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### Finshots College Weekly - Stocks & Speed

In this week's newsletter, we talk about India's stock markets, plans for 6G, ice creams and more.

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## Is India's stock market riding too high?



**Quote of the Day:** "<u>The more you learn, the more you earn.</u>" - Frank Clark.

Let's talk about stock market crashes. Even if you haven't lived through one, you must have definitely heard or read about the big ones: the dot-com bubble in 2000 or the global financial crisis of 2008. Those events rocked the global economy, wiping out wealth and destabilising markets for years.

But behind these crashes lies something that's often mentioned in the financial world: the Cyclically Adjusted Price-to-Earnings (CAPE) ratio, also known as Shiller's P/E.

You see, back in 2000, right before the tech bubble burst, the CAPE ratio for the U.S. stock market hit a record high. It peaked



again in 2007, right before the global financial crisis struck.

So, why are we talking about it today?

Because the CAPE ratio for Indian equities is today sitting at a hefty 43 times.1 And that's dangerously close to where it was before the 2008 crash. Add to that the fact that foreign institutional investors (FII) have pulled nearly \$7 billion from Indian stocks in October alone.

So, should we start panicking? Is another market crash on the horizon? Well, it's complicated. You can't just look at one number and call it a day.

So, let's break down what this CAPE ratio really means and how it fits into the bigger picture.

Even before we do that, let's zoom in on the recent rise in Indian stock markets. The BSE Sensex and Nifty 50, India's major stock indices, have been on a steady climb. And when stock prices go up way higher, they often outpace company earnings making stocks more expensive. By "expensive," we're referring to the price-to-earnings (P/E) ratio, which compares the price of a stock to the company's earnings.

Let's say a company has a P/E ratio of 25. This simply means investors are willing to pay 25 times the company's earnings for a share. It's like paying ₹25 for something worth ₹1. A higher P/E ratio often means that people are hopeful about the company's future; therefore, they're paying more than what's actually worth today. But a higher P/E can also mean that the stocks are too expensive for what they're actually worth.



Right now, the Nifty 50 is trading at a P/E ratio of about 24.7, higher than its 10-year average of 23.4. Economists call this "irrational exuberance," meaning the market might be too confident, setting itself up for a fall.

Here's an easy way to understand this: imagine you're at a market with two identical items. One costs ₹100, the other ₹120. Why the difference? Let's say the more expensive one is from a popular brand that everyone is talking about, so more people want it, even though both items are exactly the same.

This is what happens with stocks, too—demand, along with factors like investor sentiment, growth expectations, and market conditions, drives up the price, even if the value hasn't really changed. For example, investors may be willing to pay more for a company if they believe it has strong future growth potential, even if its current earnings don't justify the high price.

And that's what's happening with markets today. Prices are rising faster than the actual earnings.

But the P/E ratio only tells us what's happening in the short term. If we want a longer-term view, we turn to the CAPE ratio. So, what's the CAPE ratio, and how is it different?

Unlike the P/E ratio, which focuses on one year's earnings, the CAPE ratio smooths things out by averaging earnings over the last ten years and adjusting them for inflation.

It was popularised by Robert Shiller and John Campbell in 1988 as a way to smooth out short-term fluctuations and better assess a stock's value over an entire business cycle.



To read it is simple: when the CAPE ratio is high, stocks are probably overpriced. When it's low, they're likely undervalued. Sounds straightforward, right? Not quite. Because the CAPE ratio has its limitations too.

For one, it assumes that the stock market's composition stays the same over time. But we know that markets evolve.

Just look at the U.S. stock market. Tech giants like Apple and Microsoft have grown massively over the past decade, yet the CAPE ratio still includes earnings data from when these companies were much smaller players.

And then there's the issue of stock buybacks. Companies often buy back their own shares, which reduces the number of shares available and makes their earnings per share look better without actual growth. The CAPE ratio doesn't take this into account, which means it can sometimes give a distorted view of the market.

And comparing CAPE ratios across countries can be misleading too. U.S. companies have experienced stronger earnings growth and more buybacks than Indian companies, so comparing them directly isn't entirely fair.

Now, India's CAPE ratio is high, which indicates that stocks here are expensive.

#### Why?

Well, for starters, India's economy is growing faster than many other countries, making it an attractive destination for investors.



It's like a trendy new restaurant and everyone wants in.

And India's growing weight in global indices like the MSCI is attracting more institutional money, driving up stock prices. So, even though the CAPE ratio is high, there are reasons for it. India's growth story is compelling, and investors are paying a premium for it.

