



# THE SIFA CHRONICLE

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## Machine Learning



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managing means, and assessing pitfalls. But many technically-smart fiscal services professionals have an accurate view of where machine literacy can play a part in their companies.

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get their fair share of the premium commercial real estate returns. Lets deep dive further into the topic to understand the hooks....

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# Federal Funds Rate and its Impact

## What is federal funds rate?

One of the Federal Reserve's most important instruments for directing American monetary policy is the federal funds rate. The fed funds rate essentially controls the cost of money in the U.S. economy since it affects everything from the annual percentage yields (APYs) you receive on savings accounts to the rate you pay on credit card balances. The main tool the central bank uses to control the amount of money in the economy is called Fed funds. The reason for this is that it affects the rates that banks charge one another, which in turn affects the rates they charge you and their other clients.

## Impact of Federal funds rate

However, the federal funds rate has an effect on more than just interest rates. Its effects are felt across the entire economy. Changes in the federal funds rate have a significant impact on the stock market as well. When the Fed lowers interest rates, for example, the cost of borrowing for publicly traded corporations should decrease, making it less expensive for them to grow their operations and increase profits.

However, when borrowing costs increase and lenders are compensated with higher rates, equities markets may struggle more as rates rise.

One of the most significant interest rates in the U.S. economy is the federal funds rate. This is because it has

an impact on the monetary and financial conditions, which have an impact on important elements of the overall economy such as employment, growth, and inflation.

## Determination of federal funds rate

The federal funds rate, also known as the federal funds target rate or the fed funds rate, is determined by the Federal Open Markets Committee (FOMC) to regulate overnight lending among American banks. It has been set as a range between two limits, upper and lower. Customers make deposits at banks, and those deposits give the banks the funding they need to offer their clients loans and other forms of credit. To assist ensure their stability and solvency, regulators mandate that banks and other depository institutions maintain a specific portion of their total capital in reserve.

To meet the reserve requirements set by authorities, banks frequently need to borrow money from other financial institutions overnight; otherwise, they risk having too much reserve capital to lend to their peers. When institutions borrow or lend reserves, they can use the federal funds rate as a guide. Banks can borrow from the Fed to meet reserve requirements. The rate charged to banks is the discount rate, which is usually higher than the rate that banks charge each other. Banks can borrow from each other to meet reserve requirements, which is charged at the federal funds rate.



## Interest Rates & Federal Funds Rate

One of the most significant financial indicators in the United States is the federal funds rate, along with interest rates. The main contrast is that the federal funds rate determines the range of overnight lending and borrowing between banks. Stock markets are often sensitive to fluctuations in these rates because it affects borrowing costs and financial circumstances. Short-term interest rates are also indirectly impacted by the federal funds rate. In contrast, the cost of borrowing for banks is determined by interest rates, which are controlled by the Federal Reserve.

## Fed Rate Maximizing Employment

When the Fed reduces the range of interest rates, it is referred to as "expansionary monetary policy." Banks offer cheaper interest rates on all loans, including credit card, auto, and student loans.

Home loans with adjustable rates get more affordable, which boosts the housing market. Owners spend more because they feel wealthier. Additionally, they have easier access to home equity loans, which they may use to finance new cars and house renovations. By raising demand, these acts bolster the economy.

When demand rises, employers must expand both labour force size and output. As a result, unemployment falls, customers have more money to spend, and demand rises. The Fed then establishes a target range to maintain a healthy level of inflation and unemployment.

## Rates Affected by the fed fund rates

The prime rate is among the rates that are most significantly impacted by the Fed Fund Rates (FFR). That is the standard interest rate that banks impose on their most valuable clients. Numerous consumer interest rates, such as deposits, bank loans, credit card rates, and adjustable-rate mortgages, are impacted by the prime rate.

The London Interbank Offered Rate (LIBOR), too, is affected. Banks all throughout the world base their interest rates on adjustable-rate mortgages on the LIBOR rate. Its role as the relevant price index for consumer goods is scheduled to be phased out gradually starting in 2022 and completely by June 2023. LIBOR is going away from 2023.

