial products that banks offer and that you may end up working with.

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Different types of banks

- There are four main types of banks we will be covering in this course:

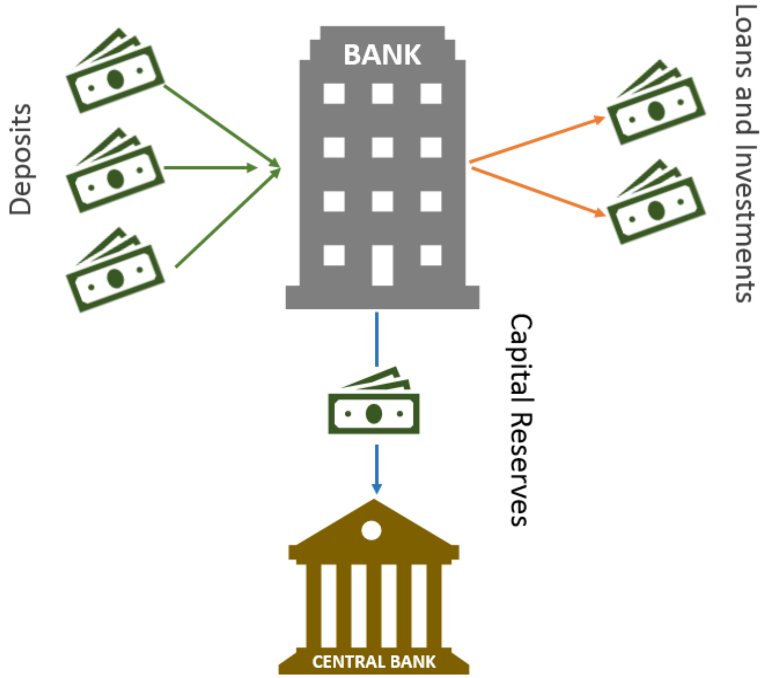
Central Banks	• Manage the money supply in a single country or series of nations. Set monetary policy goals. • US: Federal Reserve • Europe: European Central Bank
Retail Banks	• Offer general public financial products and services such as bank accounts and loans.
Universal Banks	• Provide a wide variety of comprehensive financial services; tailored to retail, commercial and investment services. • E.g., Deutsche Bank, Bank of America, HSBC
Investment Banks	• A financial intermediary that performs a variety of services. Specializing in large and complex financial transactions as well as acting as a broker or financial advisor for institutional clients. • E.g., Goldman Sachs, Morgan Stanley

A Bank: The Basics

- As hard currency came into existence, so the bank was born, traditionally taking surplus cash from lenders and acting as a financial intermediator to borrowers.

Deposit: a sum of money left with a bank

e.g., 3% paid by bank to depositor



Loan: a sum of money lent from a bank

e.g., 6% charged by the bank for a loan – the bank retains the 3% and usually invests in money markets

Fractional Reserve: banks assume that depositors will only want access to a fraction of their deposits at a time – the rest they will invest in money markets.

Interest Rates

Interest	• A fee for the use of money
Interest Rate	• A percentage of the loan or deposit that is charged as interest
APR	• Annual percentage of rate of interest

- e.g. You borrow $1000 at 6% for a year. After a year you must pay back $1060.

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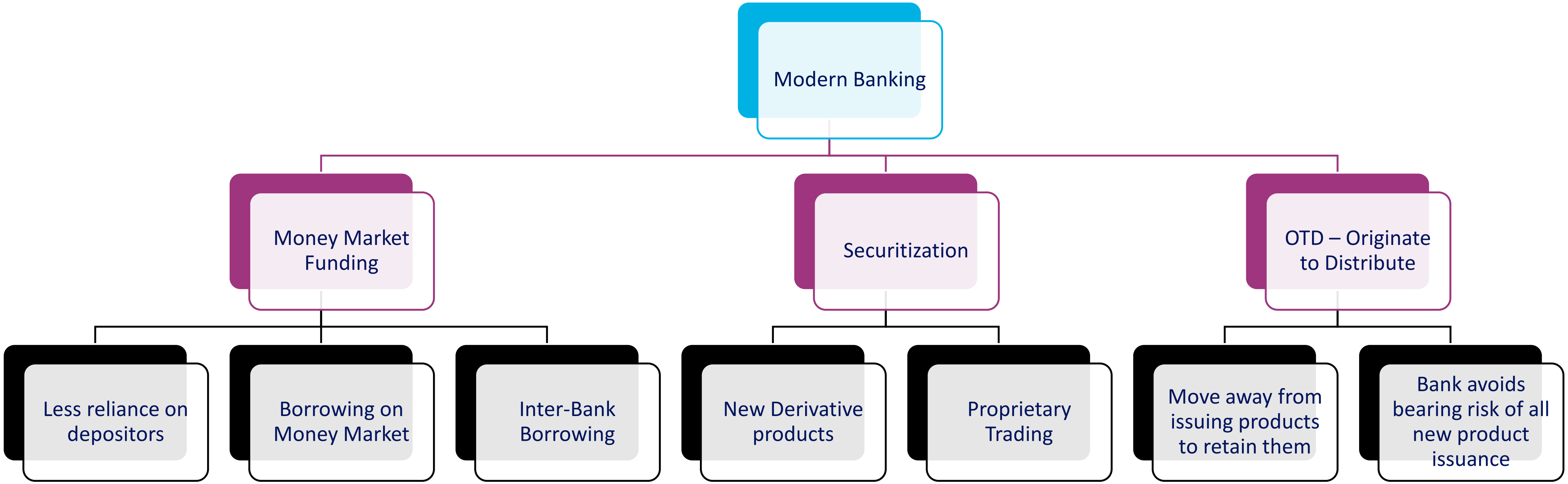
Evolution of Banking



