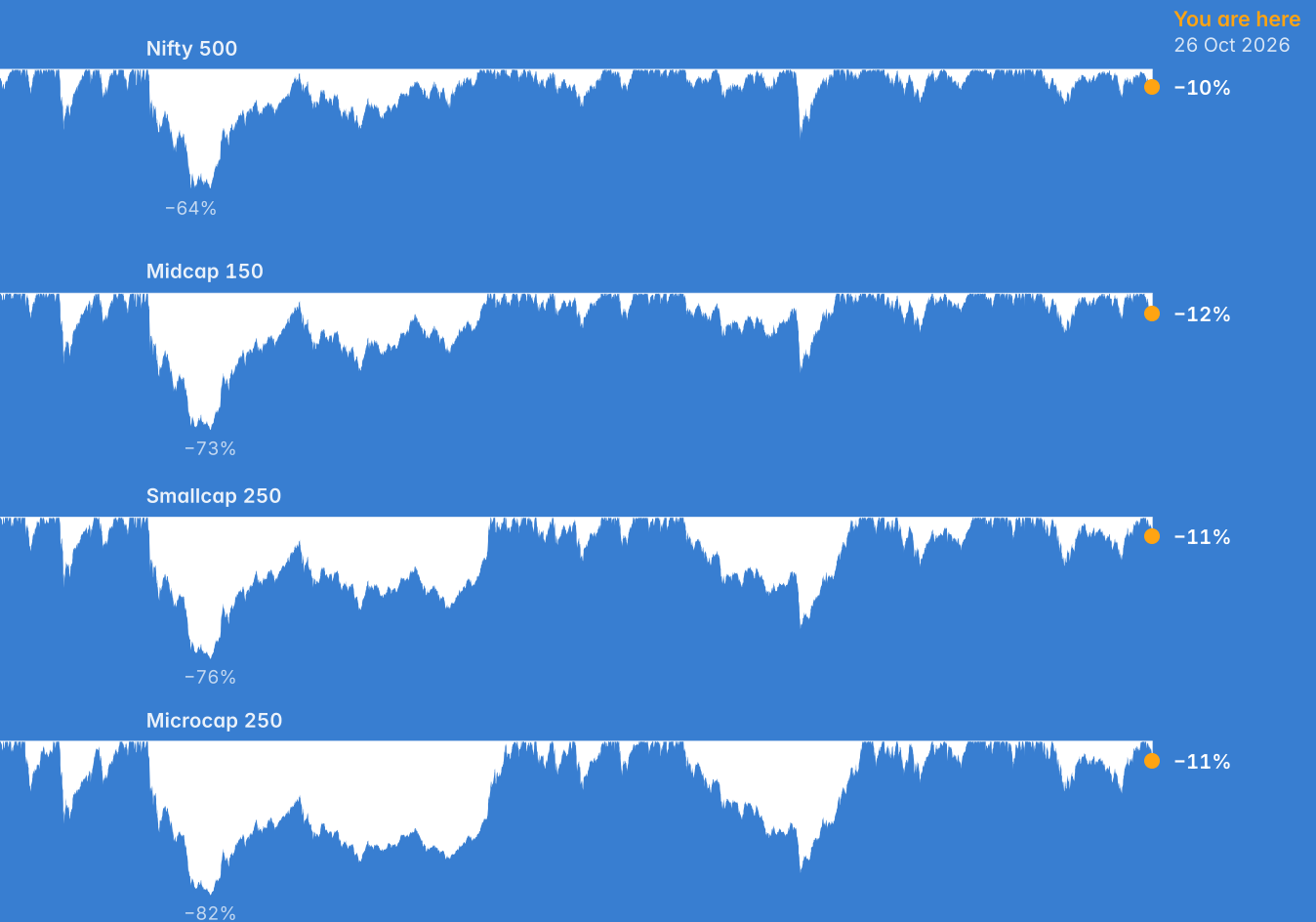


How to Survive a Bear Market

A small, sardonic guide to losing money in an informed way

Every fall in four Nifty indices since April 2005, each hanging from its own record: the smaller the companies, the deeper they tend to fall.



How to Survive a Bear Market

A small, sardonic guide to losing money in an informed way

AUTHOR	Bhuvanesh, Zerodha
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EDITION	Updated 27 October 2026
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DATA	Market data run to 20–26 October 2026, depending on the series. No 27 October observation is included. Monthly studies use completed months through September 2026. The exact cut-off for every series is on page 210.
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SOURCES	Every number traces to a named public source, listed under each chart and in the notes from page 214.
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HOW IT WAS MADE	Written and dictated by the author, with heavy use of Claude and Codex for data, code, charts, transcription and editing. There is more on this in the first chapter.
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This book is for education. It is not investment advice, and nothing in it is a forecast. If it were, I would not be working for a living.

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01

CHAPTER 1

Hi, how are you?

I ask that even as I chuckle to myself, because it's always funny to ask investors how they're doing when the markets are bleeding. And what's funnier than watching the markets fall 10 or 20% while you sit there lamenting your losses? I can't think of a single thing.

Considering the silly way I've opened this, you might be wondering what this thing is. See, whenever the markets take a turn for the worse, since I work at a broking firm, I always have to, nay, I'm always forced to write something. Some words of reassurance, something soothing to calm the frayed nerves of investors. Not that it works, but hey, who says every part of your job has to be enjoyable? Sometimes you have to do things you don't like, and this falls squarely into that bucket.

Before LLMs, I would write a long post on Z-Connect with a whole bunch of charts, data points and quotes, and just ejaculate a ton of gyaan on what to do, what not to do, historical context, so on and so forth. But this mini bear market, for the time being at least, has arrived in a post-LLM world. So I figured I'd go all in and write a short book of sorts, an evergreen guide on how to grit your teeth, hold your nose and live through bear markets, corrections and other assorted varieties of wealth destruction.

Why write this?

Look, I know better than anybody that investors don't listen to advice. Think about the sheer absurdity of giving investment advice in 2026. Lakhs and lakhs of books on investing have been written. There have been countless podcasts and videos, and in all manner of languages, everybody has given gyaan on every possible thing in the markets. And yet investors do the same silly things over and over again.

And remember, for almost nothing, people now carry around an entity, and yes, I'm anthropomorphising, trained on the collective knowledge of humanity. And yet, at every 2 or 3% fall, investors think it's the end of the world. So what does that tell you? Things will never change. Natural stupidity is a reality even in the age of artificial intelligence.

So now that we have established that investors will always do dumb things, what can we do? See, I believe in progress. I believe in improvement. If you're not better today than you were yesterday, it's a waste of your life. *Atomic Habits*, 1% improvement, whatnot. You and I are retail investors.

We know for a fact that we will do dumb and silly things, so why not do them in new, unique, stylish ways? What's the fun in doing dumb things without knowing the data, without being financially literate, without knowing market history? Doing dumb things becomes fun when they are informed dumb things, logical dumb things, backed by data and by market history. I know that's an oxymoron, but hear me out.

Gandhiji once said, sorry, Aristotle once said, that you tell a man not to sit on a gas stove, and what does he do? He takes off his pants, applies moisturiser, finds the most vastu-compliant direction and sits on the stove. He gets his bum burnt, and then he comes and tells you, "Bro, you were right." That's the reality. You can't fight evolution.

So the point I'm trying to make is that I believe in *scientific stupidity*. I have made peace with the fact that people won't listen to my advice. I have made peace with the fact that people will do the same dumb things. What I refuse to make peace with is unscientific stupidity.

Because if you're going to be stupid, you can't be the same kind of stupid as everybody else. Then you won't stand out. How do you get yourself noticed in a sea of stupidity? You need your own style of stupidity, your own unique way of doing stupid things, so that you stand out in a sea of mediocre stupid people.

What follows is a guide to doing all the dumb things in investing in an informed, logical, historically informed way. There's enough gyaan, enough charts and enough data to give you all the evidence you need to commit the most spectacular acts of investing idiocy the world has ever seen. So spectacular that it's like fireworks. So spectacular that it's a glorious painting. More spectacular than the first sunrise after a bleak midwinter's night.

A confession

Before I go any further, a little disclaimer. I've used Claude and Codex heavily in making this book, for everything from gathering, analysing and cleaning the data to making the charts. I've also relied on them to transcribe my voice notes, edit them, structure the book and sequence things. Every number comes from the people who publish the data, NSE, BSE, the RBI, MoSPI, FRED and the rest, and every method is written down for anybody with a laptop and too much time to check. The opinions, the jokes and the mistakes are mine.

To be honest, without Claude this book simply wouldn't have been possible. Crunching decades of market data, building and checking about a hundred charts, chasing down every source and turning hours of my rambling voice notes into something readable would have taken me the better part of a year, and I'd have given up halfway.

I just wanted to be clear before some smarty pants jumps on the "superior humanity" bandwagon and says, "Oh, this is AI slop." To that person I say: calm down, shut up and enjoy the privilege of the gyaan I am bestowing on your mediocre mind.

Why now?

I started writing this book in March, after Trump and Netanyahu decided to bomb Iran and kill not only the supreme leader but, to hear Trump tell it, all his potential successors in one fell swoop. "They are all dead," he said. Iran then named Khamenei's son the new supreme leader.

The Nifty fell, and I couldn't shake the hunch that this was the beginning of a bad phase for the markets. Not because this act was any different from all the other acts of stupidity committed by the two gentlemen named above, but because it was one more in a long series of acts of idiocy that would have disastrous consequences.

How bad is it right now?

Before we get into the wars, oil and everything else, here's what has happened to your money.

The Nifty 50 is about 14% below its January high. Smallcaps are up about 5% since the day before the war. The S&P 500 and the Nasdaq keep rallying because the AI trade keeps rallying, and right now the AI trade is the only game in town. TINA: there is no alternative. AI is TINA.

Here's where each piece of a sensible portfolio stands against its own record. Large caps are about 11% below their high and midcaps about 12%. Smallcaps and microcaps got thrashed twice, in early 2025 and again in March, falling as much as 26% and 28%, and have since clawed back to within 12% of their highs. Gold, the thing everybody runs to when the world is on fire, is 19% below its January record, the worst of the lot. Government bonds have barely moved, which is their whole job.

And if your portfolio looks worse than the Nifty, you're not imagining it. An index is a basket, and the stocks in it peak at different times. In this sample, even when the index was at a record, the typical stock was about 9% below its own high. On an ordinary day since 2003, it's about 18%. Right now it's 27%, while the Nifty 500 is 10% off.

Measure from the September 2024 peak and it looks worse. Among the 1,236 stocks already listed then that meet our ₹1 crore-a-day trading cut-off today, the typical stock is 35% below its highest close since that peak, and more than two in five are down 40% or more. The Nifty 500 is down 12%. So when you open your holdings page and see a sea of red, that's why.

It's bad, but it isn't unusual. The typical stock has been in better shape on 79% of trading days since 2003, which means it has been in worse shape on the other 21%. In 2008 it was three-quarters below its high, and in 2020 about half.

The Sensex hasn't seen its September 2024 peak in more than two years. For most people who started investing after COVID, this is the longest stretch they've ever spent in the red. A monthly SIP in the Nifty 500 started one or two years ago is showing a loss today. The three-year SIP has barely broken even. These are nominal returns, before inflation takes its cut.

FIGURE 1.1

Where each asset stands

Fall from the record close, daily, January 2024–26 October 2026; latest value marked

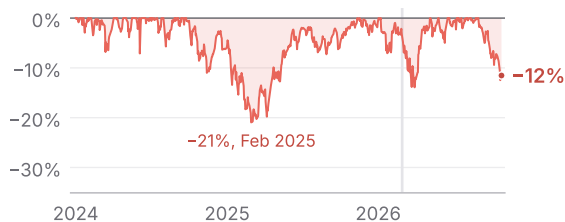
Large caps

Nifty 100



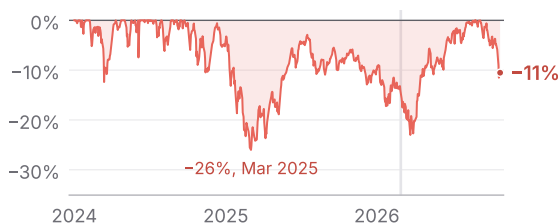
Mid caps

Nifty Midcap 150



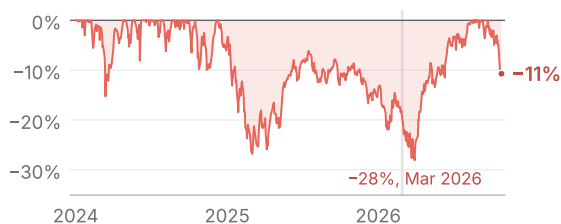
Small caps

Nifty Smallcap 250



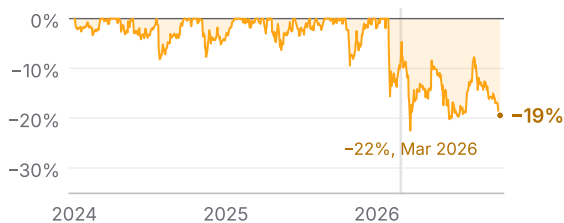
Micro caps

Nifty Microcap 250



Gold

Rupee price



Government bonds

Nifty 5-year G-Sec



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Each panel is a fall from that asset's own record close, January 2024 to 26 October 2026, on one shared scale; the light line marks 28 February 2026, when the war began. Large caps are the Nifty 100, mid caps the Midcap 150, small caps the Smallcap 250 and micro caps the Microcap 250, all with dividends reinvested. Gold is the rupee price, without taxes or making charges, and bonds are the Nifty 5-year G-Sec index, interest included. None of it includes fund costs or tax.

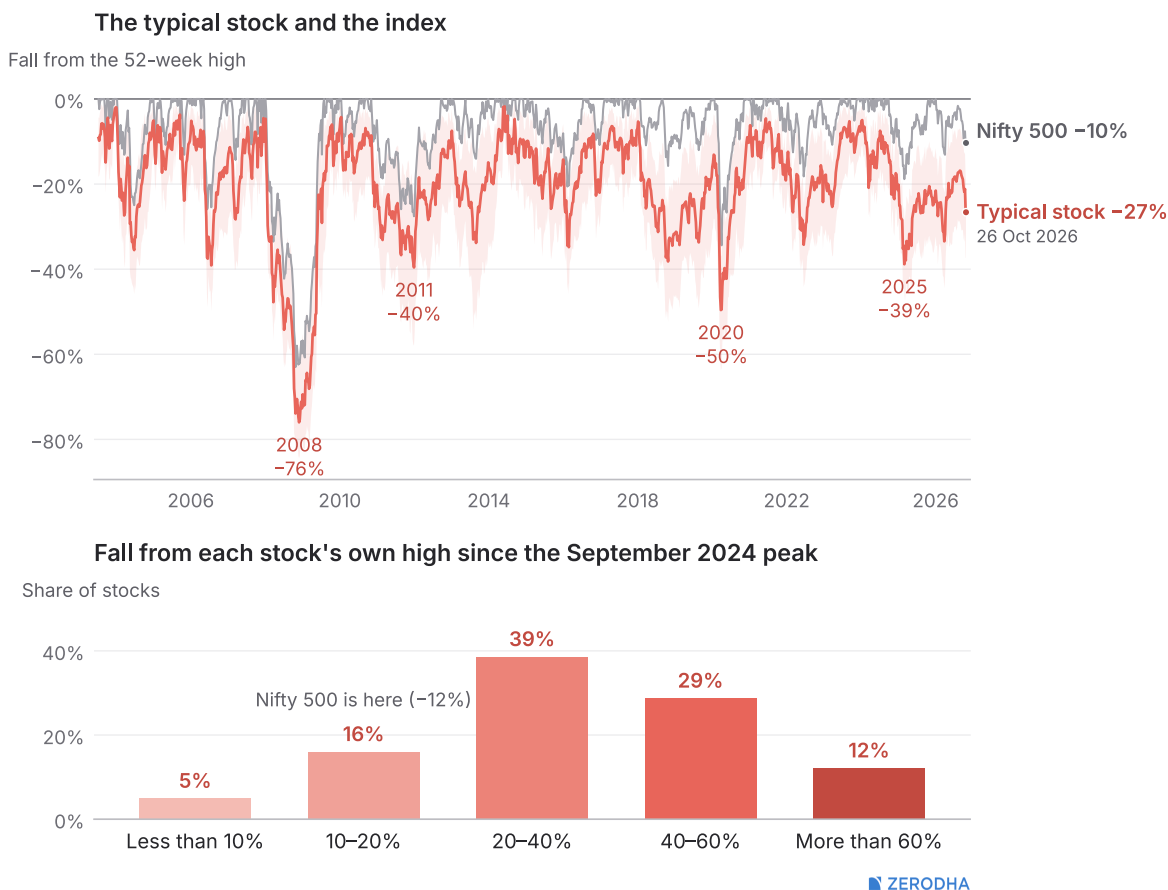
SOURCE

Nifty Indices, World Gold Council
· Zerodha analysis

FIGURE 1.2

The typical stock has fallen further

Liquid NSE stocks and the Nifty 500, fall from their high, July 2003–26 October 2026



Top, weekly: the red line is the typical (median) stock's fall from its own highest close of the past year, the shaded band holds the middle half of stocks, and the grey line is the Nifty 500 on the same measure. Bottom: the 1,236 stocks already listed on 26 September 2024, when the Sensex and Nifty 500 set their records, grouped by how far each now sits below its own highest close since then. Stocks are NSE companies trading at least ₹1 crore a day in today's rupees, counting companies that were later delisted. Prices are adjusted for splits and bonuses, not dividends.

SOURCE

NSE, Nifty Indices, stocks.events, MoSPI · Zerodha analysis

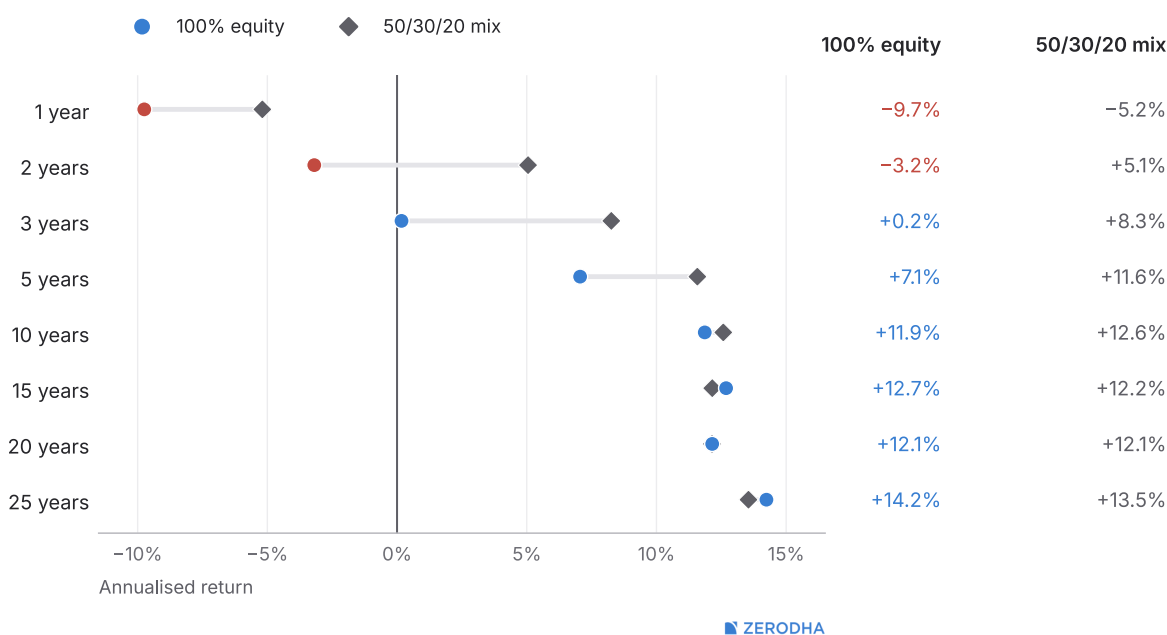
After inflation, it's worse. Prices have risen about 7% since that peak, so in terms of what your money can buy, the Sensex is about 20% below it, and the Nifty 50, even with dividends, about 17%.

Put a more diversified portfolio beside it and the picture changes. Over the past three years, a monthly Nifty 500 SIP has returned about 0.2% a year. A mix of 50% Nifty 500, 30% government bonds and 20% gold has returned about 8.3%, rebalanced every January. Even that mix has lost money over the past year. Diversification helps, but it doesn't make every stretch pleasant.

FIGURE 1.3

What your SIP has earned, depending on when you started

Annualised SIP returns at 26 October 2026 · monthly contributions · nominal rupee returns



₹10,000 invested at each completed month's last trading close, valued on 26 October 2026; returns are annualised (XIRR). Each row ends on the same day and starts that many years earlier, with 12 monthly instalments per year; October 2026's instalment is not yet included. Equity is the Nifty 500 with dividends reinvested. The mix holds 50% Nifty 500, 30% five-year G-Sec total-return index and 20% rupee gold, rebalanced every January. Gold's early history uses RBI monthly averages as month-end price proxies, linked to GoldHub's June 2005 close; later gold uses canonical GoldHub INR history, including the documented stale-quote repairs. The 25-year result therefore includes a modelled gold history. No deposit-rate proxy is used in this chart. Before fund costs and tax.

SOURCE

Nifty Indices, RBI DBIE, World Gold Council · Zerodha analysis

These are the returns of SIPs ending now. They don't tell you what every one-, three- or five-year SIP has earned, or what yours will earn from here. We'll get to that history later. For now, this is what investors are sitting with.

What is happening around us?

It isn't just the headlines getting louder. Uppsala University's conflict researchers recorded 65 conflicts involving at least one government in 2025, including eight between states. They also recorded 75 conflicts between armed groups and 55 governments or armed groups deliberately killing civilians. These categories count different things and can involve the same places and people, so adding them up doesn't give us 195 separate wars. But the rise is real, and it began well before this year's oil shock.

Iran sits right next to the most important energy choke point in the world, the Strait of Hormuz. Before the war, about a fifth of the world's oil and a fifth of its liquefied natural gas passed through it. The Middle East supplies about a quarter of the world's urea exports, and Qatar alone makes about a third of the world's helium. Around the strait sit the biggest oil, gas and petrochemical producers on the planet. You didn't need to be a genius to see that if things flared up, the consequences for the region and for global energy security would be spectacular.

That's pretty much how it played out. As the bombs kept falling, Iran hit back at American bases in Bahrain, Kuwait and Qatar, at Qatar's giant gas hub at Ras Laffan, where two LNG trains that will take years to repair were knocked out, and even at Amazon's data centres in the UAE.

Drones forced a shutdown at Saudi Arabia's Ras Tanura refinery in March. Old rivalries flared too. Saudi Arabia and the Houthis in Yemen had lived with an uneasy truce since 2022. Since July, the Houthis have been firing missiles and drones deep into the kingdom, and on 10 October a missile hit the passenger terminal of Riyadh's main airport, killing at least twelve people.

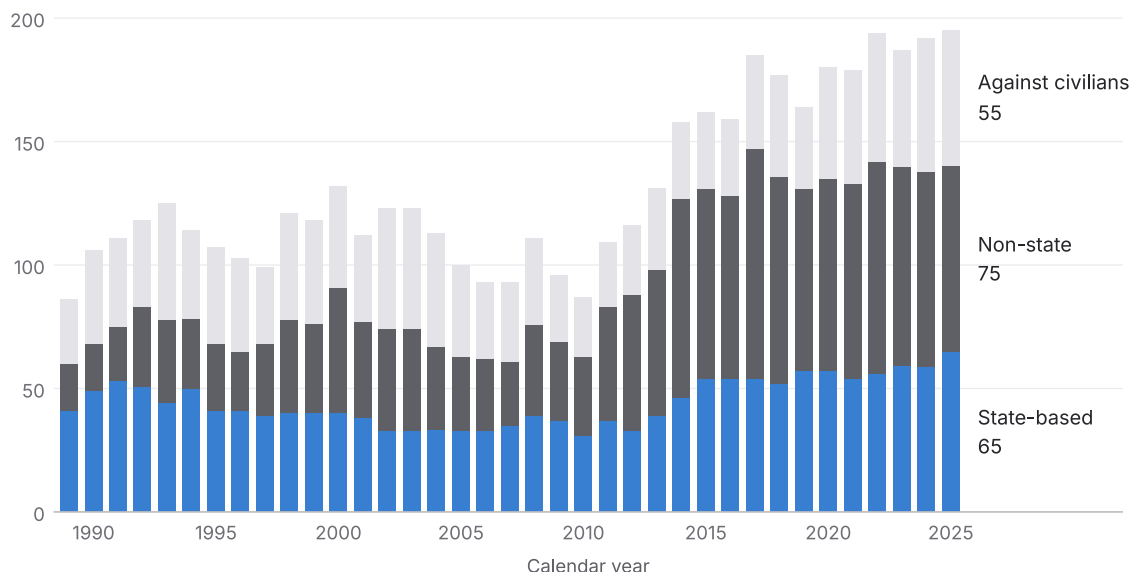
I want to be really clear that I had no idea how far markets would fall. My best guess, and it was a guess, was that they would go sideways. There are only two kinds of people who can predict where the market goes: God and liars. I'm neither. Actually, there's a third, astrologers, and in the interest of full disclosure, I'm a shitty astrologer.

FIGURE 1.4

Armed conflict and violence against civilians

Annual counts in three UCDP categories · 1989–2025

Annual category counts



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Annual counts, 1989–2025, from UCDP version 26.1 via Our World in Data. State-based conflicts involve at least one government; non-state conflicts are between armed groups. Both require at least 25 battle-related deaths in a year. The third category counts governments or armed groups deliberately killing at least 25 civilians in a year, each perpetrator counted once. The categories use different counting units and can involve the same actors or places. Their sum is not a count of wars, countries, separate incidents or deaths. Peaceful protests and trade disputes are excluded. Comparable coverage starts in 1989; unfinished 2026 is not included.

SOURCE

UCDP v26.1 (2026), processed by Our World in Data · Zerodha analysis · CC BY 4.0

And that's more or less how it has gone. Iran more or less shut the strait. Lots of otherwise sensible people said we were staring at the mother of all oil shocks, one that would make the 1970s look like a costume party, and there were serious calls for \$200 a barrel. Brent did go from about \$71 the day before the first strikes to \$138 by early April.

In the first two weeks oil rose 45% and the Nifty fell 8%, and by the Nifty's March low, oil was up 71% and the index was down 11%. But just like in 2008, China pretty much saved the world single-handedly. It cut its

seaborne crude imports by more than 40%, which put a lid on the oil price. Rory Johnston, the oil analyst, has a brilliant piece on this called “How China Saved the Global Oil Market”.

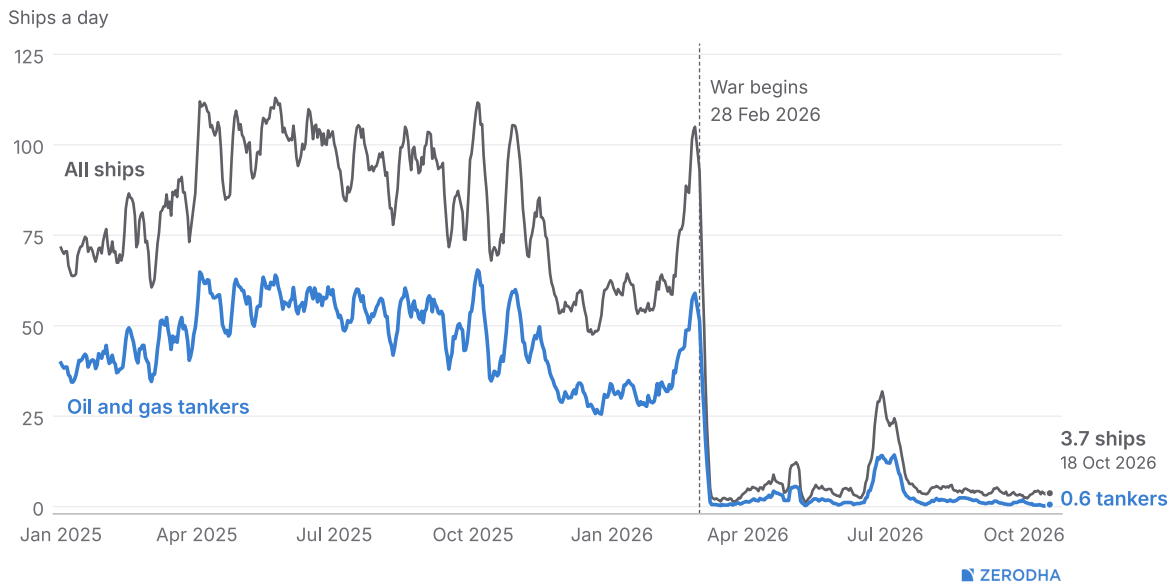
Since then we’ve been through the cycle of Trump’s vacillations: a ceasefire in April, renewed fighting in July, and more threats and offers since than I can count. If there’s one thing you can give Donald Trump credit for, it’s that he keeps things entertaining. It isn’t clear that this crisis is over, or how and when it will end.

The Saudis and the Emiratis are pushing as much oil as they can through pipelines that go around the strait, but that adds cost, and only a handful of ships a day still make it through. The International Energy Agency has called this the largest supply disruption in the history of the oil market, and Brent was still at about \$115 a barrel on 20 October.

FIGURE 1.5

Ships through the Strait of Hormuz

Ships crossing the Strait of Hormuz each day, seven-day average, January 2025 to 18 October 2026



Ships passing through the Strait of Hormuz each day, seven-day average. About 86 ships a day crossed in 2025 and about 78 in February 2026. Since 1 March it has averaged about six, and in September fewer than four. Counts come from ship transponders, so vessels that switch them off are missed.

SOURCE
IMF PortWatch (satellite AIS data) · Zerodha analysis

And as if an oil shock and an energy shock weren't enough, everybody in the world seems to have decided that this is the moment to get cute. Here's what's happening as I write this. The war between Russia and Ukraine is in its fifth year. Ukraine struck a Russian refinery about every three days in the first eight months of 2026, Russian refinery runs fell about 30% year on year in June, and American diesel hit a record \$6.53 a gallon in September.

So, and I can't believe I'm writing this sentence, on 9 October Donald Trump cut a deal with Vladimir Putin to buy Russian diesel, with the midterms a month away. He had already told Ukraine to stop hitting refineries, and in October Ukrainian officials reported restrictions on their military's Starlink and Starshield access, though who ordered them remains disputed. Russia, meanwhile, keeps hitting ships carrying Ukrainian grain, which feeds much of North Africa and the Middle East. In July, a missile strike on a corn ship off Odesa killed ten sailors.

Half a million people marched across France on 17 October, in protests that began with students in the Paris suburbs angry about crumbling schools and turned into riots and a fight about budgets, wages and fuel. Belgium, Portugal and Italy had their own versions the same weekend. The war in Sudan, now in its fourth year, is the biggest human catastrophe nobody is talking about.

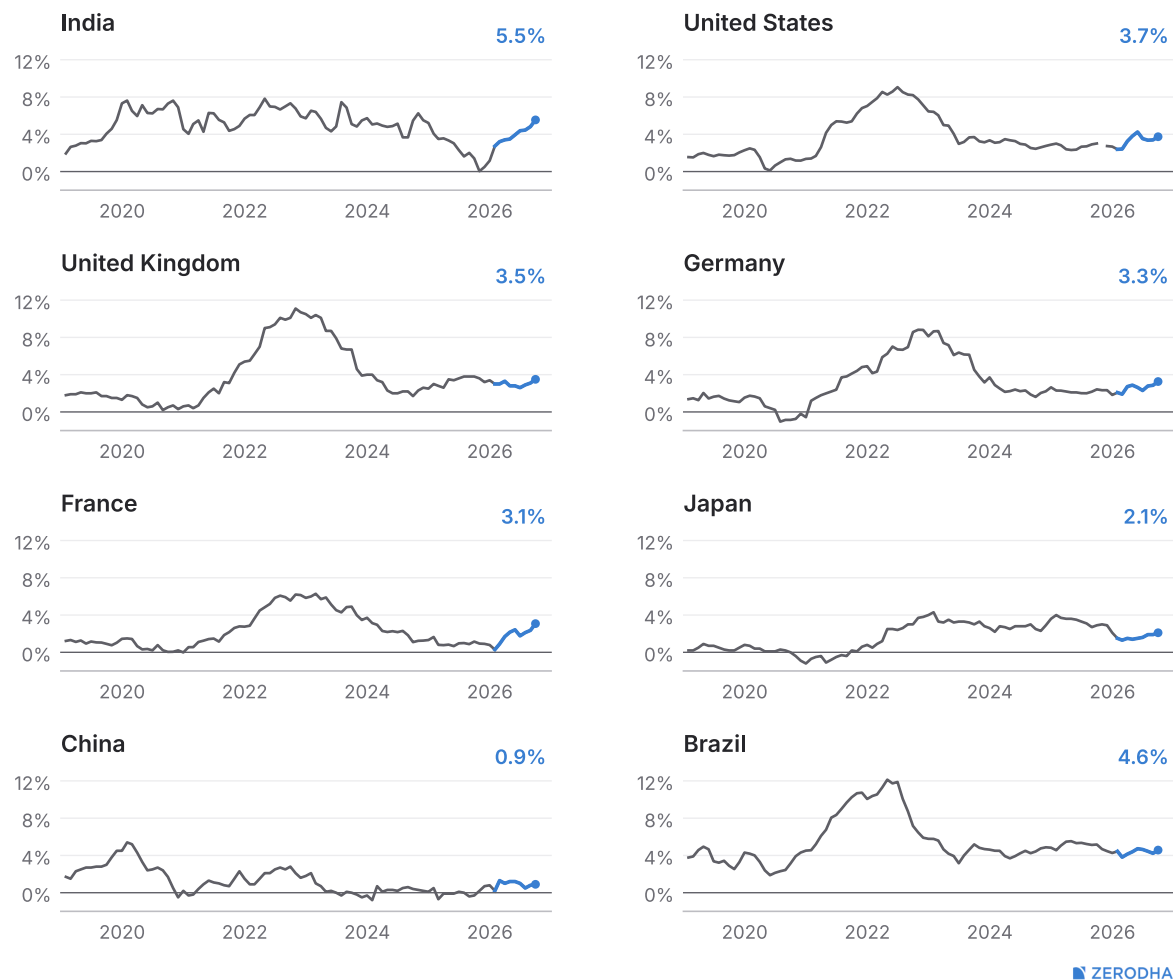
About 13 million people have been driven from their homes, the largest displacement crisis in the world. Famine conditions were documented in El Fasher for September 2025, before the RSF militia took the city the following month, although the formal confirmation came later. Nobody knows how many have died. Even for 2025 alone, PRIO describes estimates ranging from about 19,000 to more than 70,000 direct deaths, with its researchers putting the possible toll as high as 100,000. If any country deserves the title of hell on earth, it is Sudan.

American political dysfunction continues, inflation has picked up again in several big economies, and governments everywhere are paying a lot more to borrow. The US ten-year Treasury yield crossed 5% in September for the first time since 2007 and closed at 5.31% on 5 October, its highest since 2002. Monthly averages put Britain's ten-year yield at its highest since 2007 and Australia's since 2011, both above 5% in September. France's briefly touched 5% on 21 October, according to Reuters.

FIGURE 1.6

Inflation has picked up again in several big economies

Headline CPI · year-on-year change · January 2019–September 2026



Headline consumer inflation, prices compared with the same month a year earlier, January 2019–September 2026; all eight panels use the same scale. Blue marks 2026. India uses MoSPI's all-India Combined CPI (September provisional); the UK uses ONS CPI, not CPIH. The other six countries use national all-items CPI from the OECD. None is seasonally adjusted. National baskets and coverage differ. The US line has a gap in October 2025, when the government shutdown prevented CPI data collection. These selected countries are not a world inflation index; the rise has not been uniform.

SOURCE

Sources: National sources;
OECD consumer price indices;
MoSPI; ONS · Zerodha analysis

Even Japan, the birthplace and poster child of deflation, is raising rates: the Bank of Japan hiked in September to its highest rate in about thirty years, and September's average ten-year yield was at levels last seen in 1996. Whenever weird things happen in Japan, they travel.

We got a preview in August 2024, when the yen carry trade unwound and the Nikkei fell 12.4% in a single day, its worst since 1987. Japan is the biggest foreign owner of American government bonds, so when its interest rates or its yen move sharply, weird things happen everywhere. One can only imagine what's coming.

At home, Indian inflation has risen every month since May, to 5.5% in September. On 7 October the RBI raised its repo rate for the first time since February 2023. The rupee fell to almost 97 to the dollar at RBI's reference rate on 8 October, before clawing back to about 95 in the last couple of weeks. And India's ten-year government bond yield has decisively crossed 7%, from 6.7% before the war to 7.5%.

And these are just the things I can remember off the top of my head. There's a phrase that has been running in my mind ever since Russia invaded Ukraine: the age of discord. Right now we seem to be watching the mother of all discord play out everywhere.

All I'm seeing are monsters. I don't see the new world at all. I don't know what it looks like. And boy, do things look morbid right now.

And then there's the rupee. A year ago, a dollar cost about ₹88. Today it costs about ₹95, which means the rupee has lost about 8% of its value against the dollar in a year. On 8 October, RBI's reference rate hit a record ₹96.88.

The dollar index, which measures the dollar against six major currencies, is up about 3% over the same year. The rupee has lost about 8% of its dollar value. That doesn't tell us why the rupee fell, but broad dollar strength alone doesn't tell the whole story. If you own US stocks, the weak rupee has padded your returns. If you're paying for a kid's college abroad or a holiday in Europe, you've felt it the other way.

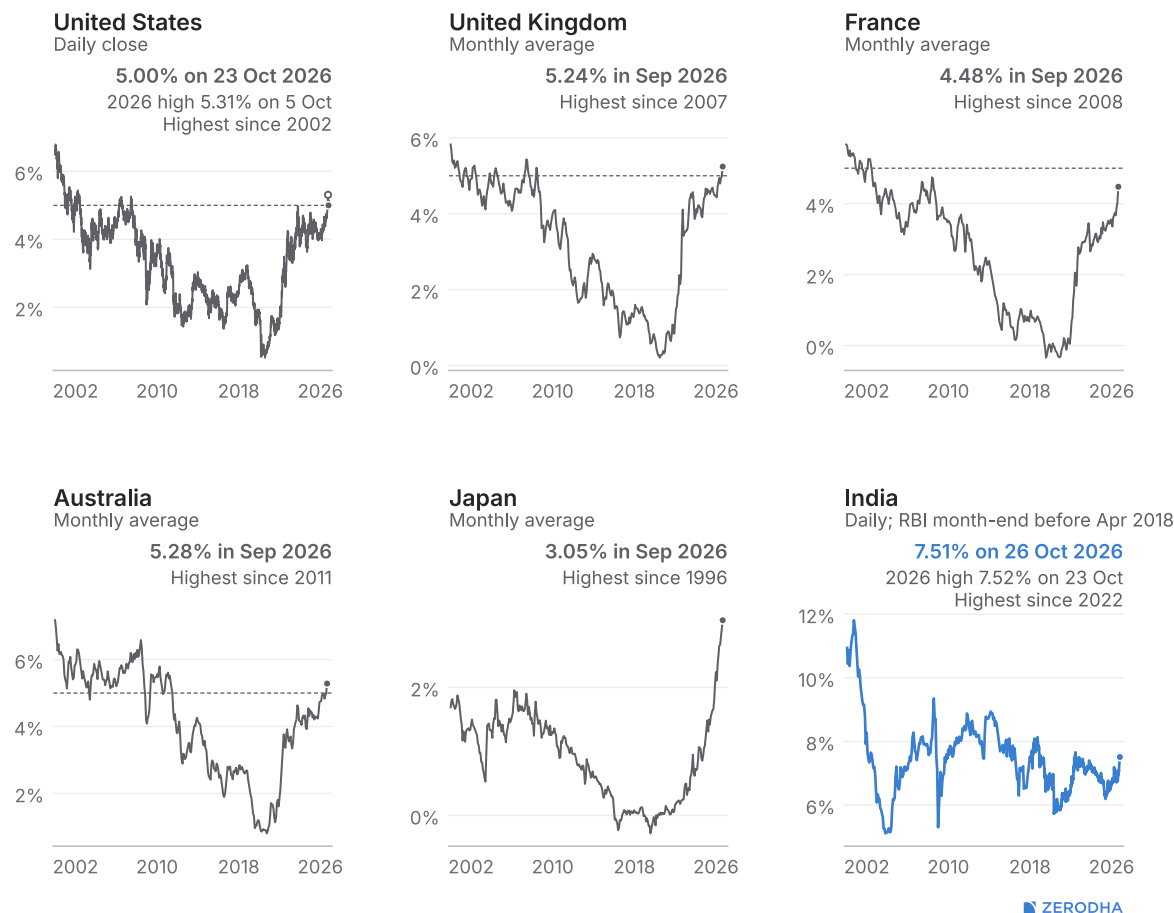
And this is what makes investing so hard. With all this depressing shit happening, American markets are up, Indian markets are going sideways and European markets are more or less okay. Predicting markets is hard. In

the selected episodes later in this book, the headlines alone were a poor guide to where markets stood a year later. Markets discount, digest and poop out the past, while always trying to price the future.

FIGURE 1.7

Borrowing costs rose everywhere at once

Ten-year government bond yields, 2000 to the latest reading



Ten-year government bond yields since 2000; the dashed line marks 5%. The US yield closed at 5.31% on 5 October 2026, its highest since 2002. Monthly averages put Britain at its highest since 2007, France since 2008 and Australia since 2011, and Japan at its highest since 1996. India's rose from 6.71% the day before the war to 7.51% on 26 October. US and Indian yields are daily closes; the others are monthly averages to September, which smooth out the daily highs.

SOURCE

FBIL, RBI, FRED (US Treasury);
OECD for the UK, France,
Australia and Japan) - Zerodha
analysis

FIGURE 1.8

A dollar costs more rupees

USD/INR and the dollar index, 24 Oct 2025–26 Oct 2026

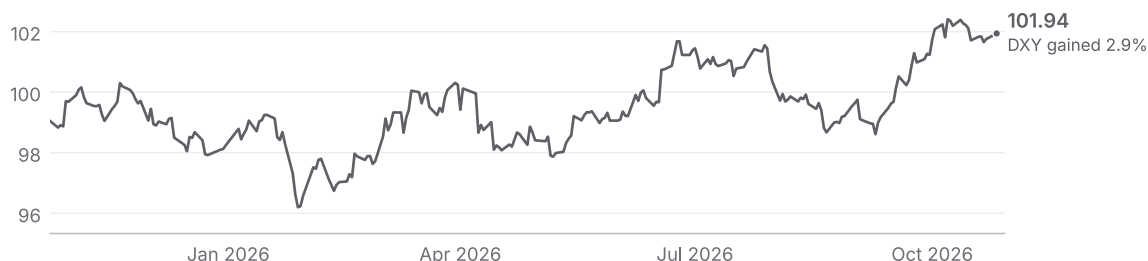
One dollar, in rupees

₹ per US dollar · higher means a weaker rupee



The dollar against major currencies

DXY index · higher means a stronger dollar



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Same one-year window, 24 October 2025 to 26 October 2026, shown in each series' own units. Top: rupees needed to buy one dollar, from ₹87.83 to ₹95.21; a higher line means a weaker rupee. The rupee lost 7.8% of its dollar value. Bottom: the ICE US Dollar Index (DXY), from 99.04 to 101.94, gained 2.9% against its basket of six major currencies. The panels have separate vertical scales. DXY is context for the rupee's move, not an attribution of its causes; the percentage changes should not be subtracted as a causal breakdown.

SOURCE

RBI/FBIL reference rate; ICE US Dollar Index via India Data Hub · Zerodha analysis

So where does this leave us? Let me preface this by saying it's a guess, not a prediction, and I could be completely wrong. But I think we are heading into a world where markets will be more volatile and outcomes will vary a lot more. For most of the period since the 2008 crisis, Indian markets were calm.

Measured from daily returns, a typical year's annualised Nifty volatility was about 26% in 1991–2007 and 15% in 2009–2025, leaving out 2020. Individual years were much wilder. Many falls after 2008 rebounded quickly, and COVID gave us a particularly sharp V-shaped recovery, though some recoveries took years. Investing in those eighteen years was very, very easy.

I think that world is changing. Interest rates and bond yields have risen, and my worry is that climate change, broken supply chains, rearmament and a rush towards self-sufficiency could keep inflation higher for longer.

My sense is that countries are becoming more inward-looking, and I wouldn't build a plan around a return to the low-inflation world many of us grew used to. I could be wrong. The useful response to that uncertainty is to think carefully about how we build portfolios, how much we put where and how we diversify.

The price of admission

Before we go any further, I want to introduce one idea that I think is really, really important: the equity risk premium, or as I like to think of it, the price of admission. What I'm about to say will sound incredibly basic and banal, but I still get surprised that investors don't seem to grasp it.

Why do stocks give higher returns than a government bond or a fixed deposit? The answer is the equity risk premium. It sounds fancy, but it's very simple. Imagine a world where the stock market goes up steadily, just like a fixed deposit, and never falls, regardless of wars or panics. Is it fair to expect double-digit returns in that world? Of course not. There's no risk. If there's no risk, everybody would buy stocks, and if everybody buys stocks, the returns have to fall. Why would there be a low-risk, high-return instrument? Seems stupid.

Now think about the world we actually live in. It's a messy reality filled with messy people doing messy things, all because we're trying to deal with not knowing what will happen tomorrow. Buying a stock is fundamentally an act of faith. It's a hopeful act. Yes, you can look at the financials. You can do all the fundamental analysis, the quantitative analysis, look at the

balance sheets, the cash flows, the annual reports, read all the transcripts, do psychotherapy and psychoanalysis on the management. You still don't know what will happen tomorrow.

The company might go bust. It might become one of the most valuable companies in history. It might go to zero. All of these outcomes are possible, with different probabilities. The person who buys the stock is bearing that uncertainty, and he or she should be paid for bearing it. That payment is the premium. No pain, no premium, as Corey Hoffstein keeps saying.

The other distinction I like, one I learnt only recently, comes from William Bernstein, the market historian who has written several great books, and from whose podcasts and videos I've learnt a lot over the years. He talks about two kinds of risk. *Shallow risk* is a temporary fall in prices, 20, 30, 40%, whatever it is. As bad as it gets, it tends to recover over time. It is not a permanent loss of capital. Think of the falls in 2008 and 2020, which eventually recovered.

Deep risk is a permanent loss of capital, and in Bernstein's view it comes from four places: inflation, deflation, confiscation and devastation. We know inflation. We're seeing it right now. If you want to know what it does to your returns, take the returns you see in your portfolio, give them to Claude and ask it to adjust them for inflation. You'll be shocked at the number.

In this book I'll mostly focus on shallow risk, but we'll cover deep risk too, in a little detail, so that you get the fuller picture. The reason I bring up the distinction at all is something Jason Zweig wrote about Bernstein's ideas:

// *Look back, honestly, at what you did in 2008 and 2009 when your stock portfolio lost half its value. Then ask how likely you are to hang on in a similar collapse. Your own behavior can turn shallow risk into deep risk in a heartbeat."*

JASON ZWEIF, 2013

Sell at the bottom of a fall that would have come back, and you have turned a temporary loss into a permanent one, all by yourself.

So what follows is me saying the same damn thing over and over again, with all sorts of fancy charts, analysis and visualisations, in the hope that you'll read all of it and then go and do uniquely stupid things. If you do sensible things, I'll be personally offended. So please, don't disappoint me. Commit spectacular, informed, scientifically stupid acts of investing, the kind history books remember, so that someday a biographer knocks on your door and asks, "Sir, may I write about your glorious acts of investing stupidity, the likes of which the world has never seen?"

The whole book on one page

For those of you with the attention span of a goldfish, which, thanks to Instagram, is most of us: the book in twelve numbers, each from a chart later on.

The pain

93%	Share of available daily Sensex closes since 1979 below the previous recorded high. Being down from the peak is normal.
41	Days in a typical year since 1991 that the Nifty fell 1% or more. A 1% fall is normal, not news.
12 of 21	Completed Sensex falls of 13% or more that went on to 20% or worse. Seven went past 30%. A small historical sample, not odds for this fall.
13.9 years	How long the Sensex took to buy as much as it did at its 1992 peak, once you count inflation. Prices come back faster than purchasing power does.
22%	What Indian government bonds lost to inflation between 2008 and 2013, while every statement showed a gain. Safe is not the same as safe from inflation.
34 years	How long Japan's Nikkei took to regain its 1989 peak. Unlikely here, but not impossible.
9 of 86	Thirteen-year stretches since 1928 in which US stocks did worse than boring Treasury bills. The long term is usually kind. Usually.

The traps

13 of 261	Versions of a popular market-timing rule that beat simply holding the Nifty since 2001. You are probably not the fourteenth.
11 of 16	Wars and attacks since 1979 after which the Sensex was higher a year later. Knowing the news is not the same as knowing the prices.
₹34.0 lakh	What pausing a ₹10,000 SIP during scary markets cost one historical investor. Stopping your SIP in a fall is one of the costliest mistakes you can make.

What works

241 of 241	Five-year stretches since 2006 in which an equal mix of Indian shares, US shares, gold and bonds fell less than Indian shares alone. The boring mix worked.
94%	Sensex falls of 10% or more since 1979 that had fully recovered within three years. So money you need within three years doesn't belong in shares.

PART ONE

The pain

How far markets fall, how long they stay down, and what inflation takes while you wait.

02	Bad shit does happen	26
03	How bad can it get?	32
04	What if Japan?	50
05	The quiet thief	62

02

CHAPTER 2

Bad shit does happen

93%

Share of trading days since 1979 on which the Sensex was below its previous all-time high

Look, I'm not going to pretend this world is a fairy tale. Ever since COVID it has felt like we are careening from one crisis to the next, rolling the dice each time. The pandemic was one beginning. Then Vladimir Putin decided to write one of the shittiest pieces of fiction in modern history and invade Ukraine because apparently it was full of Nazis.

Then the endless wars across Africa: the Sahel, Sudan, Congo. India and Pakistan briefly decided to re-enact Diwali. And now we have the United States and Israel deciding to attack Iran, in the process eliminating the supreme leader and also, apparently, the people they were supposed to replace him with. Oops. Tufaani.

I'm not telling you this to depress you further. I'm telling you because of one of my favourite charts. Take the history of the Sensex and mark all the wars, scams, panics and disasters on it, and it always looks like the world was five minutes away from ending. That is the entire history of markets. The apocalypse is always just around the corner. And yet, somehow, here we are.

Why did we survive all of it? The hopeful reading is that whenever we step close to the brink, we eventually step back. The cynical reading is that humans are incompetent even at being incompetent, and we are simply too dumb to successfully end ourselves. I lean cynical, but for an investor both readings lead to the same place: you will spend your entire investing life sitting through stories about bad things happening. There will always be a reason to exit. There will always be a reason to believe this time is uniquely terrible.

Maybe it is. Maybe it isn't.

Either way, get used to this: a new all-time high is a rare event. On 93% of the available daily closes since 1979 the Sensex has been below its previous recorded peak, and on about a quarter of them it was more than 20% below. Being "down from the high" is not a crisis. It's where the market spends most of its time.

Even the good years are rarely pleasant while you're in them. A calendar-year return is a sneaky number. It tells you where December ended and conveniently forgets the part in June where you questioned every decision you have ever made.

The bars show where each year ended. The diamonds show how far it fell along the way.

Now zoom in to the smallest unit of pain, the day. As I write this, a 1% fall in the Nifty is treated as news. Anchors lower their voices. Your cousin forwards a WhatsApp video. It happens about forty times a year.

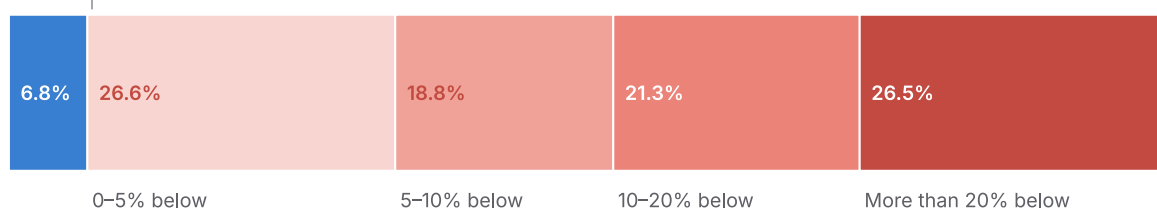
FIGURE 2.1

The market spends most of its life below its last peak

BSE Sensex: available daily closes below the previous recorded high (1979–2026)

At or above the old high

Below a previous high: 93.2% of recorded closes, Apr 1979–Oct 2026



ZERODHA

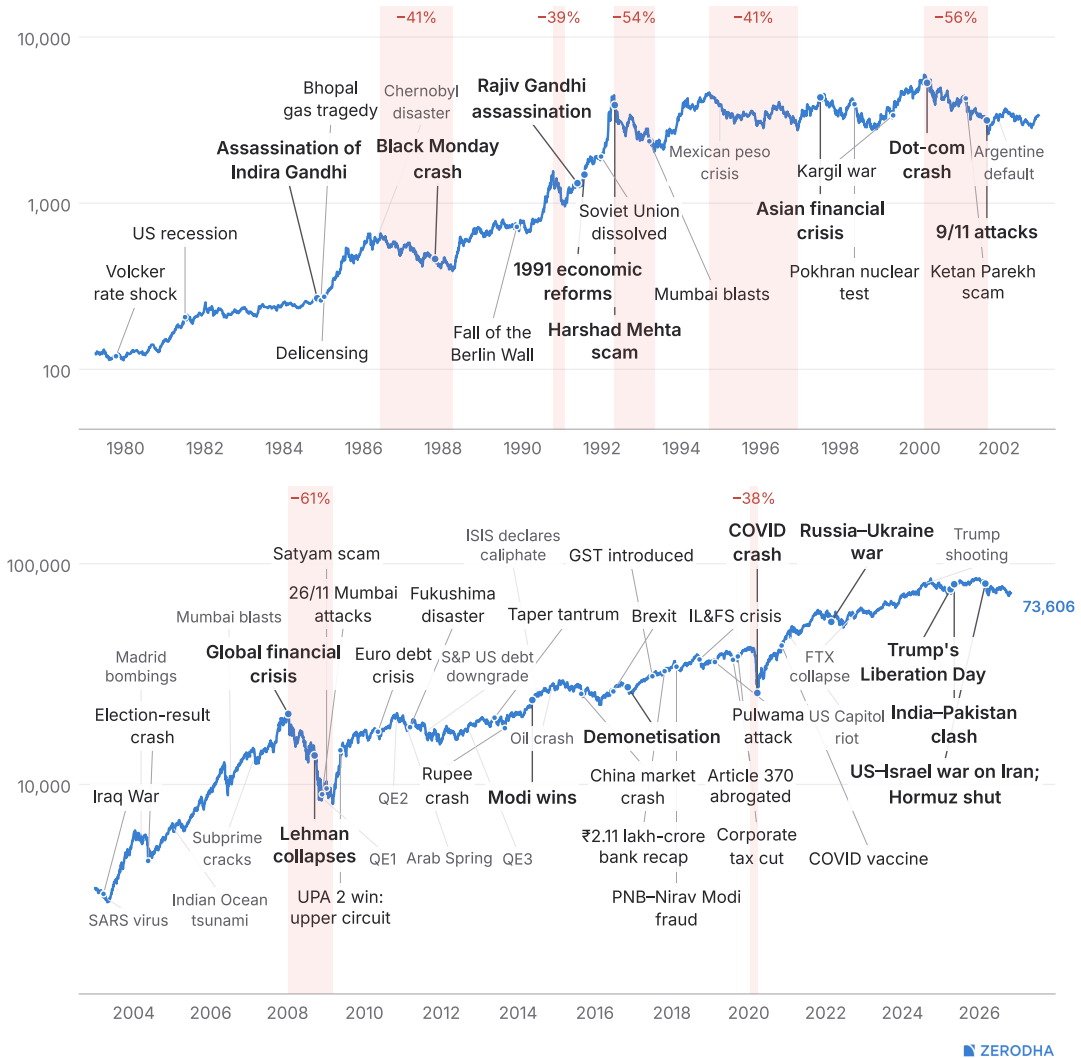
Available daily Sensex closes from April 1979 to October 2026, by how far the index stood below its previous high. It matched or exceeded its previous recorded high on only 7% of observations. It spent 45% of days below its peak but within 10% of it, and 27% more than 20% below it. If “below the peak” makes you anxious, you have signed up to be anxious for most of your life.

SOURCE
BSE · Zerodha

FIGURE 2.2

Every reason to panic, 1979–2026

BSE Sensex daily close, log scale, April 1979–October 2026, with the wars, scams, crashes and crises that felt like the end at the time. Shaded: every fall of 30% or more, from peak to bottom



The Sensex on a log scale, so a 10% fall looks the same size in 1985 as in 2025. Shaded bands mark every fall of 30% or more, from peak to bottom: seven since 1979, the deepest -61% in 2008–09. Look at the line, then the labels, then the line again. Price index, without dividends or inflation.

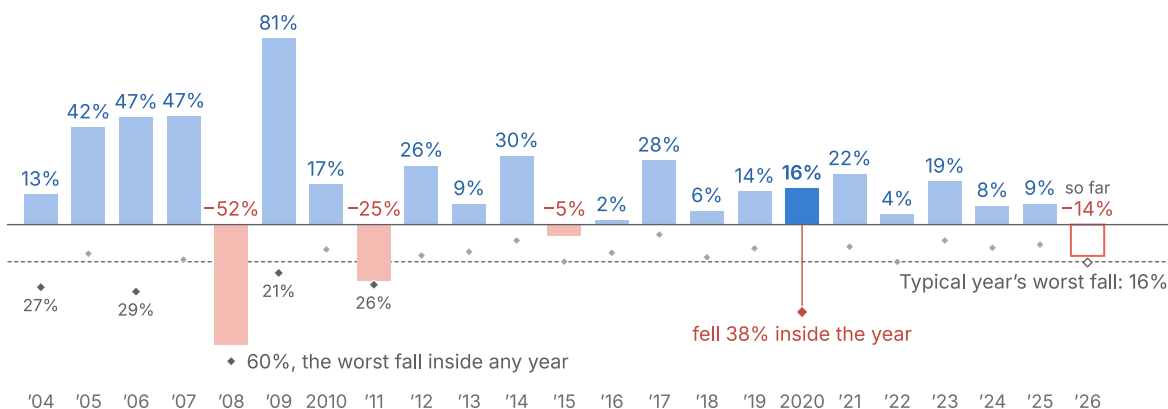
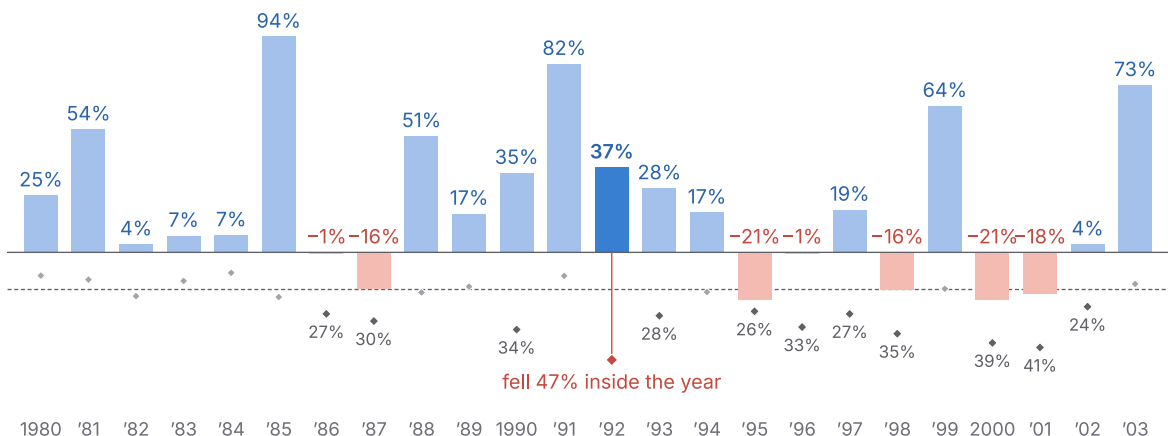
SOURCE
BSE · events compiled by
Zerodha

FIGURE 2.3

Good years still had bad falls

BSE Sensex calendar-year returns vs intra-year drawdowns, 1980–2025, and 2026 so far (to 26 October)

Calendar-year return; diamonds mark the worst fall inside each year (labelled when 20% or more)



■ ZERODHA

Each bar is a calendar year's Sensex return; each diamond is the worst fall from a high inside that same year. The Sensex rose in 36 of the 46 full years since 1980, and 30 of those 36 good years still had a fall of 10% or more along the way. 1992 finished up 37% after a 47% fall inside the year. 2020 finished up 16% after a 38% fall. The outlined bar is 2026 so far. Price index, dividends excluded.