Even longer-term interest rates are indirectly influenced by the FFR. For a longer-term Treasury note, investors choose a greater interest rate. Long-term conventional mortgage interest rates are indirectly influenced by the yields on Treasury notes.

## Conclusion

Banks are not required to charge the exact federal funds rate by the FOMC. Instead, the FOMC establishes a target rate as a benchmark. Negotiations between the two banks result in the final interest rate that a lending bank will impose. The effective federal funds rate is the weighted average of interest rates for all transactions of this nature.

While the Federal Reserve System can change the money supply to cause interest rates to move in the direction of the target rate, the FOMC cannot impose a specific federal funds rate. It is possible to lower interest rates by adding more money to the system. On the other hand, by reducing the money supply, it can raise interest rates.

*-Akshaya Pawar*



# Machine Learning in Finance

Machine learning has come to play an integral part in the financial ecosystem, from approving loans to credit scores, to managing means, and assessing pitfalls. But many technically-smart fiscal services professionals have an accurate view of where machine literacy can play a part in their companies.

## **Why financial institutions are using AI and machine learning?**

Artificial intelligence and machine learning can expedite procedures and enhance the utilisation of unprocessed data. In turn, it may enhance corporate results while saving time and money. Finance firms are increasingly relying on machine learning and AI to automate tedious activities, improve consumer experiences, and outperform their rivals.

## **Current AI operations in Finance, Banking, and Insurance:**

### **Portfolio Management:**

The term “ robo-counsel ” was basically unheard- of just five times ago, but it's now common place in the fiscal geography. The term is deceiving and doesn't involve robots at all. Rather, robo-counsels (companies similar to Betterment, Wealthfront, and others) are algorithms erected to calibrate a financial portfolio to the pretensions.

Robo-counsels have gained significant traction with millennial consumers who don't need physical counsel to feel comfortable investing, and who are less suitable

to validate the freights paid to mortal counsels.

### **Algorithmic Trading:**

With origins going back to the 1970s, algorithmic trading involves the use of complex AI systems to make extremely fast trading opinions.

Algorithmic systems frequently make thousands or millions of trades in a day, hence the term “high-frequency trading ”( HFT), which is considered to be a subset of algorithmic trading. Utmost barricade finance institutions don't openly expose their AI approaches to trading, but it's believed that machine literacy and deep literacy are playing an important part in calibrating trading opinions in real-time.

### **Loan/ Insurance Underwriting:**

Underwriting could be described as a perfect job for machine literacy in finance, and indeed there's a great deal of solicitude in the assiduity that machines will replace a large swath of the underwriting positions that live in the moment.

Especially at large companies (big banks and intimately traded insurance enterprises), machine literacy algorithms can be trained on millions of exemplifications of consumer data(age, job, connubial status) and fiscal lending or insurance results, similar to whether or not a person defaulted or paid back their loans on time.

At present, larger companies have the money to hire data scientists and can integrate massive volumes of history with present data to train their algorithms.



### **Client Service:**

Converse bots and conversational interfaces are a rapidly expanding area of adventure investment and client service budget. Companies like Kasisto are establishing finance centric chatbots to help guests ask questions via conversations similar as “ How much did I spend on groceries last month? ” and “ What was the balance of my particular savings regard 60 days ago ? ”

### **Security 2.0:**

Username, watchwords, and security questions may no longer be the norm for stoner security in five years time. Stoner security in banking and finance is a particularly high-stakes game. In addition to anomaly-discovery operations like those presently being developed and used in fraud, unborn security measures might bear facial recognition, voice recognition, or other biometric data.

### **Sentiment/ News Analysis:**

Barricade finances hold their cards tight to their casket, and we can anticipate hearing veritably little by way of how sentiment analysis is being used specifically. Still, it's supposed that the importance of the future operations of machine literacy will be in understanding social media, news trends, and other data sources, not just stock prices and trades.

The stock request moves in response to myriad mortal-affiliated factors that have nothing to do with ticker symbols, and the stopgap is that machine literacy will be suitable to replicate and enhance mortal “suspicion” of fiscal exertion by discovering new trends and telling signals.