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2008 Financial Crisis

- Factors that led to the crisis:

Focus on short term profits	Proprietary interest over clients
Return for risk taking	Inadequate risk assessment
Junk debt traded in securities	Inadequate capital reserves

New regulatory bodies	Ring fencing
Effect risk assessments	Transparent markets
Stress resilient capital reserves	Ethics and culture

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Retail Banking

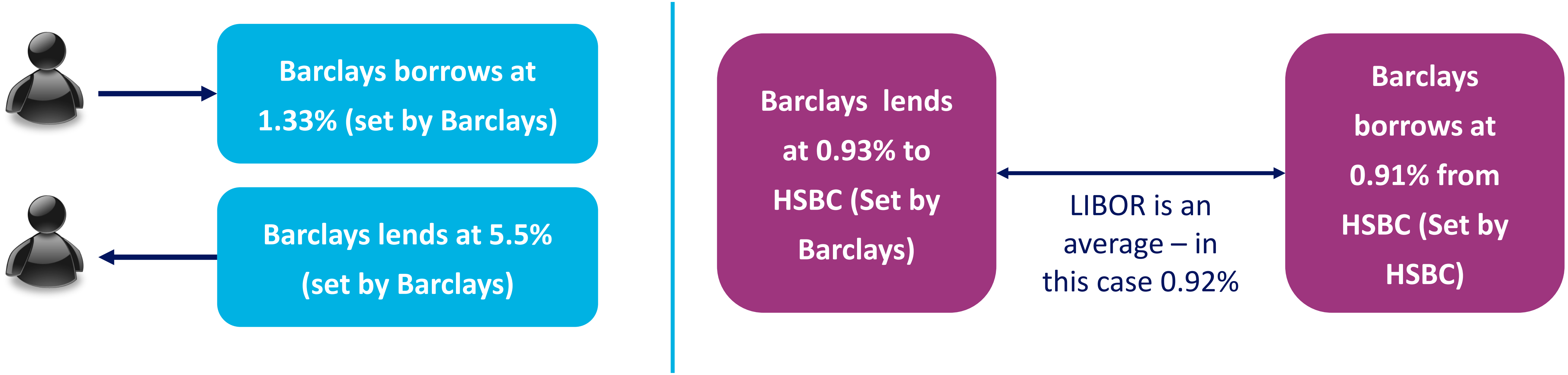
- Banking for individual consumers, they cover the following product types.

Current Accounts	Mortgages	Debit Cards
Savings Accounts	Personal Loans	Checks
Overdrafts	Payments	Money Transfers
Telephone Banking	Branches	Online Banking

- Also known as **chartered banks** in Canada.

Banks – Monetary Policy

- Retail banks can set their own rates for lending and borrowing money to their clients. The rate to lend between banks is usually set by the central bank.
- **LIBOR**: Benchmark interest rate at which major global banks lend to one another in the international interbank market for short-term loans. (Rate is calculated and published each day by the Intercontinental Exchange – ICE).