SOURCE

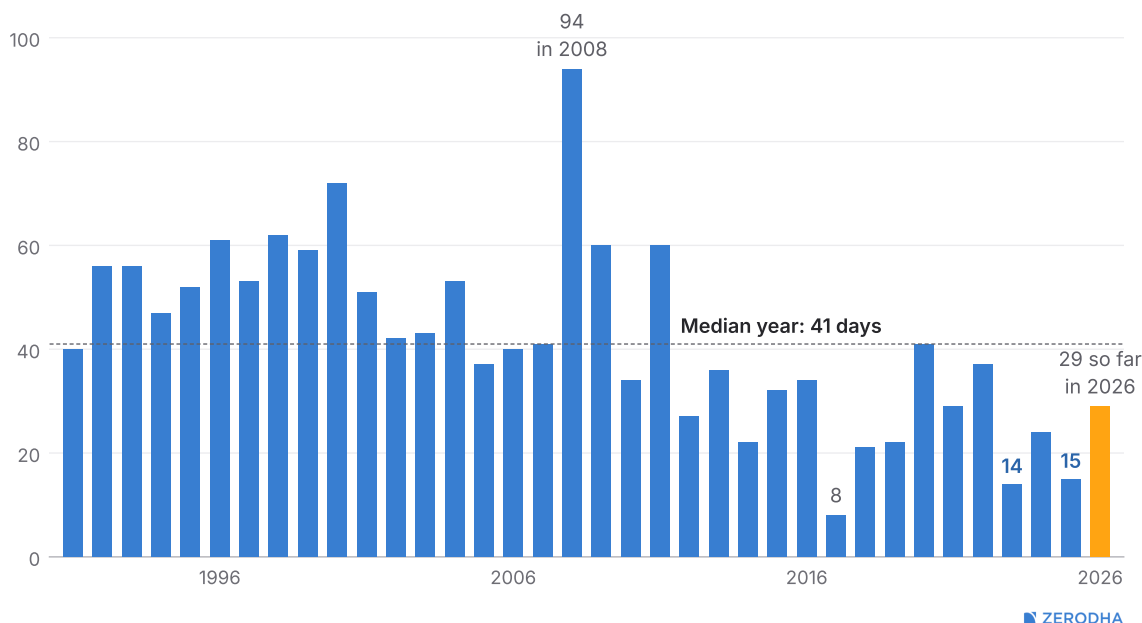
BSE · Zerodha

FIGURE 2.4

A 1% fall happens about 40 times a year

Days each year the Nifty 50 closed down 1% or more, 1991–2026 (2026 to 26 October)

Days the Nifty 50 fell 1% or more



Days each year the Nifty 50 closed down 1% or more. The median year since 1991 had 41 of them, about one every week and a half. 2023 had 14 and 2025 had 15, so if you started investing recently, you started in an unusually calm stretch and may have mistaken it for normal.

SOURCE

Nifty Indices · Zerodha analysis

The equity premium goes to the people who sit through both the euphoria and the despair, not to the ones who react to every 1% fall. That's much harder than it sounds.

03

CHAPTER 3

How bad can it get?

–86%

The fall in the US stock market's price index during the Great Depression

Whenever things look bad in the markets, the first question every investor has is how bad they can get. The simple answer is that we don't know. It can get much worse than you assume, or much better. The range of outcomes runs from hell to heaven.

By convention, a 10% fall is called a correction and a 20% fall a bear market. They're round numbers somebody picked, and your portfolio doesn't care what we call it.

The reason we keep asking is a funny quirk in our wiring. We are creatures hardwired to crave certainty. I always think of a 2016 experiment at University College London in which people turned over rocks in a video game, and if there was a snake under the rock, they got a real electric shock on the hand.

The researchers measured their stress. It was lowest when people knew for sure there would be no snake, and almost as low when they knew for sure there would be one. It peaked when the odds were 50-50. Not knowing whether you'll get zapped is worse than knowing you will. That pretty much sums up our desperate need to know what happens next.

And as I said earlier, there are only four kinds of people who know what will happen tomorrow: God, a liar, an astrologer and Donald Trump. And even Donald Trump, as shocking as it sounds, has been wrong. That's actually really shocking.

So if the future is unknowable, what's the next best thing? Look at the past. History doesn't give you answers. It gives you a sense of the range of possibilities, and it helps you ask better questions. That's how to read every chart in this chapter. Don't get hung up on the specifics. Look at the range.

Let's start with the worst falls in Indian market history.

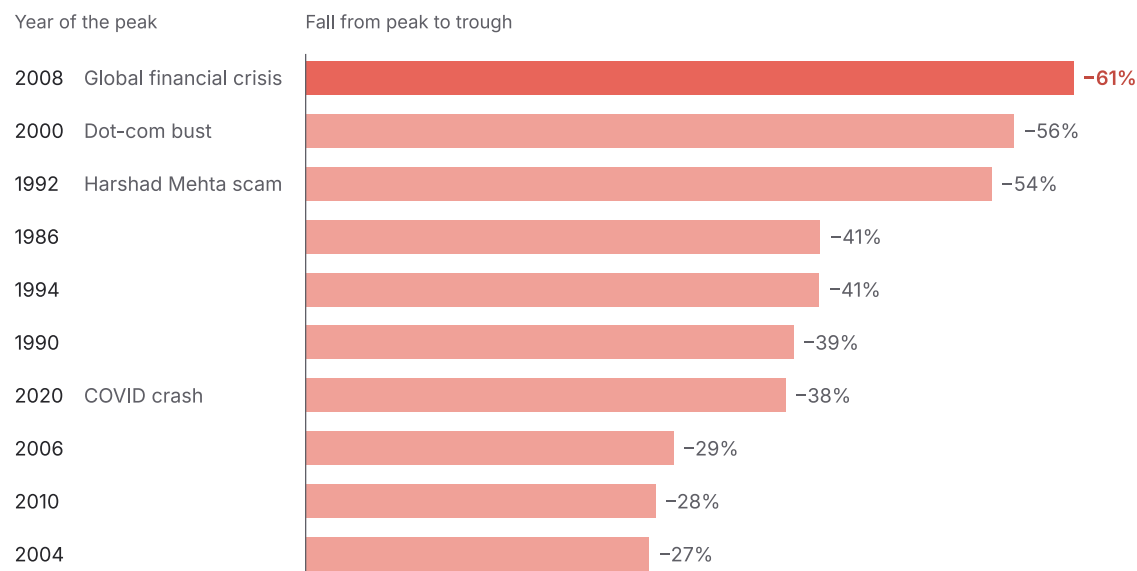
How deep a fall goes is only half the story. The other half is how long you have to wait to get back to where you were. This matters more than people think, because a fall you look at on a chart is not the same as a fall you have to live through. Two years of watching your portfolio sit below

what you paid feels very different from a sharp two-month crash, even if the crash was deeper. And the longest waits weren't always after the deepest falls.

FIGURE 3.1

The Sensex's ten worst falls

Worst bear markets in Sensex history, ranked by peak-to-trough decline (1979–2026)



ZERODHA

The worst falls in the Sensex price index, peak to trough, since 1979. In 2008, midcaps and smallcaps fell even further, by over 70%. That is ₹100 becoming ₹30. Imagine opening that statement.

SOURCE
BSE · Zerodha

Here's a bit of maths that people always get wrong. If you lose 50%, you don't need a 50% gain to get back. You need 100%. ₹100 falls to ₹50, and ₹50 has to double to become ₹100 again. Jack Bogle reminded an audience of this in January 2008, months before the crash.

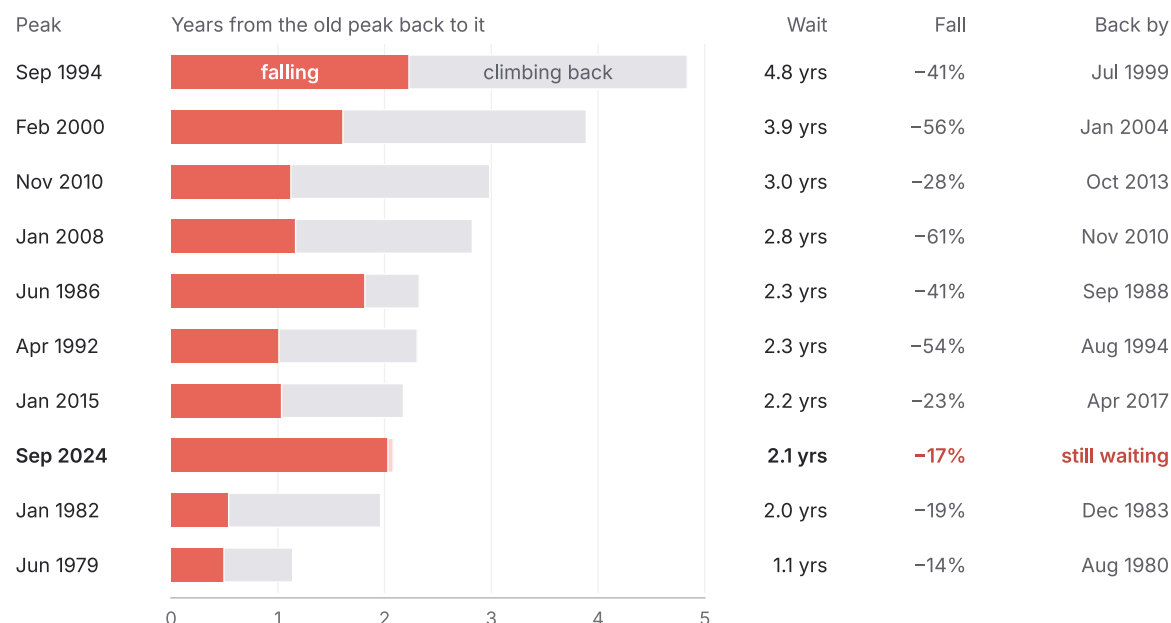
// *Down 50 percent and up 100 percent nets out to a return, not of plus 50 percent but of zero. Do the math!"*

JACK BOGLE, JANUARY 2008

FIGURE 3.2

The ten longest waits

BSE Sensex falls of 10% or more, ranked by time from the old peak back to that peak, 1979–October 2026; daily closes



ZERODHA

The ten longest waits from a Sensex peak back to that same level, for every fall of 10% or more since 1979. Coral is the fall, grey is the climb back. The 1994 fall of 41% took almost five years to repair, longer than 2008's 61%. The wait that began in September 2024 is still open, and at over two years it is already among the longest in Sensex history.

SOURCE

BSE · Zerodha analysis

Not all falls feel the same. Some are like a car crash. It's over before you've even understood what happened. COVID took the Sensex down 38% in about two months. Others are a slow bleed. The market keeps leaking for a year and a half, and every small rally convinces you the worst is over, until it isn't. The way back up also comes in different shapes. Everybody remembers the V of 2020. Very few remember that after the dot-com bottom, the market bounced, then sat around doing nothing for most of a year, and only then got going.

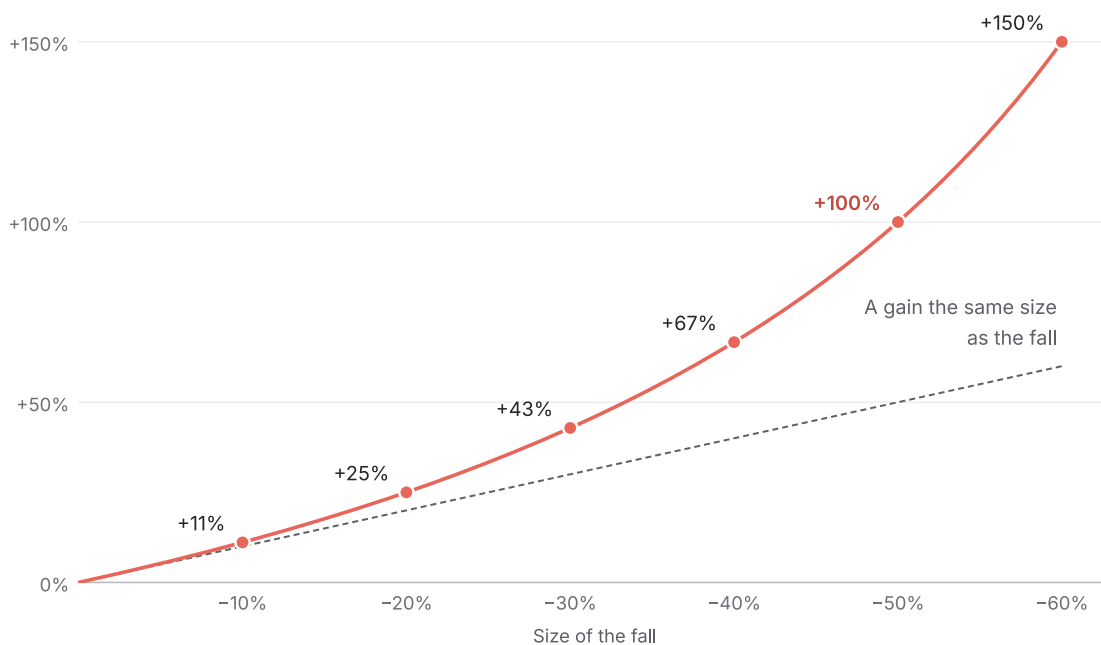
Broadly, small falls heal fast and big falls don't. COVID broke that rule. A 38% fall was repaired in about ten months, which is one reason so many people who started investing in 2020 think every crash is a sale that ends by Diwali.

FIGURE 3.3

The bigger the fall, the bigger the rally you need

Return needed to recover after different portfolio falls.

Gain needed to get back to where you started



ZERODHA

The gain needed to get back to where you started after a fall. The curve bends upward because each rupee lost shrinks the base the recovery has to work on. This is why avoiding ruin matters more than looking brave on the way down.

SOURCE
Zerodha

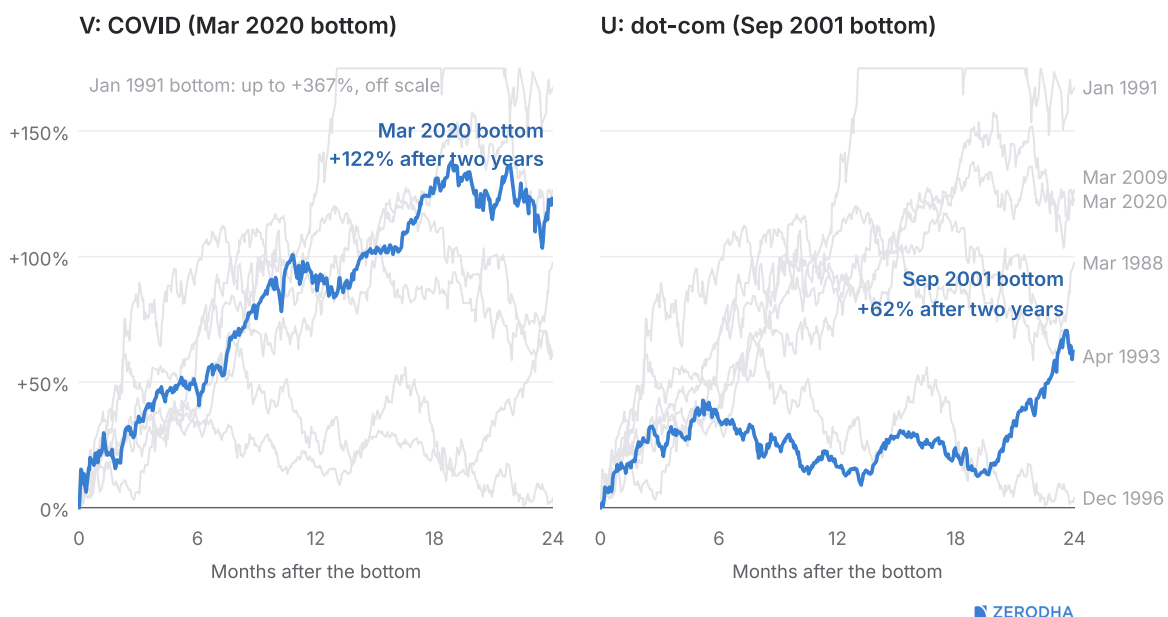
All of this is about the Sensex, which is thirty of the biggest companies in India. If what you own is mostly small and mid-sized companies, which is where a lot of the new money has gone in the last five years, the ride is rougher.

One common mistake I've seen, mostly among new investors, is to go to a fund research site like Value Research, sort the funds by past returns and put all their money in whatever is on top. That's usually a small or midcap fund, and it's the dumbest thing you can do. Saying small and midcaps are risky is like saying water is wet. The returns look great on the way up, and they fall just as hard on the way down. Smaller-company shares can also be harder to sell when everybody wants out at the same time.

FIGURE 3.4

Some falls are quick, some drag on

Sensex gain over the 24 months after each bottom of a fall of 30% or more



The Sensex over the 24 months after each bottom of a 30%-plus fall; grey lines are the other bottoms. COVID was a V: up 93% within a year and 122% after two. The dot-com bottom was a U: up 36% in six months, then stuck 16–24% above the bottom for most of the next year, and 62% up after two years. If you expect every recovery to look like 2020, the U will wear you out.

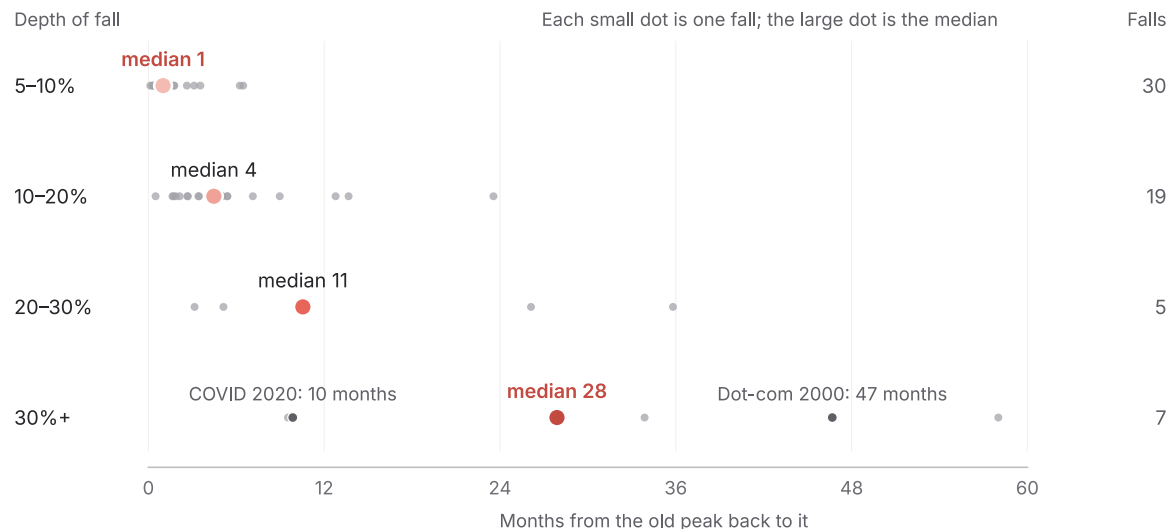
SOURCE
BSE · Zerodha analysis

That doesn't mean you shouldn't own any. Spread your bets across large, mid and small caps instead of going YOLO with all your money at the small end. If you don't know how to split it, put a third in each and you'll end up reasonably okay. Here's how each of them, and that simple mix, has fared through the bad times.

FIGURE 3.5

Small falls heal fast, big ones don't

Recovered Sensex drawdowns from 1979 to 2026, grouped by depth bucket. Each row shows the recovery range, with the dot marking the median wait.



ZERODHA

Recovered Sensex falls grouped by depth, and how long each took to regain the old high. The median wait goes from about a month for shallow dips to about 28 months for falls of 30% or more.

SOURCE
BSE · Zerodha

Splitting your money three ways didn't save you from 2008. In the five periods I compared, the mix fell less than the smallcaps. It still fell more than the Nifty 50, by about nine to ten percentage points in 2008 and 2010-13.

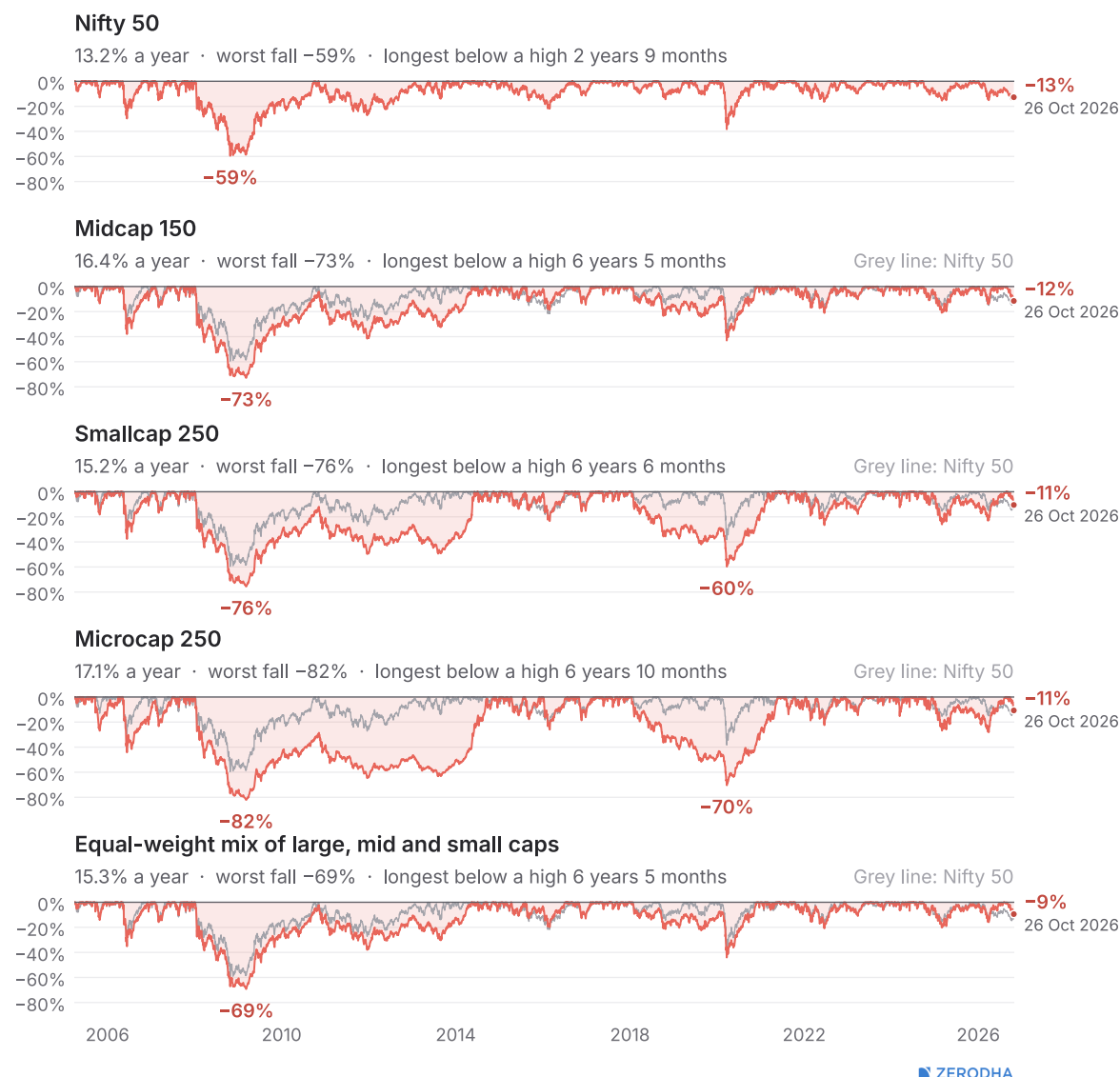
One of the problems with India is that we don't have a long enough market history. The longest Indian market series I use here is the Sensex, which goes back to 1979. While writing this book, I remembered a presentation by Robert Frey, a former partner at Jim Simons's Renaissance Technologies, which I first found on Ben Carlson's blog.

In it, Frey walks through 180 years of US market history through the lens of drawdowns, which is one of my favourite ways of looking at risk. A drawdown chart shows how far a market has fallen from its previous peak. For me, it's the easiest way to show risk, because the moment you see the deepest fall, the range of possible outcomes hits you. But I digress.

FIGURE 3.6

Smaller companies paid more, and fell much further

Fall from the previous high, total return indices, April 2005–October 2026



Since April 2005, with dividends, the Nifty 50 returned 13.2% a year, midcaps 16.4%, smallcaps 15.2% and microcaps 17.1%. In 2008–09 they fell 59%, 73%, 76% and 82%. Smallcaps fell 60% again between 2018 and 2020, and microcaps 70%. The three smaller indices each spent more than six years below an old high at one point. A third each in the Nifty 50, Midcap 150 and Smallcap 250, reset every January, returned 15.3% a year and fell 69% at worst. The extra return is real. So is the bill. Index histories before launch are back-calculated by NSE, not returns available to investors at the time.

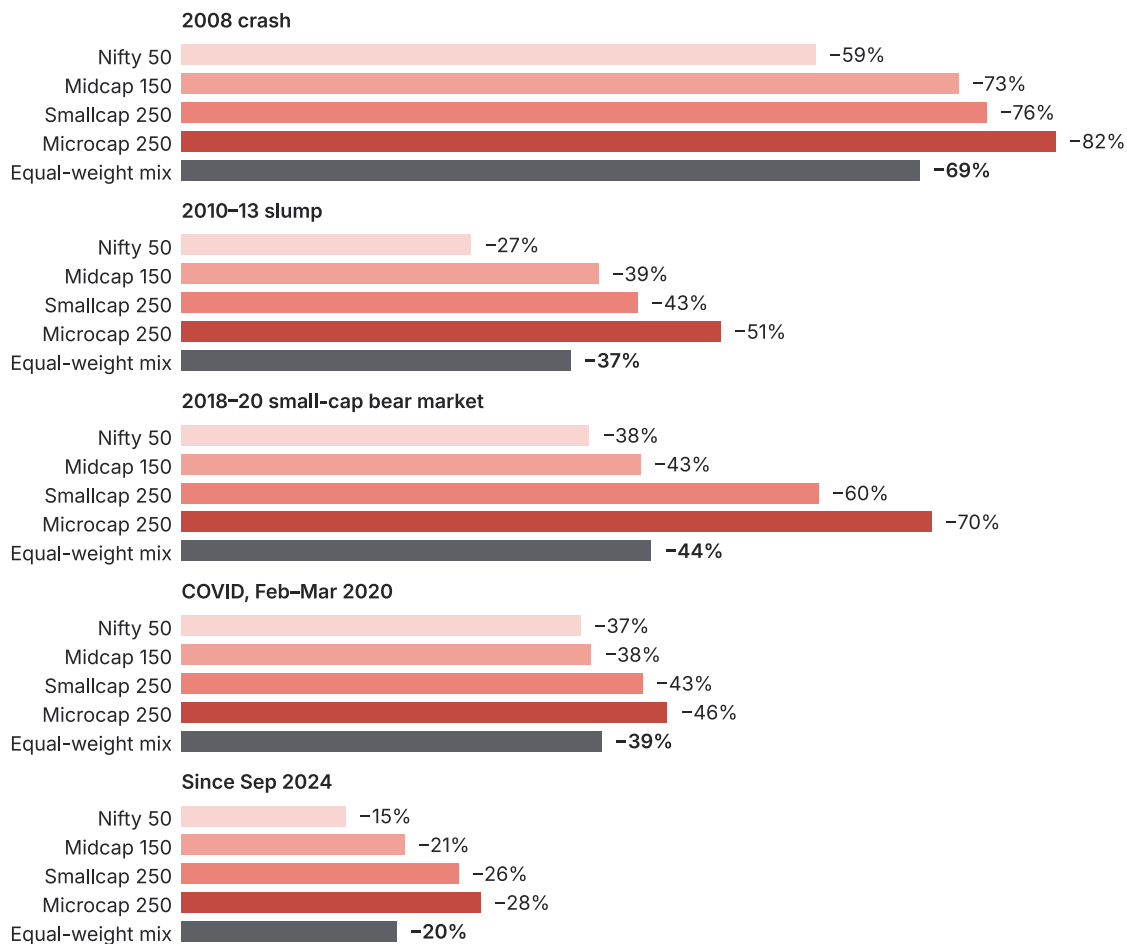
SOURCE

Nifty Indices · Zerodha analysis

FIGURE 3.7

In every bad stretch, smaller companies fell further

Deepest fall inside each stretch, total return indices, April 2005–October 2026; the mix holds a third each in large, mid and small caps



ZERODHA

The deepest fall inside each stretch, from each series' own high there to its later low, with dividends. The equal-weight mix holds a third each in the Nifty 50, Midcap 150 and Smallcap 250, reset every January, before costs and tax. It fell less than smallcaps every time and more than the Nifty 50 every time. The last stretch runs from September 2024 to 26 October 2026. Index histories before launch are back-calculated by NSE, not returns available to investors at the time.

SOURCE

Nifty Indices · Zerodha analysis

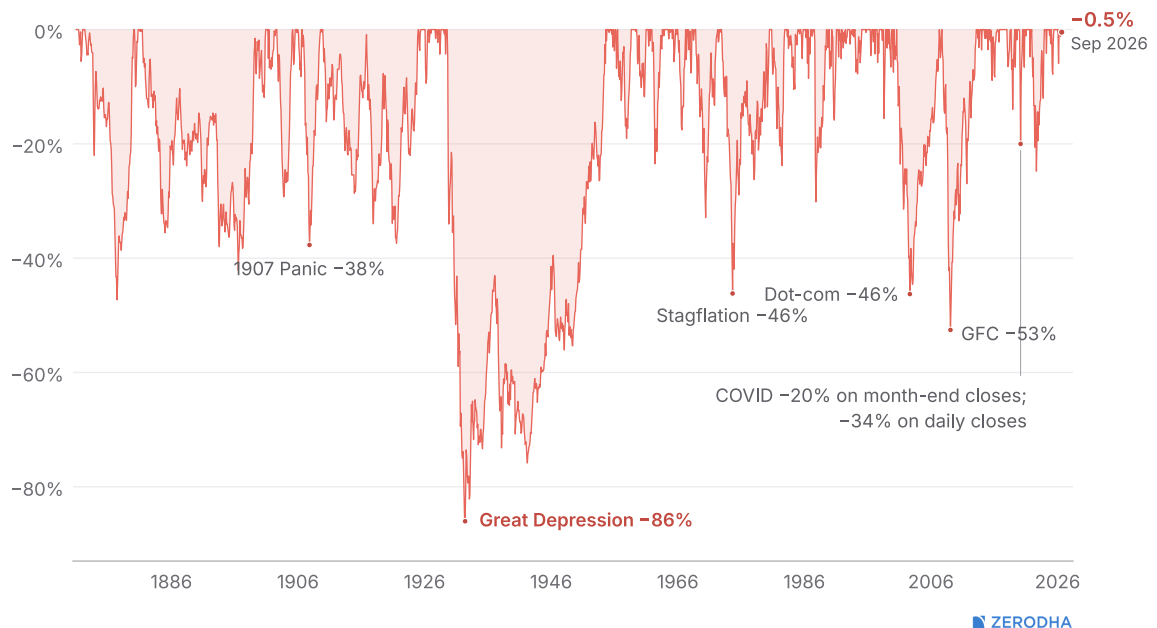
Frey's point was that in those 180 years, everything about US markets changed. The gold standard came and went. Central banks were set up and then became the dominant players in financial markets. Computers made trading electronic, and along came mutual funds, ETFs and high-frequency trading. Regulators were created. So many things changed, but one thing stayed the same: risk. Markets still fall the way they did a century and a half ago. Risk is the only constant.

FIGURE 3.8

150 years of falls and recoveries

Historical US composite / S&P price drawdowns, 1871–2026; monthly observations

Fall from the previous high



Falls from the previous high in the historical US composite and S&P price index since 1871: monthly-average prices through November 1927, then month-end closes. Monthly data smooth out the COVID fall. The Great Depression took it down about 86%. Dividends are excluded, which makes the recoveries look slower than they were for an investor who reinvested them.

SOURCE

Robert Shiller, TradingView,
FRED · Zerodha

Elroy Dimson, Paul Marsh and Mike Staunton, who have done the most careful work on this, point out that after the 1929 crash, US stocks took fifteen and a half years to recover, and that after 1973–74, “in real terms,

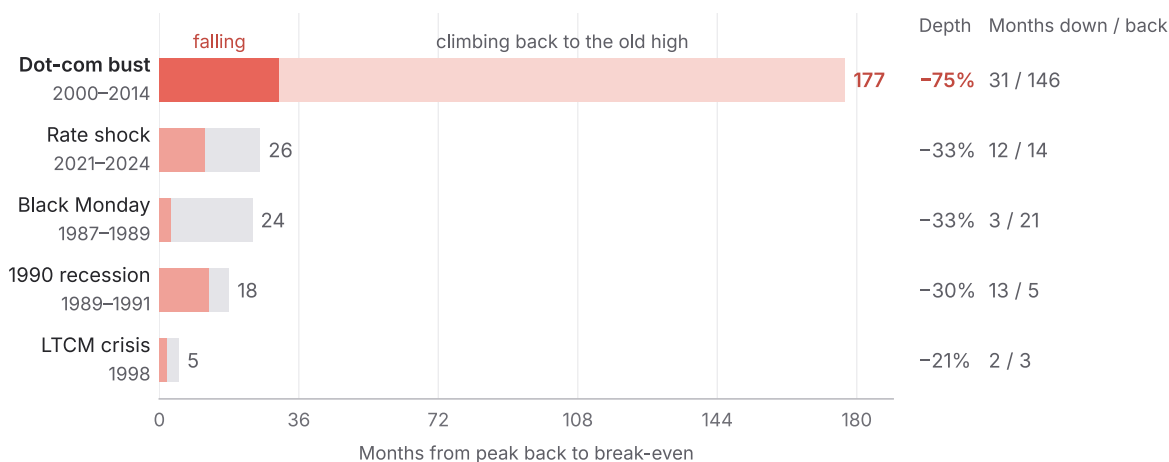
equities were underwater for over ten years". And remember, this is the *good* market. The one everybody holds up as proof that stocks always come back.

Now, some smart alec will say: fine, but those were boring old-economy stocks. What about technology? Well, here's the most futuristic index on the planet. The people who bought the Nasdaq in March 2000 weren't wrong about the internet. They were right about the internet and wrong about the price. Knowing that something will change the world doesn't tell you what to pay for it.

FIGURE 3.9

The Nasdaq took about 15 years to get back to its 2000 peak

5 major Nasdaq drawdowns since 1984, measured by months from peak back to breakeven.



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The Nasdaq's biggest falls, measured from peak back to break-even. The dot-com bust took it down about 75% and kept it underwater for roughly 177 months. Many of the companies that survived went on to change the world. The people who paid the peak price waited a very long time to be thanked.

SOURCE
Nasdaq · Zerodha

And all of this is still the view from the countries that won. Every chart so far comes from markets that survived and eventually did well, and that itself is a bias. In a 1999 study, Philippe Jorion and William Goetzmann went looking for every stock market they could find data on, going back to the 1920s. For 1921–1996, they found that the US had "the highest real return of

all countries, at 4.3 percent, versus a median of 0.8 percent for other countries". Those are real price returns, excluding dividends. The country whose market history everybody quotes is the exception, not the rule.

A more recent study used data from 39 developed markets going back to 1841 to simulate long-term outcomes. It estimated a 12.1% chance of losing to inflation over thirty years in a single country's stock market, against 1.2% using American data alone. For some countries, the answer to "how bad can it get?" was "pretty much all of it".

Now find India on that chart. In dollars, which is how a foreign investor sees it, Indian stocks fell 73% from January 2008 and didn't get back to that peak until December 2017. Almost ten years. The India growth story was very real in that decade. It just didn't show up for a dollar investor who bought at the top, with the falling rupee adding to the problem. A country growing fast doesn't guarantee that its investors will do well.

And the newest entry on that chart is being written as I type, in Indonesia. A bit of context first. Most of the world's big investors don't pick countries one by one. They follow indices made by companies like MSCI. Funds that track MSCI's emerging-markets index buy countries roughly in proportion to their index weights. Active managers also watch those weights, though they can choose to differ. A country losing its place in the index can therefore face forced selling from funds that track it.

In January 2026, MSCI froze any increase in Indonesia's weight, citing "ongoing opacity in shareholding structures" and "possible coordinated trading behaviour". In other words, it wasn't sure who really owned many Indonesian companies, or how many of their shares were available to trade. On 15 October, it went further and proposed taking Indonesia out of the emerging-markets index and putting it in a category of its own, with a final decision due by June 2027.

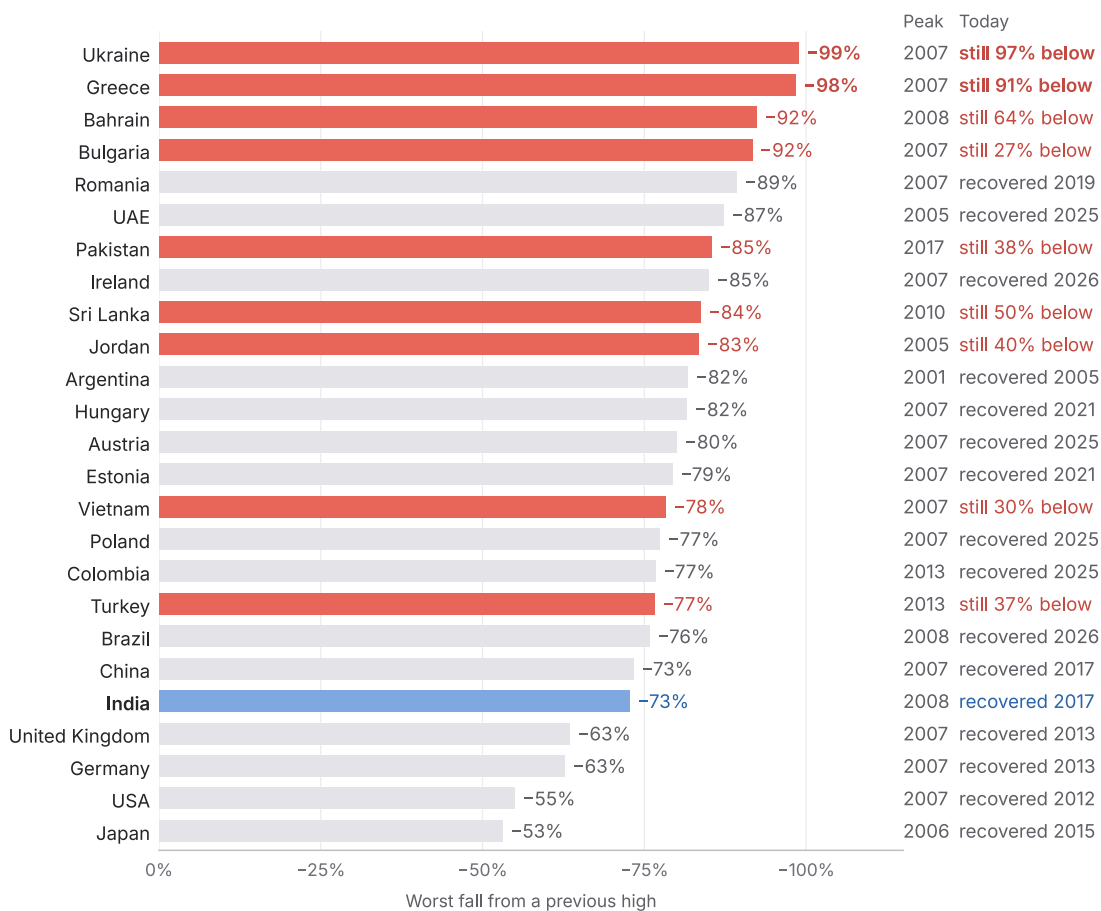
I'll be honest, I don't know enough about Indonesian companies to tell you whether MSCI is being fair. But look at what happened. Indonesia's economy didn't halve this year. The index rules changed and investors fled.

Foreign investors pulled about \$4.9 billion out of Indonesian shares this year, and on 16 October alone the MSCI Indonesia index fell almost 15% in dollars. I'm not saying India is next. But foreigners have been selling Indian shares too, and it's a useful reminder that a market can fall for reasons that have nothing to do with how its economy is doing.

FIGURE 3.10

Some countries never came back

Worst fall from a previous high in MSCI country indices, US dollars with dividends reinvested, December 2000–2026 troughs; the 18 worst plus large markets



ZERODHA

The worst fall in each MSCI country index since 2001, in US dollars with dividends reinvested. Greece fell 98% from its 2007 peak and is still 90% below it; Ukraine fell 99%. Of the 73 country indices in the data, 14 have still not regained their old high; the chart shows the 18 worst falls plus seven large markets. Nigeria, Zimbabwe, Serbia and Lebanon are left out because currency-regime changes or rebasing break their histories.

SOURCE

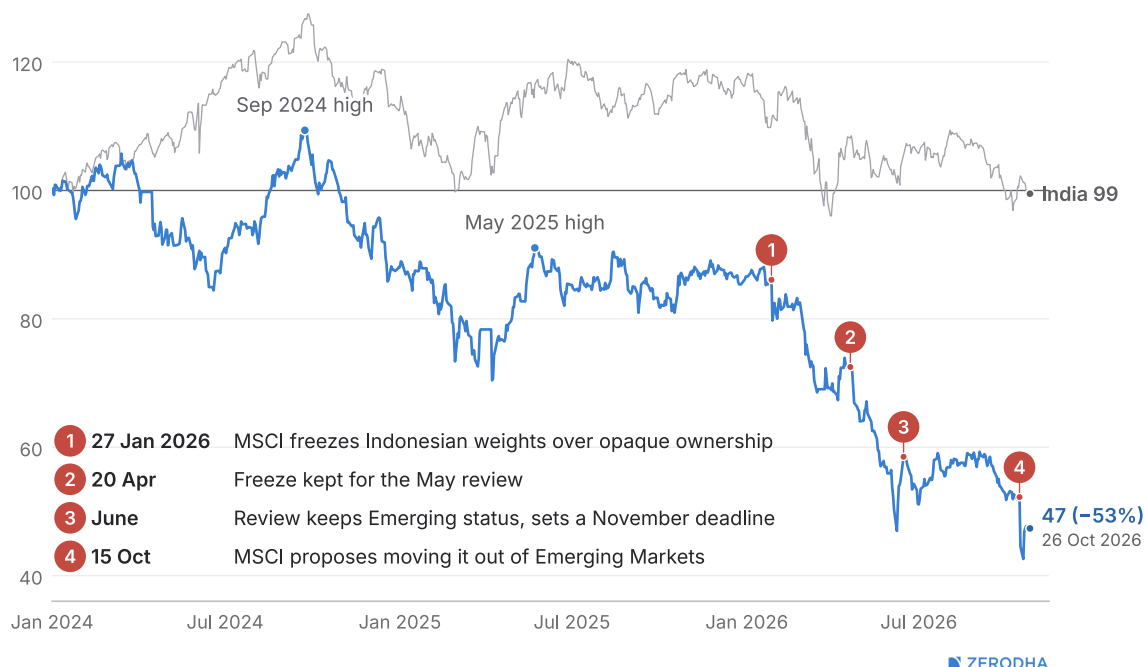
MSCI end-of-day index data ·
Zerodha analysis

FIGURE 3.11

When MSCI froze Indonesia

Value of \$100 put into MSCI Indonesia and MSCI India at the end of 2023, US dollars with dividends reinvested, daily to 26 October 2026

Value of \$100



ZERODHA

\$100 invested in MSCI Indonesia (US dollars, dividends reinvested) and MSCI India in January 2024, to 26 October 2026, with MSCI's announcements marked. Indonesia's \$100 is now \$47; it is 48% below its May 2025 high and down 45% in 2026 alone, against 15% for MSCI India; most of the fall is in share prices, not the rupiah. MSCI froze Indonesian weight increases on 27 January 2026 and on 15 October proposed reclassifying the market from Emerging to Standalone, with a decision due by 30 June 2027.

SOURCE

MSCI end-of-day indices (gross total return, USD); MSCI announcements of 27 Jan, 20 Apr and 15 Oct 2026; IMF exchange rates · Zerodha analysis

So where are we now?

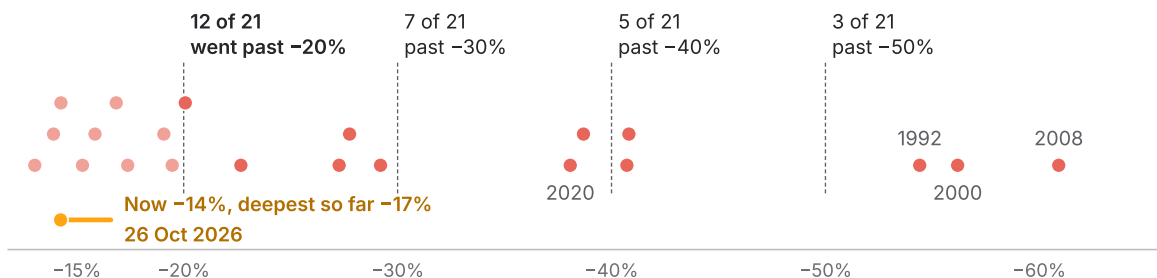
As of 26 October, the Sensex is about 14% below its September 2024 high, and at its worst close, on 8 October, it was nearly 17% down. Every investor I speak to, my friends, my colleagues, has the same question: will things get better or worse? My answer is that I don't know. What I can do is show you what happened in past Sensex falls of 13% or more. Does that give you answers? No. But it gives you perspective.

FIGURE 3.12

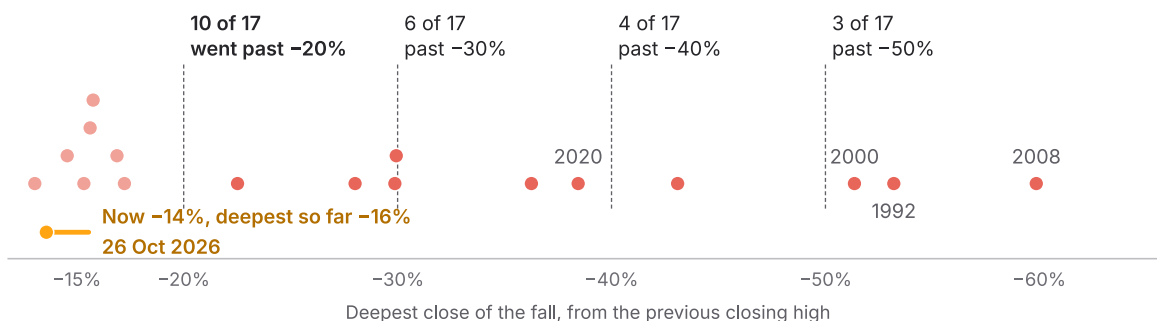
What happened after past falls this deep

Every completed fall of 13% or more from a closing high, placed at its deepest point. BSE Sensex since 1979, Nifty 50 since 1990

BSE Sensex, falls since 1979



Nifty 50, falls since 1990



ZERODHA

Each dot is a past fall, placed at its deepest point; dots beyond a dashed line went past that depth. Each dot is one completed Sensex fall of 13% or more from a closing high, placed at its deepest close. Of the 21 since 1979, 12 went past -20%, 7 past -30%, 5 past -40% and 3 past -50%. The yellow mark is the current fall. Price index; about twenty episodes, so this describes history, not the odds of anything.

SOURCE
BSE, Nifty Indices · Zerodha
analysis

Of the 21 completed falls in which the Sensex lost at least 13%, more than half went on to become proper bear markets of 20% or more, and one in three went past 30%. The Nifty's record is almost the same. There are plenty of examples of things getting worse from here, some of them much worse. Twenty-one past falls cannot tell us the probability for this one.

The typical fall took a little over three months from this point to hit bottom, and about eight months to recover fully. The longest took over two years to find a bottom and more than four and a half to get back.

But be clear about what this can and can't tell you. Twenty-one falls over 47 years is a tiny sample. Each one had its own cause: a scam, a global crisis, a pandemic, a war.

And the India of 1992 or 2008 was a very different market from today's. There are far more investors, far more SIP money coming in every month and many more listed companies. Trading has gone fully electronic, and the market is deeper and easier to trade in. Pretty much everything has changed since the 1990s except the human in it. We're still driven by fear and greed, and more often than not we make the wrong decisions at the wrong time. As the investor Jim O'Shaughnessy likes to say, the last edge left in markets is human behaviour:

// *Markets change minute-by-minute. Human nature barely changes millennium-by-millennium. Therein lies your edge."*

JIM O'SHAUGHNESSY, QUOTED BY MORNINGSTAR INDIA, 2018

So this is the range of what has happened, not a forecast of what will. If it does anything, it should stop you treating "it has already fallen 14%" as if it were a floor.

Since twenty-one falls is a small sample, I went looking for a bigger one. MSCI publishes indices for almost every stock market in the world, and since 2000, those markets have produced 596 falls of 13% or more.

The world has been a little harsher than the Sensex. Among the falls that can be put into a final depth group, about a third stopped before 20%, against roughly 43% in the Sensex's completed falls. The samples and currencies differ, so that isn't a clean like-for-like comparison. A falling currency deepens a dollar investor's loss; unfinished falls and indices that stop publishing also limit what this history can tell us. India's history is one market's experience, rather than a promise about what happens next.

And here's the current fall laid over the famous ones, so you can see roughly where we are on the map. None of these lines tells you how ours ends. They just show how differently the famous ones played out.

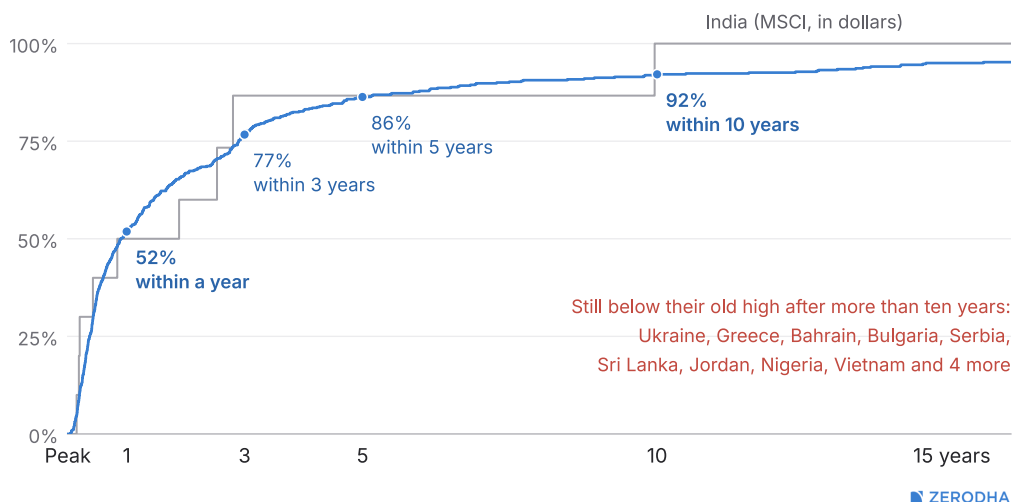
FIGURE 3.13

How deep falls went in 78 markets, and how long they took to heal

Every fall of 13% or more from a high in 78 MSCI country indices, in US dollars with dividends, January 2001–October 2026

	Stopped before -20%	-20% to -30%	-30% to -50%	Past -50%
All markets 567 falls, 78 markets	35%	26%	20%	19%
One vote per market average of 78 markets	32%	22%	20%	26%
India, MSCI in dollars 9 falls since 2001	33%	22%	33%	11%
Sensex, in rupees 21 falls since 1979	43%	24%	19%	14%

Share of falls back at the old high



596 falls of 13% or more in 78 MSCI country indices since December 2000, in US dollars with dividends. The top panel classifies 567: completed falls and open falls already in the deepest group; 29 unfinished shallower falls have no final group yet. Of those 567, 35% stopped before 20% and 19% reached 50% or worse. The lower panel accounts for unfinished waits with a survival estimate: 52% recovered within a year of the peak, 77% within three and 92% within ten. Thirteen remained below their old high after more than ten years. Falls cluster in global crises, 122 began in 2007–08, so the count overstates how many separate historical experiences sit behind these results.

SOURCE

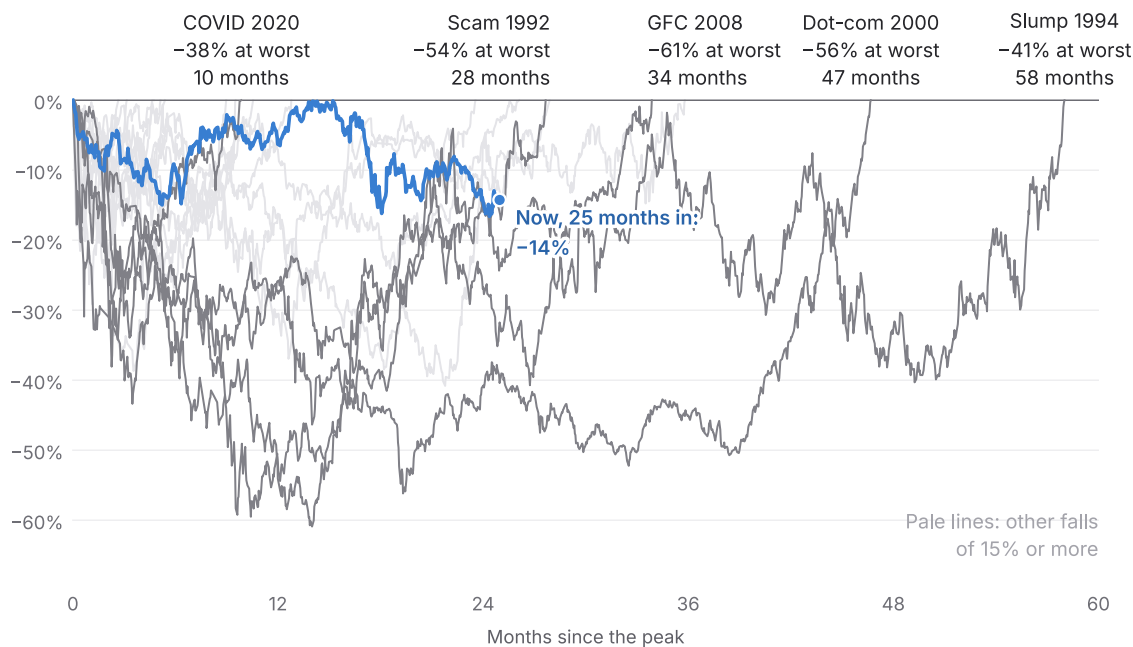
MSCI end-of-day country indices (gross total return, USD),
BSE · Zerodha analysis

FIGURE 3.14

The current fall, beside the famous ones

Every major Sensex drawdown since 1979 overlaid from peak, measured in months elapsed. Latest close: 26 Oct 2026.

Fall from the previous high



ZERODHA

Every line starts at a market peak (0%); the further it dips, the deeper the fall, and it ends when it gets back to 0%. The Sensex from each recorded daily peak, sampled monthly. COVID (-38%) was a V, back at the old high in 10 months; the global financial crisis (-61%) took 34; the dot-com bust (-56%) took 47; the 1994 slump (-41%) took 58. The blue line, 25 months in and 14% below its September 2024 high, has no known ending.

SOURCE
BSE · Zerodha

04

CHAPTER 4

What if Japan?

34 years

How long the Nikkei 225 took to regain its December 1989 peak

What if Japan? This is the abyss into which all investing arguments eventually fall. Say even a remotely optimistic thing about investing, that markets tend to recover, that most falls don't last, that over the long run it's reasonable to expect markets to go up (what's the technical term? a positive drift), and somebody will eventually counter you with three words. What if Japan? It's the ultimate investing killer.

But you don't have to go to Tokyo to see that this can happen. Even with our short market history, India has enough examples of markets going sideways for so long that you want to sell everything, put it all in fixed deposits and get on with your life.

Take the last five years. If you bought the Nifty 50 five years ago and reinvested the dividends, you've earned about 6.4% a year through September. Painful, right? The Nifty's five-year return is now about where it was in July 2020, in the middle of the pandemic.

So when people ask how bad things can get, the awkward answer is that equity investors have already had five years of pretty much nothing, at least compared with an FD. The broader Nifty 500 did better, about 9% a year, which tells you that what you mean by "the market" matters too.

Now look at someone who held a diversified mix, say 50% in the Nifty, 30% in government bonds and 20% in gold, rebalanced once a year. They made about 10.6% a year over the same five years, and since 2010 they've never had a five-year stretch below about 6%. Which is another reason why comparing everything with a 100% equity portfolio is a bit silly. People do it all the time, but for most people, putting every rupee in shares would be crazy.

And this isn't the first time Indian markets have gone sideways. The longest wait in the Sensex's history ran from September 1994 to July 1999, almost five years in which the market went nowhere. That's long enough for a fresh graduate to become a team lead and conclude that the stock market is a scam. You'll also hear that the Nifty stayed below its December 2007 peak until October 2013.

That's true of the price index, but it ignores dividends. Count them, and the Nifty was back at its January 2008 high in under three years. So in this book, returns include dividends unless I say otherwise, and before you get scared by anybody's chart, always ask what they counted as a return.