But hey, the Indian stock market is also the second-most expensive in the world after Greece! So, does that mean a crash is coming?

Not necessarily.

Critics argue that the CAPE ratio is based on historical data and doesn't always predict future crashes. And as we know, the markets evolve, and past trends aren't always a reliable guide.

Even Shiller, the creator of the CAPE ratio, started looking at another metric during the pandemic—the "Excess CAPE Yield."4 This compares stock earnings to returns on inflation-adjusted government bonds. If bond yields are low, investors are more willing to pay a premium for stocks, even if they look expensive.

So, where does that leave us and the Indian stock markets? See, a high CAPE ratio might suggest that stocks are overpriced, but it's just one piece of the puzzle.

And because the markets never move in isolation, you also need to consider other factors, like growth trends and how companies are returning value to shareholders. The market's changing, and so should the tools we use to understand it.



Clearly, the CAPE ratio is more like a weather vane than a crystal ball. It signals trends, but it won't predict the future.

The markets might drop. Or they might soar.

In the meantime, we'd do well to pay heed to what the legendary investor and fund manager <u>Peter Lynch</u> once said... "No one can predict with any certainty which way the next 1,000 points will be. Market fluctuations, while no means comfortable, are normal." and... "You only need a few really big stocks in a lifetime to make a lot of money".

So, for now, all we can do is stay alert and keep watching.



## Is India's stock market riding too high?



A few days ago, Elon Musk once again dazzled the world by unveiling some futuristic tech — driverless cars and humanoid robots that seemed straight out of a sci-fi movie. But these technologies are real, and they're coming sooner than you might think. The potential is enormous too, from cars driving themselves to robots doing human tasks, and the future looks increasingly like one where machines and humans interact seamlessly.

But let's pause for a moment. Why are we talking about Tesla's innovations here?

Because none of this futuristic tech can exist on a large scale without one crucial element - *networks*. Super-fast, reliable networks capable of handling huge amounts of data.

And that's where 6G comes in.



You're probably familiar with 5G — maybe you're even using it right now. But 6G? Well, that's about to take things to a whole new level. While 5G is still rolling out, 6G is expected to be fully deployed by 2030, promising 100 times faster speeds and near-zero lag in connection (called network latency). So, we're talking about a world where Al-driven machines and entire smart cities operate in perfect harmony.

And that brings us to India.

Turns out, India has some pretty big ambitions when it comes to 6G. We rank in the top six globally for filing 6G patents.1 And the government has set a bold target — to secure 10% of global 6G patents in the next three years.

And patents do matter a lot in this context. Think of it this way. Owning patents in 6G is like holding the keys to the future. It allows countries and companies to set global standards, charge licensing fees, and even influence how the technology develops. So, for India, securing these patents is about shaping the very infrastructure that will drive the next wave of technological innovation.

It also wants to contribute one-sixth of global 6G standards by 2027. To make this happen, the government launched the Bharat 6G Alliance, a network of stakeholders driving research and development. The vision is to create a nine-year mission (from 2022 to 2031) to fund 6G in three phases, and lead to field trials and global standard contributions in the next few years.



But the big question remains: Is India really ready to lead the 6G race? To answer that, let's start with a simple explanation of what 6G really is.

Imagine 5G as a motorcycle — it's fast, efficient and pretty cool. But 6G? That's a jet plane. It's 100 times faster than 5G and designed to support everything from AI-powered robots to holographic communication and autonomous vehicles. So it's not just about faster internet speeds; it's about creating a world where everything is connected in real-time. Or in simple terms, a world where remote-controlled factories, self-driving cars, and smart wearables that communicate with your senses will be the norm.

But all this tech needs infrastructure, research and a highly skilled workforce to back it up. And here's where things get tricky for India.

See, building a 6G network isn't just about flipping a switch. It requires massive investments in infrastructure. While India has made impressive strides in rolling out 5G, we're still not fully prepared for 6G. Right now, India has about 4.5 lakh 5G Base Transceiver Stations (BTSs) from over 29 lakh BTSs in total. This infrastructure connects mobile devices to cellular networks. But for 6G, we'll need a whole new level of infrastructure — fiber optics, satellites and technology that can handle higher frequencies.

Then there's the issue of research and development. For 6G, the Indian government has allocated ₹10,000 crores for 6G research over the next decade.