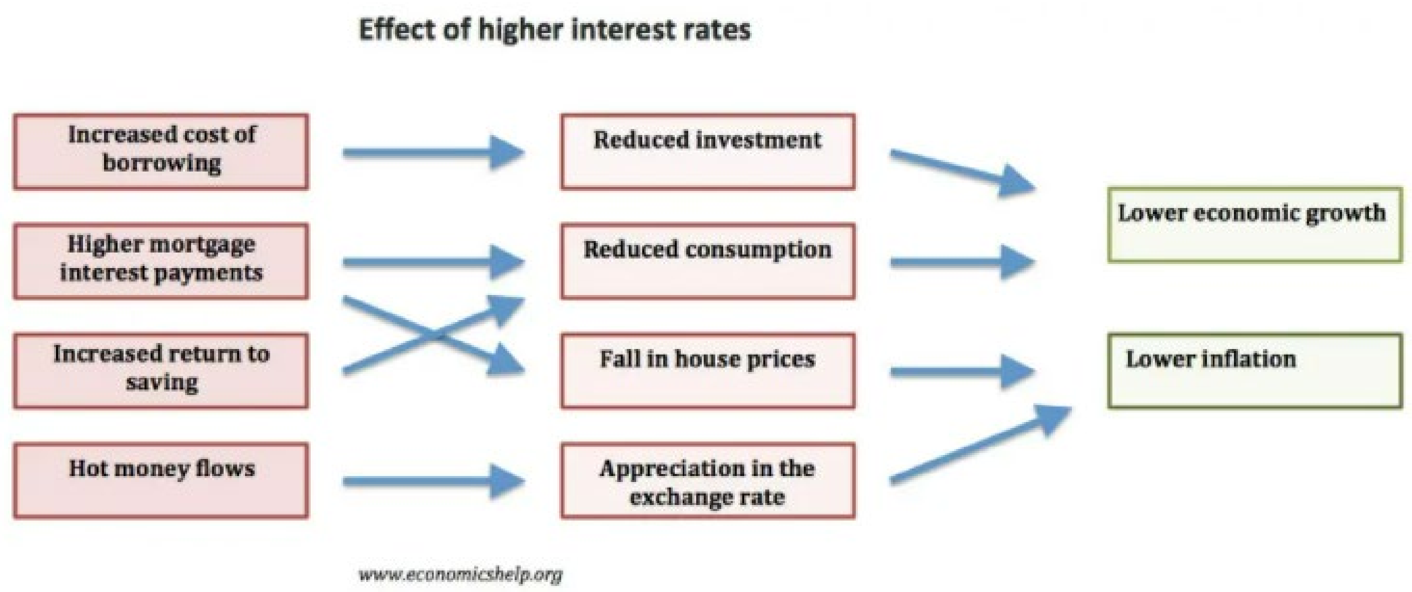
Central Banks – Interest and Inflation

- **Interest Rates**: The percentage of principal charged by the lender for the use of its money.
- **Inflation**: A quantitative measure of the rate at which the average price level of selected goods and services in an economy increases over time. It indicates a decrease in the purchasing power of a nation’s currency. Measured by CPI: Consumer price index and PPI: Producer Price Index
- The central banks will make changes to interest rates to have an impact on inflation. (They usually have a target of what inflation should be over a given time period.)

Lower Interest Rates

Raise Interest Rates

Central Banks – Interest and Inflation



- A higher interest rate should also lead to a higher exchange rate (more demand for the currency from abroad), which helps to reduce inflationary pressure by:
  - Making imports cheaper (lower prices of imported goods)
  - Reducing demand for exports
  - Increasing incentive for exporters to cut costs

Quantitative Easing (QE)

- The Central Bank creates new money electronically - **Quantitative Easing (QE)**
- This money is used to purchase Government Bonds or other assets
- Increases bond prices, reduces yield and encourages/frees up money to be invested elsewhere, such as lending
- Increased lending supply, lowers the cost of borrowing
- Used when interest rates and inflation are very low and need boosting via spending

"Central Banks as a Safety Net"

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Corporate Banking

Banking for different size businesses offering retail banking services plus:

Multi-Bank Syndicated Loans

- Larger loans supported by a group of banks to spread the risk of the loan and raise the capital required, usually available at short notice, cheaper than a bond issue

Foreign Exchange Facilities

- Providing competitive foreign exchange facilities including help with balance sheet analysis and hedging solutions and managing exposure and risk to FX movements

Cash Management Services

- Movement of money between various accounts as needed

Letters of Credit and Guarantees

- Assurance from the bank that an exporter will be paid after shipping goods

Lines of Credit

- Business form of an overdraft but not set up as a negative balance on your account; the line of credit is set up on another account

Private Banking and Wealth Management

Banking for high net worth individuals with more than $1 million of liquid assets.

Examples of such individuals:

- Entrepreneurs
- Executives
- Landowners
- Celebrities
- Royalty

In addition to retail services, they also offer:

- Advice and management
- Tax planning
- Personal relationship
- Investment planning
- Wealth structuring
- Discretion

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Investment Banking

Who are the clients of an investment bank?