FIGURE 4.1

The Nifty 50's five-year return fell to FD levels

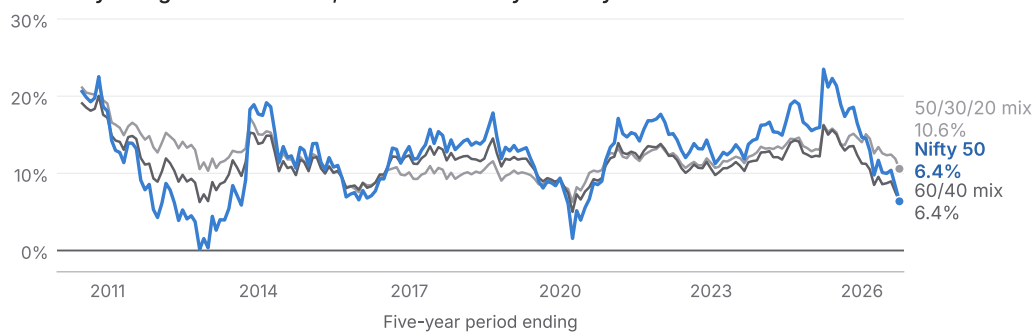
Total return (TRI): Nifty 50, Nifty 500 and Nifty LargeMidcap 250 · Apr 2010 to Sep 2026

Three Indian equity indices

Annualised return over the previous five years



Nifty 50 against two mixes, rebalanced every January



ZERODHA

Each point is the yearly return of someone who invested five years before that date. The annualised five-year total return, with dividends reinvested, for three Indian indices at each month-end. The September 2026 Nifty 50 reading is 6.4% a year, close to its July 2020 reading of 6.7%. Broader indices did better, which is its own small lesson about what "the market" means. Bottom panel: the Nifty 50's five-year return since 2010 ranged from 0.2% to 23.5% a year; a 60/40 mix with G-Secs from 5.0% to 20.1%, and a 50/30/20 mix with gold from 6.3% to 21.6%. Today 60/40 matches the Nifty at 6.4% and 50/30/20 is at 10.6%.

SOURCE

Nifty Indices, World Gold Council
· data to 30 Sep 2026 · Zerodha

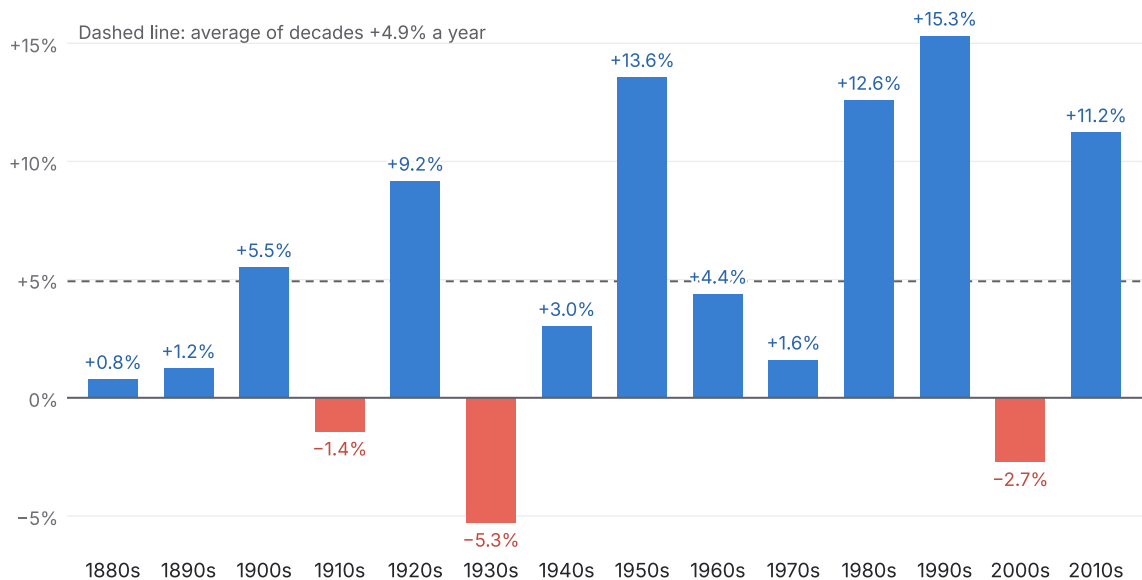
To go further back, we have to look at the US, where we have a much longer return history available. Break it into decades, and you'll find several when the price index went nowhere, or backwards.

FIGURE 4.2

Some decades were duds

Nominal annualised S&P 500 price-index return by decade, 1880s–2010s

Yearly nominal price return



■ ZERODHA

Historical US composite / S&P annualised price return by decade since the 1880s, excluding dividends. Before December 1927 it uses monthly-average prices; thereafter month-end closes. Each decade runs from the preceding December through December of its last year. Investors do not receive the long-run average as a smooth line. They live through one decade at a time, and some decades are duds.

SOURCE

Robert Shiller, TradingView,
FRED · Zerodha

I first learnt about these long dry spells from the great Larry Swedroe, and I highly recommend reading everything he has written, his books, his blogs, all of it. He likes to puncture the phrase “stocks for the long run” with an uncomfortable fact: there have been stretches of 13 years or more when US stocks did worse than risk-free Treasury bills.

I checked this using Professor Aswath Damodaran's history of US returns, and thank God he publishes it, because it makes this kind of comparison easy. In the 15 years from 1929 to 1943, \$100 in stocks ended up at about \$97. The same \$100 in boring three-month bills became about \$115. It happened again from 1966 to 1982, and again from 2000 to 2012.

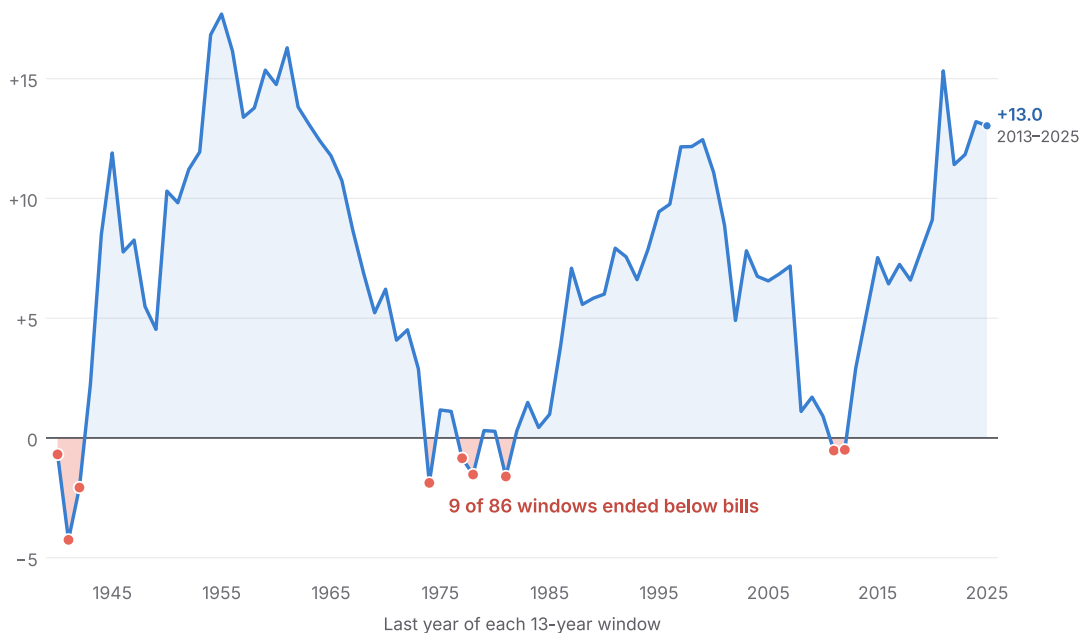
Smart people disagree about what this means. Jeremy Siegel made the case for long-term share ownership in his famous book *Stocks for the Long Run*. Edward McQuarrie rebuilt US returns all the way back to 1792 and found something messier: over stretches of several decades, stocks sometimes beat bonds, sometimes lagged them and sometimes tied.

FIGURE 4.3

Thirteen-year stretches when bills beat stocks

S&P 500 total return less 3-month US Treasury bills; 9 of 86 overlapping 13-year windows ended below bills

Stocks minus bills over 13 years, percentage points a year



ZERODHA

Each point is one 13-year stretch, marked at its final year; below zero means Treasury bills beat stocks. The annualised return of US stocks with dividends minus Treasury bills over every 13-year window since 1928. Nine of 86 windows ended below zero. The windows overlap, so these are not nine separate disasters, but each was a real investor's 13 years.

SOURCE

Aswath Damodaran, NYU Stern · Zerodha analysis

And then there's Japan itself. The Nikkei 225 peaked in 1989 and only got back to that level in early 2024. That's 34 years, most of an adult's investing life. And that's the price index. Dividends would have helped, but I couldn't find a clean long history of Japanese total returns, so the numbers below leave them out.

Whenever people bring up Japan, though, they're talking about a lump sum: put everything in at the 1989 peak and wait 34 years to get your money back. Very few people invest like that. Most of us invest out of a monthly salary, which means an SIP.

So what if somebody had kept doing an SIP into the Nikkei as the crash was unfolding? I ran that simple experiment: the same amount of yen every month, from January 1990 to February 2024. That investor would have made about 5% a year and ended with about two and a half times the money put in.

That doesn't make it all right. For more than half of those 34 years, the account was worth less than the money paid into it. At the worst point, in 2003, it was worth less than half. After twenty years of dutiful investing, at the end of 2010, it was still down about 30%. The monthly investor did win in the end, but only after spending most of an adult life being told by relatives that this was a very stupid hobby. Still, it was a lot better than nothing.

Would bonds have helped? Probably. Japan does have a proper government-bond index, but I couldn't get my hands on its full history, so I built a synthetic one from Japanese ten-year bond yields. Treat it as directionally accurate, not a record. At the April 2003 trough, an SIP into a 60/40 mix of the Nikkei and Japanese government bonds was down about 22%, against 53% for the all-equity one. It ended with a little less money, but it was a far easier ride to sit through.

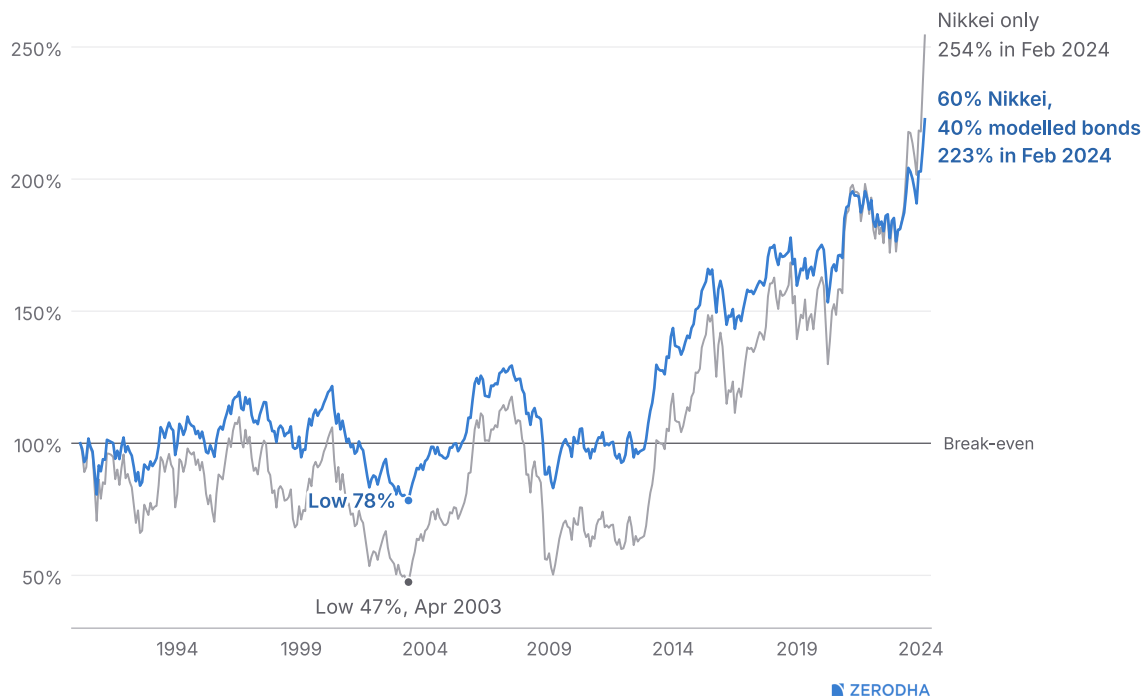
And Japan is not the only case. History is littered with countries that had spectacular crashes and long stretches of sideways or even negative returns. Cliff Asness and two of his colleagues at AQR looked at these countries in a 2011 paper, and this is what they concluded:

FIGURE 4.4

Japan's lost decades, for a monthly buyer

Exploratory model: 60% Nikkei price index / 40% modelled 10-year JGB, rebalanced each January

Account value as % of cash paid in



A fixed yen amount invested every month from January 1990 to February 2024, in the Nikkei 225 price index alone and in a 60/40 mix with a modelled ten-year Japanese government bond, priced off Ministry of Finance yields and rebalanced each January. At the April 2003 low the equity-only account was worth 47% of the cash paid in and the 60/40 account 78%. By February 2024 they held 2.54 and 2.23 times the cash paid in, 4.9% and 4.3% a year. The bond leg is a model, checked against an independent academic bond-return series; dividends, which would have favoured shares, are excluded.

SOURCE

FRED (Nikkei 225); Ministry of Finance, Japan (JGB yields) · Zerodha model

Owning other countries may not save you when everything goes south. Markets are so tied together that in a crash everything falls, at least in the first legs. The case for owning the world is that over long periods, different countries do well at different times. When one country goes nowhere for years, and God forbid decades, the hope, and it is a hope, is that not every country follows the same path. In their words, investors "should care more about long, drawn-out bear markets". We'll come back to this in the chapter on owning the world.

// *Critics of international diversification observe that it does not protect investors against short-term market crashes because markets become more correlated during downturns. Although true, this observation misses the big picture. Over longer horizons, underlying economic growth matters more than short-lived panics with respect to returns, and international diversification does an excellent job of protecting investors."*

CLIFF ASNESS, RONI ISRAELOV AND JOHN LIEW, 2011

So yes, you had Japan. You had the Great Depression. You had the crashes in China, Greece and Brazil. You had US value stocks after 2008; if you held value for a decade and more, you suffered a fate worse than torture. There are countless times in market history when markets went nowhere for so long that the people holding them gave up.

The point of telling you all this is that just because you take a risk doesn't mean you're owed a return. The equity risk premium can be negative too. There's no God-given law, and no clause in the Indian constitution, that guarantees you 12% returns, and the phrase "India growth story" doesn't make 12% your birthright either.

And just because you diversify doesn't mean you'll end up all right. You need to diversify, you need to get your asset allocation right, and you need a little luck. But the odds of doing all right are far better for someone who diversifies, holds a sensible mix and keeps investing through good times and bad than for someone who owns one country or one asset class.

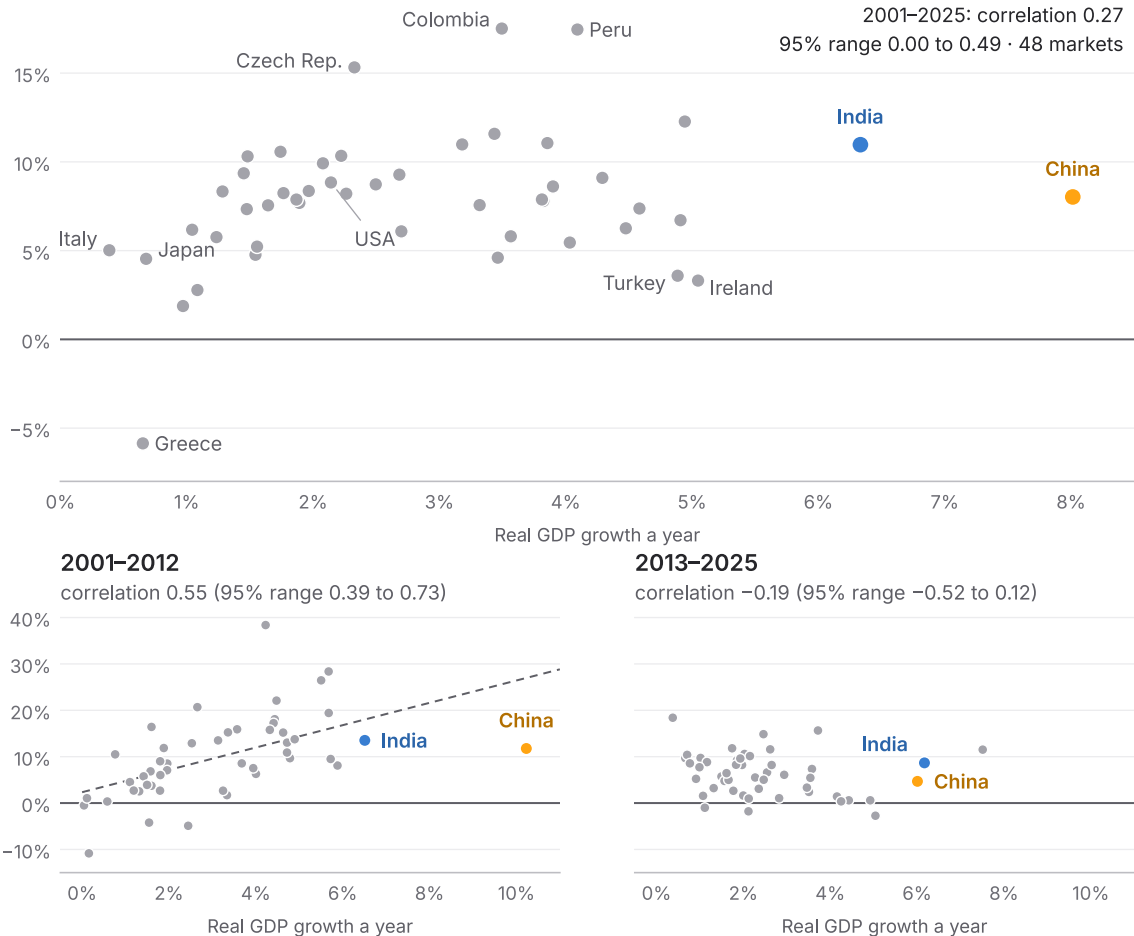
In fact, the growth story is a much weaker guide to returns than people think. I went to MSCI's website and downloaded every country index going back to 2000. Forty-eight countries have data for the whole stretch, so I lined up how fast each economy grew against what its stock market returned.

FIGURE 4.5

Growth told you surprisingly little

48 MSCI country stock indices, US dollars with dividends reinvested, against real GDP growth, 2001–2025; yearly averages

Stock return a year, US dollars



ZERODHA

If fast growth meant good returns, the dots would rise from left to right. Each dot is one country, 2001 to 2025: real GDP growth a year against the MSCI index return a year in US dollars, with dividends. Faster growers did slightly better on average, but the link is weak (correlation 0.27, with a 95% range from 0.00 to 0.49) and it flipped: 0.55 in 2001–2012, -0.19 in 2013–2025. China grew fastest and returned less than India, the US and several slow-growing markets. Russia's index is missing from the data.

SOURCE
MSCI end-of-day index data,
IMF World Economic Outlook
(Oct 2026) · Zerodha analysis

Growth explains only about 7% of the difference in returns between countries. Take China. Its economy grew about 8% a year for a quarter-century, and MSCI China returned about 8% a year in dollars from 2001 to 2025, roughly what American investors got from an economy growing at 2%. That window starts near a low, though. Measure from the index's start at the end of 1992, and the price index is still below where it began; even with dividends, it has made about 1% a year. If you had bought China then, you'd have earned pretty much nothing for 33 years in the fastest-growing big economy on earth. India did better, 11% a year in dollars from 2001, but I can't tell you from this chart whether that was because of growth or despite it.

FIGURE 4.6

China's economy grew; its shares didn't

China's real GDP and MSCI China in US dollars, end-1992 = 100, to Oct 2026



China's economy and MSCI China in US dollars, both set to 100 at the end of 1992. The economy grew about fifteen-fold after inflation. The index is below where it started on price, and has returned about 1% a year with dividends. A fast-growing economy is not the same thing as a good stock market.

SOURCE

MSCI (China index 302400, USD), World Bank WDI · Zerodha analysis

Jay Ritter looked at 16 countries over the twentieth century and found a negative relationship between economic growth and stock returns. I don't find a negative link in this shorter window, but the lesson is the same: knowing a country will grow fast is nowhere near enough to know its shareholders will be paid for it. The profits can go to new companies that weren't listed when you bought, to new shares issued by old ones, to the government, or into the high price you paid at the start. New shares can help a company grow without giving its existing shareholders the same growth per share.

When I think about investing, the image that comes to mind is Borges's *Garden of Forking Paths*. I imagine standing at the edge of a cliff, staring into a giant, gaping void full of darkness, with tiny dots of light in it. I like to think of those dots as possible futures. Any one of them can unfold, and there's no way to know which in advance. So investing is a hopeful act, an act of faith. It's a bet that the companies you buy will grow, make a lot of money and reward you for owning them. It's also an act of terror, because you don't know whether that will happen.

My default way of thinking about all this is in odds. Are the odds reasonably higher that I'll do better over the long term with a diversified basket of Indian and international shares than sitting entirely in safe assets? I think yes, and that belief is backed by evidence, data and long history. Not certainty. Odds. And there's a big difference between *most* and *mine*: most three-year stretches in the Nifty made money, which is no comfort at all if yours was one of the ones that didn't.

But here, too, I'm reminded of something I once read about David Hume: just because the sun has risen every day doesn't mean it *has* to rise tomorrow. As depressing as that sounds, that's also true of investing. We often mistake one roll of the dice for destiny. Just because the US market has had the history it has had doesn't mean the future must look like the past. The same goes for India. The paradox of being an investor is that you have to be deeply pessimistic and deeply optimistic at the same time.

05

CHAPTER 5

The quiet thief

13.9 years

How long the Sensex took to buy as much as it did in March 1992

As investors, yes, you have to worry about crashes and long sideways stretches. But at least those are visible. They're in your face. The thing you should worry about most is the silent thief, and that is inflation. You don't see it, but it can do lasting damage to your wealth. You'll only notice it one happy day when you wake up, look at your statement or the corpus you've built, decide to check your returns after inflation, and probably have a heart attack.

This is what Bernstein means by deep risk: the kind where markets don't come back, or where something hidden eats away at your returns. And you can see some of the signs. Brent was still about 62% above its pre-war level on 20 October, even though the news from the Gulf looks a little better. Inflation has picked up in several big economies, including India. Food and beverage inflation reached 7.4% in September, and wholesale prices rose 11.4% in the year to September. The RBI made its first rate hike in October, and the ten-year government bond yield is above 7.5%.

Before the pandemic, the big worry in rich countries was bonds with negative yields. Today, government bond yields across the developed world are at levels we haven't seen in decades. Does all this mean doom and gloom? No. But it does look like a big renormalisation is under way, and like we may be headed for a world where inflation stays high for a while. I don't know. Nobody does. But it's worth knowing what inflation has done to investors before, because most of the charts people show you hide it.

Economists have a name for our blind spot: *money illusion*. I didn't understand it at first either, so here it is plainly. Almost every conversation about investing happens in nominal terms, that is, returns before inflation, because real returns aren't intuitive. But what you earn is the nominal return, and what you can buy with it depends on the real return. When prices rise, everything you earn buys less.

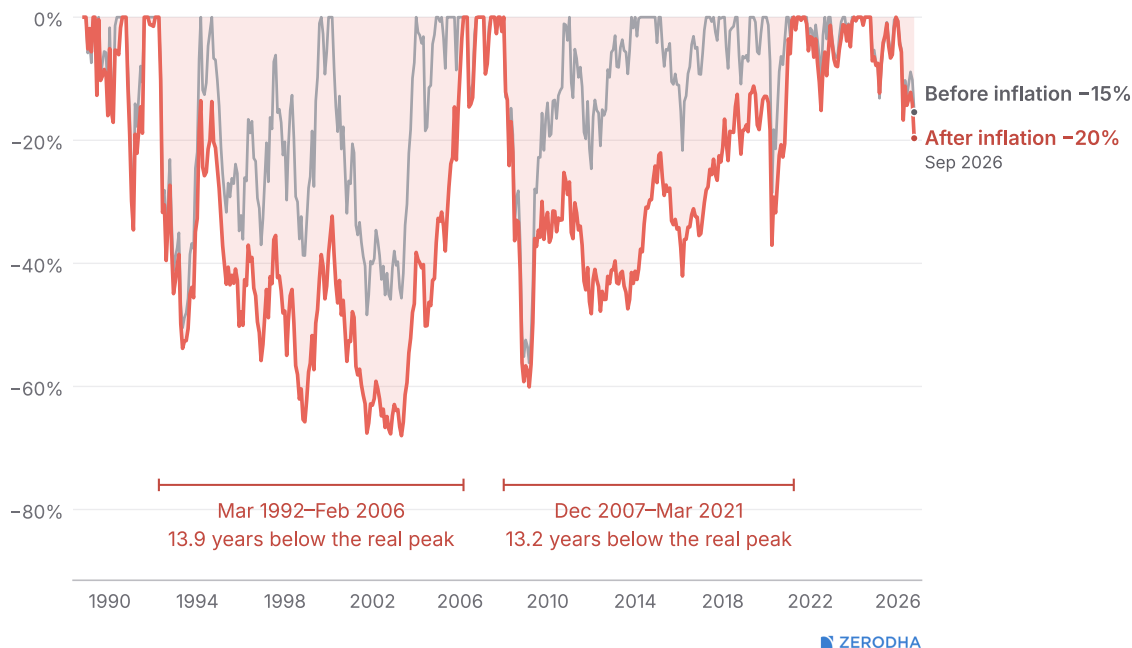
So what do Indian returns look like after inflation? The next chart shows how far the Sensex was below its previous high, in grey, and the same thing after inflation, in coral.

FIGURE 5.1

After inflation, the Sensex took about 14 years to get back

BSE Sensex price index, fall from its previous month-end high, before inflation and after Indian consumer inflation, October 1988–September 2026

Fall from the previous high



The Sensex price index's percentage fall from its previous high, before inflation (grey) and after Indian consumer inflation (coral), since 1988. In purchasing power, the March 1992 peak took 13.9 years to regain and the December 2007 peak took about 13 and a quarter. Dividends, worth roughly 1–2% a year, are excluded; they would shorten these waits, but not by a decade.

SOURCE

BSE, MoSPI, RBI/India Data Hub · Zerodha analysis

Look at the two biggest peaks. If you bought the Sensex in March 1992, by February 2006 it had returned about 6.6% a year. After inflation, that was zero: fourteen years in which your money grew on paper and bought nothing more. The same thing happened from December 2007. To March 2021, the Sensex returned 7% a year, and after inflation, zero again. That's thirteen years. Two lost decades, give or take, hiding inside the chart everybody uses to prove that Indian stocks always come back.

They did come back. Over its whole history from 1988 to 2026, the Sensex returned 13.2% a year, and about 6% a year after inflation. The gap is what inflation took. That's still a perfectly good real return. But it tells you why you have to look at returns after inflation to know whether what you're doing is enough to keep up with prices and grow your money beyond them.

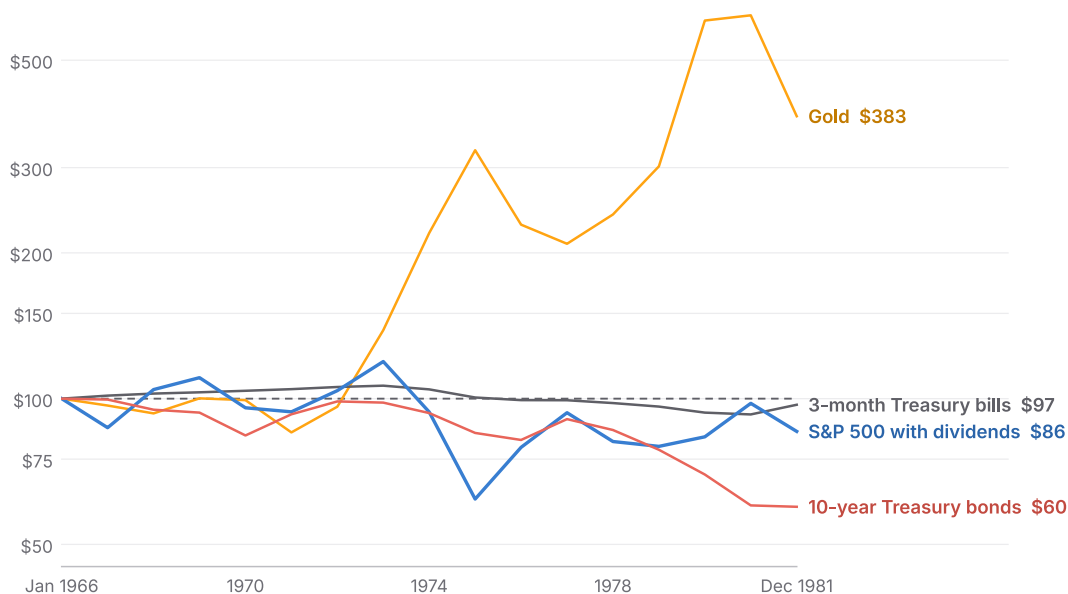
But what if inflation stays stubborn for years? Indian market data doesn't go back far enough to tell us, so let's look at the US. From January 1966 to December 1981, American consumer prices roughly tripled over almost sixteen years.

FIGURE 5.2

From 1966 to 1981, shares and government bonds both lost money after inflation

Growth of \$100 after US consumer inflation, January 1966 to December 1981, annual total returns, log scale

Real value of \$100 (log scale)



■ ZERODHA

What \$100 was worth after US inflation, January 1966 to December 1981, log scale. Stocks with dividends reinvested ended at \$86 in purchasing power. Ten-year government bonds, the "safe" asset, ended at \$60. Treasury bills roughly held their own at \$97. Gold ended at \$383, though its official price was fixed at \$35 an ounce until 1971 (the private market price floated from 1968) and US restrictions on most private bullion ownership were lifted on 31 December 1974.

SOURCE
Damodaran Online (NYU Stern),
FRED CPIAUCSL · Zerodha
analysis

This is probably the scariest chart in this book. We all think of bonds as safe. They pay a fixed amount and you get your money back at the end. But bonds are safe in nominal terms. In a long, high inflation, they're probably the worst thing to own, because that fixed amount is paid in a currency that keeps shrinking. That doesn't mean you shouldn't own bonds. It means you need to know what inflation does to them. In those sixteen years, the "safe" asset lost more purchasing power than shares did. And this isn't just an American thing. Elroy Dimson, Paul Marsh and Mike Staunton studied government bonds from 1900 to 2024 and reported an average annualised real return across markets of 0.9% excluding Austria's exceptionally poor result, or 0.6% with it included, with long stretches of real losses along the way.

Sure, you might think this is one decade in one country and tells you nothing. So I went through every year of US data since 1928, sorted by how much inflation there was, and here's what I found.

In the sixteen years since 1928 when American prices rose more than 6%, here's what a typical year looked like after inflation:

- Stocks lost about 11%. They beat inflation in only about a third of those years.
- Ten-year government bonds lost about 9%. They beat inflation in just one of the sixteen.
- Treasury bills, which are basically cash, lost about 2%.
- Gold, shown here from 1971, gained about 2% in the typical hot-inflation year, although the outcomes varied widely. In 2021 and 2022, it lost money too.

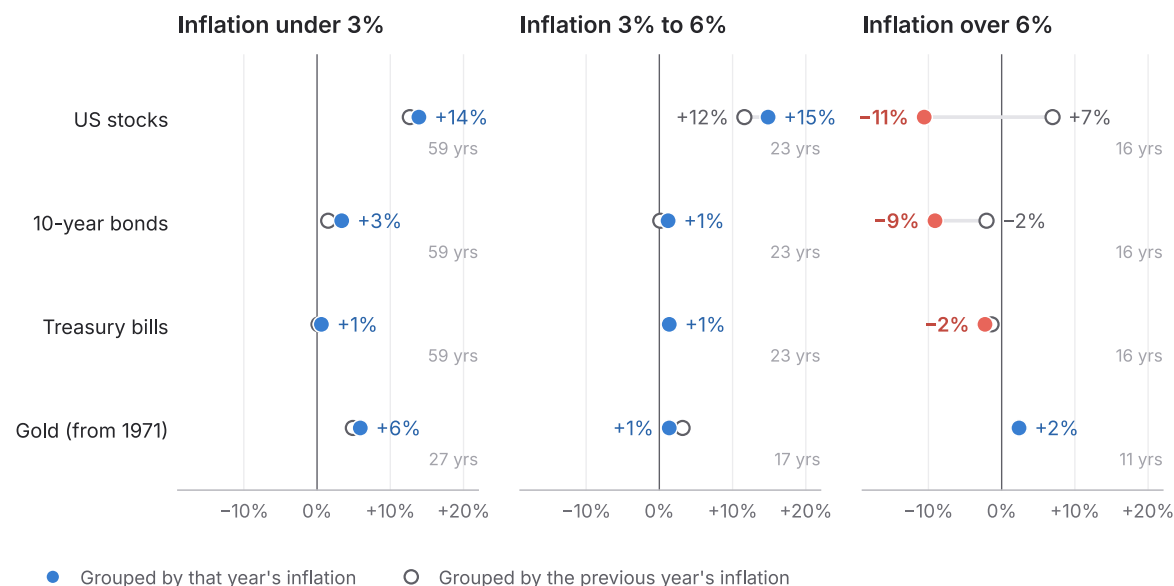
In years when inflation was below 6%, stocks did well, gaining about 14% in a typical year after inflation.

So yes, high inflation is bad for almost everything you own while it's happening. The problem is that you only know a year was a high-inflation year once it's over. Say you had a simple rule: if inflation was above 6% last year, get out of stocks. You'd have sat out decent years, because in the year after a high-inflation year, US stocks typically gained about 7% after inflation. By the time inflation is in the headlines, markets have usually already taken the hit.

FIGURE 5.3

High-inflation years hurt almost everything

Median real return in US calendar years, 1928–2025, grouped by that year's December-to-December CPI inflation (dots) or the previous year's (rings)



■ ZERODHA

Dots left of the zero line lost money after inflation. Median real (after-inflation) return of US stocks, ten-year government bonds, Treasury bills and gold, by how much prices rose that year, 1928–2025. In the 16 years when prices rose more than 6%, stocks lost a median 10.6% and bonds 9.1% after inflation; bills lost 2.3%. Gold, shown from 1971, gained a median 2.4%, but unevenly. Sorted instead by the previous year's inflation, which is what you would know at the time, the median stock year after a hot one was +7%.

SOURCE

Aswath Damodaran (NYU Stern)
annual returns, BLS CPI-U via
FRED · Zerodha analysis

Two warnings before you sell your debt funds and buy a gold biscuit. First, these were American years, with American bonds and an American central bank. India is not America. Second, if you think gold is an inflation hedge, I hate to break it to you, but it's a patchy one. Claude Erb and Campbell Harvey showed in *The Golden Dilemma* (2013) that gold's price after inflation swings far too much to protect you over anything shorter than a very long lifetime. It was spectacular in the 1970s and then lost most of its real value over the next two decades. Over long stretches, shares have been the more reliable way to beat inflation.

FIGURE 5.4

Gold has been a patchy inflation hedge

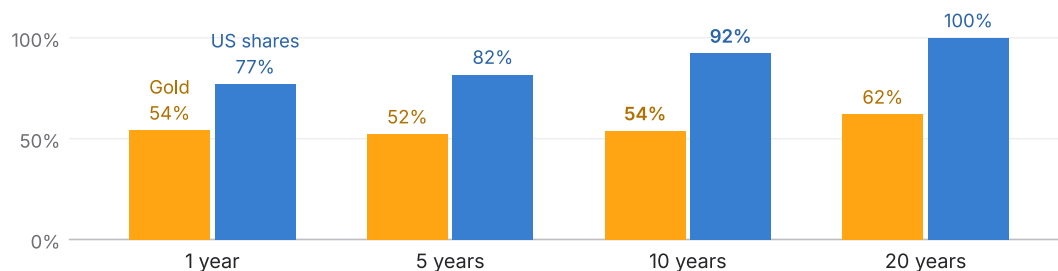
Gold in today's dollars, Jan 1978–Sep 2026, and how often gold and US shares beat US inflation

Gold, an ounce, in today's dollars

Sep 2026 dollars



Share of windows that beat US inflation



ZERODHA

Gold in today's dollars since 1978, and how often gold and US shares beat US inflation. An ounce bought in January 1980 took nearly 45 years to regain its buying power. Over ten-year spans, gold beat US inflation about half the time; US shares did so nine times in ten. One country, overlapping windows.

SOURCE

World Gold Council, US BLS via FRED, Aswath Damodaran (NYU Stern) · Zerodha analysis

What a rate hike does to your debt fund

Now, the other thing you need to know is what a rate hike does to your debt fund. If we're headed into a more inflationary world, central banks, the RBI included, may be forced to keep raising rates.

When interest rates rise, the price of the bond you already own falls. Why? Because nobody wants to pay full price for an old bond paying a low rate when a new one pays more. For a new buyer to want the old bond, its price has to fall. How much? That depends on one number, called duration.

In simple terms, duration tells you roughly what percentage you'll lose for each percentage point rise in interest rates. A bond fund with a duration of five years will fall about 5% if rates go up by one percentage point. A short-term fund with a duration of a few months barely notices. A long-term gilt fund, with a duration of ten years or more, can lose a year or two of interest in a few months.

Here's what happened every time Indian bond yields rose sharply since 2003.

Treasury bills didn't lose money in any of these episodes. The five-year government bond index fell at most about 5%. The ten-year bond fell as much as 11%. And in three of the seven episodes, somebody holding ten-year bonds was still losing money a full year after rates started going up. Now look at this year, in the funds people own.

None of this makes bonds a bad investment. They have a role in your portfolio, and when rates fall, long bonds are where you want to be.

A rough rule of thumb: if yields rise once and then settle, the extra interest can make up for the early price loss over roughly the fund's duration, as long as you stay invested. 2022 is a good example. The RBI's first hike that year came on 4 May. Long-duration funds fell about 5%, were back by early September, and two years after the eve of the hike they were ahead of liquid funds, 16.0% against 13.8%, because the higher yields they picked up paid for the early loss. So if you need the money in the next year or two, don't keep it in a long-duration fund. Match the bond to the date you need the money, and a rate hike becomes something you read about rather than something you feel.

Duration isn't the only risk in debt, though. There's a bigger worry: credit risk, the chance that whoever borrowed the money doesn't pay it back. That applies when your fund owns corporate bonds. If it owns only government securities, you don't have to worry about the government defaulting, or at least I hope not, because if that happens, we have far bigger worries than our mutual funds. A gilt fund can still fall when rates

rise, as you just saw, but it won't go bust. Corporate bonds are another story. On 23 April 2020, Franklin Templeton shut six of its debt funds, holding about ₹25,000 crore, because it couldn't sell their bonds fast enough to pay the people who wanted out. Investors did eventually get back a little more than the funds were worth when they shut, but it took more than three years and a court-supervised wind-up.

My simple advice on debt is to keep it simple and stick to the safest of the safe funds: overnight or liquid funds for money you need soon, and government bond funds matched to when you'll need the rest. It makes little sense to chase higher returns and take more risk with your debt, because the role of debt in your portfolio is stability, not returns. That's the job of equities.

And in case you're wondering what shares did once the RBI started hiking: in the five completed hiking cycles since 2005, the Nifty was higher three, six and twelve months after the first hike every time, about 13% higher a year later in the typical case. Five cases prove nothing, though. The June 2008 hike, which came after a long pause rather than a cut, was followed by a 35% fall within six months.

Cullen Roche is one of the most thoughtful people in investing, and someone I've read and admired for a long time. In a 2022 paper called *All Duration Investing*, which he later renamed *Defined Duration Investing*, he borrows an idea that pension funds and insurance companies have used for decades, called asset-liability matching. Put simply: match what you own to when you'll need the money.

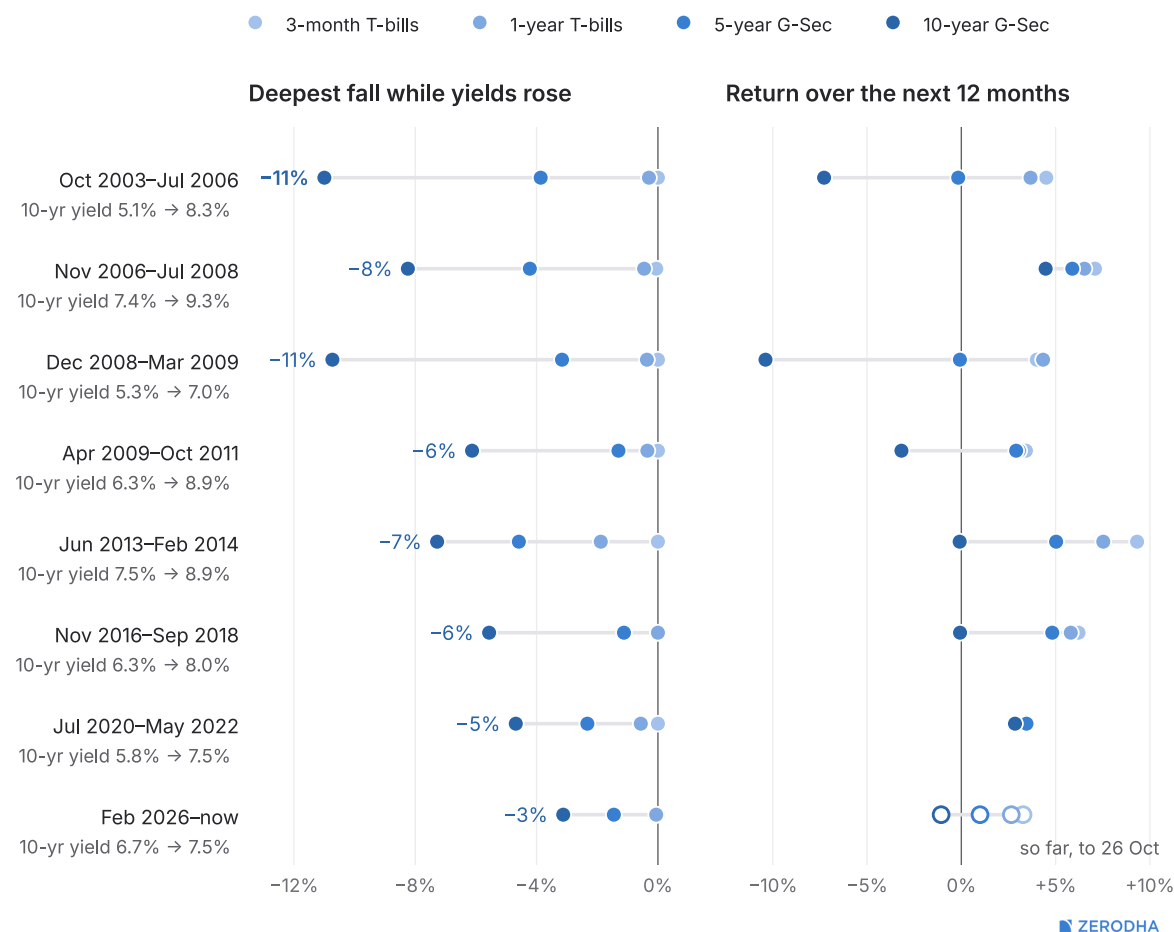
Roche takes duration from bonds and gives every asset one, shares and gold included. For shares, gold or anything else, it's roughly how long you might have to wait to be made whole after a bad fall. Cash has a duration of almost zero. Shares have a long one. So money you need next year goes into something short, and money you need in fifteen years can go into shares. That way you don't get rude surprises, and it's one way of protecting yourself from the order of returns, which we'll come back to in the plan chapter. One of the section headings in his paper says it perfectly: "No One Ever Panic Sold a 3 Month Treasury Bill".

But there's a catch, and Roche says it himself. Cash gives you "absolute nominal stability and short-term certainty with the potential for very high real uncertainty". Safe in rupees and safe after inflation are two very different things.

FIGURE 5.5

The longer the bond, the bigger the fall

Indian government debt through every rise of 1 percentage point or more in the 10-year G-Sec yield since 2003, month-end values, before costs and tax



Dots further left fell more; darker dots are longer bonds. Each row is a period when the ten-year government bond yield climbed at least one percentage point from a low; the last row is the rise since February 2026, 80 basis points so far. Left, the deepest fall each kind of government debt suffered while yields rose; right, what it returned over the following twelve months. Treasury bills barely moved. The ten-year bond fell as much as 11%, in 2003–06. T-bill and ten-year returns are modelled from RBI yields; the five-year is NSE's index. Before fund costs and tax.

SOURCE

RBI (91-day and 364-day T-bill yields, 10-year G-Sec yield), FBIL, Nifty Indices (Nifty 5yr Benchmark G-Sec) · Zerodha analysis

FIGURE 5.6

This year, short was safe and long went nowhere

Category composites since 27 February 2026, chaining median daily direct-plan growth returns in each category, to 26 October 2026; 10-year G-Sec yield to 26 October below

Return since 27 February



Each line chains the median daily NAV return of the direct-plan growth funds in a debt category, from 27 February to 26 October 2026; it is a changing category composite, not one investible fund. The liquid-fund composite earned 4.3% without a down day. The long-duration composite fell 3.6% by 2 April, recovered in the summer, gave it back in the autumn and ended down 0.53%. Funds that closed or merged count while they existed. After fund costs, before tax. The lower panel shows the ten-year yield through 26 October and the repo rate.

ZERODHA

SOURCE
AMFI (daily NAVs), FBIL (10-year par yield), RBI (repo rate) · Zerodha analysis

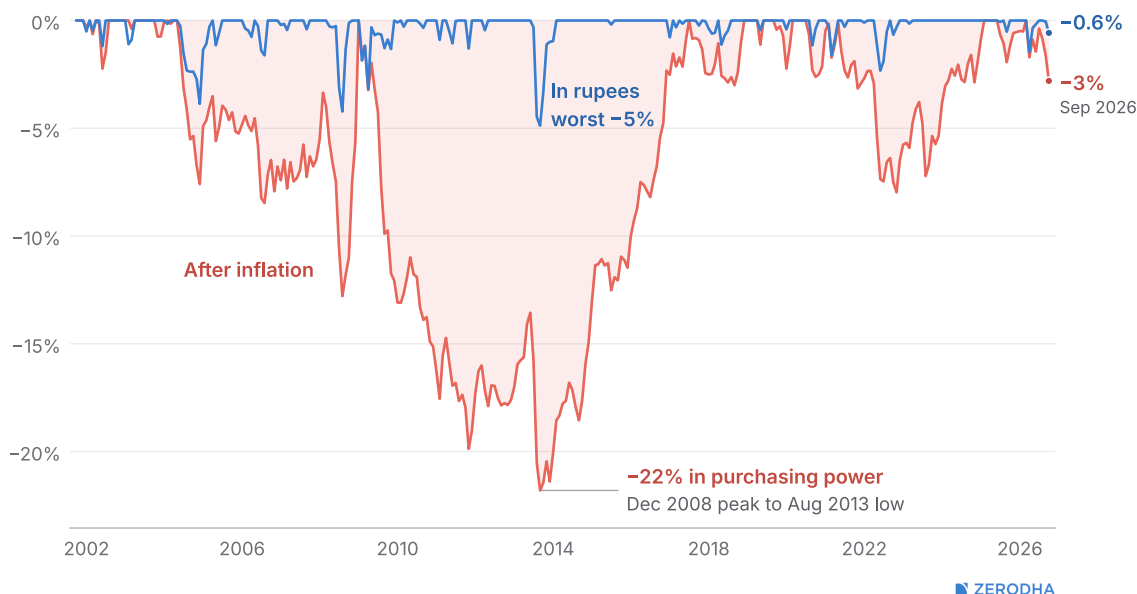
Indian government bonds have their own version of this story. The Nifty five-year G-Sec index holds Indian government bonds around the five-year maturity, so it sits in the middle of the maturity range. In rupees, its worst fall was about 7%. After inflation, it's a different animal.

FIGURE 5.7

Government bonds lost 22% after inflation between 2008 and 2013

Nifty 5-year G-Sec total return index, fall from its previous month-end high, in rupees and after Indian consumer inflation, September 2001–September 2026

Fall from the previous high



The Nifty 5-year G-Sec total return index, fall from its previous high in rupees (blue) and after inflation (coral), 2001–2026. Between December 2008 and August 2013, when Indian inflation ran ahead of bond yields, holders lost 22% of their purchasing power while every statement showed a gain.

SOURCE
Nifty Indices, MoSPI, RBI/India
Data Hub · Zerodha analysis

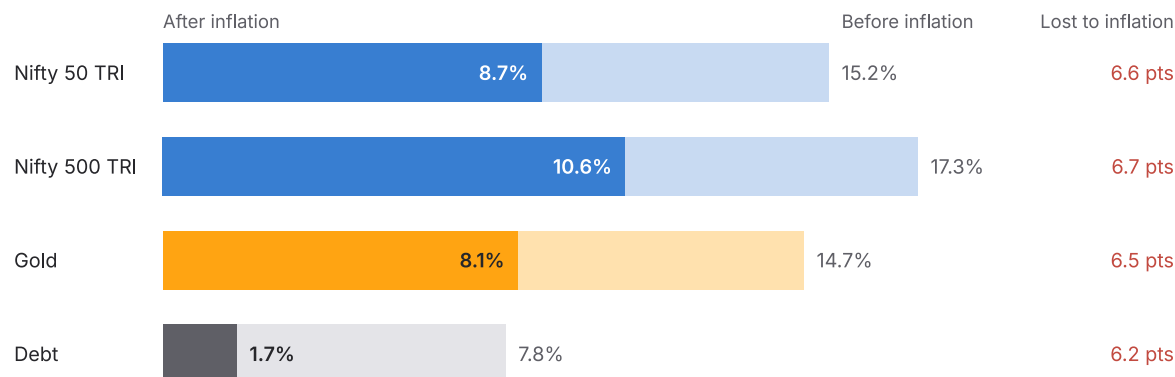
And here's the whole picture for the main Indian assets over the last 25 years: what showed up on your statement, and how much of it was left after inflation.

And since every Indian's default answer is a fixed deposit, I checked that too. In 208 monthly ten-year stretches since June 1999, a modelled one-year FD rolled over each year and taxed at 30% beat inflation only about one time in twenty-five. The typical result was a loss of about 1% a year in what your money could buy. The Nifty, even after paying its own tax at the end, beat the FD in every one of those 208 stretches, though its worst one, starting in December 2007, still lost 1.6% a year after inflation. If you're in a lower tax slab, the FD looks better.

FIGURE 5.8

Inflation ate a big chunk of the headline return

Nominal CAGR versus real CAGR after CPI inflation, Sep 2001 to Sep 2026.



■ ZERODHA

Annualised returns from September 2001 to September 2026, before and after Indian inflation. The pale part of each bar looked good on paper and bought nothing.

SOURCE

NSE · WGC Goldhub ·
IndiaDataHub · MoSPI · Zerodha

Gold is hard to beat

Gold is an insanely hard benchmark for everyone, including people like me who keep banging on about equities. From March 1992, a few weeks before the Sensex's Harshad Mehta peak, gold returned about 11.3% a year in rupees, against 8.5% for the Sensex. But that comparison is unfair to shares in two ways. It starts at a bubble top, and the Sensex number leaves out dividends.

So I checked with total returns, which count dividends. I picked January 1995 because that's when the Nifty 500's total return data starts: it returned 12.4% a year, against 11.9% for gold, more or less a wash. Pick June 1999, when the Nifty 50 total return index begins, and it's 12.9% a year against 14.1% for gold. Yes, I know I'm messing around with the starting point. The point is that gold is really, really hard to beat. Nobody who bought a little gold for their daughter's wedding in 1992 was a fool. In a way, Indian mothers have done better than most Indian fund managers.

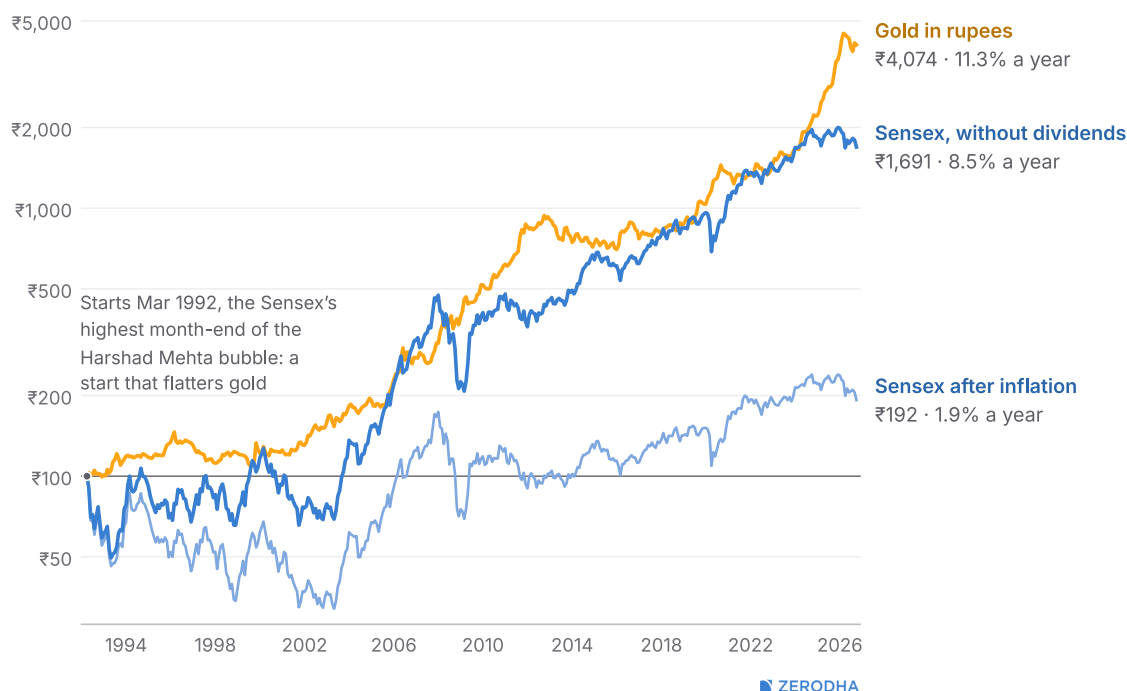
And how much of gold's return was just the rupee falling? Less than you'd think. Since 2001, dollar gold converted to rupees has earned about 14.6% a year. About four-fifths of that was gold rising in dollars, and only a fifth was the weaker rupee. Over the longer run since 1992, the rupee did about a third of the work.

FIGURE 5.9

The Sensex, the Sensex after inflation, and gold

Growth of ₹100 in three reference paths from Mar 1992 to Sep 2026, log scale

Value of ₹100, log scale



Growth of ₹100 from March 1992, when the rupee gold series begins and, by bad luck, the Sensex was near its Harshad Mehta peak, to September 2026. The Sensex price index returned 8.5% a year, about 1.9% after inflation; gold returned 11.3%. Start a year later and it is 10.9% for the Sensex against 11.6% for gold: gold still wins, by much less.

SOURCE

BSE · IndiaDataHub / MoSPI (CPI) · World Gold Council (gold USD) · RBI (USD/INR monthly avg) · Zerodha

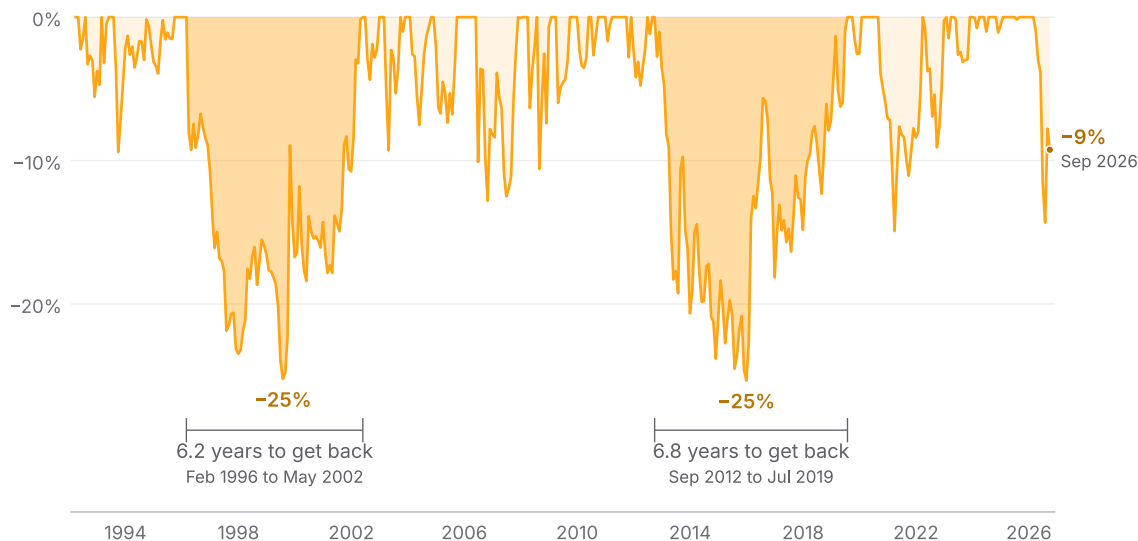
Gold has its own bear markets, though, and they can be just as long.

FIGURE 5.10

Gold falls too, and it can take years to come back

Gold in rupees, fall from its previous monthly high, March 1992–September 2026

Fall from the previous high



ZERODHA

Gold in rupees, fall from its previous high. From 1996 it fell 25% and took over six years to recover; from 2012 it fell 25% again and took almost seven. Gold is a diversifier, not a force field.

SOURCE
World Gold Council, RBI ·
Zerodha analysis

And this year, as you read in the first chapter, the end-of-the-world asset took one look at an actual war in the Gulf and went sideways.

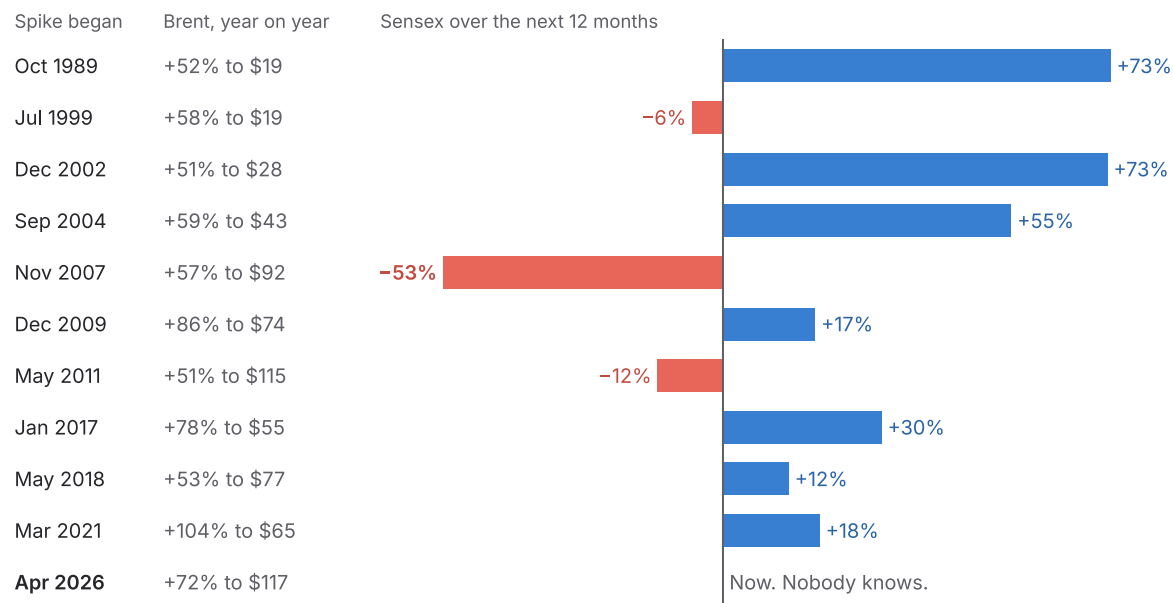
Does oil tell you anything?