That's a decent start, but when you compare it to the ₹38,000



crores (\$4.5 billion) committed by Japan and the US, it seems relatively small.3 And let's not forget China, where the telecom giant Huawei started work on 6G in 2019 and spent over \$22 billion on R&D in 2021 alone.4 So, India is going to need to step up its R&D game if it wants to stay competitive. Because it's not just about building infrastructure but also about developing the cutting-edge tech that will power 6G.

But perhaps the biggest hurdle is the skills gap. Building and maintaining a 6G network requires a workforce of highly trained engineers, Al specialists, and telecom experts. And right now, India's education system isn't fully equipped to produce the talent needed for this massive leap in technology. Although we have about 1.5 million engineering graduates every year, 48% of those remain unemployed.5 And that leads to the talent migrating to better tech enabled countries. That also explains the highest rate of economic migration of the workforce in the world. So, the bottom line is that we'll need to focus on upskilling our workforce. And we'll need to do it fast.

There's also the issue of sustainability. Since most of the 6G supporting communication devices will be battery-powered, they can have a huge carbon footprint. So, as India pushes for carbon neutrality by 2070, balancing the energy demands of 6G with our sustainability goals is going to be a major challenge.

And then there's cybersecurity. With faster networks come more sophisticated cyberattacks. As 6G rolls out, India will need to significantly ramp up its cybersecurity measures. Otherwise, we could face a wave of data breaches, fraud and other cyber threats that will put citizens at risk.



So, where does all of this leave us, you ask?

India's progress in 6G patents is promising, but we still have a long way to go. A 2021 study by Japan's Nikkei and Cyber Creative Institute revealed that China held 40% of 6G patents, while the US held 35%. India, meanwhile, accounted for just 1.5%. That's a big gap.

On top of that, China also leads in setting global standards for 6G technology. India, by comparison, is lagging behind. For context, if a country wants to shape the future of 6G, it can't just sit on the sidelines. It needs to be part of the technical committees and subcommittees of the International Organization for Standardization (ISO), which brings together standard bodies from 160 countries. And a Geneva Internet Platform study found that as of 2021, India was only part of 400 such committees, while China was involved in 732.

So, does this mean that India's 6G dreams are doomed? Not quite. Because 6G is crucial for India's future. It will power smart cities, automated industries and revolutionize sectors like healthcare and education for the world's most populous nation.

Besides, don't forget that 6G will be built on the infrastructure and capacity established by 5G networks. And India has been on fire with its 5G rollout, setting up over 4,00,000 stations in the first 15 months which is <u>faster than any other country</u>. The excitement is clear, with telecom giants like Bharti Airtel and Reliance Jio gearing up for the 6G era. Even new players, like Adani Network, are stepping in through telecom spectrum auctions, ready to join the action



Public-private partnerships will also be key to accelerating 6G development, and India has already started collaborating with nations and experts on this front.

So yeah, India's ambitions for 6G are bold, but filing patents and setting targets is just one piece of the puzzle. To truly claim a seat at the global 6G table, the foundational bits — skilled labor, cutting-edge infrastructure and strong R&D, need to fall into place.

The numbers show progress. Mobile connections in India have skyrocketed from 904 million to 1.16 billion, broadband users have jumped from 60 million to 924 million and the fiber optic network has expanded from 11 million to 41 million kilometers. So India seems to be on the right track.

But it's not just about the scale. It's about how quickly we adapt.

We've still got about six years until 2030, the year when 6G is expected to roll out. And if India's rapid adoption of 4G and 5G is any indication, we just might find ourselves leading the charge when the 6G curtain rises.

And we hope to see that in reality in 2030.



## Today's Discussion 👺: The ice cream of Juhu scheme



If you have ever looked closely on the walls of an older Naturals Ice Cream outlet, you would know the story of how an idea blossomed into the beloved brand.

But in case you missed it, here's how it all began-Back in 1984, in the bustling streets of Mumbai, Raghunandan Kamath had an idea—he wanted to make ice cream the way people would make it at home.

Yup, no artificial flavours, just real fruits. But Mr. Kamath wasn't sure if people would flock to his new, fruit-based ice creams right away.

So, he brought out his clever plan.



He knew that if people tried his ice creams once, they'd definitely come back for more. So, to get them in the door—he started by serving Pav Bhaji as the main dish, with ice cream as an add-on. And guess what? It worked!

His little eatery in Juhu started to get attention, not just for the food but for those real-fruit ice cream scoops. Soon enough, their ice cream became the star of the show.

And today, what once started as a humble thought with just 12 flavours of 3 ingredient-based ice cream has expanded to more than 150 outlets across 40 cities!



#### And that's all for today folks!

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