Professional Clients

- Assumed to be more informed investors and as such, are able to take more financial risks than other types of investor
- Have experience, knowledge and expertise to make their own investment decisions & risk assessment
- Covered by fewer regulatory guarantees

Institutional Investors

- Investment firms, pension funds, insurance firms, commodity dealers, hedge funds, asset managers, national and regional governments, sovereigns
- International and supranational institutions: World Bank, IMF, Central Banks

Investment Banking

- Services include:
- Company Restructuring
- Mergers and Acquisitions
- Financing
- Security Issuance Underwriting
- Research and Advisory
- Brokerage and Market Making

Timeframe: **Year to date 2019** Display: **Top Banks** Reset filters

Top 10 Banks	Fees ($m)	Changes in Fees vs. Prev Period*	% of Fees collected by product Year to Date 2019: M&A	Equity	Bonds	Loans
JP Morgan	6,329.31	-9.51%	28	22	30	19
Goldman Sachs & Co	5,528.35	-13.98%	45	25	20	10
Bank of America Merrill Lynch	4,946.15	-1.86%	22	19	36	23
Morgan Stanley	4,830.35	-7.81%	36	27	28	8
Citi	4,341.65	-7.37%	25	19	36	19
Barclays	2,987.26	-6.25%	28	13	38	22
Credit Suisse	2,932.57	-12.09%	25	21	33	21
Deutsche Bank	2,223.38	-13.42%	24	12	42	22
Wells Fargo & Co	2,050.81	-4.22%	12	10	43	35
Mizuho Financial Group	1,918.77	--	9	6	34	50
Total	**98,487.26**	**-5.68%**	**28**	**17**	**32**	**22**

Data from Jan 1 2019 - Dec 31 2019 and Jan 1 2018 - Dec 31 2018

Data as of Dec 31 2019

IB – Research and Advisory

- Research and advisory is often offered to clients free of charge to gain good will and encourage them to use other fee-based services.

Buy/Sell/Hold Recommendations	• Stock ratings; portfolio balancing; overweight/underweight on securities
Financial Trends and Forecasting	• Market trends and consumer trends
Politics and Macro Economics	• Information on major events and news, supply and demand
Market Analysis	• Technical analysis and market risk models

IB – Financing and M+A

Financing

- Used when a client needs to raise capital:
- Advice
- Investor Introductions
- Syndicate Loans
- Bond and Securities Issuance
- Project Financing

Mergers and Acquisitions

- Very lucrative part of the IB business.
- Why would you want to merge?
  - Make money for shareholders (ideally)
  - Economies of scale, especially in areas such as research and development
  - Gaining larger market share
  - Better competition against other firms
- e.g., Bank of New York and Mellon Financial Corporation combined to form BNY Mellon.

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Capital Markets

- Investment banks facilitate the operation of the capital markets alongside exchanges, brokers, interdealer brokers and market data providers.
- Markets have generally moved on from open out-cry trading, which has been replaced by electronic trading.
- We split the markets into primary and secondary:

Primary Market	Secondary Market
• *"The market that raises medium- and long-term financing (capital) for the issuers of share and bond securities"* • New security issuance • New bonds • New shares • IPOs	• Buying and selling of securities • Trading

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Secondary Market Services

Brokerage - Brokers

Broker Securities Dealing

Match Buyers and Sellers

Fees: Upfront, Spread Quarterly Charge

Long-Term

- Holding
- Dividends

Market Making - Dealers

Make a Market for a Security

Offer a Buy and Sell Price

Generate Fees from the Buy - Sell Price Spread

Hold an Inventory of Securities to Supply This Service

Investment Banking: Risks – Diversification

- Diversification: A risk management strategy that mixes investments within a portfolio – this limits exposure to one type of asset.
- All investments involve some level of risk.

Financial and Reputational Damage

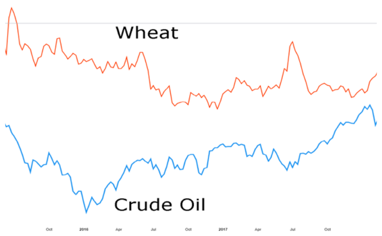
Operational Risk
- System, people, and process failures

Market Risk
- Loss due to market volatility

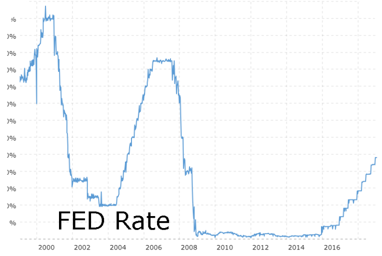
Credit Risk
- Defaults leading to financial loss