As an aside, everybody right now is talking about how India depends on imports for about 88% of its crude oil, how oil prices are sky-high, and how that's why the markets are falling. Which raises the question: is there any link between crude prices and the market? Well, I decided to check. Here's every time since 1989 that Brent's monthly average rose 50% or more in a year, and what the Sensex did over the next twelve months.

FIGURE 5.11

Oil spikes are a terrible crystal ball

BSE Sensex price return in the 12 months after Brent crude's monthly average first rose 50% or more on a year earlier, 1989–2026



ZERODHA

After each past spike, the Sensex's next twelve months ranged from a 73% gain to a 53% loss. Some spikes were genuine supply shocks; others were oil bouncing back from a crash along with everything else. Which is why the headline "oil shock" tells you so little about what happens next.

SOURCE
FRED (DCOILBRETEU), BSE ·
Zerodha analysis

Over the next twelve months, the Sensex did everything from rising 73% to falling 53%. This chart is funny, because looking at oil prices told you one thing, which is nothing.

But when I checked every month since 1989, there was no statistically significant relationship between how much oil rose over a year and what the Sensex did over the next year. This test did not give us a reliable guide to the next year's stock-market return. The market is not a machine that takes in oil prices and prints out returns. It's millions of people guessing about each other's guesses.

PART TWO

The traps

The habits that turn a bad market into a worse result.

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06

CHAPTER 6

Your brain on money

600 million years

The span covered by Bennett's evolutionary hypotheses

I was recently reading Max Bennett's wonderful book, *A Brief History of Intelligence*. He proposes a history of human intelligence through simpler abilities in our distant ancestors, across roughly 600 million years.

As someone who thinks about investors for a living, I've always wondered at the absurdity of it. We are the same species that went to the moon, decoded the particles that make up reality, invented mRNA vaccines and artificial intelligence, and is now trying to crack nuclear fusion. And yet we are perfectly capable of natural stupidity, like selling the very things we need for a comfortable retirement every time the market falls 10%.

As I once heard someone say, we are dealing with the 21st century using Stone Age brains. What makes investing so hard is that, as the neuroscientist Lisa Feldman Barrett puts it, your brain's job is not to think. It's to keep you alive. To your Stone Age brain, the Nifty falling 10% is no different from the rustle your great-great-grandfather heard in a bush, or the tiger sprinting at him because it thought he looked like a delightful sandwich. When either happens, your first instinct is the same: run.

Just because your brain was built for a different world doesn't mean you get to tell yourself a soothing story that your investing mistakes are okay. The difference between a comfortable retirement and sleeping under a flyover, wrapped in a copy of the *Times of India*, is your ability to resist impulses that evolution hard-wired into you over millions of years, impulses that don't suit the world we live in. The good news is that, thanks to the work of a great many people, we know a lot about how to save ourselves from ourselves. And when it comes to investing, we are usually our own worst enemy.

Start with loss aversion. Daniel Kahneman, the Nobel laureate, and his longtime partner in crime, Amos Tversky, found that people often give losses more weight than equal gains. Their later model estimated that weight at about two to one in the choices they studied. That isn't a universal rule for how much losing ₹10,000 will hurt you. A large replication across 19 countries reproduced many patterns of prospect theory, though researchers still argue about when loss aversion appears and how strong it is. Now add the fact that you can check your portfolio every second of

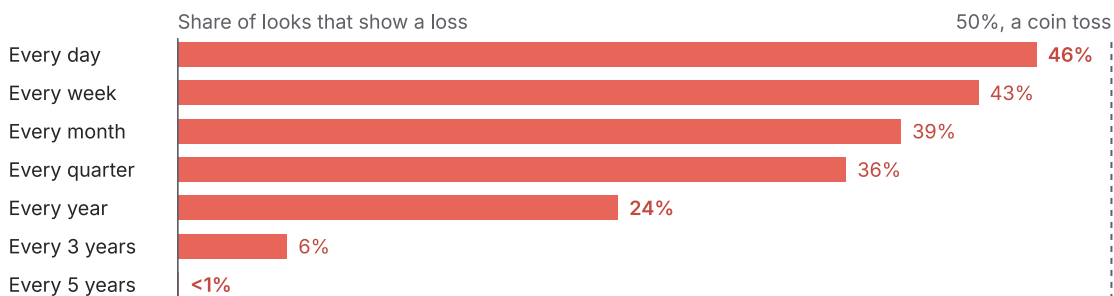
every day. The pain compounds, and so do the odds of you doing something silly. In the next chart, the investment is the same every time. The only thing that changes is how often you look at it.

FIGURE 6.1

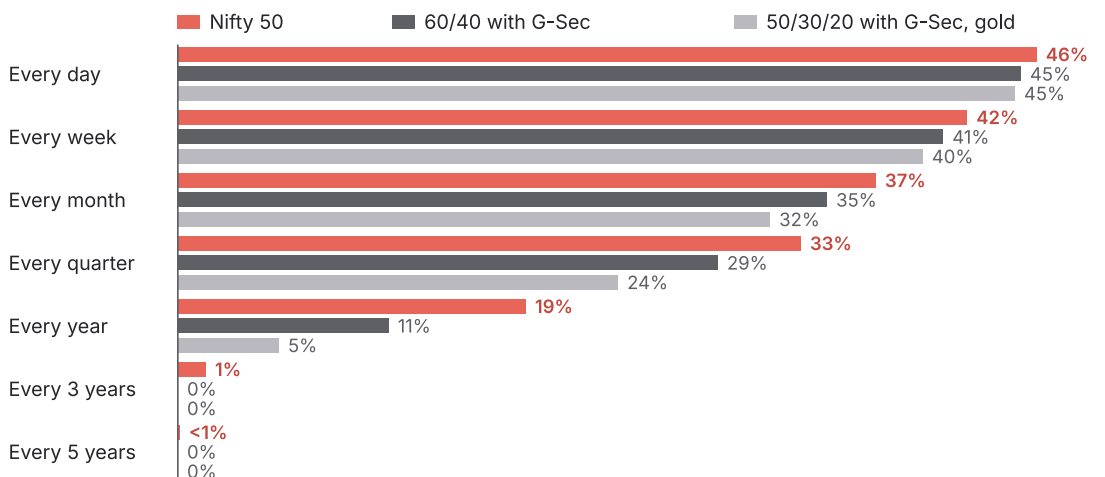
Check daily and you'll see a loss almost half the time

Share of all periods in which the Nifty 50 total return index ended lower than it started, by how often you look, June 1999–October 2026

Nifty 50, Jun 1999–Oct 2026



Nifty 50 against two mixes, Jun 2005–Oct 2026



ZERODHA

Share of periods in which the Nifty 50, with dividends, ended lower than it started. Look every day and you see red 46% of the time. Look once a year and it is 24%. Look every five years and it is almost never. The investment is identical. The pain is not. Bottom panel, since June 2005: a yearly look showed a loss 19% of the time for the Nifty 50, 11% for a 60/40 mix and 5% for a 50/30/20 mix with gold; a daily look showed red about 45% of the time for all three.

SOURCE

Nifty Indices, World Gold Council
· Zerodha analysis

Shlomo Benartzi and another Nobel laureate, Richard Thaler, have a name for this: *myopic loss aversion*. Myopic means short-sighted. The more often you check a risky investment, the more losses you see, and because losses can weigh more heavily than gains, the more you hate owning it and the likelier you are to do something silly. Look at the Nifty every day, and it's down on almost half the days. Look once a year, and it's down about one year in four. Look every five years, and you'll almost never see a loss. Even the good years have red in them: since 2000, in 16 of the 21 years the Nifty 50 with dividends ended higher, it fell at least 10% at some point along the way.

Owning a mix helps too. Whatever you own, the screen is red on about 45% of days. But a once-a-year look showed a loss 19% of the time for the Nifty alone, 11% of the time for a 60/40 mix of the Nifty and government bonds, and just 5% of the time for a 50/30/20 mix that adds gold. The daily noise stays the same. You just see a lot less of it in the numbers that matter.

Daniel Kahneman gave similarly blunt advice in a 2012 interview:

// *The real enemies of good returns are churning and lack of diversification."*

DANIEL KAHNEMAN, AAI JOURNAL, JULY 2012

Jack Bogle is one of my investing heroes. There was a time when, every time the markets fell, the first thing I did was read his old articles and speeches. The Bogle Center has a giant library of them as PDFs, and I've linked it at the end of this book. Of all his ideas, the one that has stuck in my head the most is two words long.

// *One of my favorite rules is "Don't peek."*

JACK BOGLE, 2014

Take the app off your home screen. Your portfolio won't notice.

Your brain plays another insidious trick, and it plays it after the fact. Once something has happened, it starts to feel like it was always going to happen. The great Jason Zweig, writing in the middle of the March 2020 crash, warned his readers about this.

// *In the future, your memory of the crash of 2020 won't be a recollection. It will be a reconstruction."*

JASON ZWIG, MARCH 2020

Ask anybody about COVID today, and with the enormous privilege of hindsight, they'll tell you it was obviously a buying opportunity. Then ask them what they did in the last week of March 2020, when plenty of people were selling everything because the end of the world was nigh.

This is why I think of money as a highly reactive chemical. It reacts with your hopes, your fears, your dreams, your beliefs, what your friends say, the WhatsApp group and your very identity. The reaction is every decision you make with money, good or bad. That's why I think having a philosophy of money is so important, and I wrote about it in a post called [On having a philosophy of money](#). A philosophy of money is clarity about what money is for you and what you want it to do. With that framework, you know what to do and what not to do, and life gets that much simpler. Without it, you'll react to everything you shouldn't and end up doing dumb and silly things.

Why is the stock market falling?

One of the things that makes me laugh is that whenever the market goes up or down, the first question everybody asks is why. When people ask me, I jokingly tell them that the only thing we can say for sure is this: when the market went up, buyers were willing to pay higher prices, and when it went down, sellers were willing to accept lower ones.

I'm not trying to be facetious. There's a logic to it. The stock market is a place where buyers and sellers meet, and a stock price is the result of millions of them, each making their own decisions for their own reasons, all squashed into one number on Kite. So to answer "why did the market fall?" with "because X happened" seems silly to me.

Say we decide the Nifty fell because Donald Trump did something. How do we know? Did we go and ask the millions of buyers and sellers? Did we run a poll asking whether they placed their sell order because of Trump? Or because oil went up, or because Kim Jong-un sneezed, or because some analyst had to file copy before 3:30?

And more often than not, people like you and me aren't even the biggest players. A large share of trading is done by computers running mathematical models. Some follow trends; others trade against them or react to news. Looking at the final price does not tell us which of those traders moved it, or why.

You don't have to take my word for it. In 1989, the economists David Cutler, James Poterba and Lawrence Summers went through the fifty biggest daily moves in the US market since the Second World War and looked for the news that caused them. For many of the biggest moves, they couldn't identify obvious major news in contemporary accounts. A neat explanation after the fact isn't the same as knowing the cause.

In October 2008, with the American market down by about \$8 trillion, Jack Bogle stood in front of an audience and asked a simple question.

// *Does anyone here tonight really believe that the value of American corporate business in the aggregate has dropped by \$8 trillion—by 40 percent! Well, I for one do not."*

JACK BOGLE, 14 OCTOBER 2008

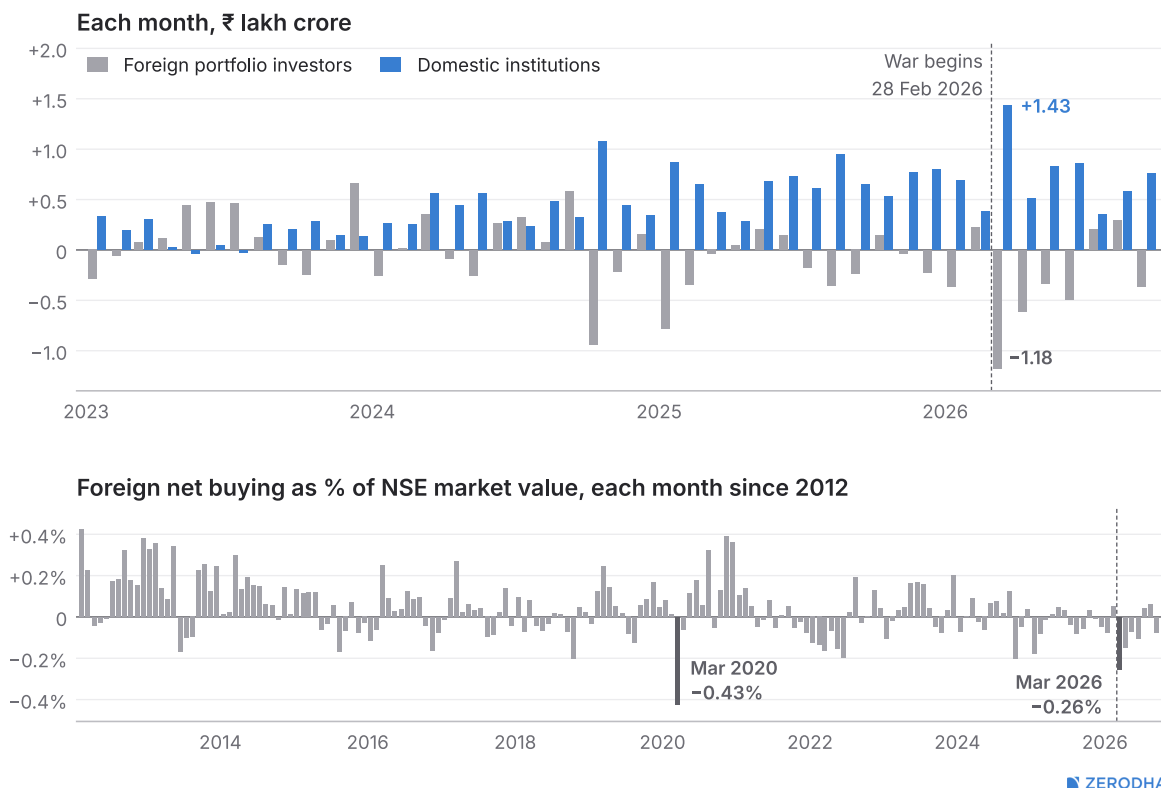
He was right, and it took a few years to prove it. Within a couple of years of one of the worst crises in its history, the US market was well on the road to recovery, and it has been among the best-performing major markets in the world for the fifteen-plus years since.

The closest we can get to a real answer is to look at who was selling and who was buying.

FIGURE 6.2

Foreigners sold, Indian institutions bought

Monthly net purchases of Indian shares, ₹ lakh crore, January 2023 to September 2026



Top: monthly net purchases of Indian shares by foreign portfolio investors (grey) and by domestic institutions, meaning mutual funds, insurers, banks and pension funds (blue), January 2023 to September 2026. From October 2024 to September 2026, foreigners sold a net ₹5.27 lakh crore and domestic institutions bought ₹16.1 lakh crore. In March 2026, foreigners sold ₹1.18 lakh crore and domestic institutions bought ₹1.43 lakh crore. Bottom: foreign flows as a share of NSE's market value at the previous month-end; March 2026 (0.26%) was the second-largest month of selling since 2012, behind March 2020 (0.43%).

SOURCE
NSDL (FPI fortnightly data), BSE via India Data Hub (DII), NSE business growth (market capitalisation) · Zerodha analysis

Since the Indian market peaked in September 2024, foreign investors have sold more than ₹5 lakh crore of Indian shares, ₹2.47 lakh crore of it since the war began. In March alone, the month the bombs started falling, they sold ₹1.18 lakh crore, more than in any month since at least 2012, when my data starts.

But looking at the rupee amount alone is a bit misleading, because the Indian market has grown so much. You have to look at the selling as a share of the market's value. Seen that way, March's selling was about 0.26% of the market, less than the 0.43% in the COVID panic of March 2020, and the whole two-year exodus adds up to a little over 1%.

This isn't the first time foreign investors have headed for the exit, and the good people at WhiteOak Capital have compiled a handy table of the big episodes since 2008: how much they sold as a share of the market, and what the market did over the next year. In dollars, the recent sell-offs look enormous. As a share of the market, most were small.

PERIOD	EVENT	SOLD, \$ BN	SHARE OF MARKET VALUE	FII OWNERSHIP OF BSE 500	BSE 500 FALL	NEXT 12 MONTHS
Jan 2008–Mar 2009	Global financial crisis	15.4	1.5%	16.0% → 13.2%	–66.0%	+127.6%
Jul–Oct 2011	US credit downgrade	2.7	0.2%	15.3% → 15.5%	–13.1%	+18.6%
Jun–Sep 2013	Taper tantrum	3.7	0.4%	19.5% → 19.4%	–10.1%	+59.7%
Apr 2015–Feb 2016	Yuan devaluation	7.8	0.5%	20.7% → 21.4%	–16.4%	+32.5%
Oct 2016–Jan 2017	Fed hikes, demonetisation	5.3	0.3%	21.6% → 21.3%	–10.8%	+43.0%
Apr–Nov 2018	NBFC crisis	7.9	0.4%	20.6% → 20.3%	–7.8%	+15.1%
Jun–Sep 2019	Slowdown	5.0	0.2%	21.1% → 20.8%	–10.0%	+10.0%
Feb–Apr 2020	COVID	10.6	0.6%	21.2% → 19.8%	–37.3%	+98.8%
Nov 2021–Jul 2022	Geopolitical worries	34.9	1.1%	20.5% → 18.1%	–16.7%	+24.7%
Sep 2024–Mar 2025	Trump tariff war	25.3	0.5%	18.5% → 18.1%	–18.7%	–3.1%

Source: [WhiteOak Capital, Market Perspective, September 2026](#), using FactSet and Yes Securities data. Numbers are approximate. "Share of market value" is the outflow as a share of the average market value; "BSE 500 fall" is peak to trough, and "Next 12 months" is from the trough.

By this measure, 2008 is still the biggest exit, at about 1.5% of the market. My number for the two years since September 2024 is a different calculation, on NSE's market value, but at a little over 1% it's in the same league as 2021–22. So what happens to the market after outflows this big? In nine of the ten episodes, it was higher a year after the bottom. The one exception is the most recent.

So who's on the other side of all this selling? Indian institutions: mutual funds, insurers, banks and pension funds. They bought ₹16.1 lakh crore over the same two years, more than three rupees for every rupee the foreigners sold, and ₹1.43 lakh crore in March alone. A big part of that was your money.

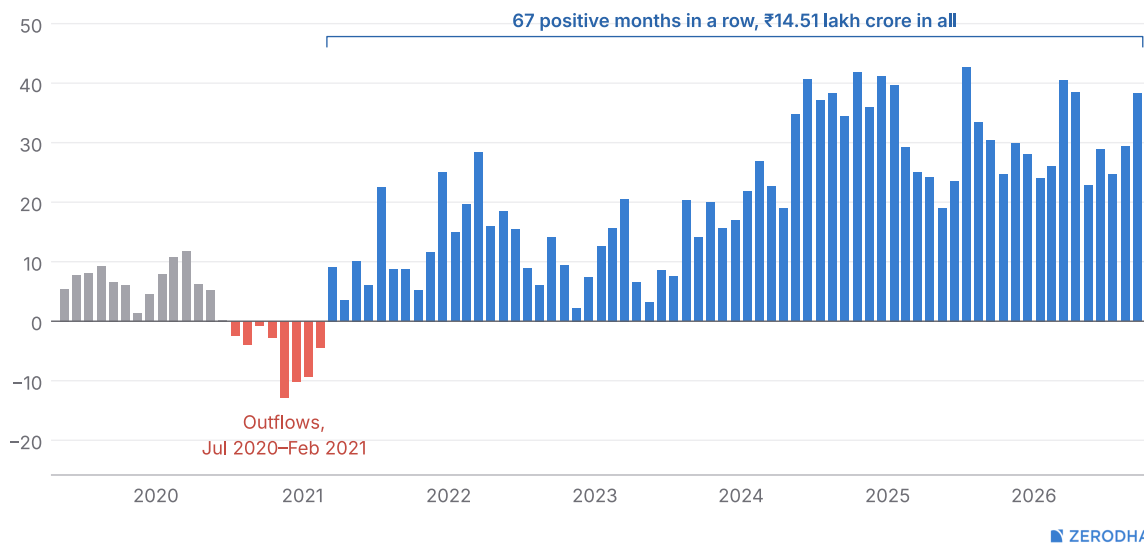
Indian equity mutual funds took in ₹7.42 lakh crore over those two years, much of it from SIPs that people simply didn't stop. Net inflows into equity funds have been positive every month since March 2021, 67 months in a row through September. Those inflows helped absorb the foreign selling. They cannot tell us how far the market would have fallen without them.

FIGURE 6.3

67 months of equity fund inflows

Net inflows into Indian equity mutual funds, ₹ thousand crore a month, May 2019–Sep 2026

₹ thousand crore



Net inflows into open-ended Indian equity mutual funds each month, May 2019 to September 2026 (AMFI). Savers have put money in every month since March 2021: 67 months in a row and ₹14.5 lakh crore in all, including through this year's fall. Index funds and ETFs are counted separately and excluded.

SOURCE

AMFI monthly reports · Zerodha analysis

None of this means foreign investors don't matter. That would be a dumb thing to say. It takes many people to make a market, with different motivations, styles and time horizons, and India needs foreign capital. But

jumping to the conclusion that the market is falling just because FIIs are selling is silly, partly because it's very hard to establish cause and effect. Even if you run a regression, too many other things are going on at the same time. Do foreign flows have an impact? Yes. Are they the only reason the market is falling? No. So the next time someone on TV says "FIIs are selling, so the market will fall", remember that they've been selling for two years, and the people who kept buying have mattered just as much.

Brian Klaas's *Fluke* is one of the better books I've read, and its theme is the butterfly effect: tiny actions can have dramatic consequences. One of my favourite stories in it is about the atomic bombing of Japan. In 1945, Kyoto was on the list of targets, and it escaped because of Henry Stimson, the US Secretary of War. Years earlier, Stimson and his wife had visited Kyoto and fallen in love with the city. When he kept seeing its name on the target list, he argued with the generals and went to his boss, President Harry Truman, to get it taken off, and Truman agreed. It gets stranger. On the day of the second bombing, the first-choice target was Kokura. When the bomber got there, the city was covered in cloud and smoke, and the crew couldn't see their target. The next city on the list was Nagasaki.

Reality is far more chaotic and random than we realise. And what is the stock market if not chaotic and random? It's millions of people with their own motivations, styles and time horizons, all making decisions for their own reasons. There's a reason it's called a complex adaptive system. Which is one more reason to be suspicious of anybody who explains it neatly after the fact.

07

CHAPTER 7

The siren song of market timing

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Versions of one simple trend-following rule that beat just
holding the Nifty 50, 2001–2026

Whenever Indian markets crack, the first thing a lot of investors do is extrapolate to the logical end. Right now the world is an uncertain place. Oil is up, inflation is up, bond yields are up, so the US will default, inflation will turn the whole world into the Weimar Republic, all these wars will end in nuclear Armageddon, and that's why we should sell equities now. This kind of magical thinking sends people looking for one magical strategy that tells them when to get out because things are about to get bad, and when to get back in because things are about to get good. That's the siren song of market timing.

Odysseus, a cunning bastard if there ever was one, knew he couldn't resist the song of the sirens, so he had his crew tie him to the mast. The problem with timing is that you have to get two things right: the exit and the re-entry. If you think you can, look at yourself in the mirror, stare deep into your own eyes and ask whether you can really do it. I can tell you the answer right now. You can't.

// *Far more money has been lost by investors preparing for corrections, or trying to anticipate corrections, than has been lost in corrections themselves."*

PETER LYNCH, WORTH, SEPTEMBER 1995

Getting out is the easy part

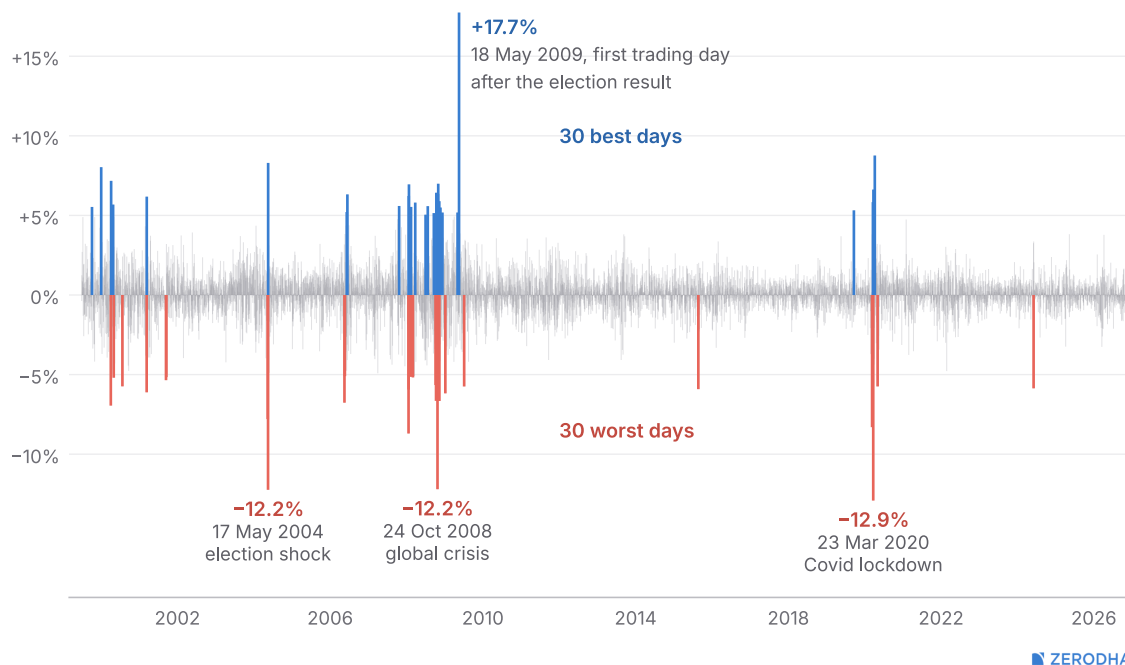
By the time you get out, things usually turn out better than you feared, and by the time you get back in, most of the recovery has already happened. That's the reality of most market timing, and the reason is that the best days and the worst days tend to come together, in the same terrifying weeks.

FIGURE 7.1

The best and worst days come together

Daily Nifty 50 returns with the 30 best (blue) and 30 worst (coral) days highlighted

Daily return



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Daily Nifty 50 returns, with the 30 best days in blue and the 30 worst in coral. They cluster in the same panics: 2008, 2020 and the other bad weeks you remember. If you leave to avoid the coral days, you will very likely be away for the blue ones too.

SOURCE

NSE · Zerodha

You've seen the chart of what happens if you miss the market's best days. It's a dumb chart, but there's some truth in it. What the people peddling it don't tell you is that volatility clusters: wild days follow wild days, in both directions. In the Nifty, 8 of the 10 best days since 1999 came within two weeks of one of the 10 worst. So if you're missing the worst days, you're probably missing the best ones too.

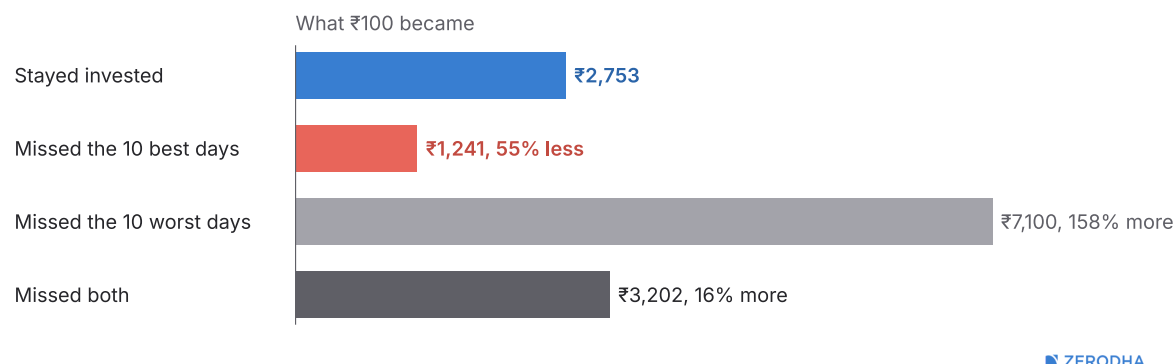
Yes, if you could somehow dodge only the worst days, you'd be fabulously rich. But can you? Sure, there are some gifted market timers. We're not talking about them. We're talking about the average person with a monthly salary, investing in a diversified basket of funds. The funny part of the maths is that missing both the best and the worst days is roughly a wash,

a bit better than staying put, because the worst days were slightly bigger than the best ones. Missing only the best days cost you more than half your money.

FIGURE 7.2

Missing the best days, the worst days, or both

₹100 in the Nifty 50 TRI, Jun 1999–Oct 2026, earning nothing on the 10 best days, the 10 worst, or both



₹100 in the Nifty 50 with dividends, June 1999 to October 2026, earning nothing on the 10 best days, the 10 worst, or both. Staying invested turned ₹100 into ₹2,753. Missing the 10 best days left ₹1,241, 55% less. Dodging the 10 worst would have left ₹7,100. Missing both left ₹3,202.

SOURCE
NSE · Zerodha analysis

Okay, you might still insist: fine, but what if I actually knew the future? Luckily, there are some nice experiments that answer that. Wes Gray is the founder of [Alpha Architect](#), which has one of the best investing blogs on the internet, and I highly recommend it. He imagined an investor with perfect knowledge of which US stocks would do best over the next five years. Buying them would have earned about 29% a year, which is ridiculous. But at one point that portfolio also fell 76%. His point: even God would get fired as an active manager.

Victor Haghani, one of the founding partners of Long-Term Capital Management, and his colleagues at Elm Wealth ran another. They gave 118 people with finance training the next day's *Wall Street Journal* front page, with the market numbers blacked out, and let them trade. They got the direction right on 51.5% of roughly 2,000 trades, no better than a coin toss, and about one in six went bust, even with a peek at tomorrow's news.

So knowing what's going to happen and trading on it are two different things. If you remember the first chapter, 2026 has been teaching everybody this lesson for free.

What if a rule decided for you?

There's a whole family of strategies, called tactical or dynamic allocation, that use a rule to decide when to be in the market and which assets to own. There are countless versions. One of the most famous comes from a 2007 paper by Meb Faber of Cambria Investments. On the last day of every month, compare the market with its average price over the last ten months. If it's above that average, stay invested. If it's below, sell and sit in cash, Treasury bills in his case, until it climbs back above.

In his 2013 update, covering US stocks from 1901 to 2012, the rule earned 10.2% a year against 9.3% for just holding the market, and the worst fall shrank from 83% to 50%. It also did worse than the plain index in roughly half of all years, which tells you how it feels to follow it.

So I ran Faber's rule on Indian data: the Nifty 50 with dividends, switching into the five-year government bond index whenever the Nifty was below its ten-month average.

Just like in Faber's study, the rule cut the worst fall in half. But the return was no different from buying and holding. Look at how it earned that return.

That's the nature of trend following. Most of the time it makes small losses, because markets often go nowhere and the rule keeps getting faked out: the market dips, the rule sells, the market goes back up, and the rule buys back in higher. Traders call this a whipsaw. Fifteen of the rule's 21 completed trips out of the market went like that.

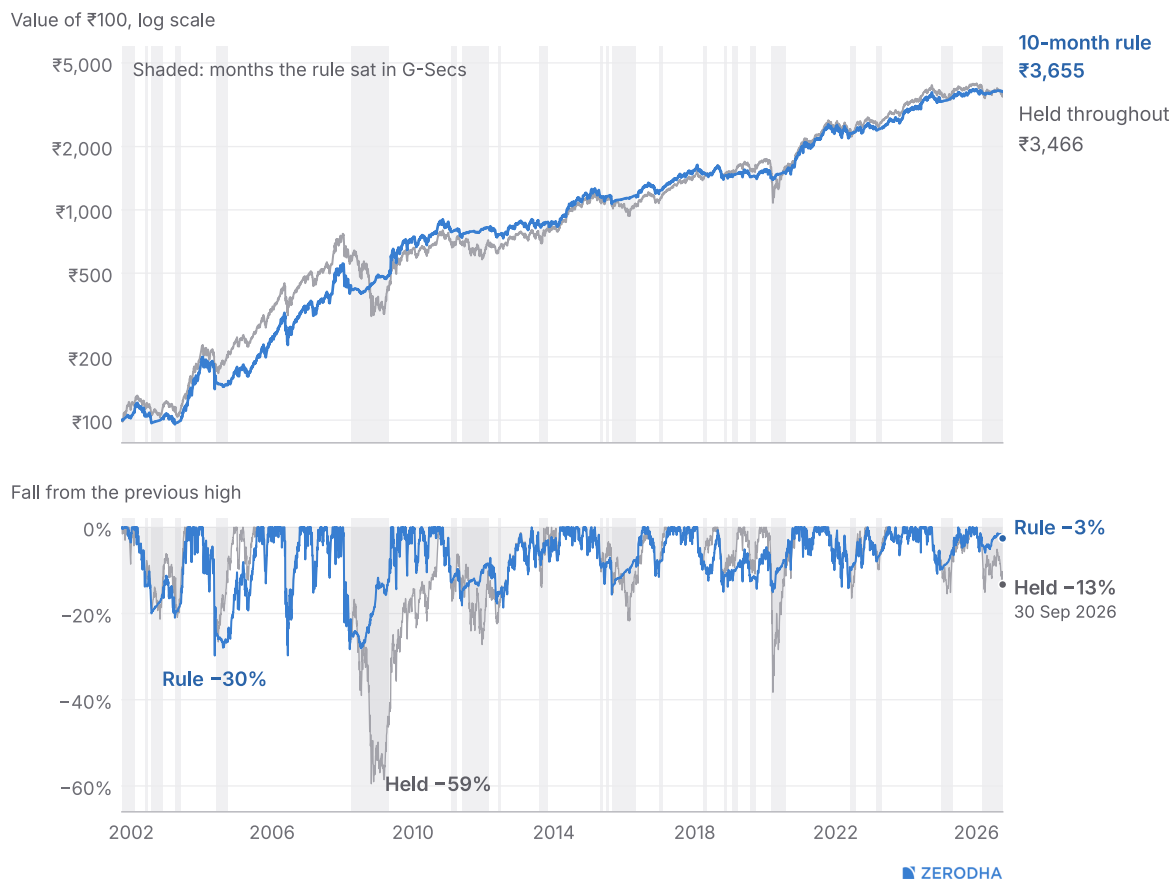
But once in a while there's a real move, more often than not a fall, and that's when the strategy earns its keep. In India, that happened once in a big way. The rule sold in March 2008 and came back in April 2009, and that one trip paid for all the others.

It also got lucky. While it was out, the RBI cut rates hard and government bonds rallied, so its hiding place paid handsomely. In a 1970s-style inflation, bonds won't protect you.

FIGURE 7.3

The 10-month rule kept returns close and halved the worst fall

₹100 in the Nifty 50 TRI, held throughout or switched to the 5-year G-Sec index whenever the month-end close was below its 10-month average, Sep 2001–Sep 2026



The rule compounded at 15.5% a year against 15.2% for holding, before tax. Its worst fall was 30% against 59%. It switched 44 times and spent 26% of the time out. Of its 21 completed trips out, 15 cost money; the March 2008 exit alone was worth 56%. In a simplified tax sensitivity the rule's after-tax return falls to 13.4%, against 14.6% for holding. The sensitivity uses 20%/12.5% equity rates and a 30% debt rate; exemptions, cess, surcharge and legal loss-offset restrictions are omitted. Grey bands: months in G-Secs.

SOURCE

Nifty Indices · Zerodha analysis

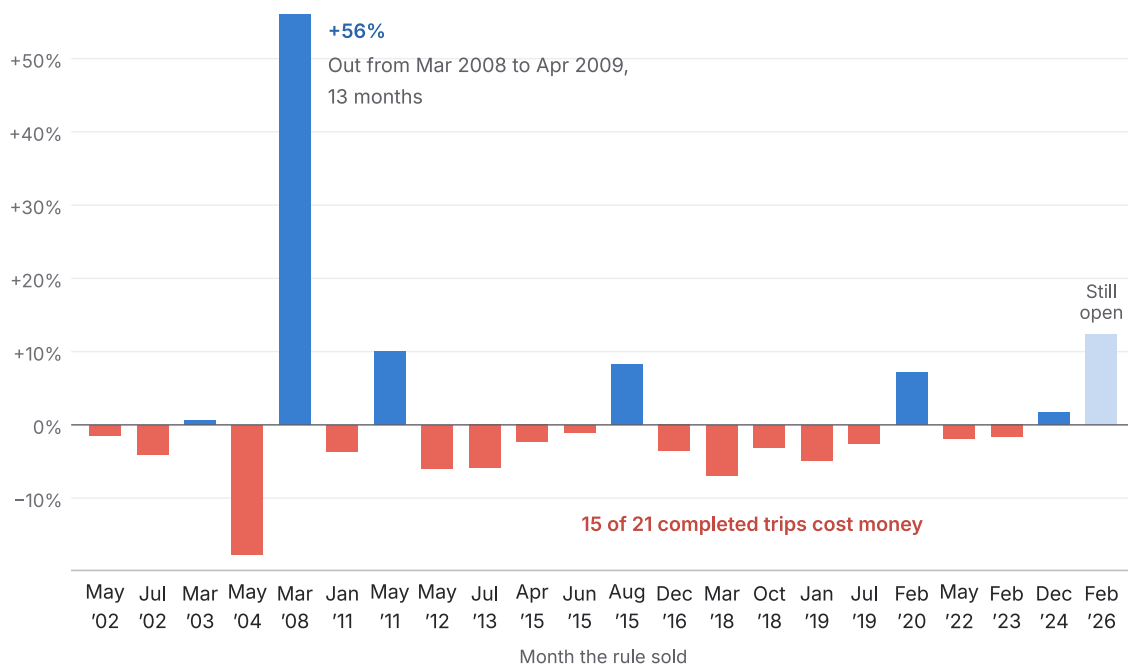
And then there's tax, which almost no backtest shows you. Every exit is a sale, and every sale is a taxable event, while someone who just holds rarely pays tax. Charge 20% on short-term equity gains, 12.5% on long-term ones and 30% on debt gains, and the rule's 15.5% a year drops to 13.4%, against 14.6% for just holding. That's a simplified sensitivity, not your tax return.

FIGURE 7.4

Most trips out of the market cost money, and one paid for all of them

Each bar is one exit from the Nifty 50 TRI under the 10-month rule: the G-Sec index's return while out, relative to the Nifty's over the same months

What each trip added or cost



ZERODHA

15 of 21 completed trips cost money, typically 3.6% each: the rule sold, the market rose, and it bought back higher. That is a whipsaw. The trips that helped were fewer and larger. The exit in March 2008, through the 2008 crash, was worth 56% on its own. Without it, ₹100 would have become ₹2,342 instead of the ₹3,466 earned by just holding. A trend rule is insurance that pays out rarely and charges a premium in whipsaws the rest of the time. The rule has been out since February 2026; that trip is still open (the pale bar).

SOURCE

Nifty Indices · Zerodha analysis

Why ten months?

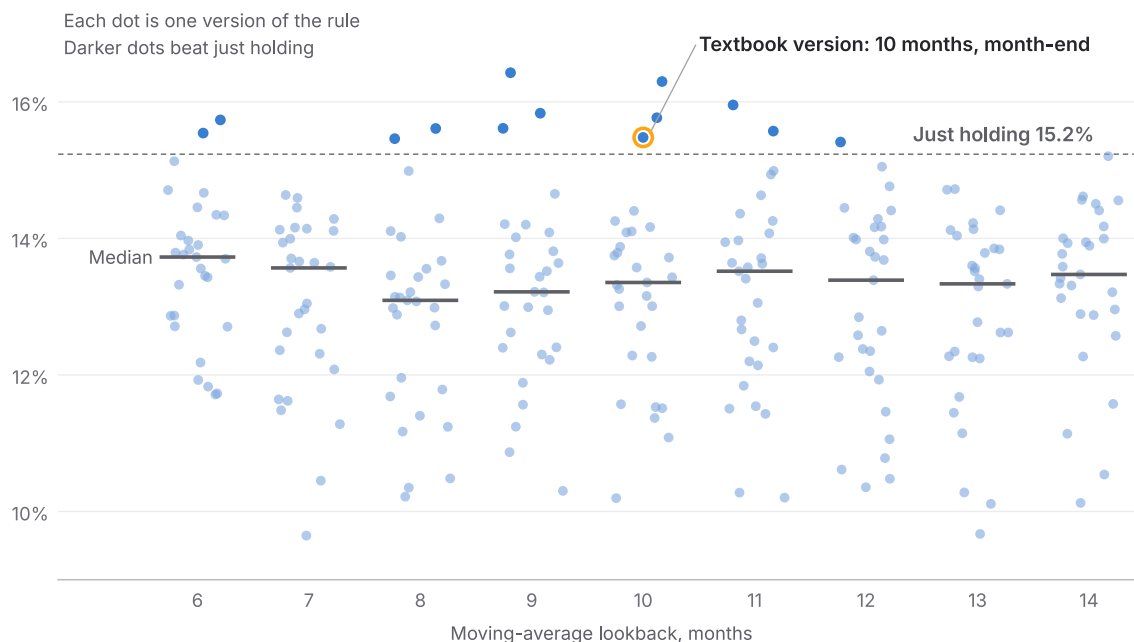
The curious reader might ask: what's so sacred about ten months? Why not eight, nine, eleven or twelve? And why check on the last day of the month? There's nothing sacred about any of it. So I ran every combination: every average from six to fourteen months, checked on every day of the month from the 1st to the 28th, plus the last day. That's 261 versions of the same idea.

FIGURE 7.5

261 versions of the same rule, with returns 7 points apart

Annual return of the Nifty 50 TRI trend rule for every lookback from 6 to 14 months, checked on each calendar day from the 1st to the 28th or at month-end, Sep 2001–Sep 2026

Annual return



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Each dot is one version of the rule. They ranged from 9.6% to 16.4% a year, and their worst falls from 22% to 43%. Only 5% beat simply holding the Nifty (15.2%). The textbook version, ten months checked at month-end, returned 15.5%, better than 96% of the others; the typical version made 13.4%. Textbook settings were lucky here. Nothing about the idea changed between the dots, only the settings and the calendar. Before tax and costs.

SOURCE

Nifty Indices · Zerodha analysis

Only 13 of the 261 beat just holding the Nifty. The typical version made 13.4% a year, two points less than doing nothing, and that's before tax, which makes it worse. The textbook version, ten months checked at month-end, happened to be one of the lucky ones.

Look only at the nine versions checked at month-end, which is how people follow Faber, and three beat holding, by a whisker; the typical one trailed by about a quarter of a percentage point a year. Every one of them cut the worst fall roughly in half, from 59% to between 30% and 32%.

To be fair to trend followers, very few of them sell it as a way to beat buy-and-hold. Its real attraction is insurance. There's even a name for it, *crisis alpha*, coined by Kathryn Kaminski: these strategies tend to do well when you need them most, in crashes like 2008 and COVID, and, for trend funds trading many markets, in the 2022 inflation shock. You pay for that insurance with a little return, a lot of tax and a great deal of patience with false alarms. And if you had started in 2001, which of the 261 versions would you have picked? You don't know. I don't know. Nobody knows.

Even if this appeals to you, as a retail investor you don't need it. There are better ways to insure your portfolio, and that's where diversification and asset allocation come in, which we'll get to later in the book. Instead of jumping in and out of shares, just own less of them, all the time.

The trend rule and a plain 60/40 mix of the Nifty and government bonds gave you almost the same protection in 2008. The rule needed 21 trips in and out of the market, fifteen of them wasted, and the nerve to keep following it through years of false alarms. The mix needed you to rebalance once a year. Neither is free.

The mix earns less than the rule in a market that mostly goes up. Add gold and the 50/30/20 mix looks even better, though that's mostly gold's great run over this particular stretch. But if what you want from timing is a smaller hole in a crash, owning less equity all the time gets you most of the way there without asking you to be right about anything.

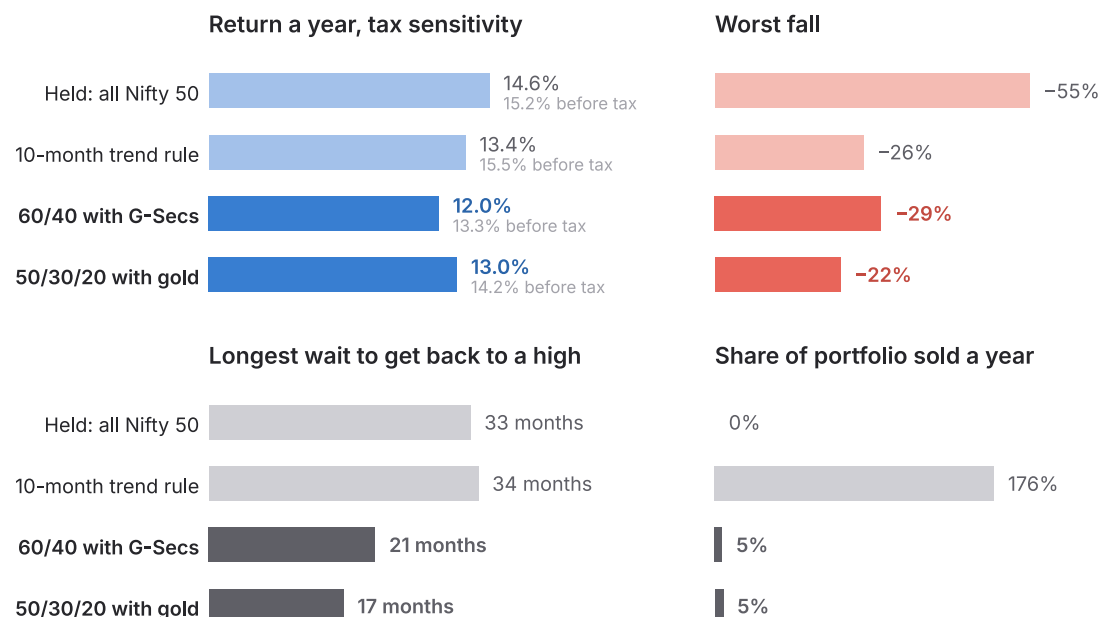
Corey Hoffstein and his colleagues at Newfound Research have a name for another problem: *rebalance timing luck*, the part of your result that comes from nothing more than the day you happened to trade. My next chart varies both the trading day and the length of the average, so it includes more than timing luck alone. Here's India in 2020.

Same rule, same year, same market. One version made 40% and another lost 19%, and the only difference between them was a few days on the calendar and a few months in the average. If this is what a disciplined, emotionless, written-down rule does, imagine what your gut does.

FIGURE 7.6

A fixed mix halved the fall too

Nifty 50 TRI held, the 10-month rule (switching to the 5-year G-Sec index), and two fixed mixes rebalanced every January, Sep 2001–Sep 2026, month-end values



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Nifty 50 with dividends, the ten-month trend rule, and two fixed mixes rebalanced every January, September 2001 to September 2026, month-end values. A 60/40 mix with the five-year G-Sec index fell 29% at worst, close to the trend rule's 26% and against 55% for holding shares alone, while selling about 5% of the portfolio a year where the rule switched everything 44 times. A 50/30/20 mix with gold fell 22%. Under the simplified tax sensitivity described above, returns were 12.0% a year for 60/40 and 13.0% for 50/30/20, against 13.4% for the rule and 14.6% for holding. These are illustrative tax assumptions, not investor-specific after-tax returns.

SOURCE

Nifty Indices, World Gold Council, RBI/FBIL · Zerodha analysis

Owning whatever went up

The other popular family of timing strategies is momentum: own whatever has been going up. One of the best known is Gary Antonacci's dual momentum, from his 2014 book. My Indian version is simple. Every month, look at the Nifty 50 and US shares in rupees over the past year, and hold whichever did better, but only if it also beat the five-year government bond index. If it didn't, hold the bond index.

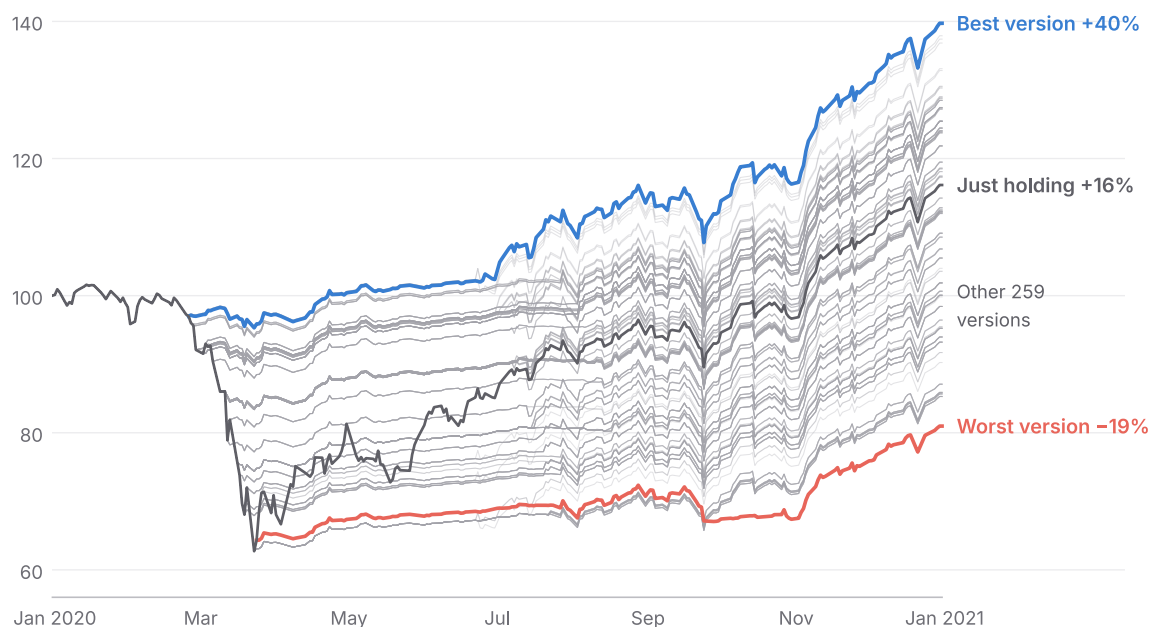
This is one of the best-looking strategies in this entire book, and I still wouldn't suggest you follow it. A lot of its performance came from the rupee falling, from about 47 to the dollar at the end of 2000 to about 95, which paid anyone who owned US shares. That's a story about one currency over one quarter-century, not a law of nature. All the trading in and out also means taxes, which I haven't modelled fully here. And slightly different settings returned anywhere from 12.1% to 19.3% a year before tax.

FIGURE 7.7

In 2020, the calendar mattered more than the rule

₹100 on 31 December 2019 in each of the 261 versions of the Nifty 50 TRI trend rule, through 2020

Value of ₹100



■ ZERODHA

Same rule, same year, results from -19% to +40%; just holding the Nifty made +16%. The best version (6-month lookahead, checked on the 25th) sold on 25 February, as the crash was just starting, and bought back on 25 June. The worst (13-month lookahead, checked on the 24th) sold on 24 March, the day after the bottom, and bought back 44% higher. Corey Hoffstein of Newfound Research called this specification risk and timing luck in March 2020. You don't get to know in advance which version you are.

SOURCE

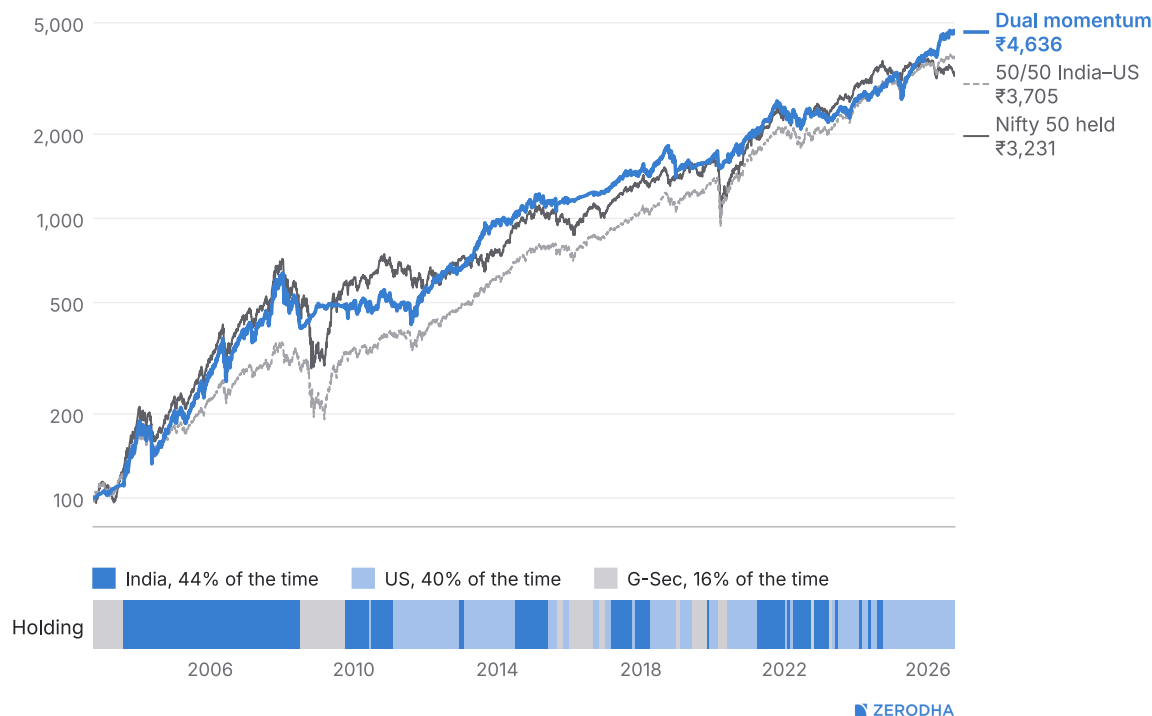
Nifty Indices · Zerodha analysis

FIGURE 7.8

Chasing whichever market is winning, and hiding in bonds when neither is

₹100 kept in whichever of the Nifty 50 TRI and US equities (MSCI USA, in rupees) did better over the past 12 months, or the 5-year G-Sec index if it beat both, re-checked every month-end, Sep 2002–Sep 2026

Value of ₹100, log scale



The textbook 12-month version compounded at 17.3% a year with a worst fall of 37%, against 15.6% and 59% for the Nifty alone, and 16.2% and 47% for a plain 50/50 India-US mix rebalanced each January. It switched 44 times in 24 years, and each switch is a taxable sale. Taxes are not estimated here: foreign shares and Indian equity have different tax rules. Change the lookback to 3, 6 or 9 months, or the check day to the 10th or 20th, and the same idea returned anywhere from 12.1% to 19.3% a year before tax.

SOURCE

Nifty Indices, MSCI, RBI/FBIL
USD/INR · Zerodha analysis

Then there's the human element. Unless you've automated it, you're in the driving seat, and when the time comes to pull the trigger, your emotions take over and you do deeply human things.

Cliff Asness, whose firm does this kind of thing for a living, wrote a paper with two colleagues called "Market Timing: Sin a Little". They found that timing the market based on valuations was "directionally right but weak

and disappointing out-of-sample". It sort of worked on old data and mostly didn't work after that. Their advice, if you must, was to sin a little. Not a lot. A little.

"But there's a war on"

That brings us to the question my friends and relatives, and probably yours, have been asking. There's a war on. Shouldn't we just get out and wait until the war, and the whole geopolitical mess, is sorted out and it's all roses and sunshine again?

I can't answer that on vibes, so I looked at the data. Humans have never gone a decade without finding something to fight about, so there's plenty of it. I took the wars, invasions, terror attacks and standoffs that people remember, from the Cuban missile crisis to the war that began on 28 February, and looked at what the Sensex (from 1979) and the S&P 500, which has the longest history, did from the last close before the news broke.

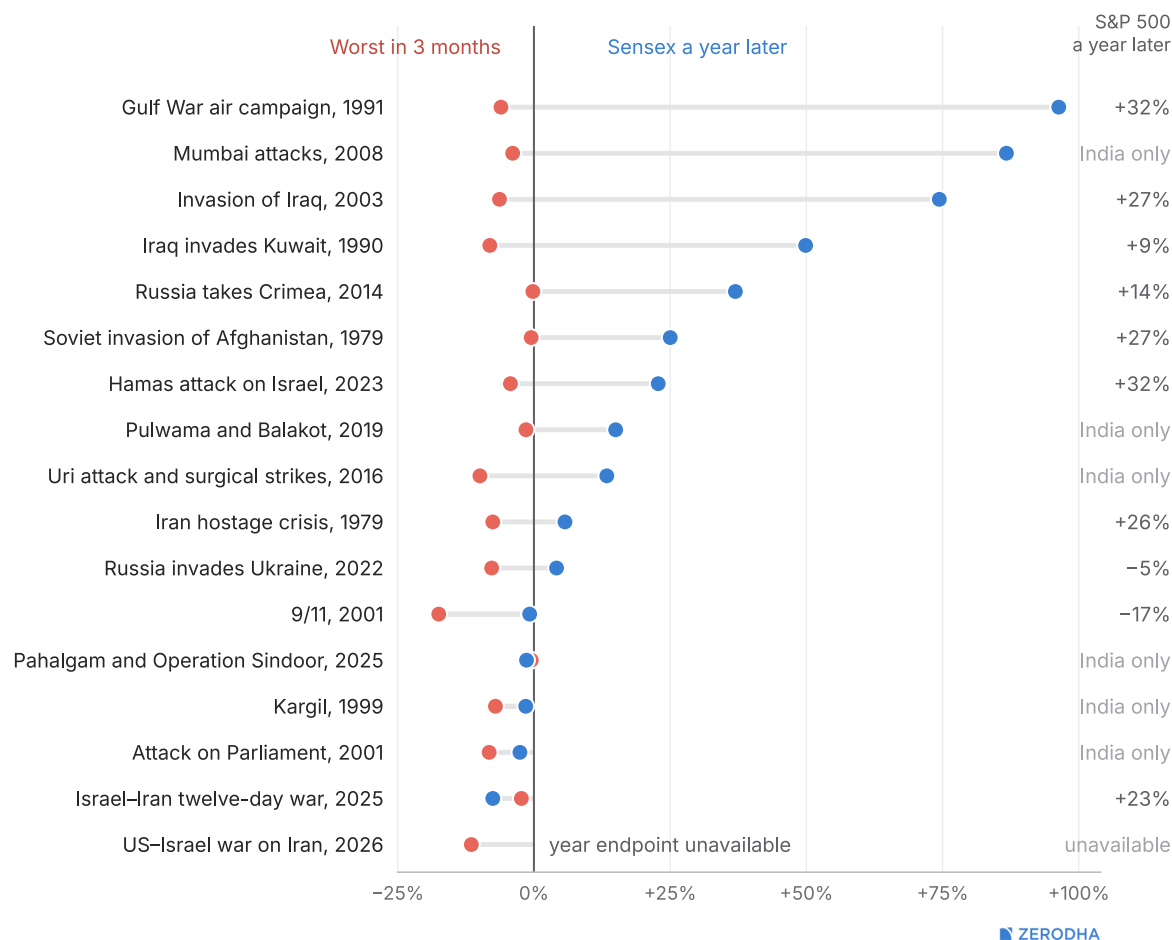
The pattern is almost boringly consistent. On the day itself, the falls were small. The worst one-day reactions in the Sensex were about 5% after Russia invaded Ukraine, about 4% after 9/11 and about 3% after Iraq invaded Kuwait. Over the next three calendar months, the typical worst point was about 6% below where things stood before the news.