### **Below is a short list of associations relating to the operation areas above:**

1. Portfolio Management – Betterment, Schwab Intelligent Portfolios
2. Algorithmic Trading – Renaissance Technologies, Walnut Algorithms
3. Fraud Discovery – Kount, APEX Analytics
4. Loan/ Insurance Underwriting – Compare.com
5. client Service – Kasisto
6. Security2.0 – FaceFirst, Cognitec
7. Sentiment/ News Analysis – report Social
8. Text To Speech

### **Conclusion:**

Due to enhanced software and hardware, the pace of disruptive technologies like AI and ML in Finance has rapidly increased in recent years. Machine learning applications are increasingly being used in the banking sector to improve outcomes for both customers and organisations.

*-Mrinal Bhakuni*



# REITs 101

## The Indian Perspective

Real Estate Investment Trusts a.k.a. REITs are the new age investment instruments allowing the retail investors to get their fair share of the premium commercial real estate returns. Lets deep dive further into the topic to understand the hooks and nooks of these instruments.

### Backdrop

A robust real-estate sector, comprising subsegments such as housing, retail, hospitality and commercial projects, is fundamental to the growth of an economy. With the Indian real estate industry expected to reach the market size of USD 1 trillion by 2030 from the current size of USD 200 billion (as in 2021), as per the report published by IBEF, there is no doubt that this sector is playing a pivotal role in helping the country emerge as one of the fastest growing economies of the world.

It would not come as a surprise that the second largest employer of the Country, i.e., the real estate sector, needs a substantial amount of continuous long-term capital for further growth provided its capital intensive nature.

As per the National Infrastructure Pipeline Report issued by the Department of Economic Affairs, Ministry of Finance, the funding requirement in the real

estate sector is estimated to be over USD 1.4 trillion by 2025. Furthermore, the Government of India's emphasis on new age asset classes such as data centers and logistics along with its aim to fulfil its target of providing housing to all, the financial pressure on the sector can be felt. Thus, it is imperative that additional channels of financing are put in place.

### REITs: The fund pool next door

Imagine this, enjoying all the benefits of owning an opulent Commercial complex in BKC, Mumbai, or one in the Commerzone of Pune or the largest IT park of Noida or to lease properties to tenants such as Amazon, Accenture, Qualcomm, Samsung, Flipkart, J P Morgan, Wells Fargo, HSBC, Facebook and many others without having to actually buy them and maintain them. This is what REITs do.

In general terms, REITs are investment vehicles that own and operate real estate assets, and allow individual investors to earn rental income without actually buying any assets. The assets typically owned by REITs include office buildings, shopping malls, apartments, warehouses and mortgaged properties.

Over the years, REITs have changed the way the real estate market operates, and has benefitted investors as well as real estate developers while doing the same.



The market regulator, SEBI, has done a commendable job in achieving the above with its Real Estate Investment Trusts Regulations, 2014 which was followed by encouraging and positive listing of the three REITs present in India, Embassy Office Parks in 2019, Mindspace REIT in 2020 and Brookfield REIT in 2021.

### **How are the stakeholders gelling with REITs (Advantages of REITs)**

#### **The developers**

- REITs have brought the much needed easy entry and exits for the developers, enabling them to monetise their assets
- REITs have facilitated in transforming the business from an asset-heavy to asset-light model
- Enabled the developers to focus on their core competencies, and segregation of operations

#### **The investors**

- Easy entry and exit in the real estate sector
- Enabling small retail investors to participate in asset classes that are normally unaffordable to them.
- Rich source of cash inflows, a result of the distribution policy put in place by regulators ( 90% of the net cash flow of a REIT is to be distributed to the unitholders)
- Diversification of portfolios from the traditional equity and debt asset classes.

### **Indian REITs in the Global landscape and way forward**

Since the inception of REITs in the US in the 1960s, several countries around the world have introduced

such instruments. The US for instance being the first one to introduce REITs has witnessed high growth in its REITs market. In order to get perspective of the size of the REITs in the US, the market capitalization of REITs in the US was a little above USD 1.9 trillion with over 198 listed REITs as per the Global REIT Survey 2021.

While the market is nascent and still evolving in India, as the framework in India matures with the necessary policies for the asset class to flourish, the expansion of the country's listed real estate sector will be massive.

*-Rohan Jain*



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