Market Risk

- These are four standard market risk factors:

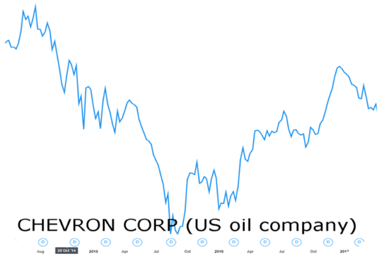


Commodity Prices



Interest Rates

FX Rates



Stock Prices

- Prices rise and fall due to market sentiment
- The risk that movements in prices lead to losses
- Hedging to mitigate against market risk
- Measured by different techniques including VAR (Value-at-risk)

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Investment Banking Trade Life Cycle

- Investment banks are usually split up into front office, middle office and back office functions.

Front Office

- **Client-Facing**: Interact with clients; build relationships
- **Revenue-Generating**: Sell research, advise, brokerage

Middle Office

- **Support**: Support front office functions
- Validation: Verifying front office transactions

Back Office

- **Settlement**: Daily trades are netted/paid and received
- **Custody**: Register new product owners
- **Regulatory Reporting**
- **Accounting**: Financial reporting

The 24-hour Banking Day

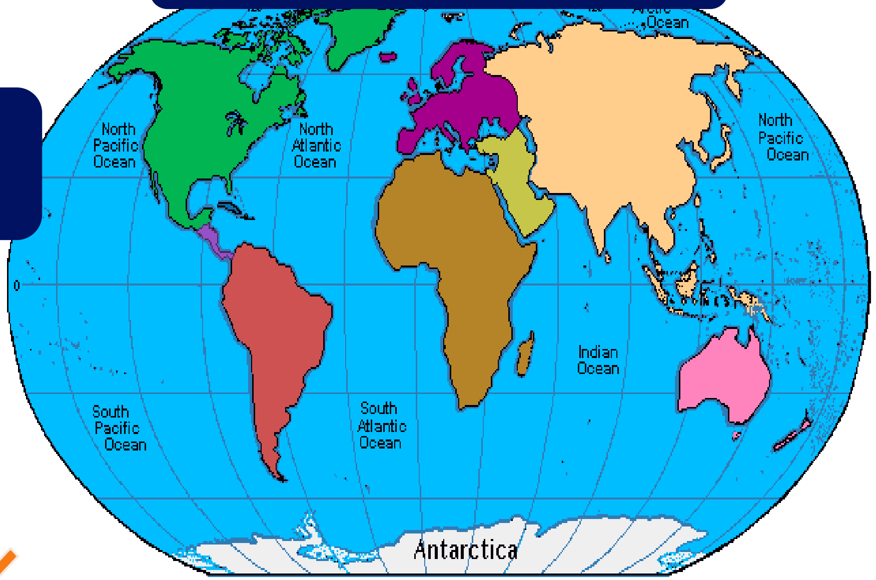
- Depending on the business area the bank applications could be being used through 24 hours and potentially 7 days a week (think online banking). This introduces follow the sun.

London/Euro Markets Open:
08:00 GMT

US Market Open:
14:30 GMT / 09:30 ET

HK Market Open:
01:30 GMT/09:30 HKT

Tokyo Market Open:
00:00 GMT / 09:00 JST



Follow the Sun Support Model

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Front Office Trading

- Front office trading can be divided into proprietary trading, brokerage and research areas. There are rules around what interactions these areas can have and they are generally separated by Chinese walls.

Proprietary Trading | Brokerage | Research

Buy Side | **Sell Side**

Prop trading occurs when a trader trades stocks, bonds, currencies, commodities, derivatives or any other financial instruments with the firm's own money (nostro account)

The sell side is involved in creation, promotion and sale of stocks, bonds, fx and other financial instruments.

Investment bankers serve as intermediaries between security issuers and investing public and the market makers who provide liquidity in the market.

Types of Asset Classes

There are multiple types of asset classes that investment banks deal in.

Equities

- Shareholder equity: represents the amount of money that would be returned if all assets of the company were liquidated.

Cash and Money Markets

- Trade in short term debt – relatively low rate of return but considered low risk

Commodities

- Tradable commodities consist of basic goods used in commerce; e.g., energy. Usually executed through future contracts that standardize quantity and quality

Fixed Income

- An investment that provides a return in the form of fixed periodic interest payments and eventual return of principle at maturity

Foreign Exchange (FX)

- The trading of currencies

Real Estate

- Property made up of land as well as anything on it; e.g., buildings, natural resources and animals