A year later, the Sensex was higher after 11 of the 16 past events, about 69% of the time. For comparison, it was higher in 73% of *all* twelve-month stretches since 1979, war or no war. A year after the shots were fired, the market looked like the market always looks: usually up, sometimes down, for reasons that mostly had nothing to do with the war.

Look at the coral line. That's the war that began this February, and so far it's one of the worst paths in this history. Almost eight months in, as of 26 October, the Sensex is about 9% below where it was the day before the first strikes, and only one of the sixteen past events had a weaker path at the same point. But the past is not prologue, and the future isn't set in stone.

FIGURE 7.9

Wars and crises dented markets, and a year later they were usually higher



The Sensex a year after each event, measured from the last close before the news, sorted from worst to best. It was higher after 11 of 16 past events. The 96% gain over the year after the 1991 Gulf War air campaign overlapped the Harshad Mehta boom. Calendar-month targets use the first recorded close within seven days; no prices are interpolated. The grey column shows the S&P 500 for the global events only, since it had no reason to react to India's own crises; it was higher a year later after 9 of the 12 that can be measured so far.

SOURCE
BSE, S&P Dow Jones Indices
(price indices) · Zerodha
analysis

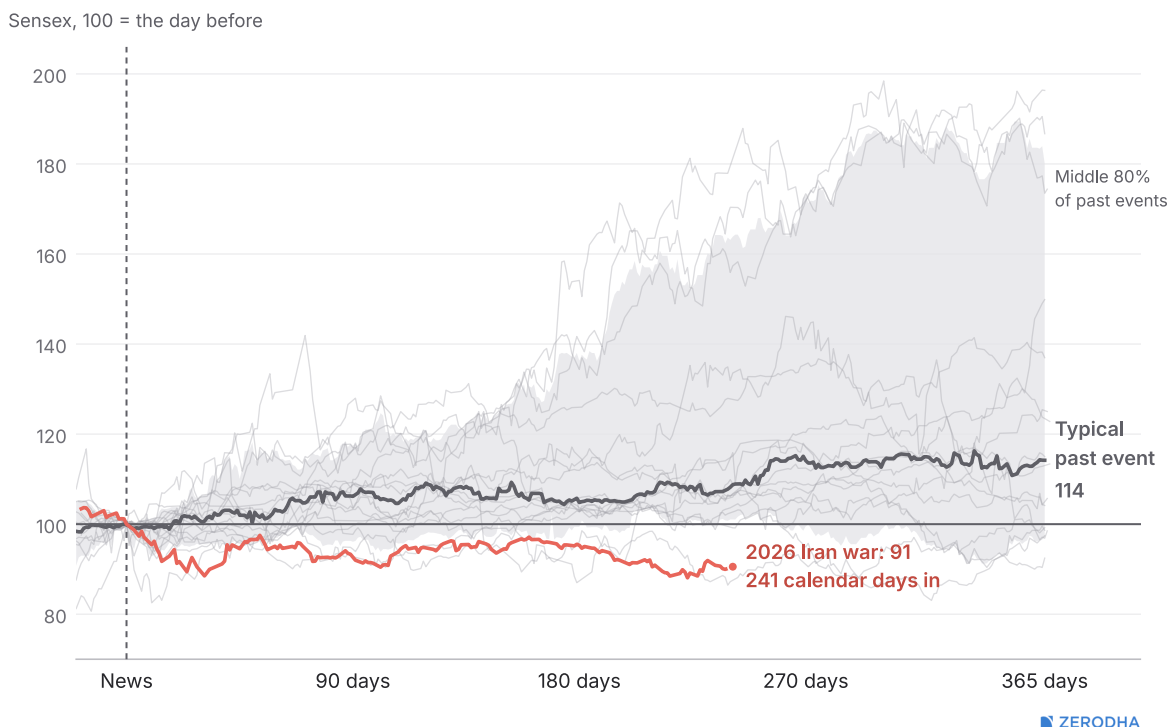
And yes, if you had sold everything on 27 February, the day before the war, and earned the overnight index return, you'd have about ₹1.2 lakh more on every ₹10 lakh than someone who held the Nifty 50. That's the trade

everyone wishes they'd made. It needed you to know the war was coming and to pay tax on the sale, and it still needs you to know when to come back in.

FIGURE 7.10

Every war and crisis since 1979, as the Sensex lived it

The Sensex from 20 calendar days before each of 16 past events to a year after, indexed to 100 at the last close before the news, with the 2026 Iran war in coral. Price index



Across the 16 past events, the median worst point in the three months after the news was 6% below the day before. All 16 were back above that level within a year, a median of 37 calendar days after the news; the slowest took 157. A year on, the median event stood at 114; the grey band holds the middle 80%. The 2026 war, 241 calendar days in, is at 91, below 15 of the 16 measurable past events at the same point. That says nothing about where it goes next, and some past paths were driven by things other than the war, like 1991's Harshad Mehta boom. Lines connect observed closes; calendar targets use the first available quote within seven days.

SOURCE
BSE, S&P Dow Jones Indices
(price indices) · Zerodha
analysis

I could spin you a story about why this war is different: it's an oil war, India imports most of its oil, and the two events that hurt the US market most, 1973 and 1990, were oil shocks too. Blah blah blah. Let's just wait it out.

It's oil, not gold, that reacts to wars. Brent jumped 79% in the three calendar months after Iraq invaded Kuwait, 16% after Russia invaded Ukraine and 36% after this February. After the Gulf War air campaign began and after 9/11, it fell by more than a third. Gold, the supposed war hedge, was a coin toss. It rose over the next three calendar months after 7 of the 11 global events, and it fell about 14% in the month after this war began.

Another way to think about the present is to look not at events but at a measure of fear. Two economists at the US Federal Reserve, Dario Caldara and Matteo Iacoviello, built a geopolitical risk index by counting how often major newspapers write about wars, threats and terrorism, every month since 1985. It doesn't care which events I happen to remember.

So the fear this year wasn't in your head. March was one of the scariest months for headlines in forty years. What the index can't tell you is what to do about it.

After thirteen separate episodes of unusually high war fear since 1990, the Sensex was higher a year later eleven times. The sample is tiny, and I wouldn't build a trading rule on it. The index measures fear. It doesn't tell you what to do about it.

So, should you get out because of the war? Sixteen hand-picked events is a small sample, so don't lean on it too hard. But history says the war itself has rarely decided people's returns. What decided them was whether they were forced to sell at the bottom. If the war changes your life, because your job depends on oil, you need the money soon or your home loan is floating, that's a reason to revisit your plan. A scary headline isn't.

Getting back in

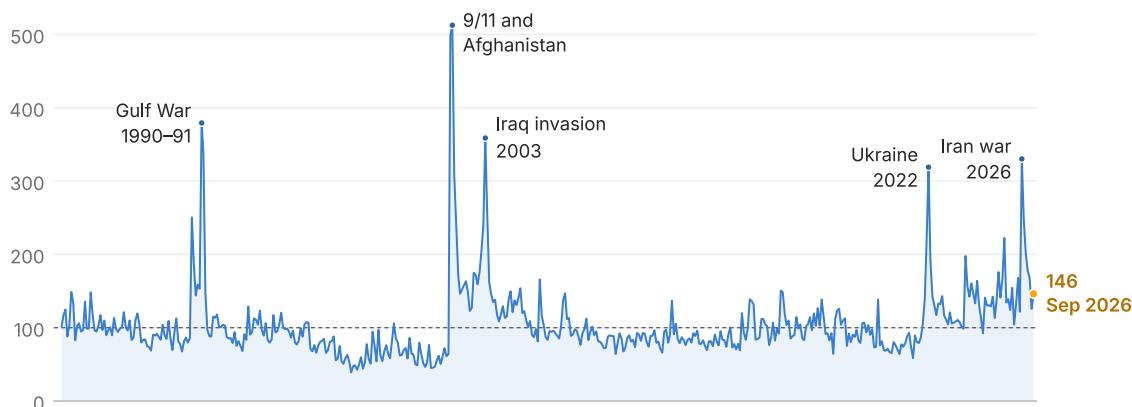
Now, say you got out. You do realise you have to get back in at some point, and this is where a lot of market timers go wrong. Andrew Lo and his colleagues at MIT analysed more than 650,000 brokerage accounts. Panic selling bunched up in sharp downturns, and about 31% of the people who panic-sold hadn't gone back into risky investments by the end of the study, in December 2015. People get out when things get bad, and then they stay out.

FIGURE 7.11

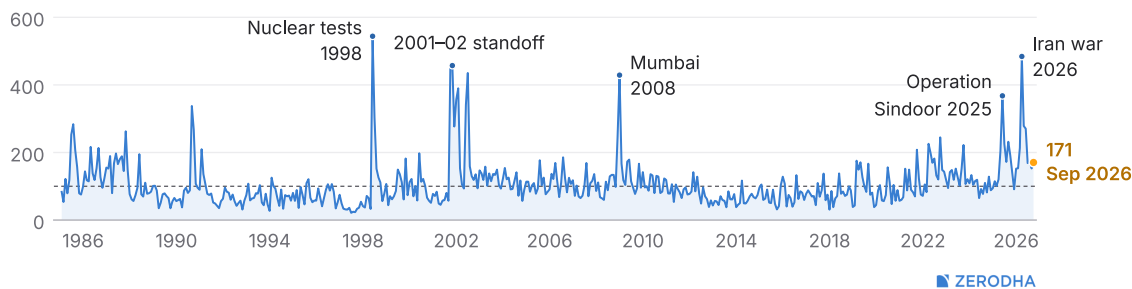
War fear hit its highest since 2003

Geopolitical Risk Index: the share of articles in ten major English-language newspapers about wars, threats and terror, monthly. 100 = the 1985–2019 average. Below, the same count for articles that also mention India, on the same base

World, 100 = the 1985–2019 average (dashed)



Articles that also mention India, same base



The Caldara-Iacoviello geopolitical risk index, monthly since 1985 (1985–2019 average = 100). In March 2026 it reached 330, its highest since the Iraq invasion of March 2003 and the sixth-highest of 501 months. By September it had eased to 146, still higher than 449 of the 500 months before it. The index counts worry in print, mostly in American and British papers; it does not measure what markets did.

SOURCE

Caldara and Iacoviello (2022), Geopolitical Risk Index, matteoiacoviello.com/gpr.htm, downloaded 21 Oct 2026 (CC BY) · Zerodha analysis

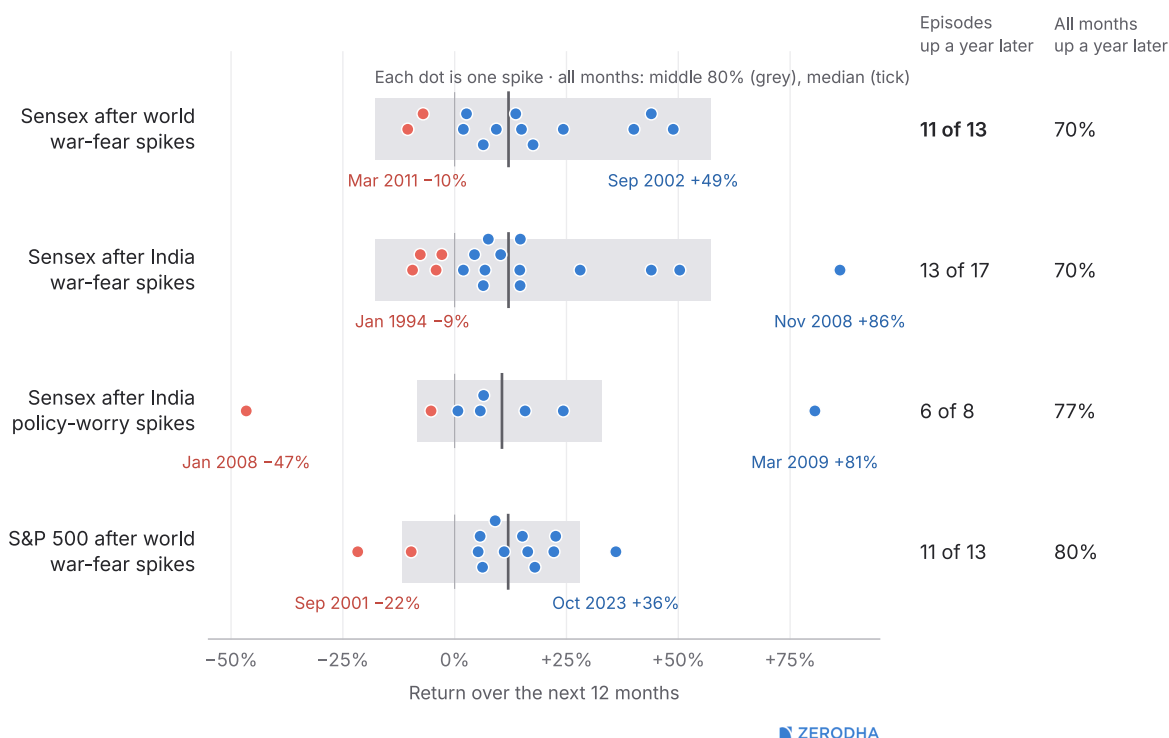
And waiting for a big fall so you can buy the crash is less reliable than it feels.

Now say you dream of buying the exact bottom. Let me allow you that fantasy for a second. Here's what happened to somebody who invested at the precise monthly low of each major Indian crisis, which, of course, nobody could have known at the time.

FIGURE 7.12

A year after the scariest headlines

Return over the twelve months after each fear spike (dots), against the range of all twelve-month returns in the same years (grey band, middle 80%; tick, median). Spike: a month above the top tenth of the previous five years. Price indices



Each dot is a twelve-month return after a fear spike; the grey band shows the middle 80% of all twelve-month returns in the same years, and the short line marks their median. The first three rows show the Sensex; the last shows the S&P 500. The Sensex was higher a year after world war-fear spikes in 11 of 13 separate episodes since 1990, with a median gain of 14%; across all months the median was 12% and 70% were up. India's economic policy uncertainty sample has eight episodes since 2008. These small historical samples do not establish a reliable trading edge.

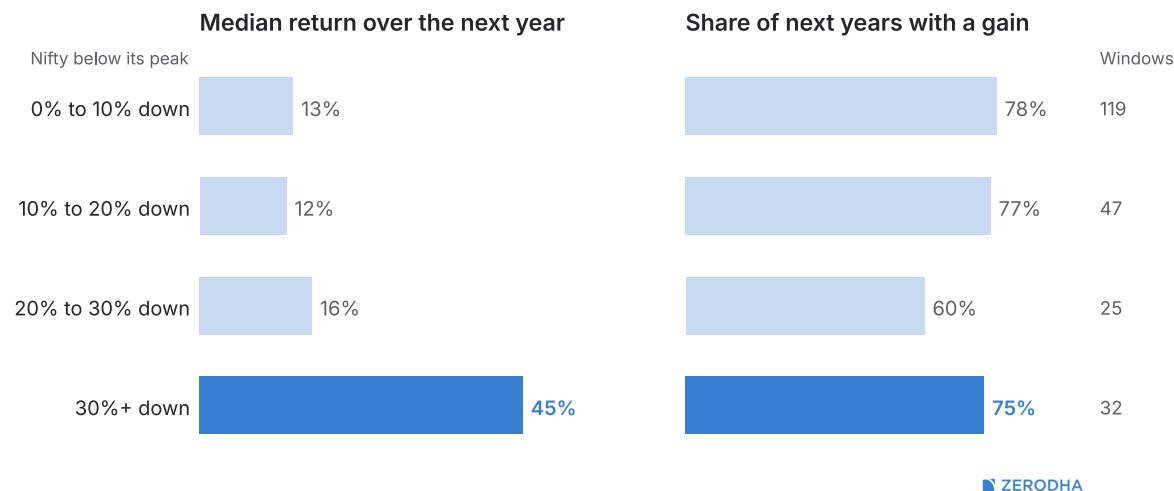
SOURCE

Caldara and Iacoviello (Geopolitical Risk Index); Baker, Bloom and Davis via FRED (India Economic Policy Uncertainty); BSE; S&P Dow Jones Indices (price indices) · Zerodha analysis

FIGURE 7.13

Deeper falls paid more on average, but didn't improve the odds

Nifty 50 TRI month-end observations from 1999 to 2026, grouped by how far the market was below its prior peak.



Nifty 50 month-ends since 1999, grouped by how far the market was below its peak, and what it returned over the next year. Below the high by less than 10%, the median next-year return was 13% and 78% of outcomes were positive; months at a new high are excluded. At 30% or more below, the median was 45%, but only 75% were positive, and those 32 deep-fall months come from just two episodes, 2001–03 and 2008–09. The worst odds were in between: from 20–30% down, only 60% of next years were positive.

SOURCE

NSE · Zerodha

The other question in every timing conversation is valuation: is the market cheap or expensive? The obvious measure is the price-to-earnings ratio, but in India it has a problem. In 2021, NSE changed how it counts profits, and I couldn't find a history back-adjusted to the new method. So the other way is the CAPE ratio, the cyclically adjusted price-to-earnings ratio. It compares the market's price with its average profits over the last ten years, adjusted for inflation, so that one unusually good or bad year doesn't distort the picture. A higher number means a more expensive market. The data is easily available thanks to Joshy Jacob and Rajan Raju, who publish it for the Sensex through IIM Ahmedabad.

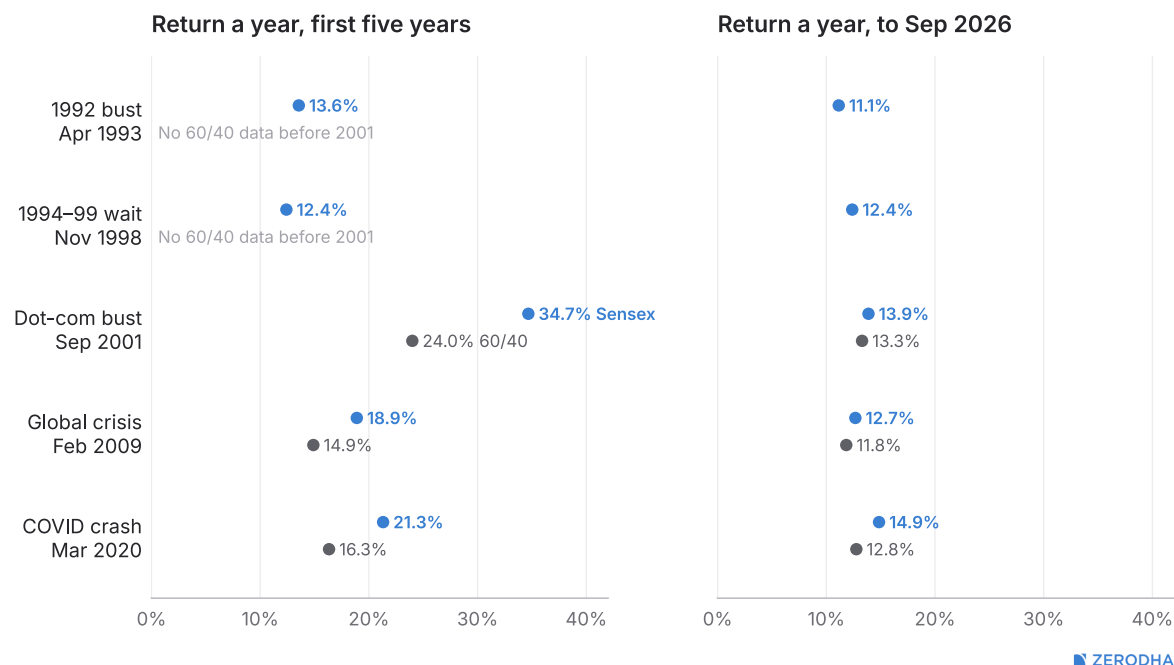
You've probably seen a version of this chart: dots sloping from top left to bottom right, proving that expensive markets lead to poor returns. It's a classic chart crime, and I'm guilty of it too. The problem is overlapping periods. Someone who invested in September 2021 and someone who

invested in October 2021 share 59 of their 60 months, so you're counting the same experience twice. Count only the separate five-year stretches, and there are just five.

FIGURE 7.14

Even a perfect crisis entry was no guarantee

Investing at selected month-end lows, identified with hindsight · September 2026 cut-off



Returns from the lowest month-end Sensex close in selected crises, chosen with hindsight. Five years from the September 2001 low, the Sensex returned 34.7% a year. From the 1993 and 1998 lows, 13.6% and 12.4%. Nobody received a notification saying “this is the bottom, please buy now”.

SOURCE
BSE and NSE indices · Zerodha analysis

Those five are the blue dots. They still slope downhill. I checked every possible set of five-year windows that don't overlap, and dearer starts were followed by weaker returns in 92% of them, but how much weaker varied wildly. Five dots can point you in a direction. They can't give you a forecast, and pretending otherwise would be stupid.

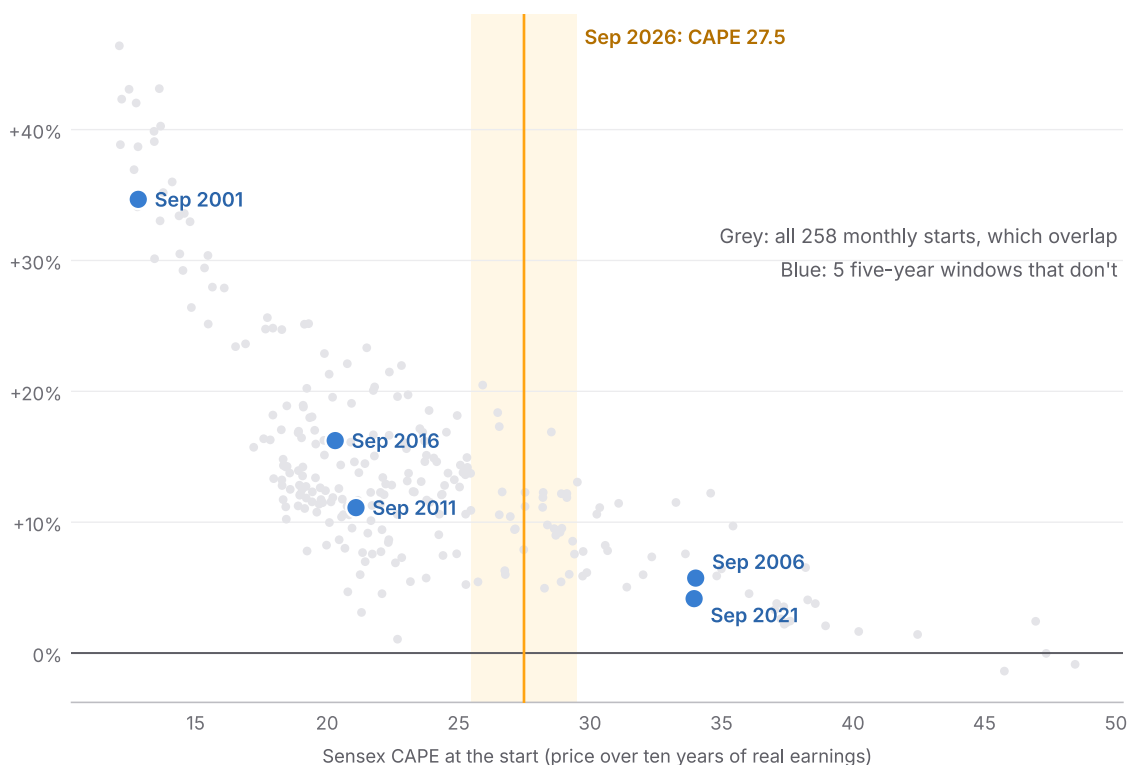
So the market isn't cheap, and it isn't crazy expensive either. The CAPE was 27.5 in September, higher than in 63% of months since 2000: somewhere in between. Valuations are useful for setting your expectations over long periods and useless for timing next month. And "stocks have fallen" is not the same sentence as "stocks are cheap".

FIGURE 7.15

Valuations and the next five years' returns, since 2000

BSE Sensex 10-year CAPE at each month-end against the Sensex's annualised price return over the next five years, April 2000–September 2021 starts

Sensex return a year over the next five years



■ ZERODHA

The Sensex CAPE at each month-end since 2000 against the Sensex's return a year over the following five years. Grey dots are every monthly start, but neighbouring months share almost all of their next five years, so they are not separate evidence. The five blue dots are one set of windows that don't overlap, counted back from the latest. In September 2026 the CAPE was 27.5, higher than in 63% of months since 2000. Price index, dividends excluded.

SOURCE

CAPE from Jacob & Raju (2024), IIM Ahmedabad India CAPE data; BSE · Zerodha analysis

So, should you ever time the market?

My simple and unequivocal answer for most retail investors is no. Or let me put it this way: if you can time the market, God bless you, go with God. If you can't, do I even need to spell out the answer?

It's very, very hard. I've tested far more strategies than I've shown you here, and most of them left you worse off than buying and holding. Plenty of strategies that work in research papers fall apart on data they weren't built on: R. David McLean and Jeffrey Pontiff found that the returns of published stock-market patterns fell by more than half after publication. Others are the product of testing variations until something looks good. And along the way, you give up returns and pay a lot in taxes and transaction charges. You're better off with a sensible asset allocation, a diversified portfolio and the Coin or Kite app uninstalled, opened once or twice a year to rebalance.

If you still feel the pull of the song, and you will, write down in advance what would make you change your plan. A change in your goals, your job or when you need the money is a reason. A headline is not. Then tie yourself to the mast.

08

CHAPTER 8

The expensive ways to be clever

76%

Share of actively managed Indian large-cap funds that trailed their benchmark over the ten years to December 2025

Okay, let me reveal the grand secret of how to make money in the stock market. Start with a few hundred crores. Make losses. Still have fifty crores left. Put that in a fixed deposit and live off the interest.

The easiest way to be rich is to be born rich, but if that were an option, you wouldn't be reading this. So let me borrow an idea from the great Michael Mauboussin, whom everybody in the markets should read: what's your edge? In his brilliant paper "Who Is on the Other Side?", he describes four kinds of edge, four ways somebody can beat the market.

Information edge. You know something others don't, and you trade on it. Sometimes this is illegal. Who am I to judge? If you're doing insider trading, I'd strongly suggest you at least stay indoors. Don't do it outside.

Analytical edge. Everybody has the same public information, but you make better sense of it. You build a better model, read the annual report more sharply or put the pieces together in a way others haven't.

Technical edge. I don't mean chart patterns. I mean the plumbing of the market: stocks being added to or dropped from an index, funds that are forced to sell, big portfolios rebalancing, margin calls. These are the moments when prices move because somebody somewhere *has* to buy or sell, not because anything about the business has changed.

Behavioural edge. This is my favourite, because it's the only one available to all of us. You don't need secret information or a supercomputer. You just need to stay calm, patient and disciplined while everybody else is being none of those things. If you can stay sane while the rest of the world goes insane, you can make a lot of money. And unlike the other edges, this one doesn't disappear when others copy it, because human nature is stubborn and knowing better is much easier than behaving better.

To survive in the market, you need an edge, and given how complex markets are, sometimes even that isn't enough. You need an edge, some luck and a prayer. Most clever strategies ask you to give up the one edge you have, the behavioural one, for an analytical one you probably don't have. The great Charles Ellis saw this long before it was fashionable, in a 1975 essay with a title that should be printed on the opening screen of

every trading app: "The Loser's Game". Borrowing an idea from the engineer Simon Ramo's book on tennis, he pointed out that investing had become like amateur tennis.

In amateur tennis, you don't aim for brilliance, because by definition you're an amateur. You win by making fewer mistakes than the other player: get the ball back over the net and keep it in bounds. Speaking on behalf of all retail investors, investing is amateur tennis. Trying to be clever can be costly, because you don't get paid for effort. Do all the research you like and cook up something smart, and there's still no guarantee of returns. In fact, more often than not, effort and results in the stock market are inversely correlated.

Kenneth French was one of the first to put a number on this. He added up what Americans spent every year from 1980 to 2006 trying to beat the market, on fund fees, trading costs and advice. It came to about 0.67% of the value of the entire US stock market, every year. As a group, they can't possibly earn that back, because together they *are* the market. Brad Barber and Terrance Odean studied 66,465 US households and found that the ones who traded the most earned a lot less than the market: 11.4% a year against 17.9%, from 1991 to 1996. Guess the title of their paper: "Trading Is Hazardous to Your Wealth".

And it isn't just individuals. The professionals suck at it too. Look at S&P's SPIVA scorecards, in India or the US, and you'll quickly see the futility of trying to pick stocks or funds. S&P's scorecard of Indian mutual funds found that 76% of actively managed large-cap funds, the ones where a fund manager picks the stocks, did worse than their benchmark index over the ten years to December 2025, and 84% over five years. The American scorecards tell the same story.

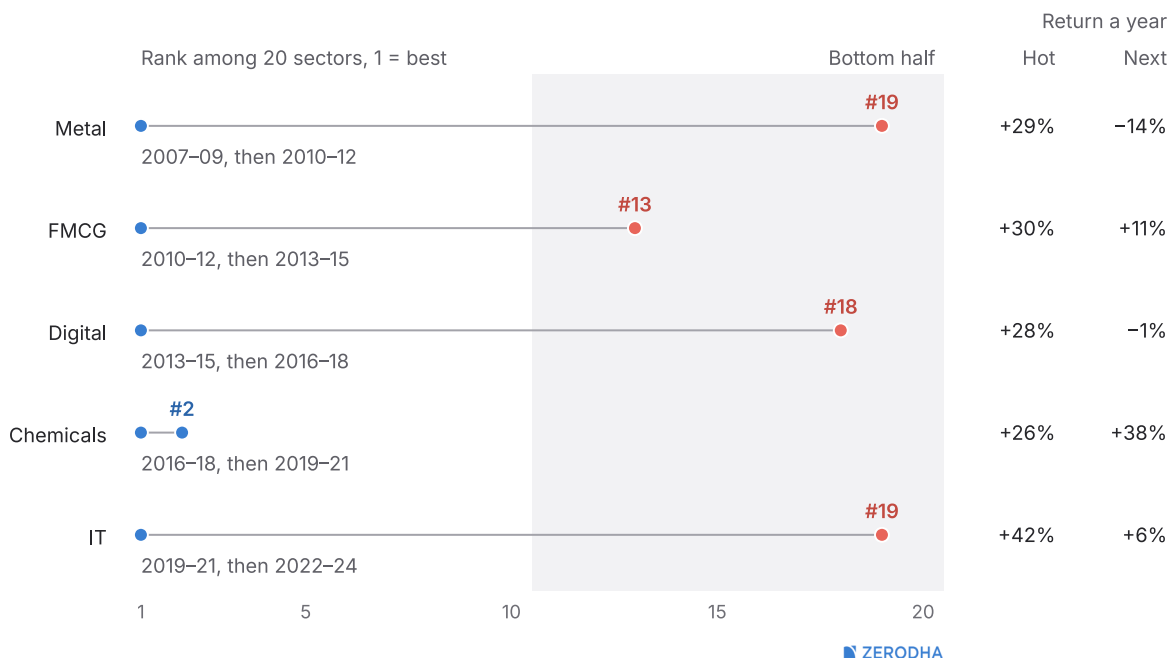
Perhaps the stupidest way retail investors try to be clever is to chase the shiniest object of the moment. Every bull market produces a hot theme, and luckily for them, the fund industry always has a shiny new fund to sell.

The fund industry knows this and acts on it. New funds are easiest to sell right after the market has had a great year, so that's when they launch, and that's when the money pours in.

FIGURE 8.1

Last period's hottest sector rarely stayed hot

The best of 20 Nifty sector total-return indices in each three-year period, and its rank in the next three years (1 = best, 20 = worst), 2007–2024



Each line joins a sector's rank in one three-year period to its rank in the next. The best of 20 Nifty sectors in each three-year period since 2007, and where it ranked in the next three years. Metals, digital and IT went from first to 19th, 18th and 19th. By the time a theme is famous, it has usually had its run.

SOURCE

Nifty Indices · Zerodha analysis

So I looked at the six quarters when new funds raised the most money and what the market did next. Over the following year, the Nifty 500 returned a median 5%, against 17% after all the other quarters. I wouldn't lean on that too hard: it rests on two hot spells, and most of it is just the market cooling off after a big year. But the point holds. By the time a new theme fund is being advertised to you, the run it's selling has usually already happened.

Clever strategies also trade a lot more, which means higher costs, more tax and, often, worse returns than the market.

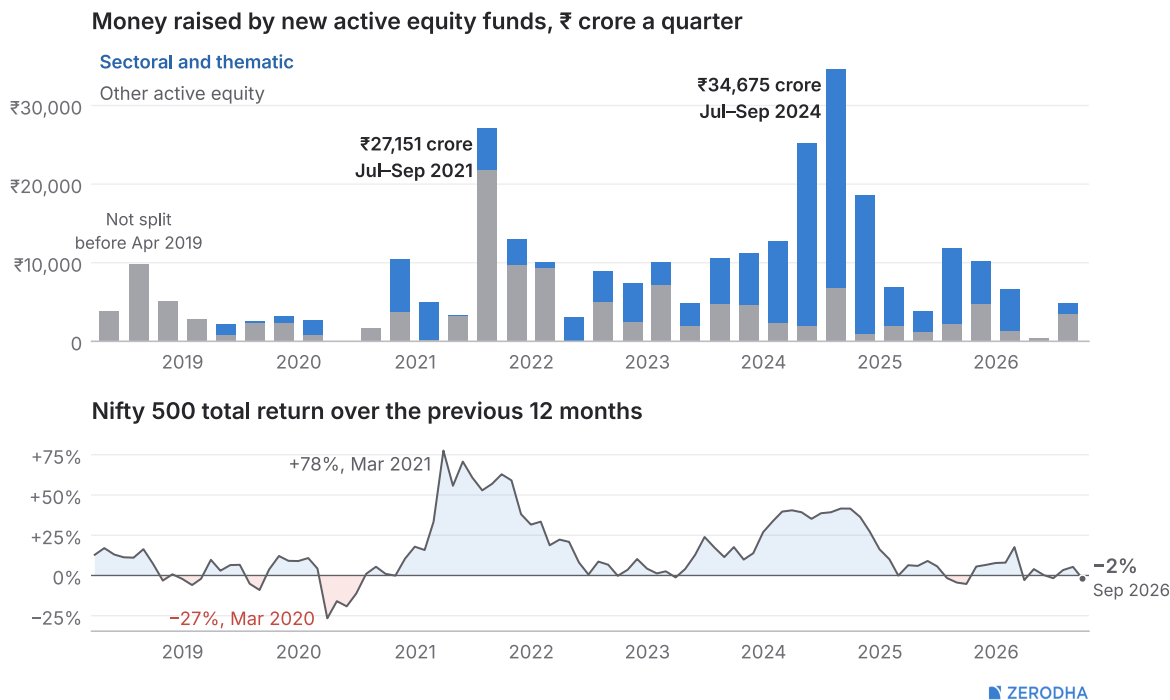
As the Stoics said, control what you can and ignore the rest; we'll come back to them later in the book. In investing, you control very few things, and one of them is your costs. Costs compound just like returns, only in the

other direction. Jack Bogle called this the cost matters hypothesis, and he once compared twenty years in the average equity mutual fund with twenty years in the market. The gap was brutal.

FIGURE 8.2

New funds raise the most after a big run

Money raised by new active equity funds each quarter, and the Nifty 500's return over the previous 12 months, Apr 2018–Sep 2026



Money raised each quarter by new active equity funds (blue for sectoral and thematic funds, which AMFI reports separately from April 2019) against the Nifty 500's return over the previous twelve months, April 2018 to September 2026. The two biggest quarters, July–September 2021 and July–September 2024, came after the index had risen 63% and 42% in a year; across 34 quarters the rank correlation between money raised and the past year's return is 0.51. The number of launches barely tracks the market; the money does. Index funds and ETFs excluded.

SOURCE

AMFI monthly reports (new schemes launched), Nifty Indices · Zerodha analysis

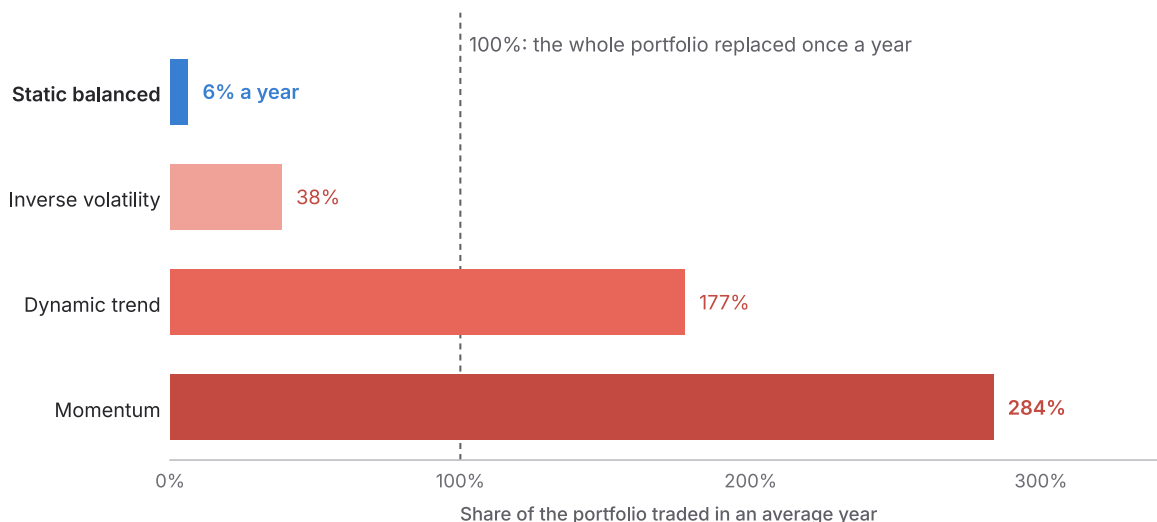
// *You, the investor, put up 100 percent of the capital and assumed 100 percent of the risk, but collected only 53 percent of the profit."*

JACK BOGLE, 2005

FIGURE 8.3

Clever strategies demanded far more trading

Annual portfolio turnover by strategy. A value of 1.0x means the whole portfolio got replaced once in a typical year.



ZERODHA

How much of each portfolio got replaced in a typical year, in a five-asset Indian portfolio since 2005. A static balanced mix turned over about 6% a year. A momentum strategy replaced its whole portfolio nearly three times a year.

SOURCE

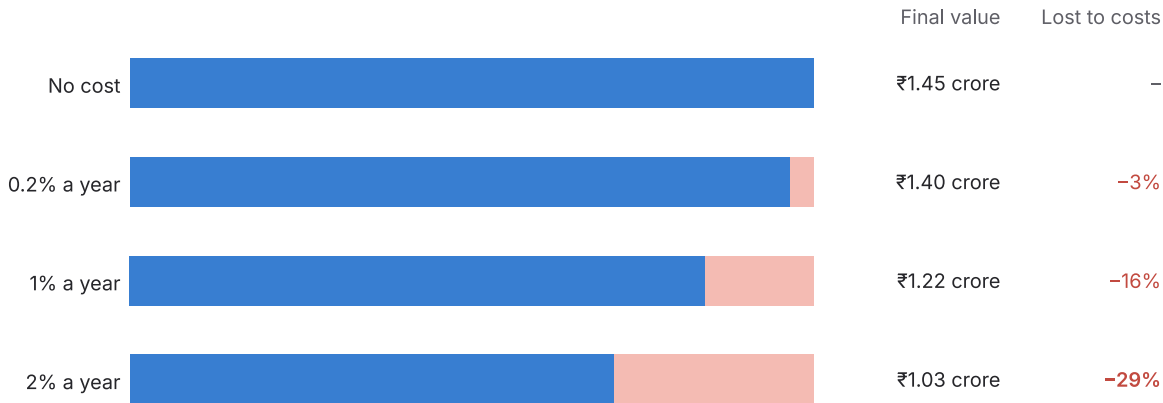
NSE · WGC Goldhub · Zerodha

Here's the Indian version. The typical active equity fund charges about 1.2 percentage points a year more in its regular plan than in its direct plan, and that extra is mostly the distributor's commission. On a ₹10,000 monthly SIP held for 20 years, at an assumed 11% a year before costs, that difference alone comes to roughly ₹9 lakh. That's arithmetic, not a forecast. If you know what you're doing, you've done your homework on the funds you want, spent time on [Zerodha Varsity](#) or read a personal finance book or two, and you're confident managing your own money, direct plans make perfect sense. You don't need anybody's help, so don't pay for it. You can now ask Claude or ChatGPT too, as long as you check their sums. The commission in a regular plan is what you pay the distributor for helping you. If you're not confident managing your money, find a good adviser instead: a SEBI-registered investment adviser who charges you a fee rather than earning a commission, like [The Financialist](#), which Zerodha has invested in through Rainmatter.

FIGURE 8.4

Over 25 years, a 1% fee adds up

Arithmetic, not history: ₹10,000 a month for 25 years at an assumed 11% a year before costs, with different annual costs taken out



ZERODHA

Arithmetic, not history: ₹10,000 at the start of each month for 25 years at an assumed 11% a year before costs. The annual growth factor is multiplied by one minus the fee. A 0.2% index fund leaves you 3% short of the no-cost amount. A 2% product leaves you 29% short, and you never see it deducted, because it comes out of the NAV. The loss to fees changes with the assumed return and holding period.

SOURCE
Zerodha calculation

Borrowing to invest

The other mistake I’ve seen people make of late, and I might sound like a hypocrite because we offer this product, is margin funding: borrowing to invest.

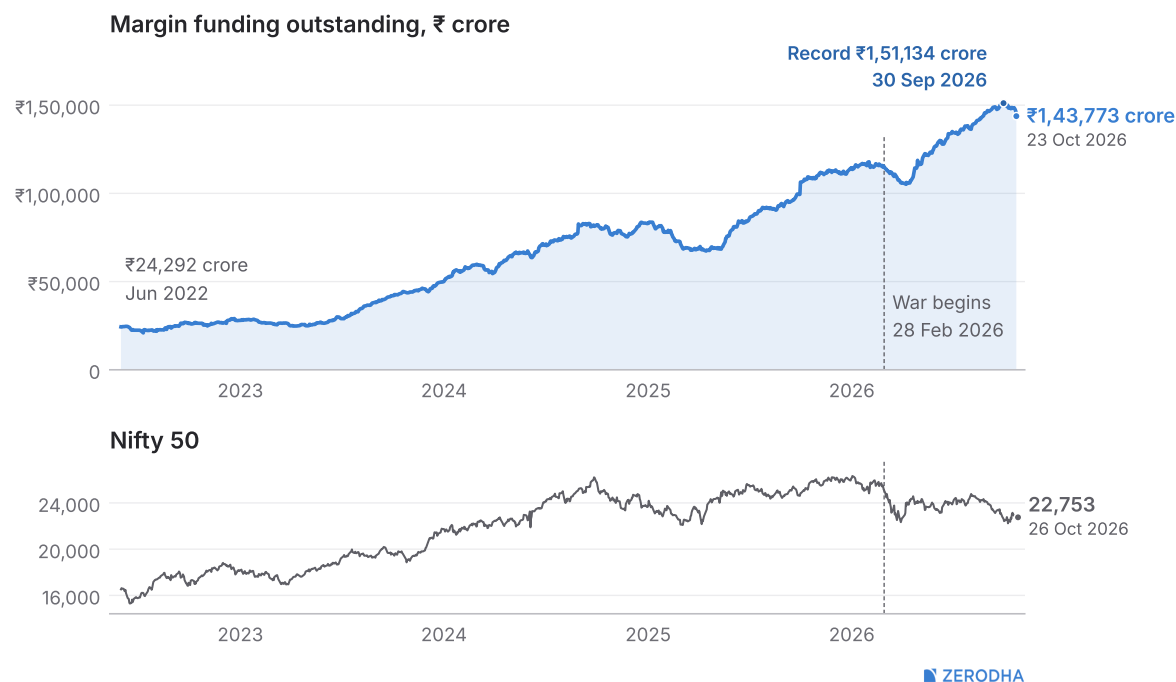
Margin funding is a loan from your broker that lets you buy more shares than you have money for. To give you a sense of how much it has grown: in mid-2022, NSE’s margin book was about ₹24,000 crore. By the end of September 2026, it was a record ₹1.51 lakh crore. The funny part is that it grew by more than ₹35,000 crore after the war began, even though Indian markets have gone sideways since 2024. People haven’t just been buying the dip. They’ve been buying the sideways snore.

I want to be careful here. A bigger loan book partly reflects a bigger market and more brokers offering these loans, and a record doesn’t mean a crash is coming. But it does mean a record amount of borrowed money is exposed to margin calls.

FIGURE 8.5

Even in a falling market, borrowing to buy shares hit a record

Margin trading funding outstanding on NSE, ₹ crore, June 2022 to 23 October 2026



Money borrowed from brokers to buy shares under NSE's margin trading facility, June 2022 to October 2026, with the Nifty 50 for context. The book hit a record ₹1,51,134 crore on 30 September 2026, up from ₹1,15,534 crore just before the war and about six times its mid-2022 level, while the Nifty stayed below its January high.

SOURCE

NSE (margin trading disclosure),
Nifty Indices · Zerodha analysis

The problem with borrowed money is that it can turn shallow risk into deep risk. Leverage is lovely when markets go up: your profits grow, and so does the value of your collateral. But when things turn, they get ugly very quickly. As prices fall, you're asked to put in more money or sell. If you can't, the broker sells your shares for you, at the worst possible time, and your losses are locked in. If the market recovers, you're no longer there for it.

Of all the stupid ways to lose money, borrowing to invest has to be one of the stupidest. Leave that to the pros.

09

CHAPTER 9

Your SIP is not the index

₹34.0 lakh

What pausing a ₹10,000 SIP during scary markets cost one historical investor

So far in this book I've used index data to make a lot of points, usually the Nifty 50, the Nifty 100 or the Sensex. Studies that run a SIP, or anything else, on a single 100% equity index always struck me as odd. Yes, a lot of people YOLO, but plenty of investors diversify. Assuming a lump sum is odd too. Most people in the markets are like me: they get a salary every month and invest a part of it. They do a SIP not because a SIP is some magic thing that guarantees 12%, as if that were written into all our sacred texts, but because that's what their income looks like.

So in this chapter I want to look at SIPs in all their dimensions. SIP has become something of a dirty word, thanks to some spectacularly dumb things said by otherwise smart, well-credentialed people, some of whom manage other people's money. I've been paying attention to what they say, and I have to admit I don't have much hope for humanity if this is the intelligence on offer. I won't take names; it's ungentlemanly and a distraction. Just because some credentialed moron says something silly doesn't mean I have to get into a mudslinging contest, even if it gets me hot and bothered.

Now, a lot of people are shouting at the top of their lungs that one- to three-year SIP returns are negative. For the Nifty 50 today, yes. It's also a partly stupid comparison. Say you started a SIP at the market's peak, in September 2024. Where are you now?

With ₹10,000 a month in the Nifty 50, you've put in ₹2.5 lakh, and it's worth about ₹2.37 lakh. Since the money went in a bit at a time, the fair way to measure that is as a yearly return on each instalment: a loss of 4.9% a year. That sounds bad until you look at someone who put the whole ₹2.5 lakh in at the start. They're down 9.7%. And if you'd gone YOLO and put the SIP into small caps, despite all the warnings? Ironically, you've barely broken even. Why? Sheer randomness and timing luck. Small caps happened to rally about 20% from their March 2025 low while large caps drifted.

Looking only at a 100% equity SIP is misleading, because a lot of people today invest in a diversified basket, either on their own or through hybrid funds, balanced advantage funds or multi-asset funds, which have become popular partly because of gold. So I built two simple mixes, both rebalanced every January: a 60/40 mix of the Nifty 50 and the five-year government bond index, and a 50/30/20 mix of the Nifty 50, the bond index and gold, roughly what a multi-asset fund looks like. The 60/40 SIP is down about 1.2% a year. The 50/30/20 SIP is up 4.3% a year, thanks to gold's spectacular rally since 2024, even though gold has fallen about 19% from its January peak. That's what diversification does, and it's why people keep calling it the only free lunch, as Harry Markowitz supposedly put it. I've yet to meet anyone who ordered it for lunch, though.

So if you listened to your friends, mothers, aunts, uncles and colleagues about the virtues of SIPs, how Indian markets only go up and how it's practically illegal for them to fall, and started at the September 2024 peak, you're close to the unluckiest schmuck on the planet. Only about one in nine of the earlier two-year Nifty SIPs since 1999 did worse, and most of those started in 1999–2000, just before the dot-com bust, or in 2006–07, just before the global financial crisis. But you're in decent company. The people who started in 2007 went on to do just fine, because they kept going.

So how long does a SIP started at a peak take to come good? Since 1999, a Nifty SIP started within 2% of an all-time high typically took about three years before it stayed above the money put in through September 2026, against a little over two years for a SIP started in any month. The worst took six years. Every peak-start SIP begun before mid-2023 has made it. The ones that have not yet stayed above are all from the last three years, which is what this fall feels like from the inside.

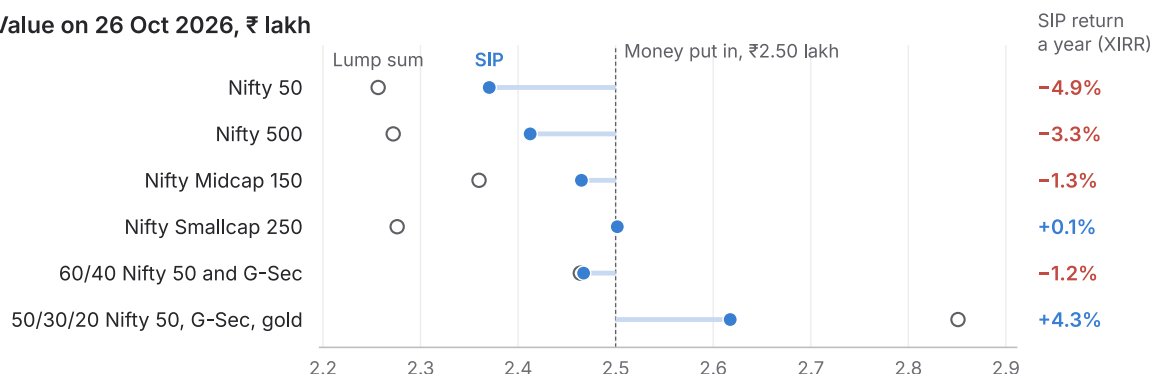
But all of this is a little silly. The real question is how long you have to keep a SIP going to not see a loss. You'll hear otherwise sensible people say five years is the minimum. It's a dumb number, and they're pulling it out of the wrong opening, the one towards the hind part of the lower abdomen. The industry latched on to five years because five-year SIPs in recent data rarely showed losses, but the longer history doesn't back five years as a magic line. Look at the data yourself: the longer you stay, the higher the odds of ending up all right. Odds, not a guarantee.

FIGURE 9.1

Two years of SIPs from the top, and not much to show

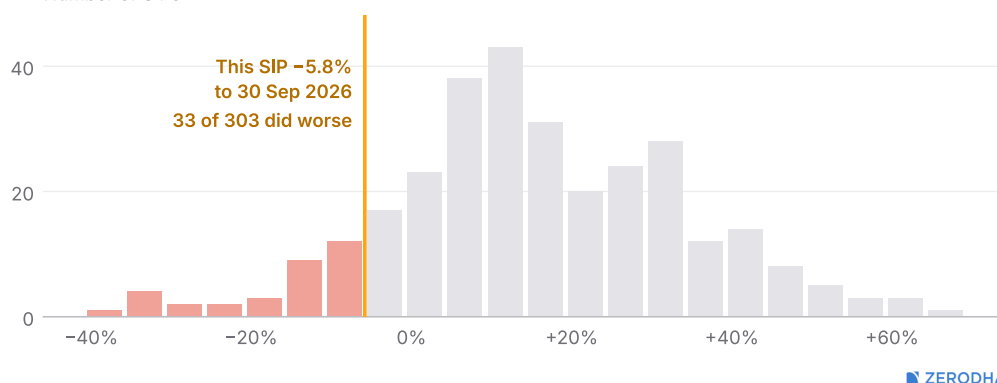
₹10,000 a month from 30 Sep 2024 (25 instalments), valued on 26 Oct 2026, against the same ₹2.5 lakh invested at once

Value on 26 Oct 2026, ₹ lakh



Every 25-month Nifty 50 SIP since 1999, by annual return

Number of SIPs



ZERODHA

A ₹10,000 monthly SIP started at the 30 September 2024 close, two trading days after the market peak, with 25 instalments (₹2.5 lakh) to September 2026, valued on 26 October 2026, against a lump sum of the same total invested at the start. Indices with dividends; the 60/40 mix is the Nifty 50 and the five-year G-Sec index, and the 50/30/20 mix adds gold; both rebalanced each January. The Nifty 50 SIP returned -4.9% a year, 60/40 -1.2% and 50/30/20 +4.3%. The lower panel ranks the Nifty 50 SIP against every earlier two-year SIP since 1999 on month-end values to 30 September (-5.8% a year); only 33 of 303 did worse.

SOURCE

Nifty Indices, World Gold Council
· Zerodha analysis

And even over long periods, there are long stretches when your SIP will be underwater. Spending time in the red is completely normal, even for SIPs that turned out fine, and it's far less common once the SIP isn't all equity.

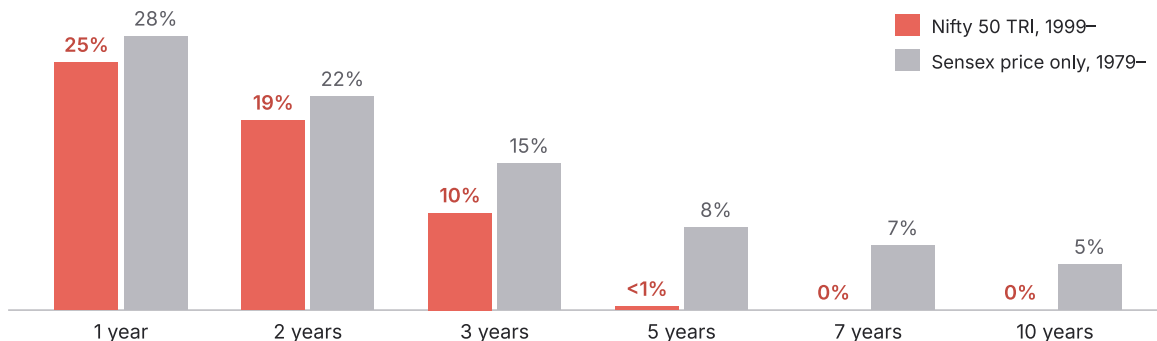
The good news first. When prices fall, the same ₹10,000 buys more.

FIGURE 9.2

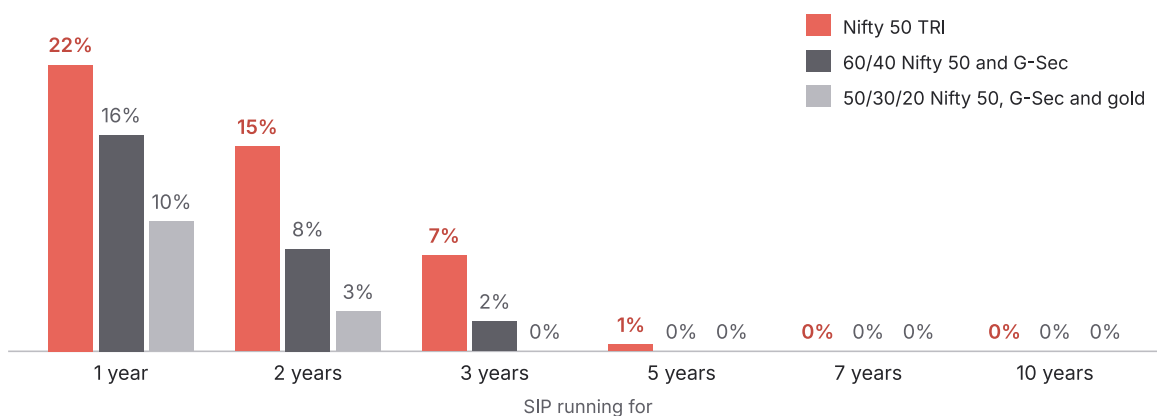
How long before your SIP stops showing a loss?

Share of monthly SIPs, started in every possible month, whose value was below the money put in after each number of years

Nifty 50 and Sensex



Nifty 50 against two mixes, Jun 2005–Sep 2026



ZERODHA

Share of monthly SIPs, started in every possible month, that were still below the money put in after one, two, three or more years. For the Nifty 50 with dividends, one in four was in loss after a year and one in ten after three. In the longer Sensex history without dividends, 15% were in loss after three years and 5% even after ten. Bottom panel, completed SIP windows drawn from June 2005 to September 2026, with the latest eligible starting month depending on the holding period: after one year 22% of Nifty 50 SIPs were below the money put in, against 16% for a 60/40 mix with the five-year G-Sec index and 10% for a 50/30/20 mix with gold; after three years, 7%, 2% and none. Mixes rebalanced every January.

SOURCE

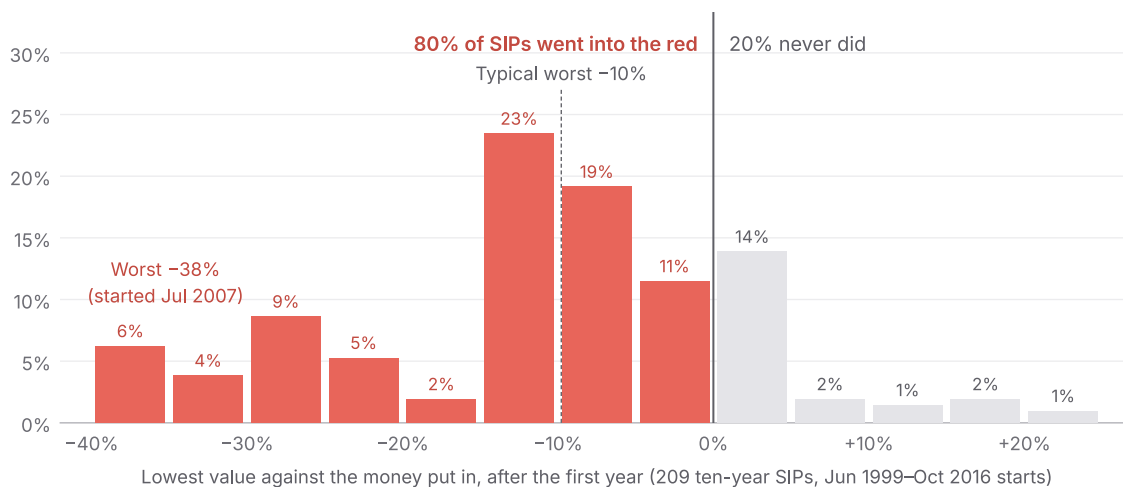
Nifty Indices, BSE, World Gold Council · Zerodha analysis

FIGURE 9.3

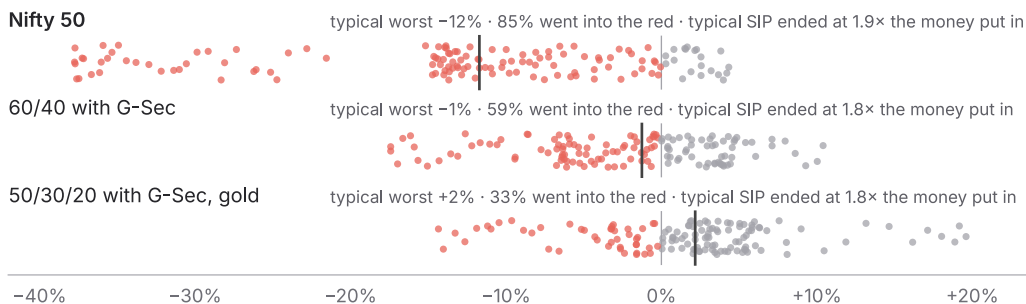
Almost every SIP spends time in the red

Every ten-year monthly Nifty 50 TRI SIP, Jun 1999–Oct 2016 starts: the lowest point the account reached against the money put in (after the first year), and where it ended

Share of SIPs



Nifty 50 against two mixes, 137 ten-year SIPs (one dot each), Jun 2005–Oct 2016 starts



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Every ten-year Nifty 50 SIP started between June 1999 and October 2016, 209 of them, by the lowest point each reached against the money put in. 80% were in the red at some point after the first year and a quarter fell more than 20% below cost; the worst, the July 2007 start, fell 38%. Every one of them finished the ten years ahead, the weakest by 26%, the typical one roughly doubling the money. Bottom panel, the 137 ten-year SIPs started from June 2005: 85% of Nifty 50 SIPs dipped below cost after the first year, against 59% for 60/40 and 33% for 50/30/20; the worst dips were 38%, 17% and 14%, and the typical SIP ended at 1.9, 1.8 and 1.8 times the money put in.

SOURCE

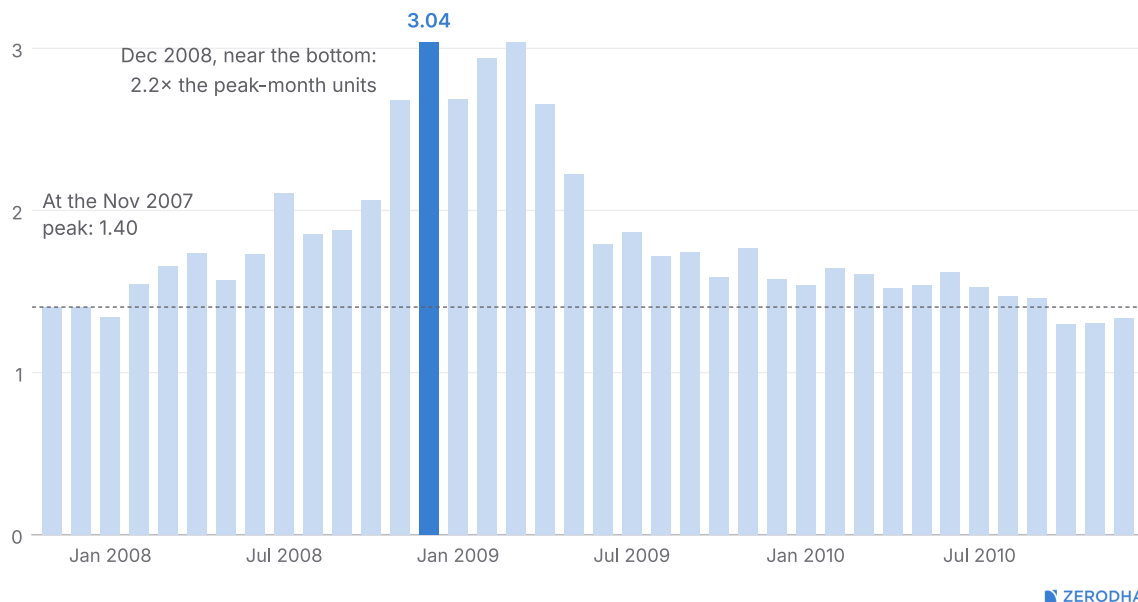
Nifty Indices, World Gold Council
· Zerodha analysis

FIGURE 9.4

The crash bought you more units

Units bought by a ₹10,000 monthly Nifty 50 SIP during the 2008 crash.

Index units bought each month



ZERODHA

Units of the Nifty 50 bought by a fixed ₹10,000 a month through the 2008 crash. At the pre-crash price, ₹10,000 bought 1.40 units. Near the bottom it bought 3.04, about 2.2 times as much. This is the whole mechanical case for continuing a SIP through a crash, in one picture.

SOURCE
NSE · Zerodha

If you're young and still saving every month, then, to paraphrase William Bernstein, you should pray for a bear market, because the same money buys more units, and when markets recover, you make a higher return. In a 2020 interview, he put it like this:

// *You should get down on your knees and pray... for awful returns, awful bear markets, great volatility."*

WILLIAM BERNSTEIN, 2020

The more units you buy cheaply now, the bigger your pile later. That doesn't make it an easy ride. It will be a nightmare. You'll feel a lot of self-doubt, and every urge to sell everything at the worst possible time. But if you resist that impulse, the odds of ending up all right are higher.

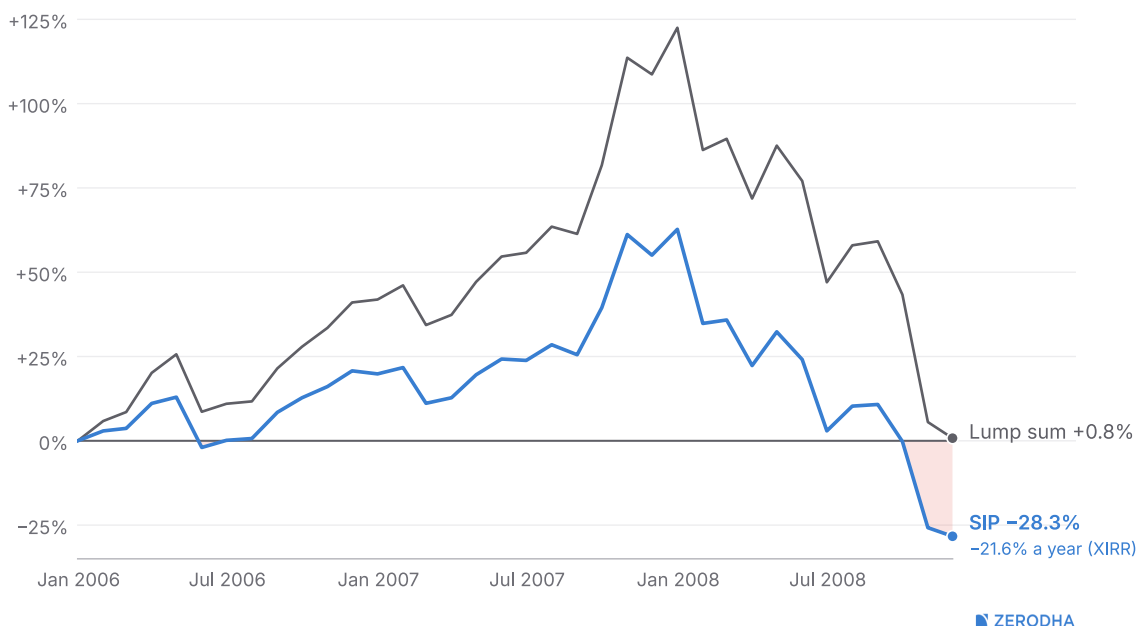
And just to drive home the point that SIPs can lose money too, here's a three-year stretch, December 2005 to November 2008, in which the Nifty 50, dividends and all, went nowhere. A lump sum invested at the start finished 0.8% up. A SIP over exactly the same months finished 28.3% below the money put in.

FIGURE 9.5

A flat index hid a painful SIP

Nifty 50 TRI, December 2005–November 2008 · standing investment versus monthly contributions

Gain or loss on the money each investor paid in



December 2005 to November 2008, Nifty 50 total return index. The lump sum was flat. The SIP ended 28.3% below the money paid in, a loss of 21.6% a year on its cash flows, because most of its money went in during the climb and was still sitting there when the floor gave way. This was the worst three-year SIP in the sample, so treat it as a warning, not a verdict.

SOURCE
NSE Nifty 50 TRI · Zerodha
analysis

So a SIP doesn't protect you from a crash. It changes which crash hurts you. A crash early on, when you have little money in, can work in your favour if you keep buying. A crash late in life, when the pile is big and your instalment is tiny next to it, hurts like a lump sum.

Let me clear up a few misconceptions. A SIP is just a way to put a fixed amount into mutual funds every month. That's it. Nothing more, nothing less. It isn't a strategy. It doesn't guarantee you a high return, and it doesn't guarantee you a shallow fall when markets crash. A lot of the confusion comes from the dumb things people in the industry itself have said. What decides your returns and the risk you live through is what you invest in, how much you invest, and what the markets do. Whether you SIP or follow some fancy strategy matters at the margin. Those three things matter most.

The other common mistake is stopping the SIP at the wrong time, and it's perhaps the single most destructive thing you can do as an investor. Meet a historical "flinchers". This person pauses their SIP whenever the market is 15% below its high and restarts only when it's back within 5% of the high. They save the same amount every month, but during the scary bits it sits in cash.

I ran the same flinchers on the two mixes, from June 2005, when my gold data starts. If they still panic at Nifty headlines, owning a mix doesn't save them: they pause for 87 months and end about a third behind. If they watch their own portfolio instead, the 50/30/20 mix fell 15% far less often, so they paused for just 16 months and ended about 10% behind. One more reason to look at your portfolio, not the Nifty.

The flip side is to assume it's better to hold some money in cash and throw it in whenever the market falls. Sounds logical, right? Not really.

Waiting for a 20% fall added a little. Waiting for a 30% crash cost you, because half the time it never came. Either way, the difference is small. What matters is that you keep investing in a sensible mix of equity, debt and gold funds.

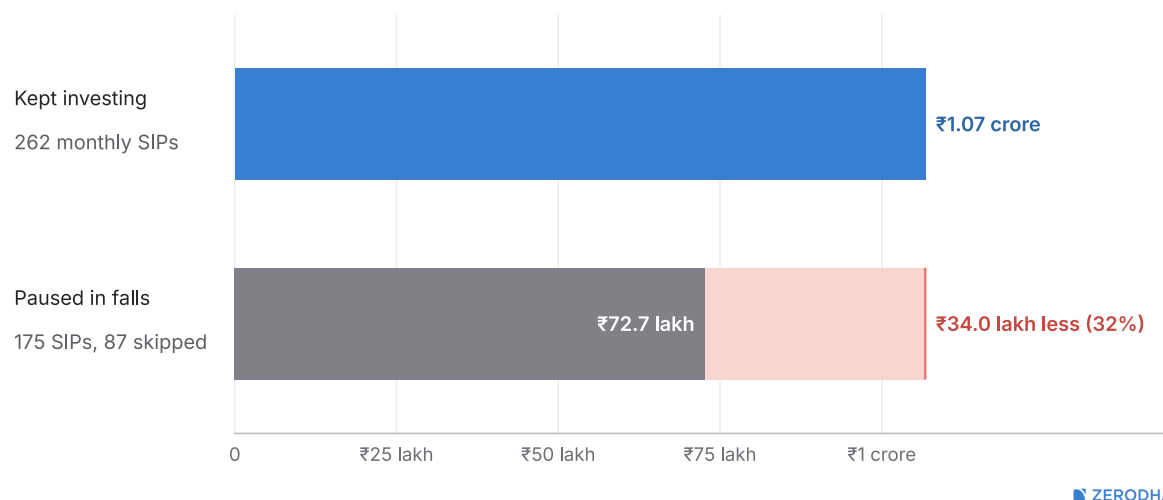
Now, after all my righteous indignation, you might shout at me: fine, but can a SIP lose money over ten years? The longest history we have is the Sensex, from 1979. In a pure Sensex SIP, the worst ten-year stretch, October 1991 to September 2001, lost 3.7% a year, and there were 21 ten-year stretches with a loss. Here the account is valued at the final payment,

one month earlier than in the longer comparison below. That's the price index. Dividends have added about 1.5% a year to the Nifty 50's return since 1999, so they'd have helped a little, but things would still have been really bad. The shorter comparison with dividends, which starts in 2001, doesn't show a single ten-year SIP that lost money. Still, "SIPs never lose money over ten years" is a sentence that needs an asterisk the size of a building.

FIGURE 9.6

Stopping your SIP in scary markets cost real money

Nifty 50 TRI SIP, ₹10,000 a month from 2005 to Oct 2026. The 'flinchers' stops buying after a 15% drawdown and resumes only when the market gets back within 5% of its prior high.



ZERODHA

A ₹10,000 monthly Nifty 50 SIP since 2005, invested every month versus paused during falls of 15% or more. The flinchers held 87 contributions in cash instead of buying units and ended about ₹34.0 lakh behind, roughly a third less wealth. One rule in one sample, but the direction is not a coincidence.

SOURCE
NSE · Zerodha

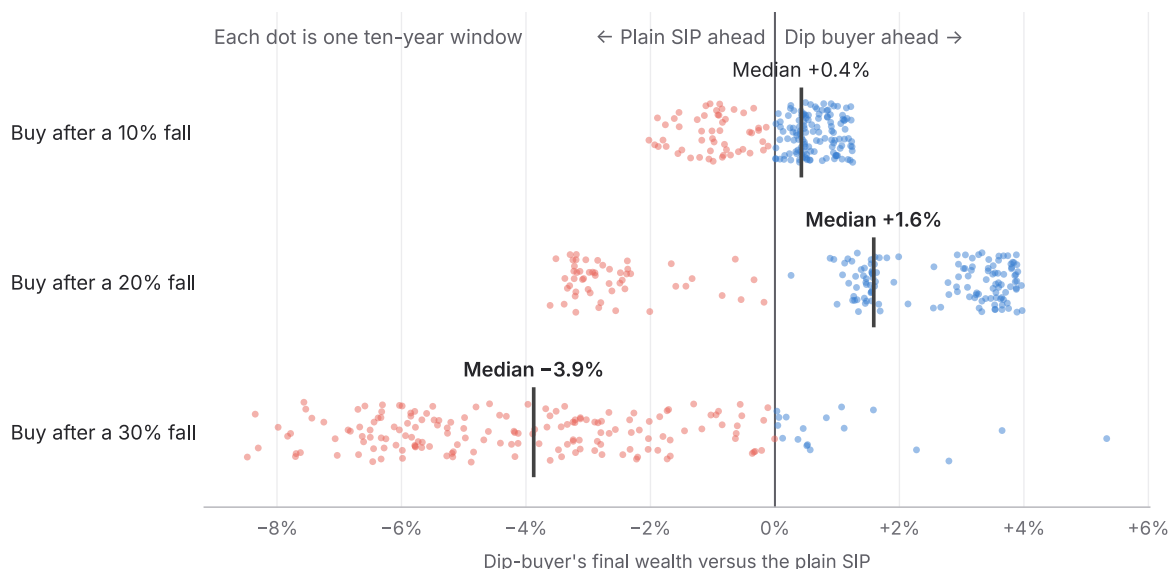
I'm telling you these depressing things, even though it might be better for us not to, because investing is hard enough without all the misleading things people with vested interests say. It's better to know what investing is really like than to go in with rose-tinted glasses. Investing in Indian markets over long periods has historically been rewarding, and the odds of doing all right have been higher the longer you stayed. But there are no guarantees. The only guaranteed return you'll get is from a government bond or a fixed deposit, and even with a fixed deposit, only ₹5 lakh per bank is insured. If

you're a gloomy person like me who expects the worst, the history of banking crises around the world won't give you a rosy view of fixed deposits either.

FIGURE 9.7

Saving cash to 'buy the dip' barely beat just investing

Every ten-year window from Sep 2001: a ₹10,000 monthly Nifty 50 TRI SIP, versus ₹8,000 into the SIP and ₹2,000 into a 5-year G-Sec reserve that is thrown in whenever the market is down by the trigger. Same money, different timing



ZERODHA

A plain ₹10,000 monthly SIP against someone who invests ₹8,000 and keeps ₹2,000 in a bond fund, throwing the reserve in whenever the market is down by a set amount. Waiting for a 20% fall added a median of 1.6% to the final amount after ten years. Waiting for a 30% crash cost 3.9%, because in half the windows it never came.

SOURCE

Nifty Indices · Zerodha analysis

And since I said that looking at a SIP in a 100% equity index is dumb, I can't go back on my word. I don't have good Indian bond data before 2001, so I built a rough debt leg from RBI deposit-rate data and pushed the comparison back to 1979:

- **Equity:** the Sensex price index, without dividends, so add a percentage point or two to its returns.
- **Debt:** before October 2001, a model of rolling bank deposits built from RBI's one-to-three-year deposit rates, assuming you could move the

money without a lock-in or a penalty; after that, the Nifty five-year government bond index.

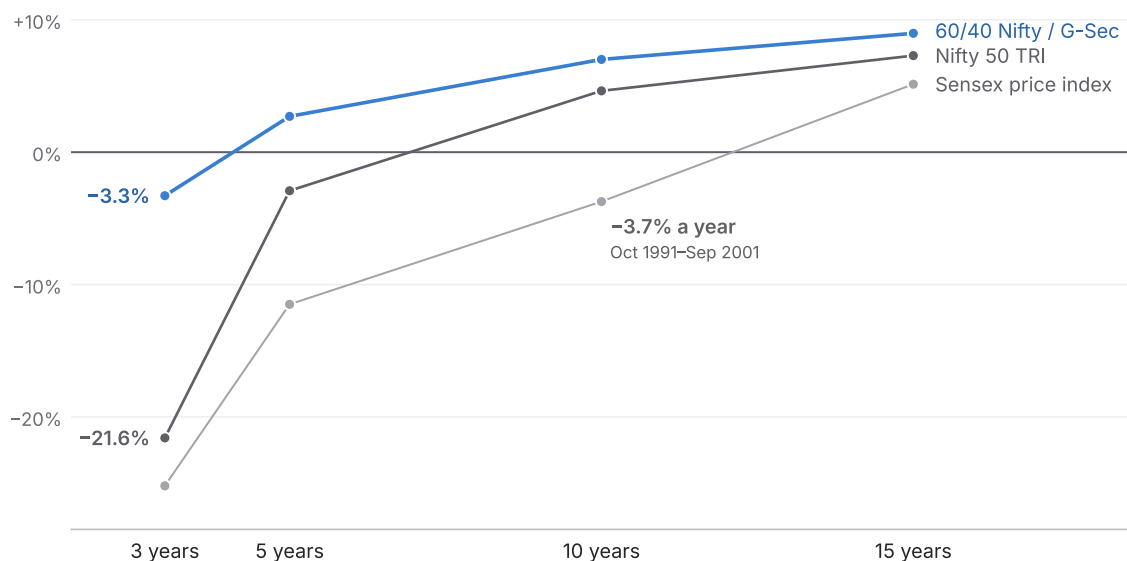
- **Mix:** 60% equity and 40% debt, reset every January.

FIGURE 9.8

A ten-year SIP has lost money

Lowest annualised XIRR among every overlapping SIP of the stated length

Worst annualised SIP return



ZERODHA

The worst annualised SIP return for each holding period. The Sensex line runs from 1979 and excludes dividends; the Nifty 50 and 60/40 lines start in 2001 and include them, so treat the Sensex line as context rather than a like-for-like ranking.

SOURCE

BSE and NSE indices · Zerodha analysis

This is a historical illustration of a rule, not the track record of a fund anyone could have bought in 1979.

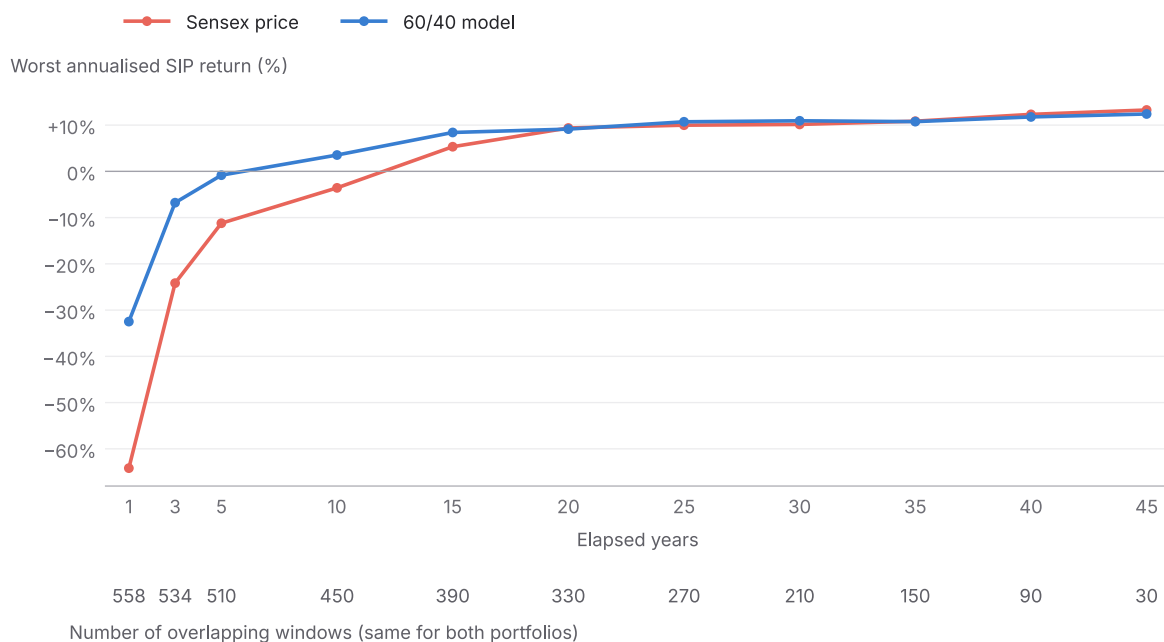
Here, ten years means 120 monthly payments, with the account valued a month after the last one.

- **Worst ten-year SIP, all equity:** lost 3.6% a year on this measure.
- **Worst ten-year SIP, 60/40:** gained 3.4% a year.
- **The catch:** 450 overlapping starts, but only four separate ten-year spans fit into the history. A long line on a chart can still be a very small sample.

FIGURE 9.9

The worst SIP returns since 1979, shares alone and in a 60/40 mix

Worst annualised return across monthly starts · complete elapsed years · modelled early debt



ZERODHA

April 1979–September 2026. Each Y-year window makes 12Y equal payments at calendar month-ends and is valued one month after the last payment, exactly 12Y months after the first. Dated XIRR uses 365.25 days per year. Payments buy units of a standing portfolio, rather than resetting its weights. Both equity legs exclude Sensex dividends; pre-1986 history is back-calculated. The 60/40 equity/debt mix rebalances each January. Debt before October 2001 is liquid synthetic deposit accrual, using RBI one-to-three-year rate midpoints or sole quotes with a twelve-month assumed record lag, April resets and quarterly nominal compounding, without lock-in, withdrawal penalties or credit losses; subsequently it uses the five-year G-Sec TRI. Fees, taxes and inflation are excluded. Of 450 ten-year windows, 20 equity and 0 mix windows lost money. Neighbouring starts overlap; only four disjoint ten-year spans and one 45-year span fit. No losses in this sample is no promise. Missing dividends hurt all-equity more.

SOURCE

BSE, Nifty Indices, RBI DBIE ·
Zerodha analysis

And adding a bit of debt changes the SIP experience a great deal.

FIGURE 9.10

Three-year SIPs, equity alone and 60/40

Annualised return on each 36-month SIP, labelled by its final month

Annualised return on each three-year SIP, by its final month



Returns on every three-year SIP since 2001, for the Nifty 50 total return index and for a 60/40 mix with the five-year G-Sec index, rebalanced every January. The worst equity SIP lost 21.6% a year; the worst 60/40 SIP lost 3.3%.

SOURCE
NSE indices · Zerodha analysis

Have SIP returns come down?

As I was writing this, one question kept nagging me, triggered by a chart from Anoop Vijaykumar of Capitalmind showing SIP returns falling over time. Instead of relying on my terrible memory, I looked at what happened.

In rupees:

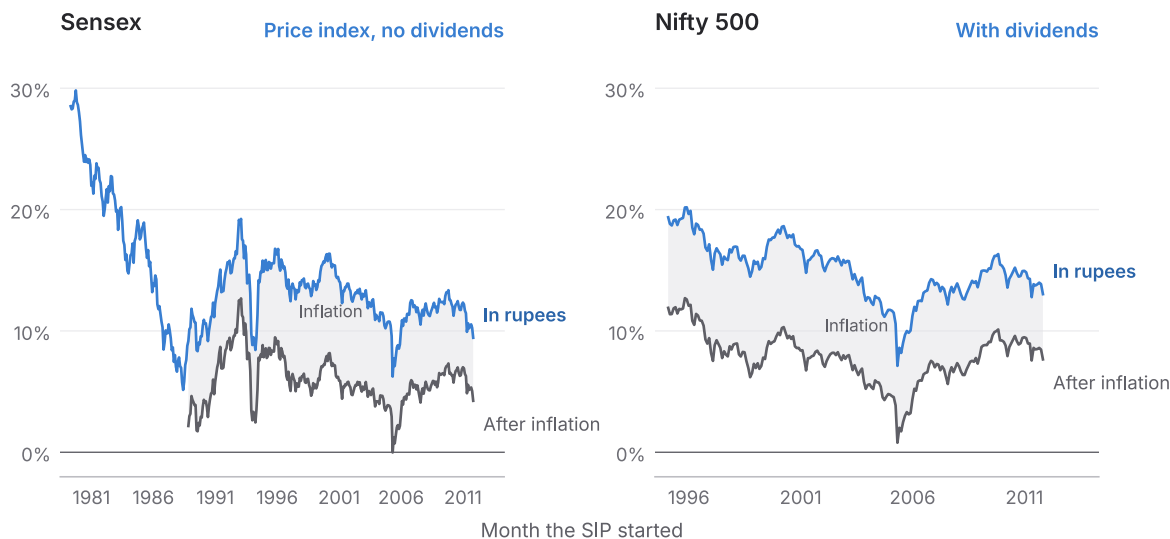
- A 15-year Sensex SIP started in the 1980s made a median 18.6% a year.
- One started between 2008 and 2012 made about 12%.

But Indian inflation averaged about 9% a year in the 1990s and about 10% between 2008 and 2013, and under 5% since 2014. A rupee of return back then bought a lot less than a rupee of return now. After inflation:

FIGURE 9.11

SIP returns came down, mostly because inflation did

Return a year on a 15-year monthly SIP, by the month it started, in rupees and after inflation



■ ZERODHA

Return a year on a 15-year monthly SIP, by the month it started: the Sensex price index from 1979 (no dividends) and the Nifty 500 with dividends from 1995, in rupees (blue) and after inflation (grey). The shaded gap is inflation. After-inflation figures start in October 1988, when the CPI series begins. Neighbouring starts share almost all of their months, so each line holds only two or three truly separate 15-year experiences.

SOURCE
BSE, Nifty Indices, India Data
Hub and MoSPI CPI · Zerodha
analysis

- Sensex SIPs started between 1988 and 1994 made about 7% a year; those started between 2008 and 2012, about 6%.
- With dividends, Nifty 500 SIPs started between 1995 and 2002 made 8.6% a year; those started between 2008 and 2012, 8.8%.
- The unlucky ones started around 2004–05 and ran straight into 2008. A 15-year Nifty 500 SIP started in April 2005 barely kept up with inflation.

So SIP returns did come down in rupees, mostly because inflation did. After inflation, they've mostly been 6–9% a year, with a couple of nasty exceptions.

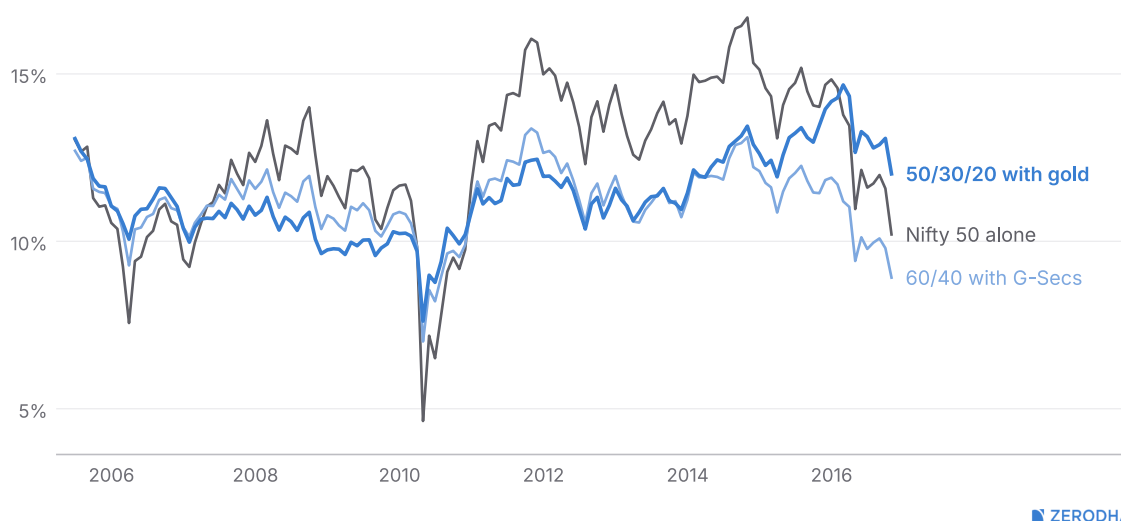
When you diversify, things change, and sometimes for the better. Diversification doesn't guarantee a higher return; often it costs you a little. What it buys you is a narrower range of outcomes, because in crashes and in different regimes, whether inflation, deflation or sideways markets, the other assets kick in.

FIGURE 9.12

A mix narrowed the range of SIP outcomes

Return a year on a 10-year monthly SIP, by the month it started, Jun 2005–Oct 2016 starts

Return a year on a ten-year SIP



ZERODHA

Return a year on a 10-year monthly SIP, by the month it started, June 2005 to October 2016 starts: the Nifty 50 with dividends alone, a 60/40 mix with the five-year G-Sec index and a 50/30/20 mix that adds gold in rupees, rebalanced every January. Neighbouring starts overlap.

SOURCE

Nifty Indices, WGC GoldHub, RBI/FBIL · Zerodha analysis

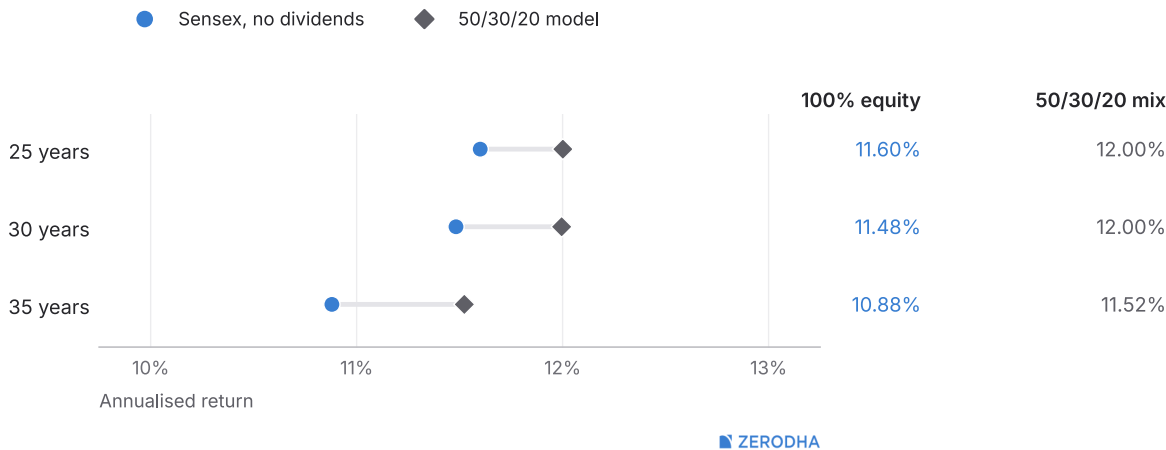
A ten-year SIP in the Nifty 50 returned anywhere from 4.6% to 16.7% a year, depending on the month you started. The worst start was April 2010, whose ten years ended right in the COVID crash. The 60/40 mix ranged from 7.0% to 13.4%, and the 50/30/20 mix from 7.6% to 14.7%. The mixes gave up some of the best outcomes, but they cut off the really depressing ones. If you're saving for something with a date on it, that narrower range is worth more than it looks.

We can stretch this back further with the same assumptions as the 1979 comparison, plus one more: gold's early prices are monthly averages. The 50/30/20 mix is reset to 50% shares, 30% debt and 20% gold each January. Leaving out dividends makes the equity side look worse than it was, so don't read the small gap between these lines as a verdict on which portfolio to buy.

FIGURE 9.13

SIPs of 25 to 35 years, with more assumptions

25-, 30- and 35-year SIPs at 26 October 2026 · Sensex excludes dividends · early debt is modelled



₹10,000 at each completed month's last trading close, valued on 26 October 2026; annualised XIRR, before costs and tax. Equity is the Sensex price index: dividends are excluded from both the all-equity line and the mix's equity leg. The mix is 50% equity, 30% debt and 20% gold, rebalanced every January. Before October 2001, debt is a liquid deposit-rate accrual proxy: the midpoint of RBI's one-to-three-year rate range (or sole quoted rate), lagged twelve months, with quarterly compounding and annual April resets. The lag is an assumption, not recovered release timing. It assumes no lock-in or withdrawal penalty. From October 2001, debt earns observed five-year G-Sec TRI returns. Before June 2005, gold uses RBI monthly-average price proxies, linked to subsequent canonical GoldHub INR prices, including the documented stale-quote repairs. Using the published low and high deposit rates changes these mix results by at most 0.03 percentage point; that range does not cover the other modelling assumptions.

SOURCE
BSE, Nifty Indices, RBI DBIE,
World Gold Council · Zerodha
analysis

Finally, two things matter more than everything above, and neither needs a view on the market: starting early, and raising your SIP as your income grows. Starting early means more time in the market and better odds of a bigger pile at the end. Raising your SIP does the same. We've seen this work in real life. Richard Thaler and Shlomo Benartzi got American

employees to agree in advance to save more out of every future pay rise; their average saving rate went from 3.5% to 13.6% in under four years, and automatic escalation is now common in American retirement plans.

Americans have them to thank. On Coin, which is ours, you can set up a step-up SIP that raises the amount every year by a percentage you choose.

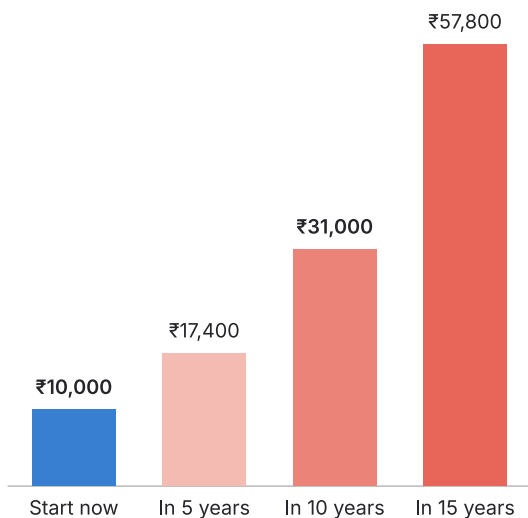
FIGURE 9.14

Start early, and raise your SIP every year

Arithmetic, not history, at an assumed 11% a year. Left: the monthly SIP needed to reach the same amount at the same age, if you start later. Right: ₹10,000 a month for 20 years, with and without a yearly increase

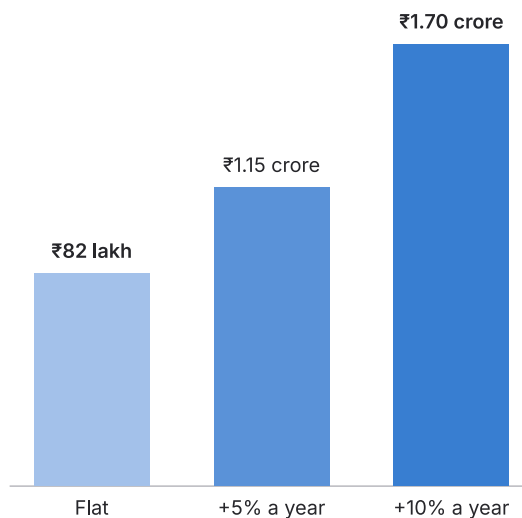
Monthly SIP needed

to reach the same sum at the same age



Value after 20 years

₹10,000 a month, raised each year by



ZERODHA

Arithmetic at an assumed 11% a year, not a forecast. Starting ten years later means investing about ₹31,000 a month instead of ₹10,000 to reach the same amount at the same age. Raising a ₹10,000 SIP by 10% a year turns ₹82 lakh into about ₹1.7 crore over 20 years.

SOURCE

Zerodha calculation

PART THREE

What works



A mix you can hold, the rest of the world, a plan written in advance, and advice boring enough to follow.

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10

CHAPTER 10

Equanimity

24 of 24

Years in which a balanced portfolio finished neither in the top two nor the bottom two of seven choices

Equanimity is one of my favourite words in English. It's the ability to stay calm whatever happens, good or bad. The word has a Stoic tinge to it, and since I'm a big fan of the Stoics, that's probably why it appeals to me. But I don't want to psychoanalyse myself on these pages. I have a lot more gyan to ooze.

A lot of traditions preach the middle way. The Buddha taught the middle way, Confucius wrote about the doctrine of the mean, and Aristotle had his golden mean. My experience in the markets has taught me that the middle path is more or less always the best way, unless you're a genius who can swing to the extremes and come out alive. For retail investors, I'll say it without qualification: it is THE best path.

Why? Think about the range of outcomes at the extremes. Say you go b*lls to the wall and put everything in equities. Get your timing right and you'll be fabulously wealthy. Get it wrong, and that's how you end up in the poorhouse. Same with leverage. Get it right and you're rich. Get it wrong and you end up in the state I dread most: sleeping under your nearest flyover, draped in silky smooth, bespoke, tailored local newspapers. At the other extreme, avoid all risk and put everything in fixed deposits and government bonds, and you run into the quiet thief, inflation, which never shows up on your statement unless you work out your returns after it. I've built a dashboard of real returns on tipsheet.markets.

As I write this, I'm reminded of the Stoic principle: control what you can and let go of the rest. In the markets, you quickly realise how little you control. You control what you buy, how much you buy, how much you save, when you invest and when you sell. Every other bloody thing is out of your hands: whether markets go up or down, whether there's a Great Depression, Armageddon or a long sideways market, whether India becomes Japan. The other thing in your control is how you behave, and that's often the difference between wealth and abject poverty.

We humans are control freaks. Our brains are built to see patterns even where none exist and to make up stories to explain chaos, because that makes the world feel more survivable. But the stock market is just a reflection of reality, and reality is mostly chaos. In the short term, there's

often no rhyme or reason to what happens. And you can't predict the future, even though how much money you make depends entirely on how the future turns out. Jack Bogle put it best in 1999:

// *Investing is an act of faith. We entrust our capital to corporate stewards in the faith—at least with the hope—that their efforts will generate high rates of return on our investments. When we purchase corporate America's stocks and bonds, we are professing our faith that the long-term success of the U.S. economy and the nation's financial markets will continue in the future. When we invest in a mutual fund, we are expressing our faith that the professional managers of the fund will be vigilant stewards of the assets we entrust to them. We are also recognizing the value of diversification by spreading our investments over a large number of stocks and bonds. A diversified portfolio minimizes the risk inherent in owning any individual security by shifting that risk to the level of the stock and bond markets."*

JACK BOGLE, *Common Sense on Mutual Funds*, 1999

If you can't accept that, you'll make a terrible investor. Staying in only for the good times is hard, and so is picking the best stocks, funds or asset classes. The only high-probability way I know to build wealth is a portfolio you can stick with through good times and bad. That's where diversification comes in.

Peter Bernstein, the great historian of risk, put it better than anyone in a 2004 interview with Jason Zweig:

// *That's what diversification is for. It's an explicit recognition of ignorance. And I view diversification not only as a survival strategy but as an aggressive strategy, because the next windfall might come from a surprising place. I want to make sure I'm exposed to it. Somebody once said that if you're comfortable with everything you own, you're not diversified."*

PETER L. BERNSTEIN, 2004

You don't diversify because you're a wimp. You diversify because you want to take risk and survive it. Diversification admits your ignorance and checks your arrogance. The future is unknowable, so you spread your money across assets that behave differently, in the hope, and it is a hope, that they kick in when you need them most. The goal isn't to top the scorecard. It's reasonable returns over long periods. In the comparison below, the balanced mix stayed out of both the top two and the bottom two, and that is a useful kind of boring.

The portfolios in this chapter. The data for each asset starts on a different date, so different studies here start at different dates. Starting dates matter more than anyone would like: all-equity returned 17.3% a year from 2001 and 13.5% from 2005. Every chart names its own mix and period. Unless a chart says otherwise, "equity" is the Nifty 500 with dividends, "debt" is the Nifty five-year G-Sec index, "gold" is gold in rupees, "US shares" are MSCI USA with dividends in rupees, and portfolios are rebalanced once a year.

Diversification and asset allocation

There are two ideas people mix up all the time, and I'll be honest, when I started out, I didn't understand the difference either. *Diversification* means owning things that don't all rise and fall at the same time. Equity, debt and gold move at different times and at different rates. *Asset allocation* means deciding how much of your money goes into each bucket: Indian shares,

foreign shares, bonds, gold, real estate and cash. There are other assets, like crypto, but it isn't my wheelhouse, and there's no clear rulebook for it in India, so I'll leave it out. If diversification is the ingredients, allocation is the recipe.

FIGURE 10.1

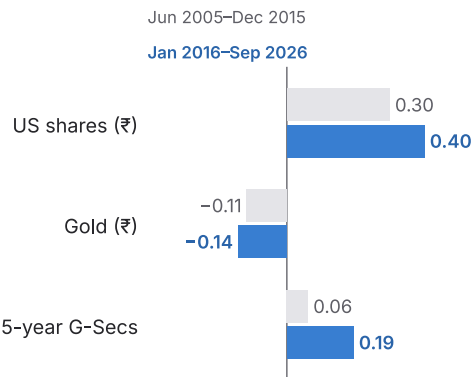
Shares, bonds and gold move differently

Correlation of monthly returns, in rupees, Jun 2005–Sep 2026

Correlation of monthly returns

	India	US (₹)	Gold (₹)	G-Secs
Indian shares	1			
US shares (₹)	0.33	1		
Gold (₹)	-0.12	-0.01	1	
5-year G-Secs	0.10	-0.12	-0.08	1

Indian shares, then and now



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Correlation of monthly returns in rupees, June 2005 to September 2026 (+1 means they move together, 0 unrelated, -1 opposite). Indian shares, US shares, gold and government bonds have barely moved together; the closest pair, Indian and US shares, is 0.33. Compare that with 0.80–0.97 between Indian large, mid, small and micro caps.

SOURCE
Nifty Indices, MSCI, World Gold Council, RBI/FBIL USD/INR · Zerodha analysis

And almost everything about how your portfolio behaves in a crash, how far it falls and how long it takes to come back, is decided by one number in that recipe: how much of it is in equities. Roger Ibbotson and Paul Kaplan found that a fund's mix of assets explains about 90% of how its returns move up and down over time, though much less of why one fund beat another.

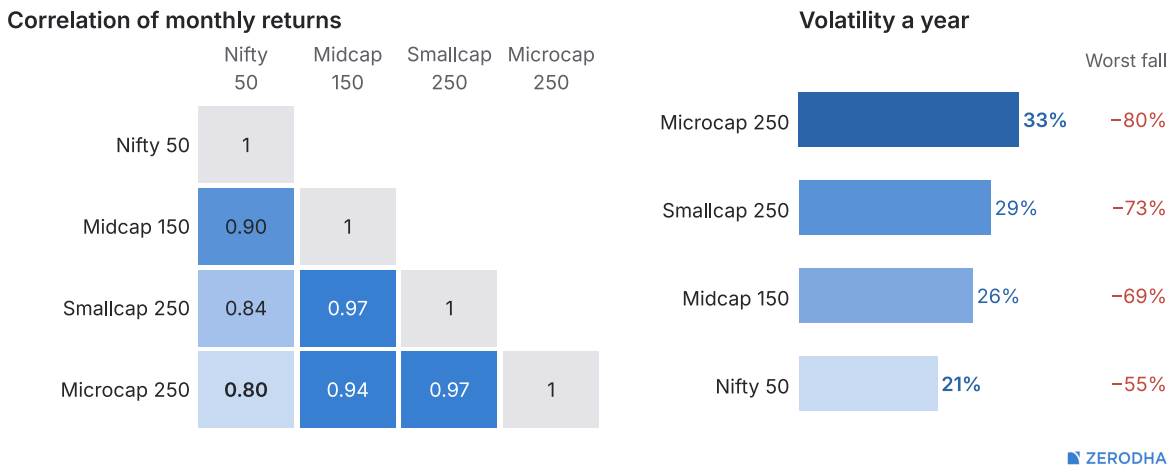
The other common mistake I see is people thinking they're diversified because they own ten equity funds or a hundred stocks. You're not. There's a scientific term for what you've done: stupidity. Or, if you prefer Peter Lynch's softer word, *diworsification*. For one, 100% equity is risky to begin with, and the different slices of Indian equities move together. Since 2005, the monthly correlation between the large, mid, small and micro cap indices

has been between 0.80 and 0.97. Small and micro caps swing the most, then mid caps, then large caps, but they all rise and fall at the same time. If the funds’ holdings overlap heavily, twelve fund names don’t buy you twelve sources of protection.

FIGURE 10.2

Large, mid, small and micro caps move together

Nifty 50, Midcap 150, Smallcap 250 and Microcap 250 TRIs, monthly, Apr 2005–Sep 2026



Monthly total returns of the Nifty 50, Midcap 150, Smallcap 250 and Microcap 250, April 2005 to September 2026. Even the furthest pair is 0.80 correlated. The smaller the companies, the bigger the swings and the deeper the worst fall. Owning all four sizes is still one bet on Indian shares. The smaller indices before their launch dates are NSE back-calculations.

SOURCE
Nifty Indices · Zerodha analysis

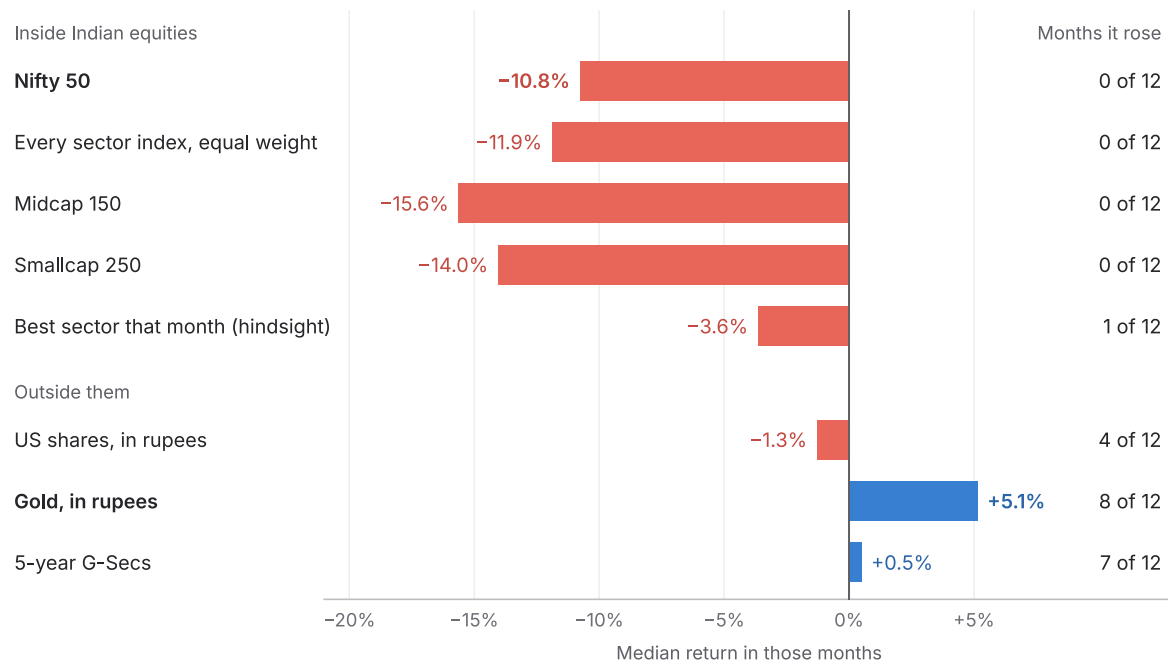
What diversifies, and what doesn't

And because you’re a retail investor, it’s in your genetic code not to listen to some idiot oozing gyan online, so you’ll keep demanding more evidence. Fine. I took the twelve worst months for the Nifty 50 since 2005, the months when people delete their trading apps, close their accounts, give up all hope and become religious converts to the cult of fixed deposits and government bonds. The months that make people utter the glorious statement, “the stock market is a scam”. Then I looked at what Indian shares, US shares, gold and government bonds did in those same months.

FIGURE 10.3

When Indian shares crashed, owning more Indian shares didn't help

Median return in the Nifty 50's 12 worst months, Oct 2005–Mar 2026, and how many of those months each one rose. Total returns, in rupees



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In those 12 months, 235 of 236 sector returns were negative. Spreading money across banks, IT, pharma and FMCG left you about where the Nifty was, -12% against -11%. Midcaps and smallcaps fell harder. Even the best sector, picked with hindsight each month, rose in just 1 of them. The cushions came from outside: gold rose in 8 of the 12 months, G-Secs in 7, and US shares, helped by a falling rupee, lost much less. The crash months include October 2008, March 2020 and March 2026.

SOURCE

Nifty Indices, MSCI, World Gold Council, RBI/FBIL USD/INR · Zerodha analysis

The numbers speak for themselves. When Indian shares fell, they all fell together; we were only arguing over the percentage. Spreading your money across every sector left you about where the Nifty was, and adding midcaps and smallcaps made it worse. Even if you'd somehow known each month which sector would do best, you'd still have lost money in eleven of the twelve months.

The protection came from other assets. Gold rose in 8 of these 12 months, and government bonds in 7. US shares fell too, but much less in rupees, partly because the rupee tends to fall just when Indian markets panic. That in itself is diversification working.

Don't get me wrong. Diversifying within equities isn't useless. Owning the whole market instead of three stocks protects you from disasters at a single company: the fraud, the promoter who pledged all his shares, the sector that gets regulated out of existence. That protection matters more in India than almost anywhere. Hendrik Bessembinder and three colleagues studied more than 64,000 listed companies around the world from 1990 to 2020, including 3,967 Indian ones. In India, just the best 5% of companies created 92% of all the wealth made by the market's winners, the most lopsided result among the 43 countries they studied. Picking stocks in India mostly means missing the few that matter.

I ran my own version, on price returns, for every main-board company in my NSE data since 1994, including the 1,898 that later stopped trading. Most lost money over their lives, and only about a third did better than plain Treasury bills: 33% if the companies that disappeared were bought out at their last price, 27% if they ended up worthless. With equal money in each, the best 1% of companies made about half of all the gain over Treasury bills, and the best 6% made all of it.

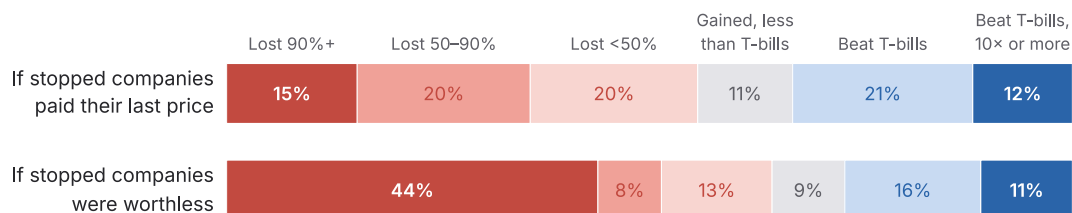
But owning lots of stocks doesn't protect you from the market itself, and buying different sizes or styles of Indian shares and thinking you're diversified is the height of folly. For that, you need things that aren't equities. Here's the winning asset in each year. Equities won most years, but gold has had plenty of spectacular years too, and in really bad years, debt has done well.

FIGURE 10.4

On price alone, most NSE stocks lost money over their lives

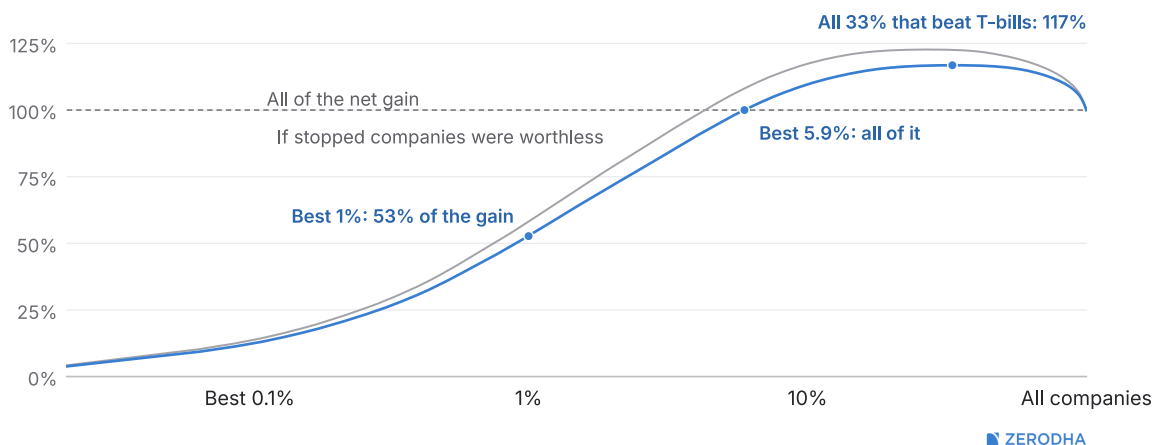
Lifetime returns of every NSE main-board company against 91-day T-bills, November 1994–26 October 2026, price only

What ₹1 at the first close became



₹1 in every company: share of the gain over T-bills, best companies first

Cumulative share of the gain



Every main-board company that has traded on the NSE from November 1994 to October 2026, 4,526 in all, including the 1,898 that stopped trading: lifetime price return against 91-day Treasury bills. Companies that stopped trading are counted at their last price or as worthless, since the reason is usually unknown. Price only; dividends would add roughly 1–2 points a year.

SOURCE

NSE bhavcopies, stocks.events, RBI (91-day T-bill yields), Nifty Indices · Zerodha analysis

How much in each bucket?

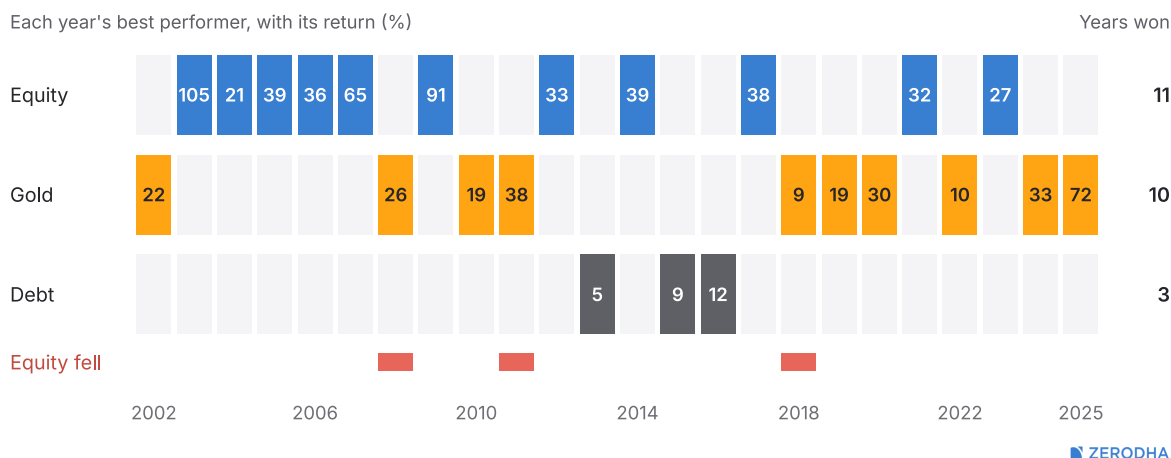
So naturally this leads to the question: okay, you've been screaming about asset allocation, and yes, you're annoying, but you're right, so how much should I put in each asset? Sadly, there's no perfect answer. Asset allocation is deeply individual. It depends on your age, your temperament, your capacity for risk and your circumstances. There's no one answer where I can tell you to buy 30% equities or 80%. That would be stupid.

What I can do is show you how different mixes would have done. Here's the whole menu of Indian shares and government bonds, from no equity to all equity, over the last twenty-five years. Whatever isn't in equities is in the five-year government bond index; there's no gold in this one.

FIGURE 10.5

The best asset each year

Calendar-year winner by asset from 2002 to 2025. Equity led most often, but no asset stayed on top for even half the sample.



Which of Indian equity, gold and debt was the best performer each year since 2002. Equity won 11 times, gold 10 and debt 3. Gold uses December monthly-average prices here; the next chart uses year-end closes. Gold took the lead in several of the years when equities fell.

SOURCE
NSE · WGC Goldhub · Zerodha

Think of it as a dial, not a switch. Each notch towards equities bought you roughly a percentage point of extra return a year. Beyond about 40% in equities, each notch also made the worst fall six or seven points deeper. That trade-off was fairly steady. The longest wait to get back to an old high was not. Anywhere from 50% to 80% in equities, it was about two years. At 100%, it was more than six. That last bit of cushion did the most work.

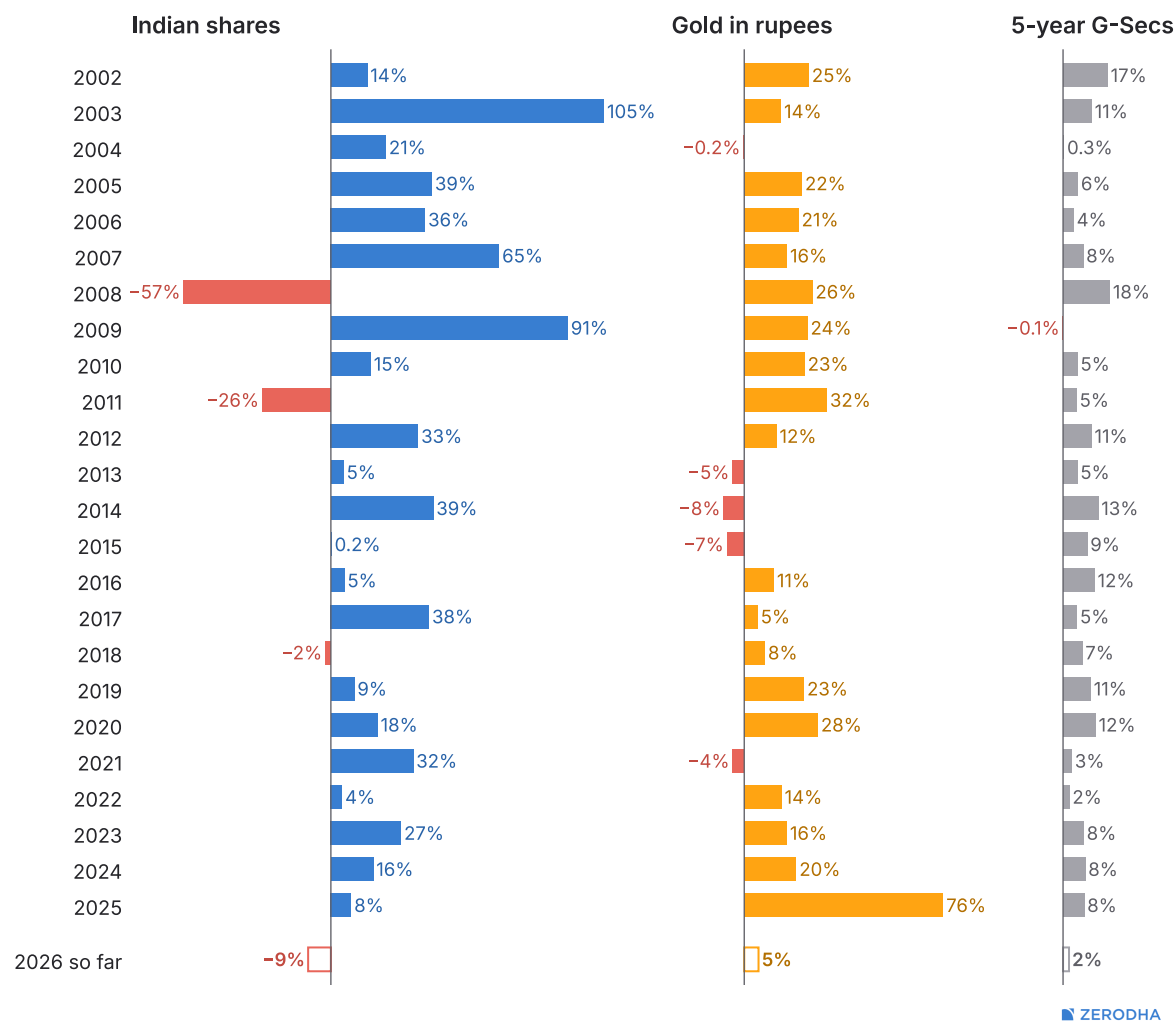
There's a serious academic argument against this chapter. Scott Cederburg and his colleagues have argued, in a working paper, that holding all shares for your whole life, two-thirds of them international, beat the usual plans

that shift from shares to bonds as you age, on wealth, retirement income and money left over. The catch is that their investor never flinches. This book is written for the rest of us, who do.

FIGURE 10.6

Every year's return: shares, gold and bonds

Calendar-year returns of Indian shares, gold and 5-year government bonds, 2002–2025 and 2026 so far



Each bar is one calendar year's return, 2002–2025, with 2026 so far outlined. In the three years Indian shares fell, gold and government bonds both rose; in the five years gold fell, shares rose. Bonds lost money once, by a tenth of a percent. Nifty 500 with dividends, rupee gold, five-year G-Sec index.

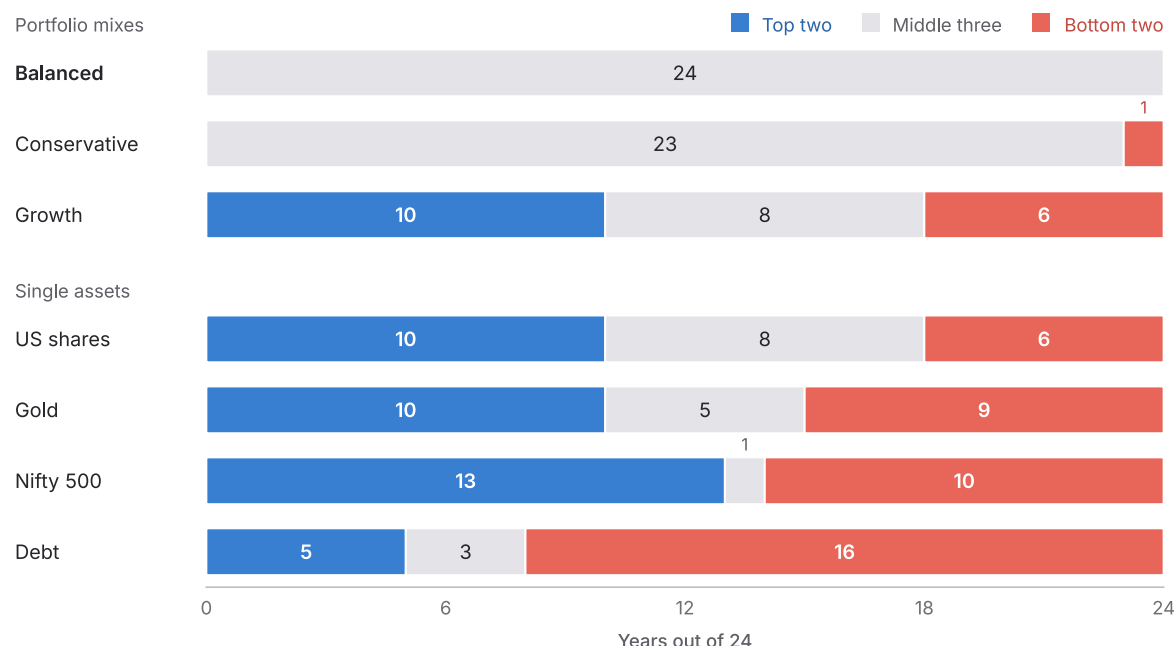
SOURCE

Nifty Indices, World Gold Council, RBI/FBIL USD/INR · Zerodha analysis

FIGURE 10.7

The balanced mix was never the best or the worst

From 2002 to 2025, Balanced stayed in the middle three ranks in all 24 calendar years. Conservative did it in 23 of 24. Portfolio mixes are rebalanced once a year.



ZERODHA

How often each option finished in the top two, middle three or bottom two of seven choices each year, 2002–2025. The balanced mix never made the podium and never hit the basement. The Nifty 500 alone did both, often: 13 top-two years and 10 bottom-two years. Mixes are rebalanced once a year. In Nifty 500 / gold / debt / US shares: Balanced 40/15/30/15, Conservative 20/20/50/10, Growth 55/10/10/25.

SOURCE

Nifty Indices, MSCI, World Gold Council, RBI/FBIL USD/INR · Zerodha

I've also taken the usual way of building portfolios, from conservative through moderate to aggressive, and shown the worst fall for each, because to me that's the simplest way to see the risk in any portfolio, along with the months it took to get back to the old high.

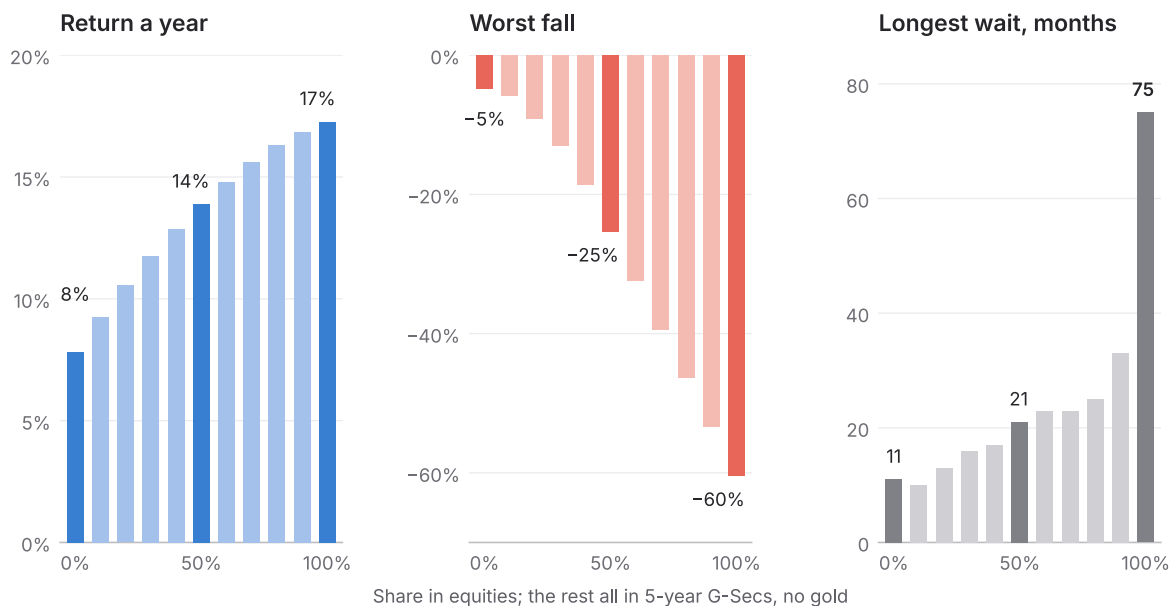
Then I did a longer study, the same one as for the SIPs, with the synthetic debt leg. I don't have rupee gold prices before the 1990s, so it's just equity and debt, but the point still stands. On monthly data from 1979, the Sensex's deepest fall was 56%, against 35% for a 60/40 portfolio. Both equity legs leave out dividends, which hurts the all-equity side more. This fall from a previous peak is my preferred way to see risk. It's simple and dumb enough

to make the point quickly, unlike Sharpe ratios, Sortino ratios, volatility and all the other fancy Greek and Latin numbers. Not that they're unimportant, but as dumb heuristics go, it's one of my favourites.

FIGURE 10.8

Each 10% more in equity added about a point of return, and a deeper fall

Nifty 500 TRI with the rest in the 5-year G-Sec index (no gold), every mix from 0% to 100% equity, rebalanced every January, Sep 2001–Sep 2026



■ ZERODHA

Each extra 10% in equities added about one percentage point of return a year. The worst fall grew slowly at first and then by six or seven points a notch above about 40% equity. Moving from 70% to 50% equity would have cut the worst fall from 39% to 25% and cost 1.7 points of return a year. The longest wait below an old high is the odd one out: 25 months at 80% equity, 75 at 100%. A small cushion shortened the long waits the most. Whatever is not in equities is in 5-year government bonds; there is no gold in any of these mixes. Each mix is reset to its weights at the start of every January (on the last December close). One 25-year sample; before tax.

SOURCE

Nifty Indices · Zerodha analysis

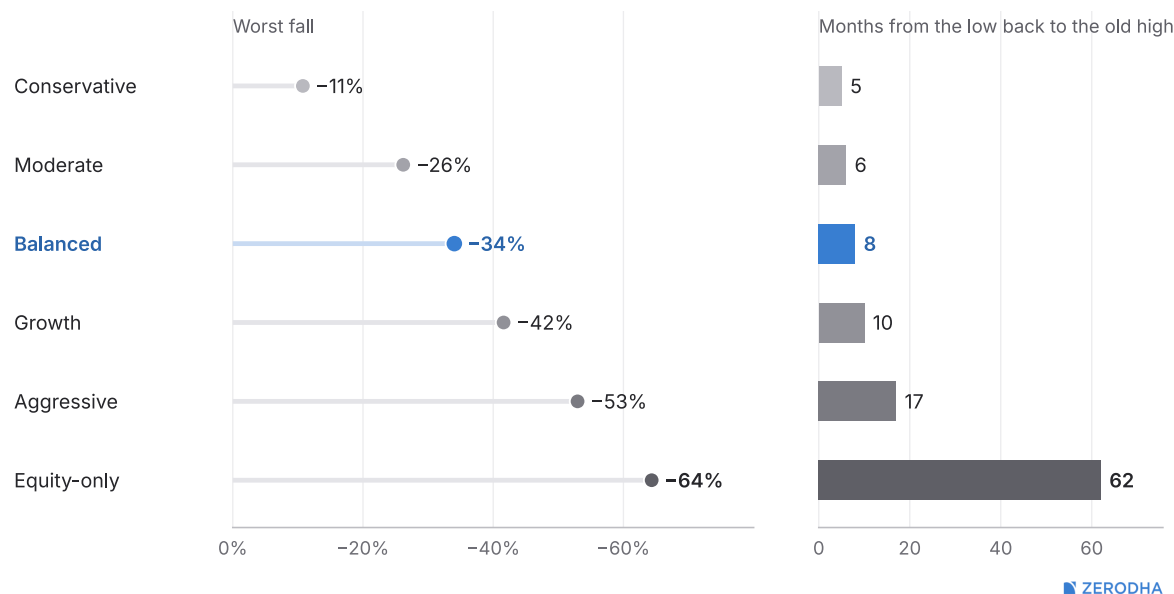
The time to recover tells a slightly different story. On month-end closes, the Sensex took sixty months to regain its August 1994 high (the daily-peak comparison earlier takes 58), while the 60/40 portfolio's longest wait was

forty-two months, after February 2000. Three and a half years is still an eternity in investing time. But that's diversification working: the mix made the hole smaller. It didn't abolish the wait.

FIGURE 10.9

Same crash, very different falls

Each row shows the worst peak-to-trough fall for a canonical portfolio and how long that worst hole took to recover.



The worst fall and recovery time for six Indian portfolios since 2005. Balanced fell 34% in 2008 and was back at its old high eight months after the bottom, 19 months after the peak. Equity-only fell 64% and took 62 months from the bottom, 76 from the peak. Same crash, same market. One of them was an inconvenience, the other a five-year sentence.

SOURCE
NSE · WGC Goldhub · Zerodha

The other way of looking at this is the time it takes to recover. To end up with more money, you don't just need higher returns. You need shallower falls, because a portfolio that falls less needs a much smaller rally to get back, which is the maths from the "How bad can it get?" chapter working in your favour. I know that sounds painfully obvious, but you'd be surprised how many investors don't get it. You diversify to cut the downside, which cuts the time to recover, so your portfolio can get back to the work of compounding.

So far I've shown you returns before inflation, so here's what happens after it. This time I used the Nifty 50, because it has good total-return data and the Sensex doesn't, along with the five-year government bond index and gold, in several mixes. Always look at portfolio returns after inflation, not just before.

FIGURE 10.10

The balanced portfolio's ten worst falls

Month-end pre-crash peak high for the canonical Balanced portfolio: 35% Nifty 500, 15% Midcap 150, 10% Smallcap 250, 10% Gold, 30% 5Y G-Sec; annually rebalanced.

#	Peak	Trough	Back at peak	Fall	Months, peak to recovery
1	Dec 2007	Nov 2008	Jul 2009	-34.0% 	19
2	Jan 2020	Mar 2020	Aug 2020	-17.4% 	7
3	Oct 2010	Dec 2011	Sep 2012	-13.2% 	23
4	Apr 2006	Jun 2006	Nov 2006	-12.6% 	7
5	Jan 2013	Aug 2013	Dec 2013	-10.2% 	11
6	Sep 2024	Feb 2025	May 2025	-9.7% 	8
7	Jul 2015	Feb 2016	Apr 2016	-7.8% 	9
8	Mar 2022	Jun 2022	Aug 2022	-7.1% 	5
9	Feb 2026	Mar 2026	Jun 2026	-7.0% 	4
10	Aug 2018	Oct 2018	Mar 2019	-6.6% 	7

Peak is the last high before the fall, not the news-event start date. Recovery means regaining that peak.

 ZERODHA

Every one of these hurt, and the worst, in 2008, was 34%. But set this table beside the Sensex's worst falls in the second chapter: smaller holes, and most were repaired in under a year.

SOURCE

NSE · WGC Goldhub · Zerodha

The embarrassingly simple portfolio

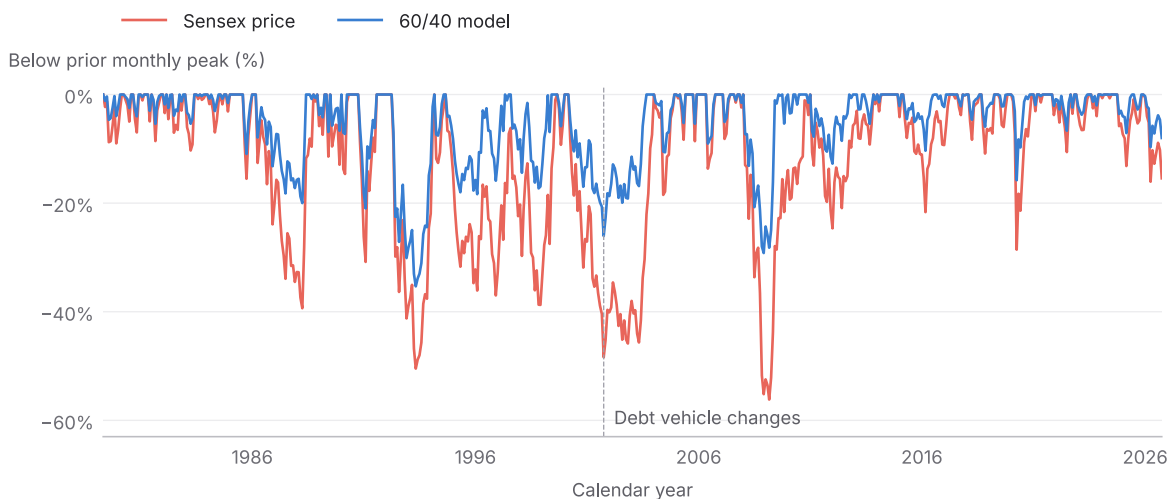
Asset allocation is one of those nightmarish things, and it's probably the topic I've thought about longest, because of how much it decides your returns. The wealth in your account on the eve of your retirement depends to a large degree on how you split your money between different assets. And there's no shortage of ways to split it: basic equity and debt mixes like 60/40, multi-asset portfolios, tactical strategies based on trend and

momentum like the ones in the timing chapter, risk parity and inverse volatility, and life-cycle glide paths that, to put it crudely, cut your equities and add debt as you get older. The list goes on.

FIGURE 10.11

Since 1979, a 60/40 mix fell much less than the Sensex

Sensex price versus a 60/40 equity/debt model · monthly observations since 1979



Portfolio	Worst fall	Back to peak	Longest wait
Sensex price	-56.2%	36 months	60 months
60/40 model	-35.3%	23 months	42 months

■ ZERODHA

April 1979–September 2026, 570 monthly levels. Both equity legs use the Sensex price index, excluding dividends; pre-1986 index history is back-calculated. The 60/40 model holds 60% equity and 40% debt, reset each January. Before October 2001, debt is synthetic deposit accrual using RBI one-to-three-year rate midpoints or sole quotes, with a twelve-month record lag, April resets and quarterly nominal compounding. The lag is an assumption, not recovered release timing; deposits are assumed liquid without lock-in, withdrawal penalties or credit losses. From October 2001, debt uses the five-year G-Sec TRI, changing its interest-rate risk. These are hypothetical nominal results before costs and tax. Monthly sampling hides deeper daily falls. Recovery means regaining the old peak; the longest wait can belong to a different fall. Missing dividends affect all-equity more.

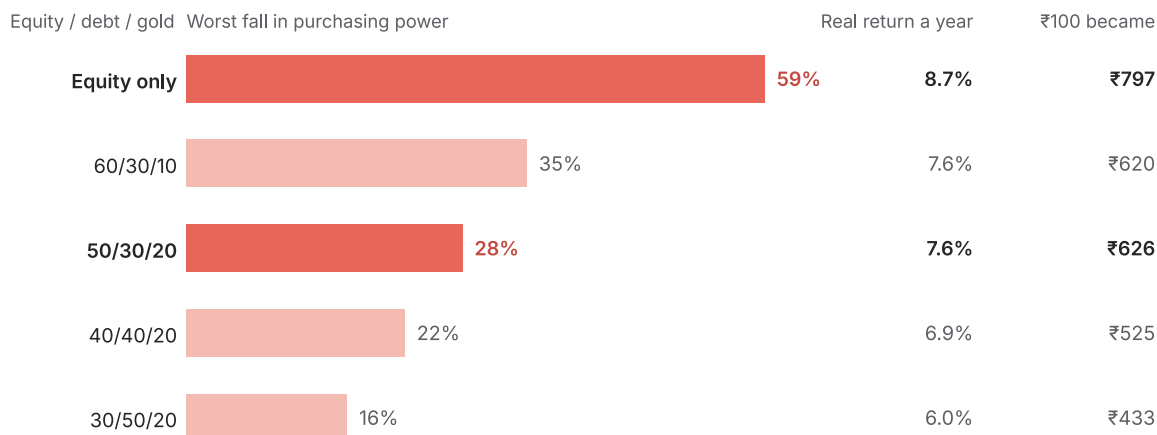
SOURCE

BSE, Nifty Indices, RBI DBIE ·
Zerodha analysis

FIGURE 10.12

A simpler mix, after inflation

Nifty 50 TRI, 5-year G-Sec, and long-history INR gold, Sep 2001 to Sep 2026, annually rebalanced.



■ ZERODHA

₹100 in September 2001, after inflation, in a 50/30/20 equity, debt and gold mix rebalanced yearly, against equity alone. Equity ended with more, ₹797 against ₹626, but its purchasing power fell 59% at its worst against 28% for the mix. Whether that trade is worth it depends on whether you would have held on through the 59%.

SOURCE

NSE · WGC Goldhub ·
IndiaDataHub · MoSPI · Zerodha

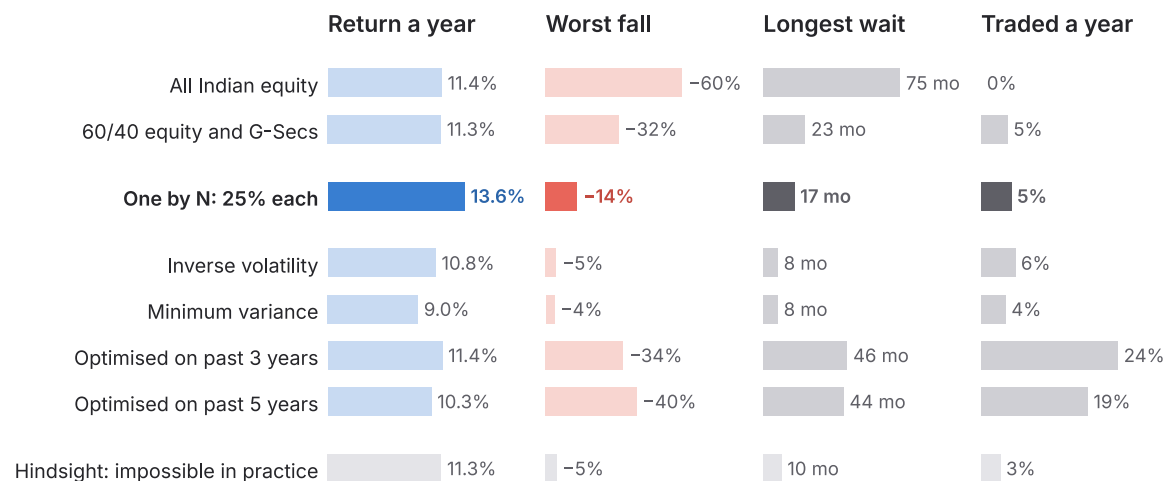
To make matters more complicated, there's the question of how and when to rebalance. When I read Corey Hoffstein's work on rebalance timing luck, I had an aha moment: the date and frequency you pick for rebalancing can have a big effect on your returns. So none of this is simple. To put it in a very hand-wavy way, the perfect asset allocation is the one you can stick with the longest. You can find the most mathematically elegant allocation there is, but if you can't stick with it when times get rough, there's no point.

Then there's a whole family of strategies that can loosely be called equal weighting, naive diversification or 1/N: split your money equally across a handful of assets, rebalance once a year and stop thinking, instead of trying to engineer the perfect mix. I'm a fan. In 2009, Victor DeMiguel, Lorenzo Garlappi and Raman Uppal tested it against fourteen sophisticated models that calculate the "best" mix from past data. None of them consistently beat the equal split on data they hadn't seen, because the clever models kept fitting themselves to the random noise of the past. So I ran the same contest on Indian data.

FIGURE 10.13

The dumb portfolio beat the clever ones

Indian shares, US shares, USD gold × USD/INR and G-Secs; rebalanced each December, Dec 2006–Sep 2026



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Indian shares, US shares in rupees, international gold converted to rupees and the five-year G-Sec index, rebalanced every December, December 2006 to September 2026. Equal weights compounded at 13.6% a year with a worst fall of 14%. Optimisers that set their weights from the past three or five years made 11.4% and 10.3%, fell 34% and 40%, and traded far more. An optimiser allowed to see the whole period in advance chose mostly G-Secs: 11.3% a year, worst fall 5%. Indian equity alone made 11.4% and fell 60%. This strategy comparison uses dollar gold times USD/INR throughout, so reconstructed Indian gold prices cannot feed future information into the historical weights.

SOURCE

Nifty Indices, MSCI, World Gold Council, RBI (USD/INR, 91-day T-bill) · Zerodha analysis

At the end of 2007, after a spectacular run in Indian shares, the models looking at the past few years put 65–74% of their money in Indian equity, just in time for 2008. The equal-weight portfolio, which had no opinion about anything, kept a quarter in each asset and rebalanced into the crash.

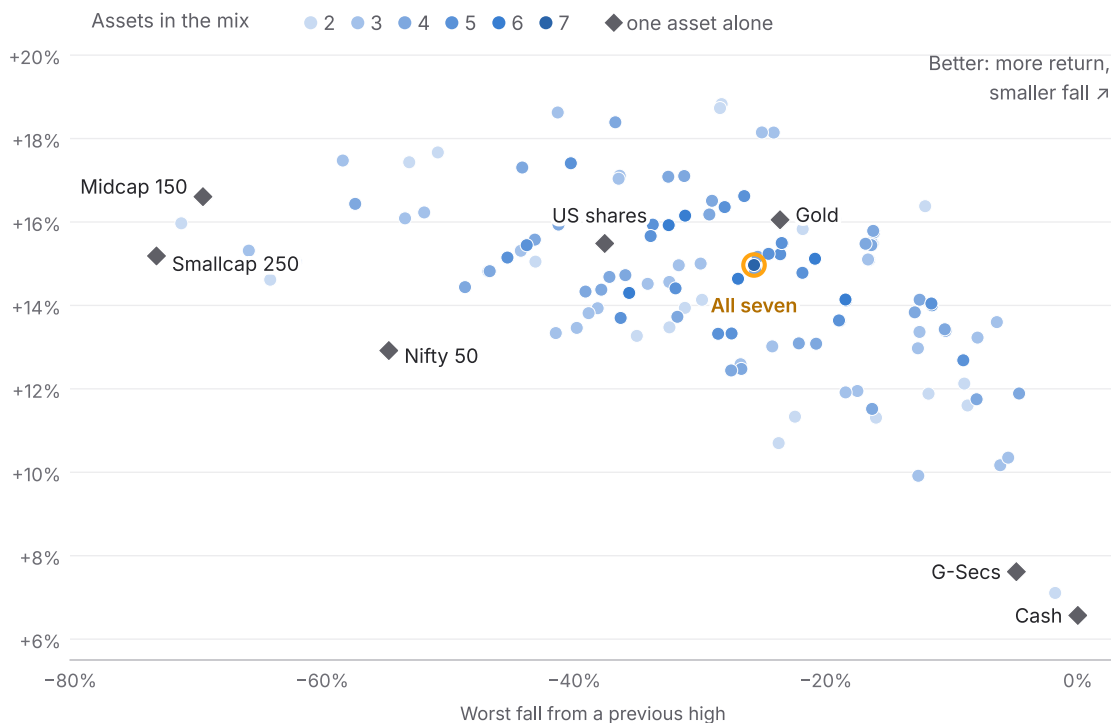
For the next test, I took seven assets, the Nifty 50, midcaps, smallcaps, US shares, gold, government bonds and a Treasury-bill cash proxy, and built every possible equal-weight mix of two or more of them. That's 120 portfolios. Well, Claude did. But I'll take the credit.

FIGURE 10.14

Almost any equal mix was gentler than the index

Every equal-weight mix of two to seven assets, rebalanced each December, Jun 2005–Sep 2026

Return a year



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Each dot is one equal-weight mix; up is more return, right is a smaller worst fall. Every equal-weight mix of two to seven of the Nifty 50, Midcap 150, Smallcap 250, US shares in rupees, gold, the five-year G-Sec index and a 91-day Treasury-bill cash proxy, rebalanced yearly, June 2005 to September 2026, by return a year and worst fall. 114 of the 120 fell less than the Nifty 50 (55%) and 101 returned more than its 12.9% a year. All seven together made 15.0% a year with a worst fall of 26%.

SOURCE

Nifty Indices, MSCI, World Gold Council, RBI (USD/INR, 91-day T-bill) · Zerodha analysis

Here's what I found. Over the whole period, the equal split beat Indian equity. But look at every five-year stretch separately, and the picture is more mixed.

FIGURE 10.15

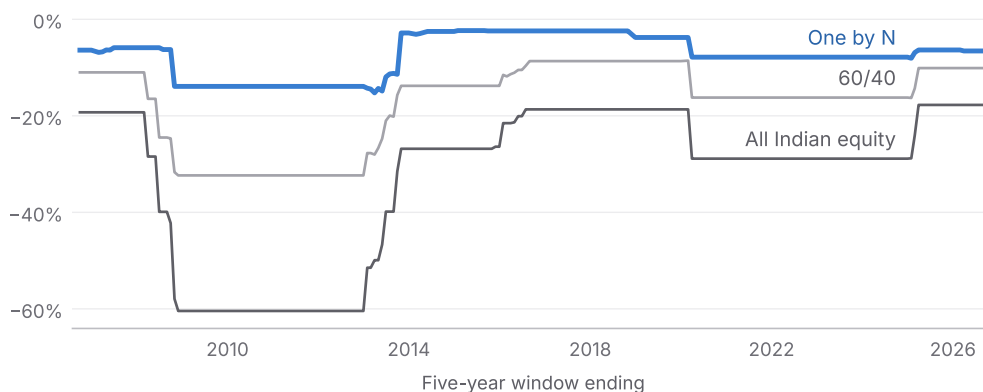
The equal mix always fell less, and only sometimes earned more

One by N across Indian shares, US shares, gold and G-Secs against all Indian equity, five-year windows ending Sep 2006–Sep 2026

Return a year: one by N minus all Indian equity, percentage points



Worst fall inside the five years



ZERODHA

Above zero, the equal-weight mix beat Indian equity over the five years ending that month. Every five-year stretch ending from September 2006 to September 2026, 241 of them: how often the equal-weight portfolio returned more than Indian equity and than a 60/40 mix, and how often it had the smaller worst fall. It fell less than Indian equity in all 241, and returned more in 44%. With gold held to inflation and the rupee flat, it returned more in only 23%.

SOURCE

Nifty Indices, MSCI, World Gold Council, RBI (USD/INR, 91-day T-bill) · Zerodha analysis · MoSPI, US BLS (inflation)

The equal split fell less than Indian equity in every single five-year stretch. It returned more in fewer than half of them. A large part of its edge over the whole period came from two things that may not repeat: gold, which returned 15% a year in rupees while inflation ran at 6.4%, and, to a smaller

extent, a falling rupee. If gold had only kept pace with inflation and the rupee had stayed flat, the equal split would have beaten Indian equity in less than a quarter of the five-year stretches.

So an equal-weight portfolio should be on your menu. It isn't the perfect strategy, because there isn't one. But if you have absolutely no clue what to do, it's a good starting point, which you then improve on for your own circumstances. Whether it beats Indian equity over your next five years depends on gold and the rupee, and the only person who can tell you that conclusively is an astrologer. As I've established by now, I'm a terrible one.

Rebalancing

I've already touched on rebalancing, so here's a quick idea of what it means. You always start with a target allocation, say 50% equities, 30% debt and 20% gold. But prices move every day, so the mix drifts out of whack, and the balanced portfolio you started with, balanced for your own circumstances, becomes unbalanced the longer you leave it.

Rebalancing is simply bringing the weights back to your target, by selling some of what has grown and buying some of what has shrunk. At the bare minimum, you can rebalance on a fixed schedule, once or twice a year, or use tolerance bands: rebalance when an asset drifts more than, say, 10 percentage points from its target. I won't go further, because rebalancing deserves a book of its own. But in general it's a good idea, because if you let your portfolio drift, you end up taking risk you wouldn't otherwise have chosen. As the next chart shows, rebalancing doesn't buy you more money. It buys you a smaller fall.

When diversification lets you down

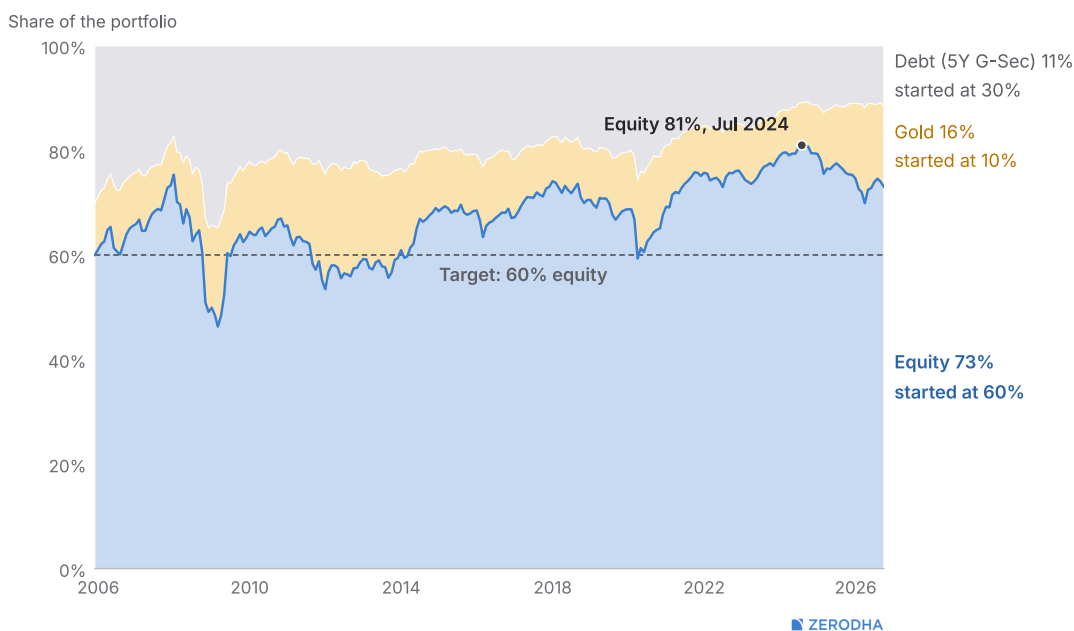
Like I've been saying over and over, much to your annoyance, the whole point of diversification is to own things that don't all go up and down at the same time. If they do, you're not diversified. You're just taking a lot of risk, and uncompensated risk at that. If you take a risk, you need to be paid for it. Otherwise, what's the point? But there are periods when everything falls together, and the biggest cause is inflation. When prices rise, central banks raise interest rates, bonds fall, and shares often fall too.

The classic example is the US in the 1970s and early 80s. Inflation surged, partly because of the oil shocks of 1973 and 1979, and Paul Volcker's Federal Reserve pushed short-term interest rates to about 19% by 1981. From 1966 to 1981, American shares returned 6% a year and ten-year government bonds 3.6%, while prices rose 7% a year. After inflation, both lost money, and owning the two together didn't save you. More recently, in 2022, as the Fed hiked, American shares fell 18% and ten-year government bonds 17.8%.

FIGURE 10.16

Balanced portfolios drift into unbalanced ones

Asset weights in the five-asset Balanced portfolio if nothing is rebalanced back to target.



A mix that started at 60% equity, 10% gold and 30% debt, never rebalanced. It ended at 73% equity and only 11% debt, and touched 81% equity in July 2024, right when you would least want it. Rebalancing is how a portfolio remembers the risk you chose.

SOURCE
NSE · WGC Goldhub · RBI ·
Zerodha

One way to check whether you're diversified is to look at the correlation between assets. Correlation is just a measure of how two things move together. If shares and bonds rise and fall together, the bonds aren't diversifying you. And correlation isn't fixed. Inflation and interest-rate surprises tend to push shares and bonds together; growth scares tend to push them apart. Here's how gold and government bonds have moved with the Nifty 500.

FIGURE 10.17

How often should you rebalance?

60/40 Nifty 500 / 5-yr G-Sec portfolio rebalanced monthly, quarterly, annually, or never (2001–2026).



A 60/40 Nifty 500 and five-year G-Sec portfolio since 2001. Never rebalancing ended with the most money, 34.9 times the start, because equities kept winning, but it fell 54% at its worst. Rebalancing once a year ended at 31.5 times with a worst fall of 32%. Monthly or quarterly rebalancing did worse than yearly on both counts, before even counting taxes and costs.

SOURCE
NSE · Zerodha

Lately, Indian bonds have been moving with Indian shares more than usual, which means they cushion you less.

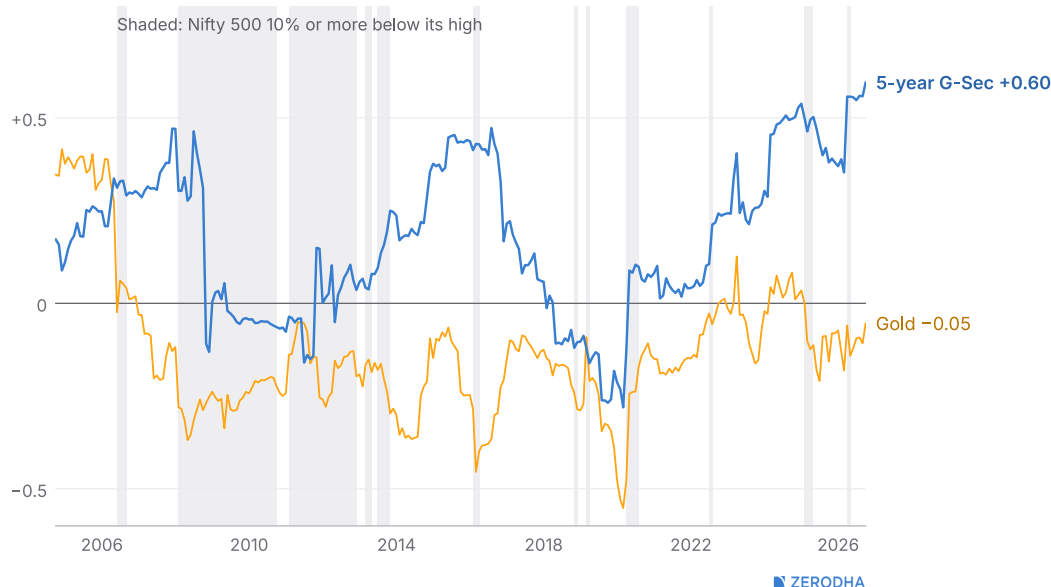
Gold can move against equities, but the price you pay for that is long stretches when it does nothing: six- and seven-year spells of going nowhere, as we’ve seen. Then there are spells when it does spectacularly well, like the two years before this war, when it more than doubled. It has fallen about 11% since. An asset that has just had its best run in decades is a fine diversifier, but a poor reason to feel clever. Expect one part of your portfolio to be embarrassing at any given moment. That’s how you know it’s diversified.

FIGURE 10.18

Recently, bonds have been moving with stocks

3-year rolling correlation of monthly returns with the Nifty 500 TRI.

Correlation with the Nifty 500: +1 = always moved together, 0 = unrelated, -1 = always moved opposite



Correlation of gold (monthly-average prices here, month-end closes in the earlier grid) and the five-year G-Sec index with the Nifty 500 over rolling three-year periods (+1 means they moved together, 0 unrelated, -1 opposite). Gold was below zero in 84% of months since 2004; its only stretch of meaningful positive correlation was 2004-06. Debt's latest reading, for September, was +0.60, which means less cushioning when you would want it, an echo in miniature of the 1970s.

SOURCE
NSE · WGC Goldhub · Zerodha

"But what if I know markets are going to shit?"

Now to the superstar question. You might tell me you know for certain that markets are going to shit, and ask what you should do. Here's my answer. First, you don't. It's simply not possible. You'd make a worse astrologer than the median astrologer. Just because your gut tells you something bad is about to happen doesn't make it right. Your gut is often a liar. Contrary to everyone who loudly tells you to trust your gut, trusting your gut is a time-tested strategy to be poor. I've seen it with my own two eyes. It's a great way to generate negative wealth.

Now let's say, for a second, that you did know, and you tinkered with your portfolio. Look at the dial chart again. Moving from 70% to 50% equity would have cut the worst fall from 39% to 25%, and it would have cost you about 1.7 percentage points of return a year. In a way, it worked: you cut the

downside. But you gave up the upside. And knowing that bad things can happen isn't enough. You need to know when they'll start and when they'll stop. You have to get the exit right and the re-entry right. Get the call right, and you're a hero. In more than a decade of doing this, I've rarely seen anyone get these calls right, and I've seen countless people get them wrong and live to regret it, giving up a lot of returns in the process. Jack Bogle said it best:

// *You have to be right twice, for the act of, say, getting out of the market implies the act of getting in later, and at a more favorable level. But when, pray? You'll have to tell me."*

JACK BOGLE, 2003

The classic example is the COVID crash. A lot of people were near certain the world was ending because of that stupid virus, and they got out. The Nifty 50 fell 38% between 14 January and 23 March 2020. Then markets quickly discounted the bad news and started rallying. By 9 November 2020, about seven and a half months after the bottom, the Nifty was back above its old high, and by October 2021 it was 143% above its low, one of the greatest bull runs Indian markets have seen. Mind you, this was in the middle of the worst pandemic in a century, one people talked about as if it would wipe out humanity. So if you think you can get these calls right, I'm here to tell you that you can't. Whether you agree is up to you. It's a free country, and you're free to gamble with your money. My job is to ooze and ejaculate gyan, and I'm doing my job properly.

And so you don't hate me for being unhelpful, here's the simple way to deal with all these shocks: a sensible asset allocation that lets you sleep well at night. Split your money in the right proportions between equity, debt and gold. Luckily, you now have tools like Claude and ChatGPT. Download historical data from niftyindices.com, the World Gold Council and FRED, or through the Kite API, which is ours, and ask Claude or ChatGPT to simulate the returns of different mixes. AI tools make arithmetic mistakes, so check their sums against the source. Then, based on the risk and reward you see, pick a mix you can live with.

11

CHAPTER 11

Own the world

34 months

The longest wait from an old high to recovery with 30% of equity abroad, against 75 months for Indian shares alone, 2001–2026

I know for a fact that most Indian investors own only Indian assets: Indian shares, Indian mutual funds, Indian property, Indian gold and an Indian salary. There's a term for this, home bias, and it isn't just an Indian habit. Investors everywhere keep most of their money in their home country. Why is that bad? Because countries can go to hell. Remember the chart in the "How bad can it get?" chapter of how far different countries' markets have fallen, and how many never came back. Owning only India means taking a single-country risk. It just so happens that investing in India has worked phenomenally well, as it has in the US and, to a smaller degree, Europe. But history is full of countries that had spectacular booms and busts. Japan is the famous one. If you were unlucky enough to own Russian shares when Russia invaded Ukraine, your market was declared uninvestable within weeks. Brazil and Indonesia have had their own wipeouts, and MSCI China has given you almost nothing since 1992.

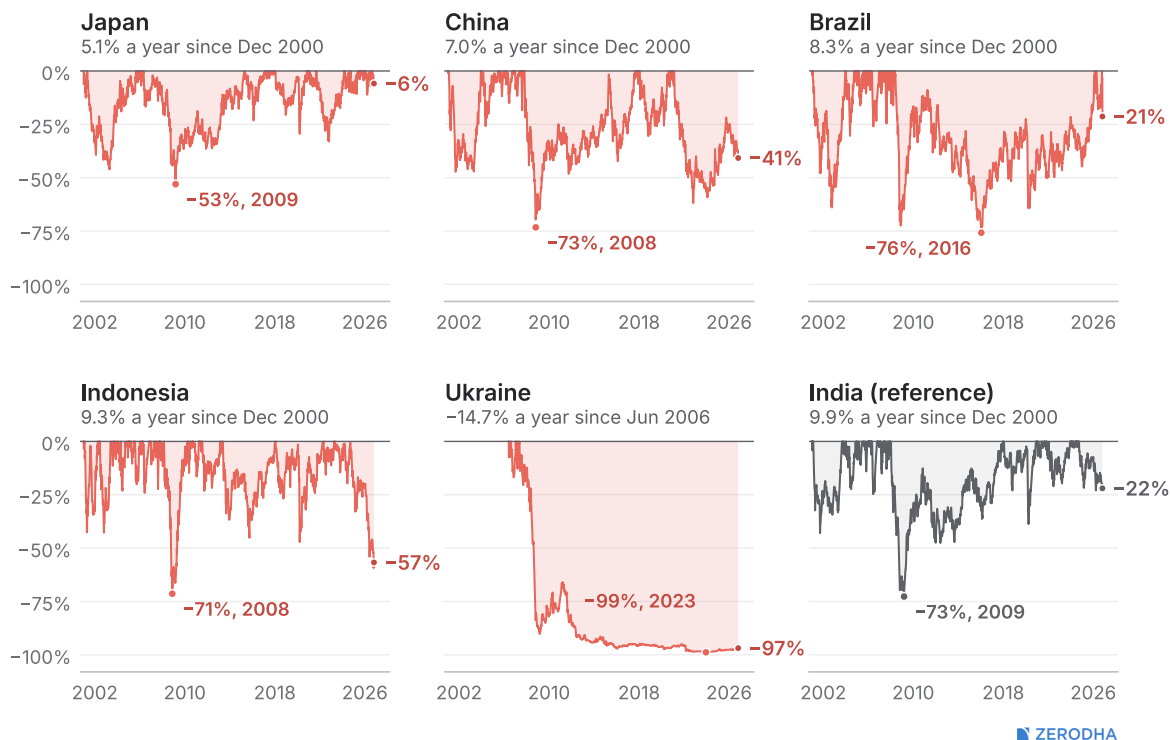
So it's a good idea to diversify not just across asset classes but across countries. It's another lever, and it's a free one. One of the smaller reasons Indians haven't diversified globally is that for the longest time we had terrible options: putting money abroad meant forms and bank visits, and the Indian funds that invest overseas were few and expensive. In the last ten years came a wave of new international funds, mostly American, which was a decent start. But SEBI caps how much the whole fund industry can invest abroad, at \$7 billion, and since 2022 most international funds have taken fresh money only off and on. That leaves the RBI's Liberalised Remittance Scheme as the main route. You can now invest directly in US-listed shares and ETFs through it in a few taps, including, in the interest of full disclosure, at Zerodha, where I work, right from Kite.

So does owning the rest of the world make an Indian investor better off? The short answer is yes. It didn't make you richer, but it made the bad times less bad.

FIGURE 11.1

Single countries can fall a long way

MSCI country indices in US dollars with dividends, fall from the previous high, to Oct 2026



MSCI country indices in US dollars with dividends, fall from the previous high, December 2000 to October 2026. Every one of these markets lost more than half its value at some point; Ukraine's lost 99% and has never come back, most of it before the 2022 invasion. Russia is missing because its history was unavailable from MSCI's public endpoint.

SOURCE

MSCI end-of-day country indices (gross total return, USD) · Zerodha analysis

What 30% abroad did

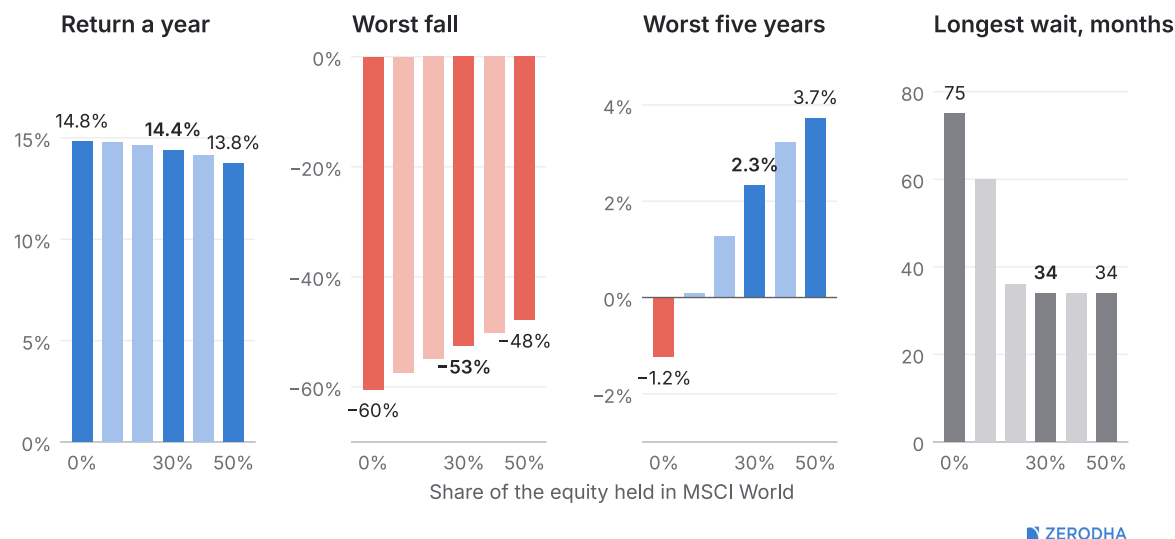
To see what international diversification does, I took a portfolio of Indian shares and moved part of it into developed-world shares, using the MSCI World index converted to rupees. An index has no costs, so I knocked a fund-like 0.2% a year off the foreign slice, and I rebalanced once a year.

Over the full twenty-five years, the world didn't make you richer. What it did was make the bad times less bad. The worst fall was smaller, the worst five years were much better, and you spent less than half as long waiting to get back to an old high. That's the kind of protection this book keeps arguing for, the kind that stops you from selling at the bottom.

FIGURE 11.2

A slice of the world made the bad times less bad

Nifty 500 TRI with 0% to 50% in MSCI World (in rupees, with dividends, less a 0.2% yearly fee), rebalanced each December, Dec 2000–Sep 2026



Indian equity (Nifty 500 with dividends) with 0% to 50% moved into MSCI World in rupees, rebalanced every December, December 2000 to September 2026, after a 0.2% yearly cost on the foreign slice. With 30% abroad the return barely moved, 14.4% a year against 14.8%, but the worst fall shrank from 60% to 53%, the worst five years went from -1.2% a year to +2.3%, and the longest wait below an old high fell from 75 months to 34.

SOURCE

MSCI, Nifty Indices, RBI/FBIL
USD/INR · Zerodha analysis

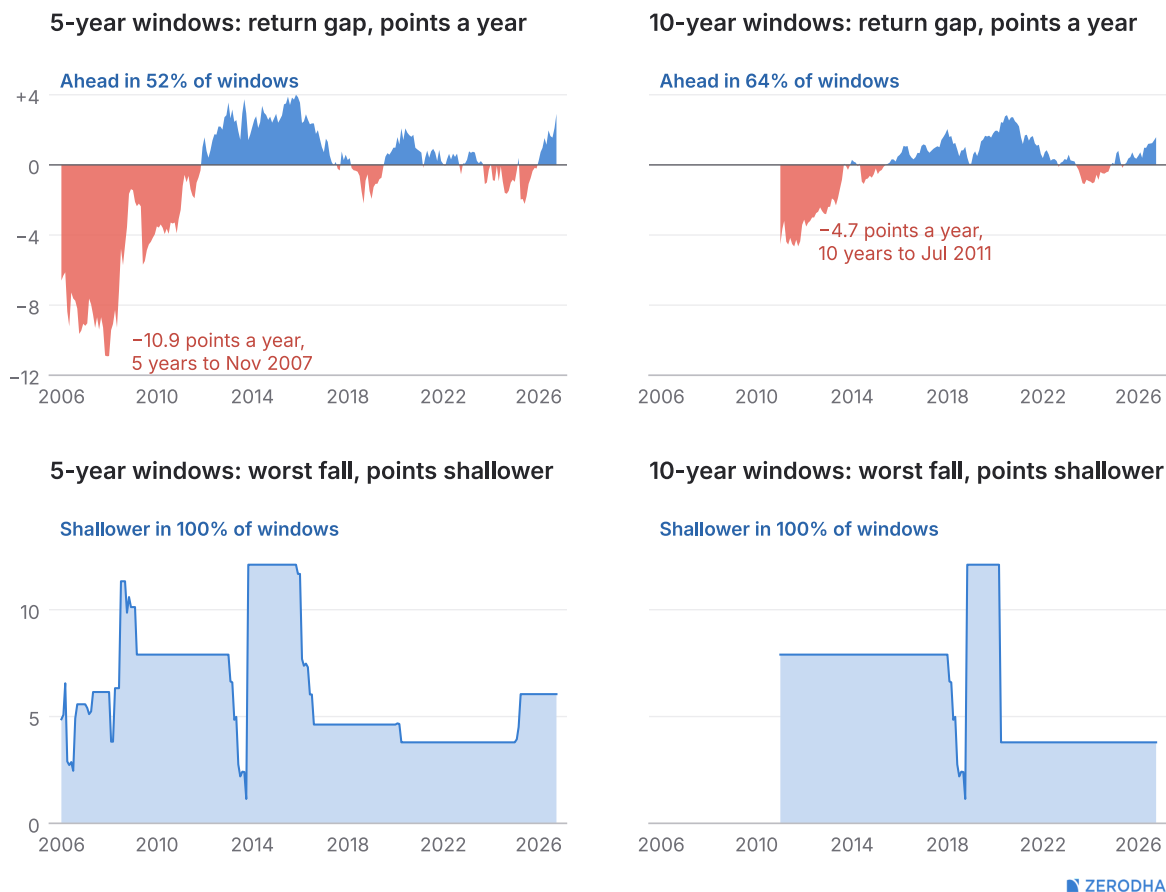
Does it matter which part of the world you pick? For the protection, hardly at all. Put the 30% in American shares, roughly the S&P 500, and the worst fall was 51% and the longest wait 33 months. The Nasdaq-100 was much the same. The return changes a little: about 14.9% a year with American shares and 15.3% with the Nasdaq-100, even without its dividends, against 14.4% with the whole developed world. But that extra return comes from the last fifteen years belonging to America, which is a bet, and I'll come back to it. The protection comes from owning something that isn't India.

And it wasn't a fluke of the full period.

FIGURE 11.3

With 30% abroad, the fall was always smaller and the return sometimes higher

Every 5- and 10-year window since 2001: 70% Nifty 500 TRI and 30% MSCI World (in rupees, less 0.2% a year), rebalanced each December, minus all Nifty 500. Plotted at the window's end



Every rolling five- and ten-year window since December 2000, comparing 70% Nifty 500 and 30% MSCI World (in rupees) with Indian equity alone. The mix earned more in 52% of five-year windows and 64% of ten-year windows, and had the shallower worst fall in every single window. Its worst stretch was the five years to November 2007, when India boomed and the mix trailed by 10.9 points a year.

SOURCE
MSCI, Nifty Indices, RBI/FBIL
USD/INR · Zerodha analysis

The mix fell less in every single window. But it earned more in only about half of the five-year windows, and during India's boom of 2003–07, it lagged badly, by up to eleven percentage points a year. If you're the kind of

investor who would have dumped the world in 2007 because India was doing so much better, you'd have dumped it at the worst possible time, because the next thing that happened was 2008.

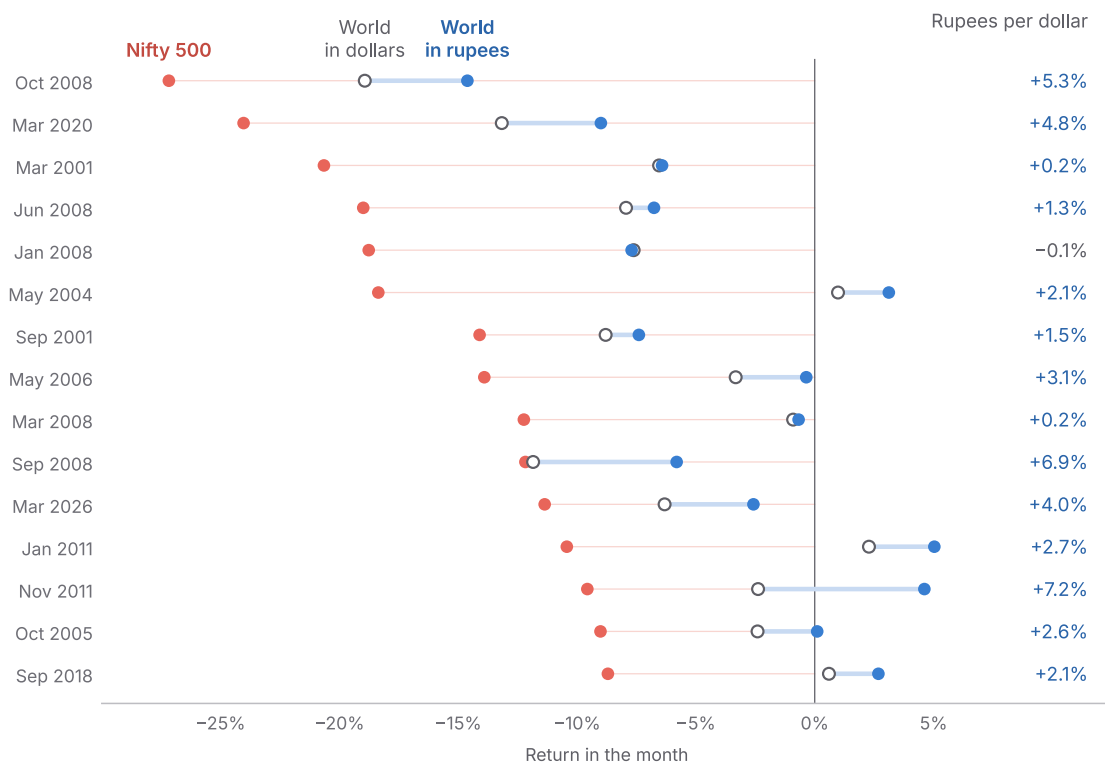
Why the world helps when India falls

Why does the world help most when India is falling? Partly because other markets fall for other reasons. But mostly, for an Indian investor, it's because of the rupee.

FIGURE 11.4

When India panics, the rupee falls, and your foreign shares hold up

The 15 worst months for the Nifty 500 TRI, Jan 2001–Sep 2026: monthly return of MSCI World in dollars and in rupees, and the change in rupees per dollar



ZERODHA

India's 15 worst months since 2001: the Nifty 500's return, MSCI World in US dollars and in rupees, and the change in rupees per dollar. The Nifty 500 fell a median 13.9%; the world fell 6.3% in dollars but only 2.6% in rupees, because the rupee weakened in 14 of the 15 months.

SOURCE
MSCI, Nifty Indices, RBI/FBIL
USD/INR · Zerodha analysis

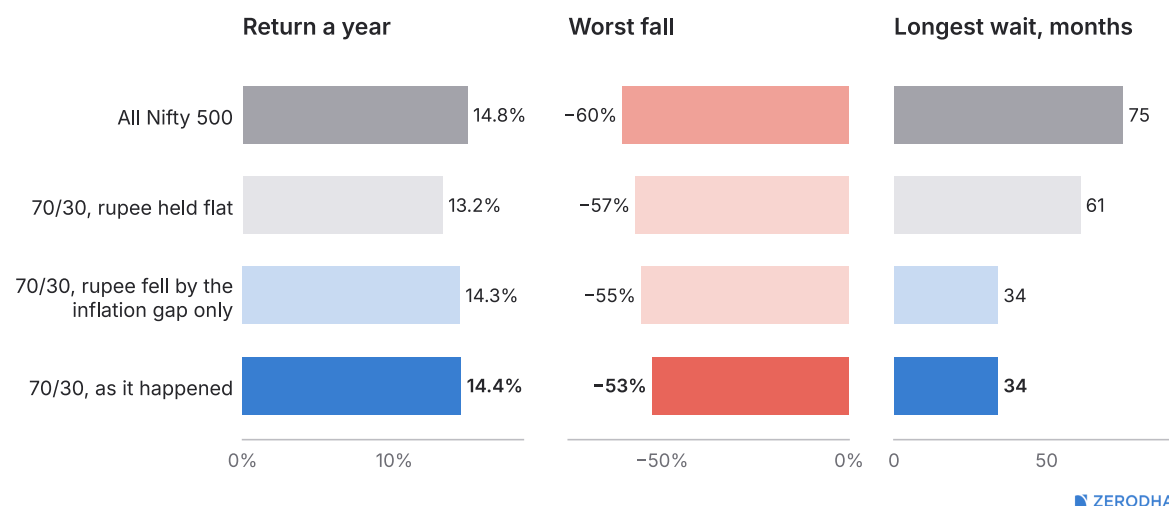
When foreign investors take money out of India, converting rupees into foreign currency can add pressure on the rupee. Anything you own that's priced in dollars is then suddenly worth more rupees. You saw a version of this in the first chapter. Since the war began, the Nifty 500 is down about 6%, while MSCI World is up about 14% in rupees. That's a pattern from one twenty-five-year stretch, not a law of nature, but it has held up surprisingly well.

But there's a flip side that most pitches for international investing leave out.

FIGURE 11.5

How much of the gain was the rupee

70% Nifty 500 TRI and 30% MSCI World (with dividends, less 0.2% a year), rebalanced each December, Dec 2000–Sep 2026, under three paths for the rupee



The 70/30 India–World portfolio, December 2000 to September 2026, as it happened and with the rupee held flat at ₹46.67 a dollar, or falling only by the gap between Indian and US inflation. All Indian shares returned 14.8% a year; the mix returned 14.4% as it happened, 14.3% with the rupee falling only by the inflation gap, and 13.2% with a frozen rupee. Its worst fall was smaller in every case.

SOURCE
MSCI, Nifty Indices, RBI/FBIL
USD/INR, MoSPI/Labour Bureau
CPI, US BLS CPI via FRED ·
Zerodha analysis

In dollars, the rest of the world earned less than India over this period. Almost all of the long-run gain from going abroad came from the rupee falling. And the rupee fell roughly in line with the gap between Indian and American inflation, which is what economists would expect over long periods. So don't go abroad expecting to beat India. Go abroad because India is one country, and owning just one country is a concentrated bet.

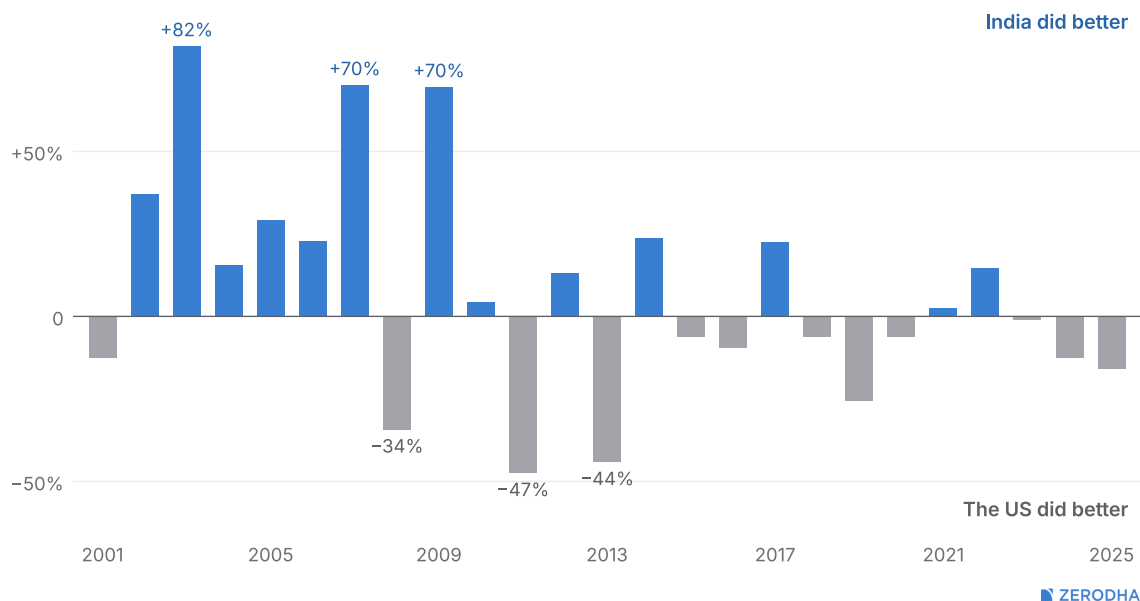
You don't know which country you're in

FIGURE 11.6

Leadership keeps changing

Calendar-year return gap in rupee terms, shown as India minus US. India led in 13 years; the US led in 12.

India's return minus the US's, in rupees



The gap between Indian and US equity returns each calendar year from 2001 to 2025, in rupees, both with dividends. India led in 13 years and the US in 12. Nobody knows which one leads next, which is why owning both is less stressful than betting on one.

SOURCE

Nifty Indices, MSCI USA gross total return, RBI/FBIL USD/INR · Zerodha

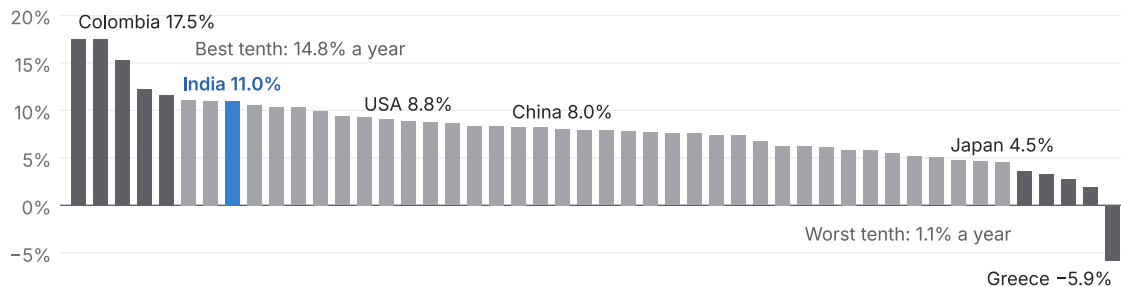
Leadership between India and America has flipped back and forth every few years. Widen the lens from two countries to all of them, and the case gets stronger.

FIGURE 11.7

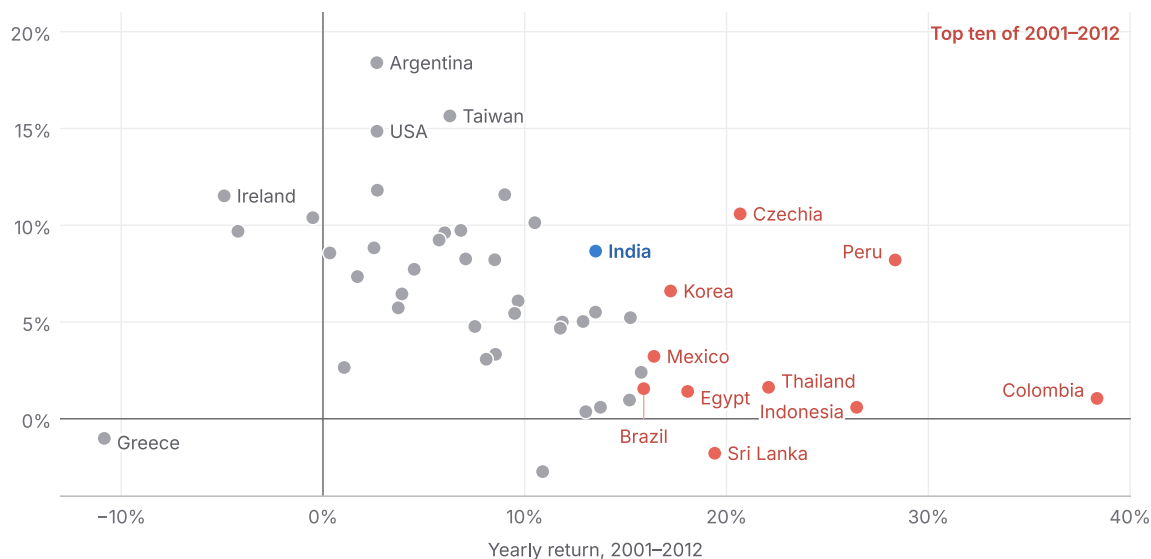
Across 48 markets, the top tenth earned 15% a year and the bottom tenth 1%

Yearly return in US dollars with dividends reinvested, end-2000 to end-2025, for every MSCI country index with the full history

Yearly return, 2001–2025



Yearly return, 2013–2025



ZERODHA

Return a year in US dollars with dividends for the 48 markets MSCI has covered since 2000, 2001–2025. The median market earned 7.9% a year; the best tenth 14.8% and the worst tenth 1.1%. \$100 became \$5,649 in Colombia and \$22 in Greece. India earned 11.0% a year, eighth of 48. The inset shows that the leaders of 2001–2012 mostly became laggards in 2013–2025: the rank correlation between the two halves was -0.50 .

SOURCE

MSCI end-of-day country indices (gross total return, USD) · Zerodha analysis

Over those 25 years, the gap between the average returns of the best tenth and worst tenth of the markets in this sample was 13.7 percentage points a year, and the leaders of the first half mostly became the laggards of the

second. India happened to be one of the good ones. But nobody living in Greece in 2001 thought they were betting on the wrong country either. Cliff Asness, in the paper I quoted in the Japan chapter, put the long-run case in one line: over longer horizons, “international diversification does an excellent job of protecting investors”.

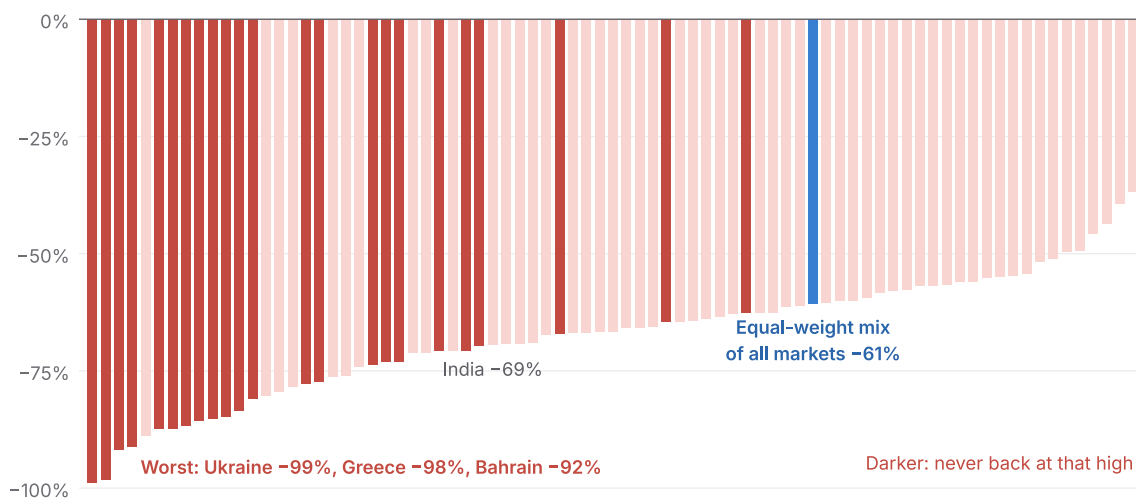
Bridgewater, the hedge fund, made the same point in a 2019 paper, “Geographic Diversification Can Be a Lifesaver”, using markets back to 1900, where a single country could be wiped out by a war or a revolution. I ran a shorter version on the MSCI country indices available since 2000.

FIGURE 11.8

Single countries were wiped out, but an equal mix of them wasn't

Worst fall of each MSCI country index and of an equal-weight mix, US dollars over T-bills, Dec 2000–Sep 2026

Worst fall, over T-bills



ZERODHA

Worst fall of each MSCI country index and of an equal-weight mix of all of them, in US dollars after what Treasury bills paid, December 2000 to September 2026. 14 of 78 markets fell 80% or more, and 23 never got back. The equal-weight mix fell 61% in 2008, like almost everything, but it was never wiped out and it recovered. This window is dominated by one global crash; Bridgewater's longer history, back to 1900, shows a bigger gap.

SOURCE

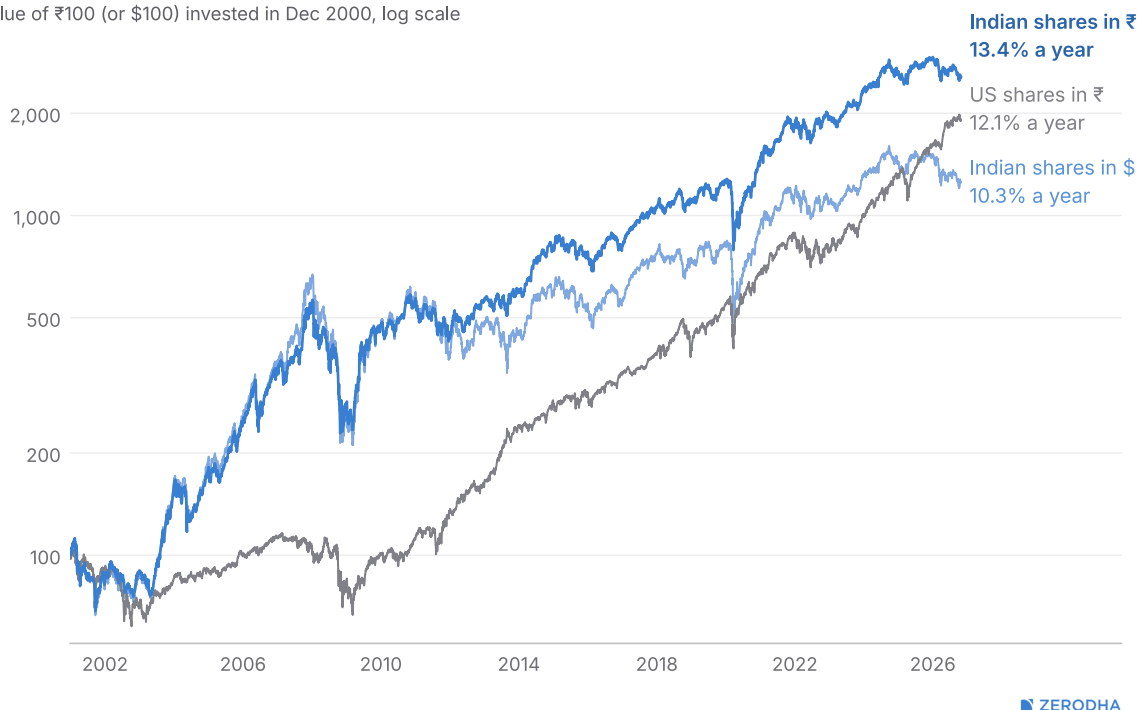
MSCI end-of-day country indices (gross total return, USD), FRED (3-month T-bill), Bridgewater (2019) · Zerodha analysis

FIGURE 11.9

Indian returns look smaller in dollars

Growth of ₹100 (or \$100 for India in dollars), log scale, dividends reinvested: Nifty 50 TRI in rupees and in dollars, and MSCI USA in rupees, December 2000–October 2026

Value of ₹100 (or \$100) invested in Dec 2000, log scale



Indian equities with dividends, in rupees and in dollars, and US equities in rupees, since December 2000. The rupee went from about 47 to 95.2 to the dollar. Indian equities returned 13.4% a year in rupees but only 10.3% in dollars, and US equities returned 12.1% a year in rupees. A falling rupee pays anyone who owns something abroad.

SOURCE

Nifty Indices, MSCI, RBI/FBIL
USD/INR · Zerodha analysis

America is not the world

Most Indians who go abroad don't buy the world. They buy America, and often the Nasdaq-100, a concentrated index of large non-financial Nasdaq-listed companies, because that's what has gone up the most and that's what the advertisements show. And I'll be honest: over the last twenty-five years, that would have worked out fine.

FIGURE 11.10

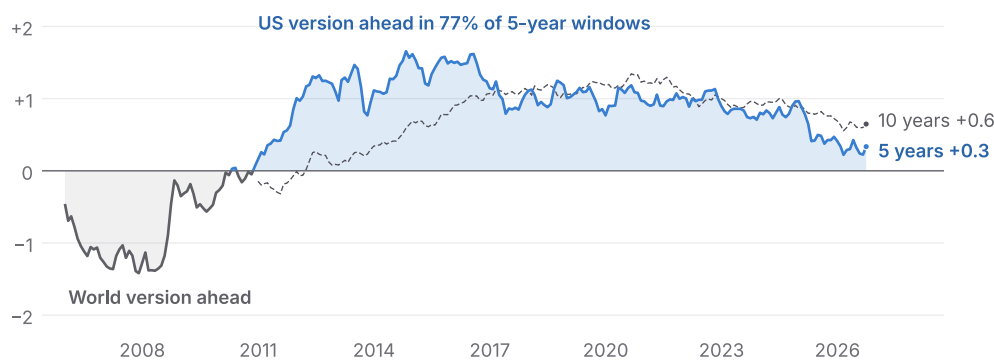
India plus America, or India plus the world

70% Nifty 500 TRI and 30% abroad, in rupees, rebalanced each December, Dec 2000–Sep 2026.

Below: the US version's yearly return minus the World version's, over each previous five years

70/30 with...	Return a year	Volatility	Worst fall	Worst 5 years, a year	Longest wait
All Nifty 500	14.8%	22.8%	−60%	−1.2%	75 months
+ MSCI World	14.4%	18.0%	−53%	+2.3%	34 months
+ MSCI ACWI ex India	14.3%	18.1%	−53%	+2.2%	34 months
+ MSCI USA	14.9%	17.8%	−51%	+3.4%	33 months
+ Nasdaq-100 (price)	15.3%	18.8%	−51%	+3.9%	33 months

US version minus World version, points a year



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70% Nifty 500 with dividends and 30% abroad, in rupees, rebalanced every December, December 2000 to September 2026, after typical fund costs. With American shares as the foreign slice the mix earned 14.9% a year, against 14.4% with MSCI World and 14.3% with the whole world outside India; worst falls were 51–53% in every case, against 60% for Indian shares alone. All of America's edge came from 2010 to 2024; in 2001–2009 the American version earned less.

SOURCE

MSCI, Nasdaq, Nifty Indices,
RBI/FBIL USD/INR · Zerodha
analysis

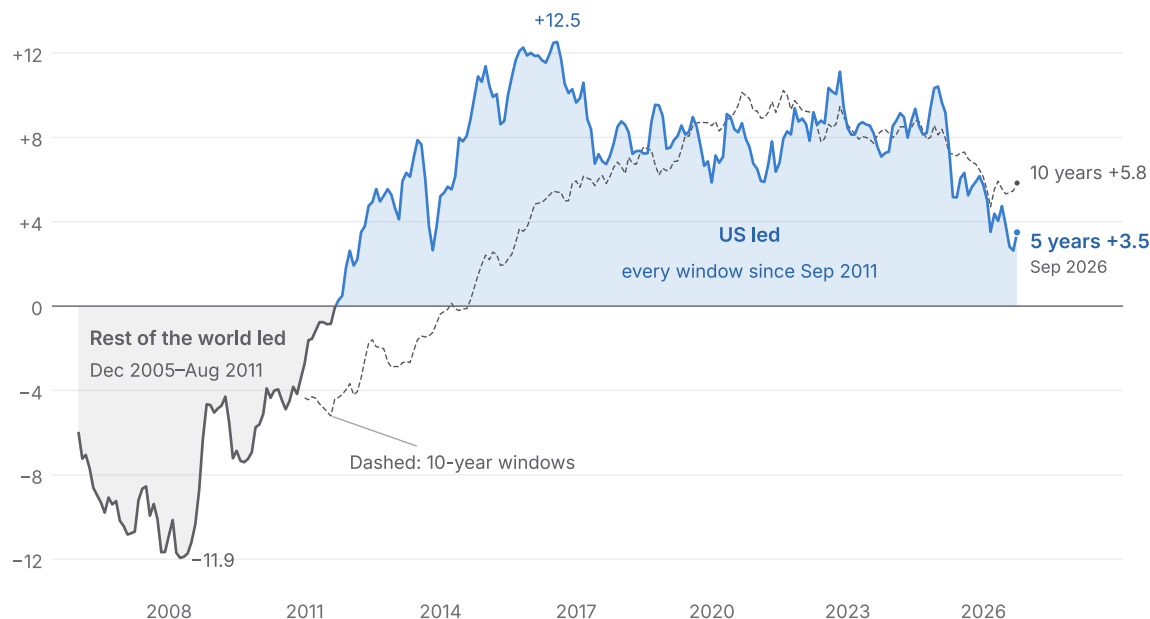
So why not just buy America? Because the last fifteen years aren't the only fifteen years there have been.

FIGURE 11.11

The lead keeps changing hands

MSCI USA minus MSCI ACWI ex USA, yearly return over the previous five and ten years, in rupees, with dividends, after fund-like fees, Dec 2000–Sep 2026. Plotted at each window's end

US minus rest of world, points a year



ZERODHA

How much more (above zero) or less (below zero) American shares earned than the rest of the world over the previous five years, each month since 2005, in rupees. The rest of the world led every five-year stretch ending between December 2005 and August 2011, by up to 12 points a year. America has led every one since September 2011, by up to 12.5 points a year. Today it leads by 3.5 points a year over five years.

SOURCE
MSCI, RBI/FBIL USD/INR ·
Zerodha analysis

In the first decade of this century, American shares earned nothing in rupees for nine years: -0.1% a year from 2001 to 2009, while emerging markets made 15.6% a year. In the next fifteen years, the order flipped completely. America made 18.8% a year, the rest of the world 11.0% and emerging markets 9.3% . Anybody who built their portfolio in 2010 based on the previous decade would have bet on the wrong horse. And anybody who builds one today based on the last fifteen years is making the same bet in reverse.

America also starts from a very different place now. The US accounts for about 64% of MSCI ACWI, a broad index of developed and emerging markets, at the end of September 2026. Within the American market, Elroy Dimson, Paul Marsh and Mike Staunton report that concentration at the end of 2025 was at its highest in at least a hundred years. Ten American companies make up more than a third of the American market.

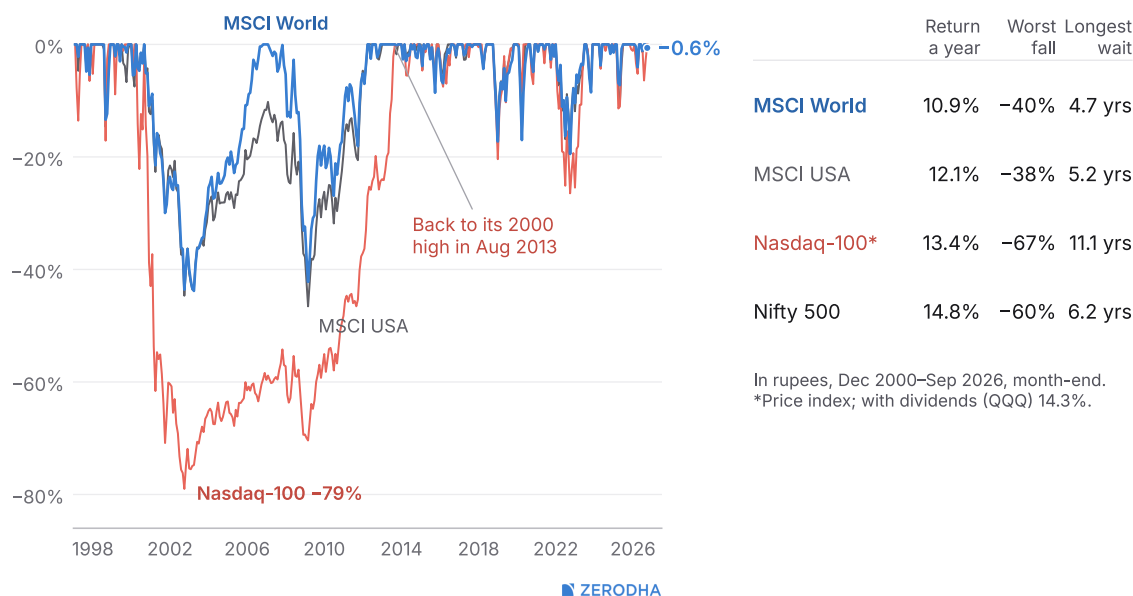
At the end of September, the MSCI USA index cost about 19 times next year's expected profits. That's a snapshot, not a forecast, and expensive markets can stay expensive for a long time. It's simply what you'd be buying.

FIGURE 11.12

The world, America, or the Nasdaq-100

Fall from the previous high, in rupees, price indices without dividends, Jan 1997–Sep 2026; right: returns with dividends, Dec 2000–Sep 2026

Fall from the previous high



MSCI World, MSCI USA and the Nasdaq-100 in rupees since 2001, after typical fund costs (the Nasdaq-100 is a price index, which understates it by roughly 0.8 points a year). They returned 10.9%, 12.1% and 13.4% a year. From the 2000 peak the Nasdaq-100 fell 79% and took 13.4 years to recover in rupees, against 6.2 years for the world. The United States is already 73% of MSCI World, and its ten biggest holdings, all American, are 28% of it.

SOURCE

MSCI, Nasdaq, RBI/FBIL and FRED USD/INR, Yahoo Finance (QQQ) · Zerodha analysis

Narrow it down further, to the Nasdaq-100, and the bet gets even more concentrated. It has had a spectacular couple of decades. It also once took more than thirteen years to get back to its 2000 peak in rupees.

None of this means America is a bad bet. It means it's a bet. An MSCI World fund already gives you roughly three-quarters America, along with Europe, Japan and other developed markets. An all-country fund also includes emerging markets. You don't know which country you're in. That's just as true of the United States as it is of India.

The world also fits neatly into the kind of mix this book keeps recommending. Since 2005, a 35/15/30/20 mix of Indian shares, world shares, government bonds and gold returned 13.7% a year, with a worst fall of 19%. The same mix without the world returned 13.8%, with a worst fall of 25%.

The rules for investing abroad

There are a few rules about investing abroad from India that people discover the hard way, so here they are in one place, as of October 2026. Rules change, so check before you act, and ask a CA if your situation is anything other than simple.

- **The limit.** Under the Liberalised Remittance Scheme, each resident individual can send up to \$250,000 abroad a financial year, for all purposes combined, including investing. You can't use it to trade on borrowed money, and money you send but don't invest has to come back within 180 days.
- **Tax collected at source.** If you send more than ₹10 lakh abroad for investment in a financial year, 20% tax is collected at source on the excess. It isn't an extra tax. It counts towards your tax bill, and salaried investors can use the current year's TCS to reduce salary TDS before filing their return.
- **Tax on gains and dividends.** For ordinary foreign company shares held directly, gains after more than 24 months are generally taxed at 12.5%, before surcharge and cess; shorter-term gains and dividends are generally taxed at your slab rate. Foreign ETF taxation depends on the instrument and its classification, so check before applying that rule.

Ordinary US dividends usually face 25% US withholding once you file the treaty paperwork, and you can claim that as a credit in India.

- **Tell the taxman.** If you're resident and ordinarily resident in India, you must report foreign holdings in Schedule FA of your tax return, even if you sold nothing and earned nothing, and it follows the calendar year, not the financial year. Not reporting can attract penalties under the Black Money Act.
- **The US estate tax.** This is the one almost nobody mentions. If someone who is neither a US citizen nor domiciled in the US dies with more than \$60,000 in US assets, a US estate-tax return is generally required, and tax can apply at rates up to 40%. US company shares and US-listed ETFs count, wherever your broker is. India has no estate-tax treaty with the US. Funds based in Ireland work differently, but that's not what US-listed access gives you. Know the threshold, keep records, and if your US holdings grow large, get proper advice.
- **Keep it cheap and broad.** Compare the annual fees of broad world and US index ETFs before you choose one. Everything in the costs chapter applies abroad too.

None of this is a reason not to invest abroad. It's a reason to do it with your eyes open, with a sensible slice of your money. Treat the world like every other diversifier: occasionally embarrassing, and there for the years when everything at home goes wrong at once.

12

CHAPTER 12

Your bear-market plan

94%

Share of completed Sensex falls of 10% or more since 1979 that had fully recovered within three years

Everything up to here has been about understanding the pain. This chapter is about deciding, in advance and in writing, what you'll do about it, because the worst time to make a plan is in the middle of the thing you're planning for. Your brain at 2 a.m. during a 30% fall is not the brain you want making decisions. So let the calm version of you make them now, and leave instructions.

Write the card

Take a piece of paper, or a note on your phone that you'll find again, and finish these sentences.

If the Nifty falls 20% from its high, I will... If it falls 30%, I will... If it falls 40%, I will...

The right answers are boring: keep the SIPs going, rebalance back to my mix, maybe increase the SIP, and do nothing else. The answers aren't the point. The point is that you wrote them down while you were sane. And don't tell yourself these lines will never be tested. Of the Sensex falls that got as deep as this one, more than half went on to 20%, and about one in three went on to 30%. You could face every line on that card over an investing lifetime. Plan for the possibility.

Decide your equity share, and count everything

The most important number in your financial life is how much of your money is in equities, and most people don't know theirs. Count everything: your mutual funds, your direct stocks, your ESOPs, the equity part of your NPS and the "balanced advantage" fund your relationship manager sold you.

Then count the debt you forget you own, like your EPF, PPF and fixed deposits. For most salaried Indians, that's a lot more than they think. Plenty of people who believe they're 90% in equities are really 50/50 once you count the EPF, and plenty who think they're cautious are sitting on a pile of their employer's shares.

Then there's the house. Real estate is always tricky in a country like India, because for most families it's the biggest thing they own. Here's how I look at it. The house you live in is a home, not an investment. You can't sell it in a crash, and you'd still need somewhere to live if you did, so leave it out of your equity, debt and gold split. The home loan is a different matter: your EMI doesn't pause because the market is down, so count it when you work out how big a buffer you need. And a second flat bought as an investment does count, as what it usually is: your biggest single bet, hard to sell in a hurry and often bought with borrowed money. Most Indians have far more riding on property than on anything else in this book.

Then pick your number using the dial from the Equanimity chapter, and pick it for your life, not for the market. Money you'll need in the next few years has no business being in equities, however clever you feel.

The most useful way I know to pick that number is to look at it in rupees, at the worst moment in recent memory.

Look at that chart and ask yourself honestly which of those numbers you could have watched on your phone without selling. That's your number, or close to it.

Never be a forced seller

The people who got hurt worst in falls that eventually recovered were the ones forced to sell along the way. So your most important defence is a buffer: money you can live on while you wait for the market to come back.

Even though this is a book about investing, I've always told people that investing is the last thing you do in your personal finance journey. The first is to play defence and cover your downside. That means health insurance and term insurance before anything else, because most Indians are one bad health scare away from their investments becoming their insurance. If you invest without health cover and, God forbid, someone falls ill, you'll be selling whatever you've saved to pay the hospital, whatever the market is doing that month. The same goes for term insurance. If anyone depends on you, not having it is a terrible idea, unless of course you have really, really filthy rich parents.

My bear-market card

Written on _____, when I was calm.

My equity share, counting everything I own (EPF and PPF count as debt): _____ %

Money I will need in the next three years, kept outside equities:
₹ _____

If the Nifty falls 20% from its high, I will:

If it falls 30%, I will:

If it falls 40%, I will:

I will rebalance on _____ each year, or when equity drifts five points from my target.

The only things that would make me change this plan (my goals, my job, my timeline):

Things that will not: headlines, WhatsApp forwards, my cousin, this book's author.

The other form of defence is an emergency fund. Its job is not to earn high returns but to deal with whatever life throws at you: a lost job, a repair, a hospital bill. Set aside about six months of expenses. You don't have to do it all at once; build it up slowly. That money is for surprises. The buffer below is for the big bills you can see coming.

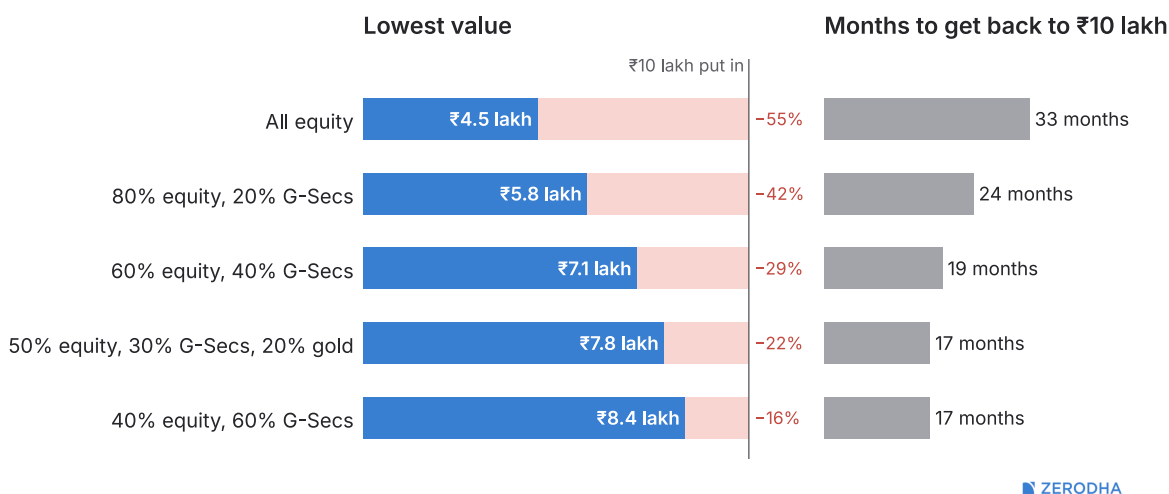
A mix shortens the wait too. Since 2001, every fall of 10% or more in a 60/40 or 50/30/20 mix was repaired within two years, against three years for the Nifty 50 on its own, though that's only a handful of falls. Either way,

don't plan for the typical fall. Plan for the long one. That's why I'd keep two to three years of known big expenses outside equities: the school fees, the down payment, the wedding you can't talk your way out of.

FIGURE 12.1

What ₹10 lakh became at the worst moment

₹10 lakh invested at the December 2007 high, the worst month-end to start in Sep 2001–Sep 2026: its lowest value and the months until it was back to ₹10 lakh



₹10 lakh invested at the end of December 2007, the worst month-end to start for every mix, in the Nifty 50 with dividends, the five-year G-Sec index and gold, rebalanced every January. All equity fell to ₹4.5 lakh and took 33 months to get back. 80/20 fell to ₹5.8 lakh (24 months); 60/40 to ₹7.1 lakh (19 months); 50/30/20 with gold to ₹7.8 lakh (17 months); 40/60 to ₹8.4 lakh (17 months).

SOURCE
Nifty Indices, World Gold Council, RBI/FBIL · Zerodha analysis

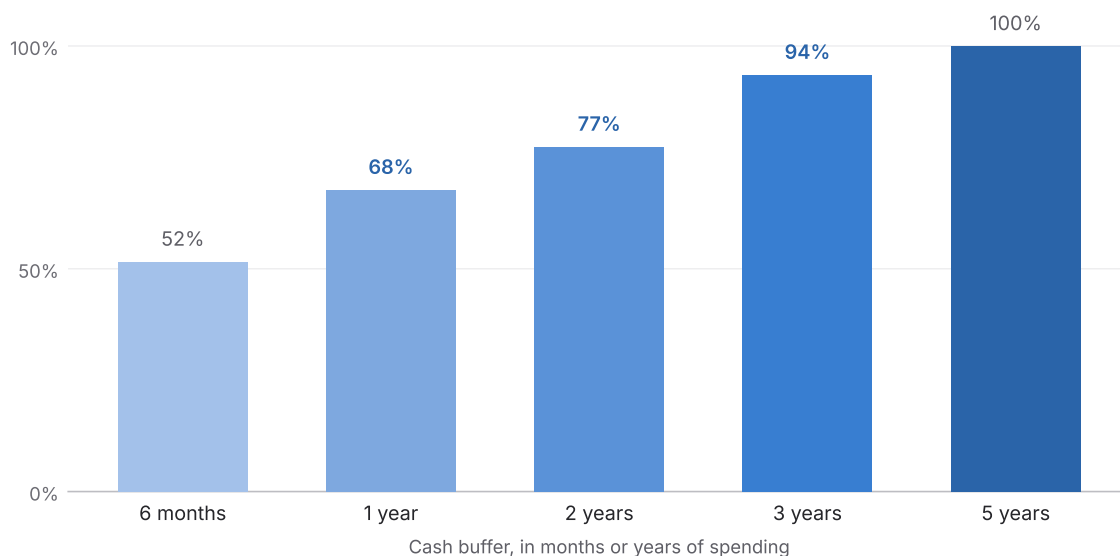
Keep that money somewhere short-term and boring. After this October's rate hike, the debt chapter applies directly. This money belongs in liquid funds, short-duration funds or fixed deposits, not in a long-duration gilt fund that can lose a year's interest in a bad quarter. And debt funds bought on or after 1 April 2023 are taxed at your slab rate, just like an FD, however long you hold them. So pick for safety and convenience, not for a tax trick that no longer exists.

FIGURE 12.2

How long the Sensex took to recover from falls of 10% or more

Share of the 31 completed Sensex falls of 10% or more, 1979–2026, that had fully recovered within a given number of months of the old peak

Share of the 31 falls back at the old high within that time



 ZERODHA

Of the 31 completed Sensex falls of 10% or more since 1979, 68% had fully recovered within a year of the old peak, 77% within two and 94% within three. Two to three years of known big expenses kept safe covers most of history. The next fall can be longer, so the buffer buys sleep, not certainty.

SOURCE
BSE · Zerodha analysis

If you have a lump sum

Say you've got a bonus, an inheritance or the money from selling a flat. Should you invest it all now or spread it out? History's answer is annoying.

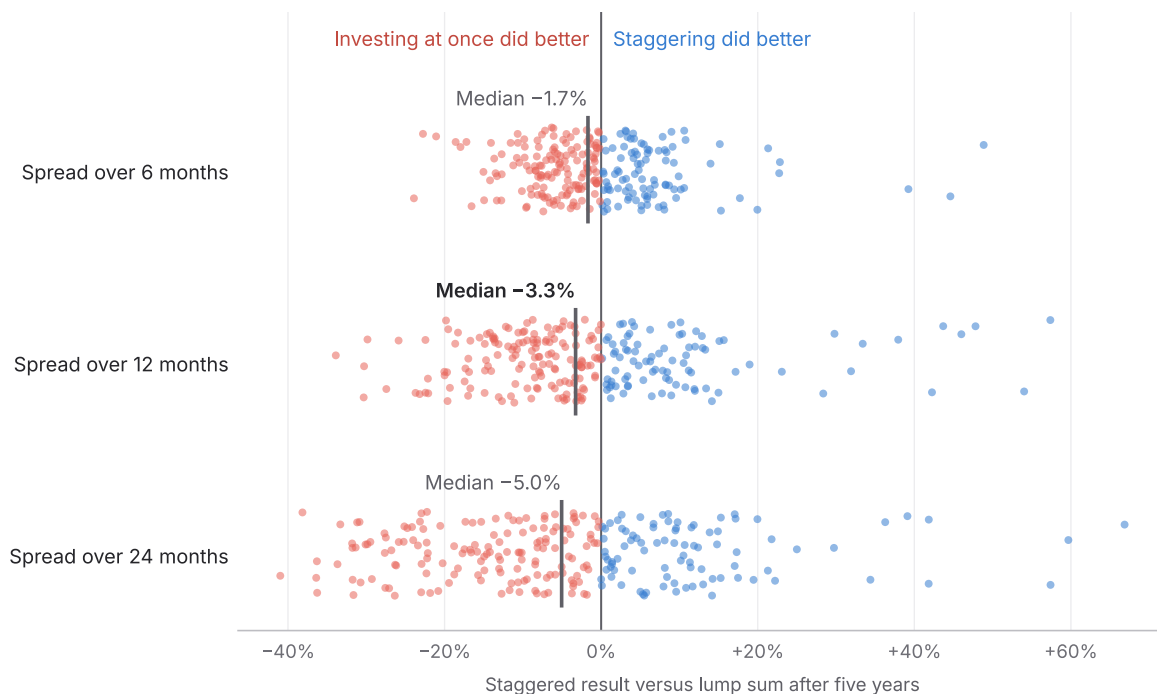
Investing it all at once usually comes out ahead, because markets go up more often than they go down. Spreading it out is insurance against regret. It usually costs you something, but some people should pay for it anyway. Vanguard found the same thing with global data from 1976 to 2022. Investing at once beat spreading the money over three months about two-thirds of the time, and spreading it out made sense mainly for people who really hate losses.

If you know you'll panic if the market falls 20% the week after you invest everything, spread it over six to twelve months. Write down the dates in advance, and don't skip any of them because the news is scary.

FIGURE 12.3

Investing at once usually beat spreading it out, but not always

Five years after the start: staggered entry versus investing the whole amount at once, Nifty 50 TRI, money waiting in the 5-year G-Sec index, 241 monthly starts Sep 2001–Sep 2021



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Each dot is one starting month; dots right of the centre line are where staggering came out ahead. Every month since 2001, five years later: spreading an investment over 6, 12 or 24 months against investing it all at once, with the waiting money in a five-year G-Sec index. Investing at once did better about 60% of the time, by a median of 2–5%. But spreading it over a year left you up to 57% better off when the lump sum would have landed just before 2008.

SOURCE

Nifty Indices · Zerodha analysis

Rebalance by a rule

Once a year, on a date you pick now, or whenever your equity share drifts five percentage points away from your target, whichever comes first, move it back. Do it with new money first, by pointing your SIPs at whatever has fallen below its target, because a sale can trigger tax and trading costs.

In a fall, rebalancing means buying equities when everything in you wants to sell them. That's why it works, and why you need it written down.

Vanguard's study of US portfolios from 1926 to 2009 landed on almost the same rule: check once or twice a year and act when a weight drifts by about five points. Rebalancing more often added cost without adding much else.

If your own stocks are down 40%

If your stocks are down 40%, ask yourself honestly whether you picked the right stocks. I'll readily admit the last time I placed a buy order for a stock was sometime in 2016 or 2017. Since then I've stuck to direct mutual funds, mostly index funds and index ETFs, because I quickly realised that stock picking is a real skill, and a really hard one. When I asked myself whether I had an edge, the answer was no. Answering otherwise would have meant deluding myself, and I'd have paid the price, probably by picking some terrible stocks and losing all my money in them.

So what do you do? If you're sure you picked good companies at reasonable prices, give the reason you bought them time to work out. If that reason has turned out to be wrong, take the call to get out and do whatever is most sensible for your circumstances. One test helps: the price you paid means nothing to the stock, so ask whether you'd buy it today at today's price. Most of us do the opposite of what that test says, selling our winners to feel good and sitting on our losers until they come back.

I know this sounds like beating about the bush, but there is no specific answer. There are good stocks and bad stocks, and even a good stock bought at a bad price becomes a bad stock.

Use the fall for your taxes

A bear market is the one time the tax system is on your side. Short-term gains on equity funds are taxed at 20%, and long-term gains at 12.5%. If you're sitting on losses in a fund or stock you don't want to keep anyway, selling it lets you set those losses off against your gains, and whatever's left can be carried forward to later years, as long as you file your return on time. Tax rules change almost every Budget, so check the current ones, or ask a CA, before you act.

Watch your loans, not just your portfolio

The RBI raised rates in October for the first time since 2023, and it may not be done. If your home loan has a floating rate, your EMI or the length of your loan is about to grow. That makes prepaying the loan a perfectly respectable investment. Prepaying saves future interest at your loan rate. Compare that saving after any tax deductions and prepayment charges with an investment return that is still uncertain. And whatever you do, don't borrow against volatile investments to fund your life or to buy more of them. Borrowed money turns a bad year into a permanent one.

If you need cash, sell in the right order

Spend the buffer first. Then sell whatever has grown above its target weight, which in a stock market fall is usually your debt or gold. Sell equities at the bottom only as the very last resort. And if the need is small and short, a loan against your mutual funds can be cheaper than selling at the worst possible price.

Near retirement, the order of returns matters

Two people with the same long-run return can have very different retirements, depending on whether the crash arrives in their first year of withdrawals or their tenth.

FIGURE 12.4

Same market, very different retirements

Two retirees, ₹1 crore each, withdrawing a flat ₹60,000 a month. Both get the Nifty 50's monthly returns from Jan 2008 to Dec 2022: one in the actual order, one in reverse.

Corpus left, ₹ crore



■ ZERODHA

Two retirees, each starting with ₹1 crore and withdrawing a flat ₹60,000 a month, get exactly the same Nifty 50 returns from January 2008 to December 2022, 8.8% a year. One gets them in the order they happened, crash first; the other gets them in reverse, crash last. The first ends with ₹0.44 crore, the second with ₹1.81 crore. Withdrawals are not raised for inflation; with 5% annual rises, the crash-first retiree runs out of money in about twelve years.

SOURCE

NSE (Nifty 50 TRI) · Zerodha analysis

A mix makes that gamble a lot smaller.

Peter Bernstein put the whole of retirement planning in a handful of words.

// *Survival is the only road to riches."*

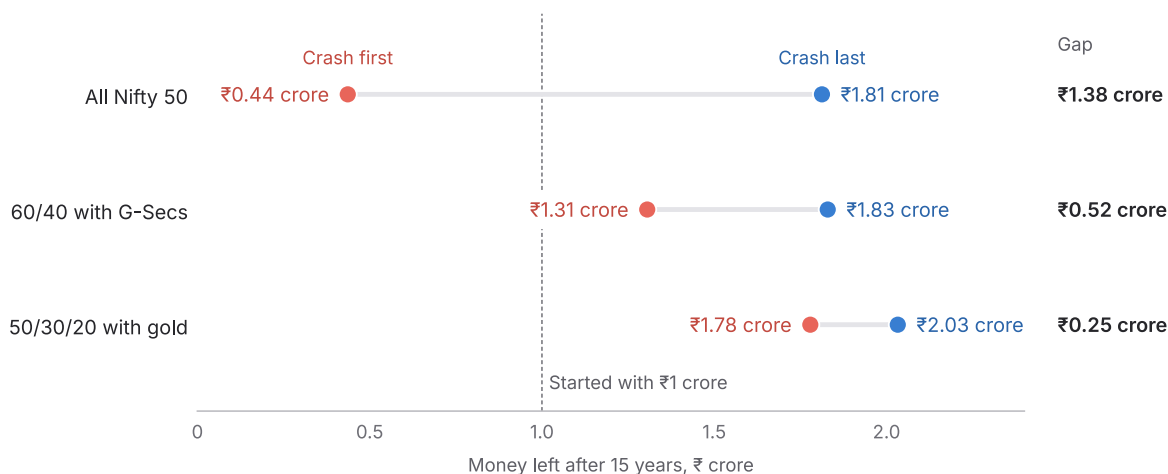
PETER BERNSTEIN

If you're within a few years of living off your portfolio, keep several years of withdrawals out of equities, so that a crash early in retirement doesn't force you to sell into it.

FIGURE 12.5

A mix takes most of the luck out of retiring

₹1 crore, a flat ₹60,000 withdrawn every month, the returns of Jan 2008–Dec 2022 in their actual order (crash first) and reversed (crash last); money left after 15 years



ZERODHA

SOURCE

Nifty Indices, World Gold Council, RBI/FBIL · Zerodha analysis

The same experiment for three retirees, ₹1 crore each and ₹60,000 a month, January 2008 to December 2022, with each portfolio's own returns run in their real order (crash first) and reversed (crash last). The gap between the lucky and unlucky retiree was ₹1.38 crore in all equity, ₹0.52 crore in a 60/40 mix with G-Secs and ₹0.25 crore in a 50/30/20 mix with gold. The mixes also earned a little more over this stretch, which flatters them; the shrinking gap is the clean comparison.

Your biggest asset is you

And please don't forget the biggest asset that never shows up on your statement: you. Economists call it *human capital*, which is a disgusting term that gets the job done. It's the value of everything you'll earn in the future, and early in a working life it can be worth far more than your mutual funds.

You're often better off getting better at your work, building a skill or starting something than squeezing another half a percent out of your portfolio. I understand the irony of saying this while AI eats white-collar work, mine included. But hey, I'm the one giving gyaan. You're the one who has to deal with reality.

13

CHAPTER 13

**So what
should you do?**

This is probably the shortest and most obvious part of the whole book.

The key to investment success isn't some grand secret locked away in a Himalayan cave. The broad answers are obvious, and they have been for decades. The problem was never a lack of information. The problem is that investors keep tripping over themselves and making the same dumb mistakes, because of fear, greed, arrogance, overconfidence and plain stupidity.

If you want reasonable odds, buy a handful of broad index funds and stick with them. Large-cap equities. Some mid-caps. A slice of the rest of the world. Some short to intermediate-term debt; after the chapter on what a rate hike does to long bonds, you probably see why I'm not a fan of loading up on long-duration funds.

And if you live in a country like India, where the rupee has a long-standing habit of falling, some gold. It can help when the rupee weakens and can behave differently from shares and bonds. As the earlier charts showed, that doesn't make it a reliable hedge against every war or burst of inflation.

To my mind, the best way to own gold is a gold ETF. It's regulated by SEBI and easy to buy and sell. Check the fund's costs and how closely it tracks gold. Every other form comes with its own problems. Jewellery and coins carry making charges and purity worries and sell back at a discount, and digital gold sits outside SEBI's investor-protection framework; SEBI itself has warned investors about it. In the interest of full disclosure, we have our own, the [Zerodha Gold ETF](#) from Zerodha Fund House. Search for GOLDCASE on Kite.

Why a mix, and not just equities? Because every investor suffers from two things: ignorance and arrogance. You don't know what's going to happen, and you think you do. The way I see it:

// *Diversification and asset allocation are insurance against ignorance and arrogance."*

Here's what that insurance does, one step at a time: start with everything in Indian shares, then add debt, then gold, then a slice of the rest of the world. Each step insures you against a different kind of ignorance.

- **Debt** is insurance against not knowing when the next crash is coming. Going from all equity to half equity and half government bonds cut the worst fall from 60% to 25%, and the longest wait from more than six years to under two. It cost you about 1.6 percentage points of return a year.
- **Gold** is insurance against the rupee and against inflation, the things that can hurt shares and bonds at the same time. Adding 20% gold won back that lost return and shortened the longest wait to 17 months. Gold has had a spectacular run over this stretch, though, so don't count on it doing that again.
- **The world** is insurance against not knowing which country you're in. Moving 15% abroad took the worst fall below 20%.

None of these steps needed a forecast. Each one just admits there's something you don't know. And you can build every one of them with a handful of cheap index funds: a Nifty 50 or Nifty 500 index fund, a government bond fund of around five years, a gold ETF and a world index fund.

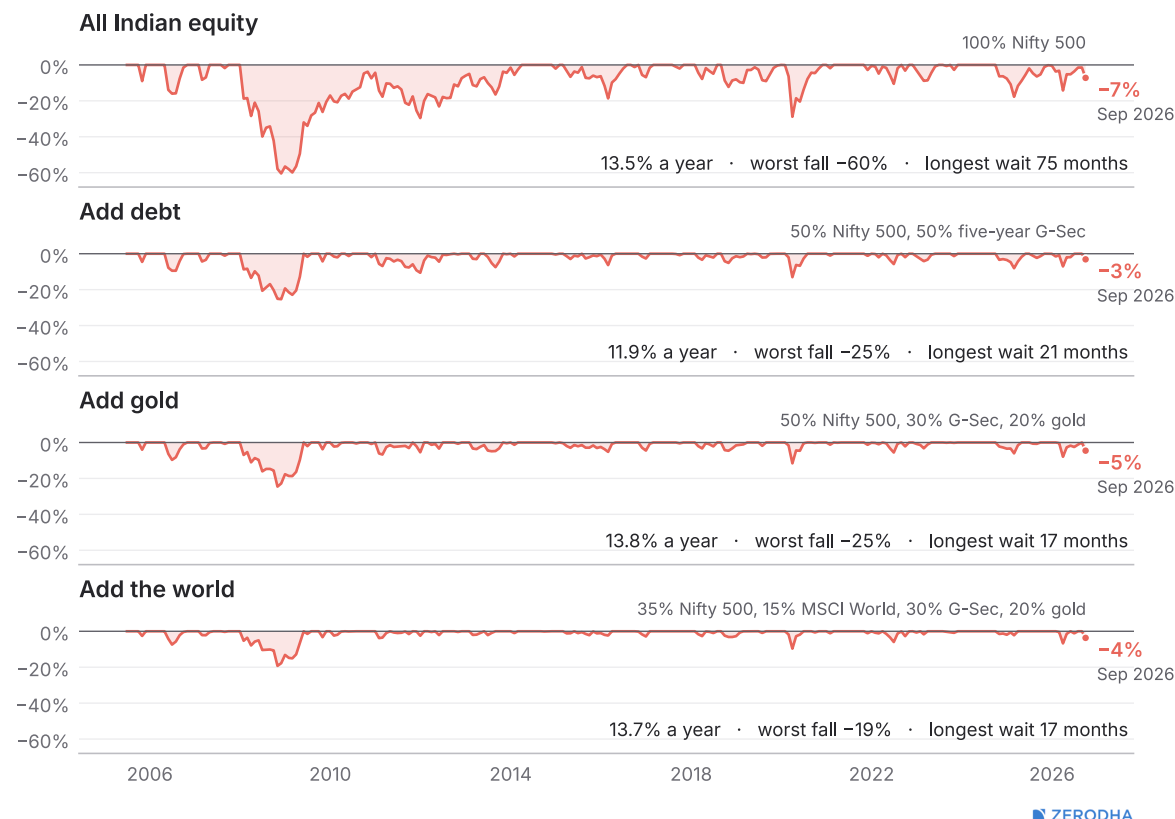
How much of each? Again, no grand secret. Even equal weights, simple and boring, leave you in a reasonably good place, as the Equanimity chapter showed. Harry Markowitz won a Nobel Prize for the mathematics of building the perfect portfolio. When he first started his retirement contributions in the 1950s, he split them fifty-fifty between stocks and bonds to minimise his future regret. He later changed his allocation using ideas from efficient portfolios. Even the father of portfolio optimisation started with a simple compromise he could live with.

You can build elaborate models. You can ask Claude to build you a beautiful allocation system; I did, for this book, and it was very beautiful. But the best strategy isn't the theoretically perfect one. It's the one you understand and can stick with when everything is on fire. Your real benchmark isn't some all-knowing ideal. It's your own ignorance and your own inability to stay the course.

FIGURE 13.1

Each step made the fall smaller

Fall from the previous high for four mixes, built one step at a time, month-ends Jun 2005–Sep 2026, rebalanced each December



Fall from the previous high for four mixes, June 2005 to September 2026, with dividends, rebalanced every December. All Indian equity (Nifty 500) returned 13.5% a year, fell 60% at worst and once took 75 months to regain an old high. Half in the five-year G-Sec index: 11.9% a year, worst fall 25%, longest wait 21 months. Adding 20% gold in rupees: 13.8%, 25% and 17 months. Moving 15% into MSCI World in rupees, less a 0.2% yearly fee: 13.7%, 19% and 17 months.

SOURCE

Nifty Indices, MSCI, WGC
GoldHub, RBI/FBIL USD/INR ·
Zerodha analysis

In January 2008, with the storm already gathering, Jack Bogle had two pieces of advice. To speculators, he said: “Get out. And stay out.” And to investors with a balanced portfolio:

// *Don't do something, just stand there.”*

JACK BOGLE, JANUARY 2008

So, what should you do? Buy a few broad index funds. Hold some debt. Hold some gold. Write the card. Automate it. Go to sleep.

That's pretty much all the investing advice most people will ever need. It's boring. There's no thrill in it. It has none of that *aaj kuch tufaani karte hain* energy. And unfortunately, the boring thing usually works better than the exciting thing.

What I cannot tell you

I can't tell you whether this war ends next month or next decade, whether oil goes to \$150 or back to \$70, whether the RBI hikes twice more or not at all, or whether the next five years will look like any five years in this book. I'm not an astrologer, preferably from India, who can read the future by playing with snakes.

What the charts can do is show you the range. How deep falls have been. How long they lasted. What inflation did to "safe" money. What a sensible mix did when one part of it failed. Which habits forced people into the most decisions at the worst moments. None of that is a forecast. It's a map of the terrain, and it's useful precisely because we don't know which path we'll take. It's also a reason to arrange your life so that more than one future is survivable.

Ultimately, beyond a point, investing is a giant distraction from everything else worth doing. Build something sensible, make it boring, and go live your life. And if you still do something dumb after reading all this, at least you'll have done it in an informed way.

Congratulations. You are now a scientifically stupid investor.

BACK MATTER

Going deeper

Almost everything worth knowing about surviving a bear market has been written down by someone smarter than me. Start with one book, and use the rest of this list when you want to go further. None of these people can tell you what the market does next.

START WITH THESE THREE

You don't have to read everything here. Pick the Indian money guide if you need to get your finances in order, Housel if the problem is behaviour, or Bernstein if you want to understand how to build a portfolio.

Let's Talk Money: You've Worked Hard for It, Now Make It Work for You

Monika Halan · 2018

An Indian guide to getting the basics in place: emergency money, insurance, accounts, investments and retirement. Start here if picking a fund has been getting more attention than the rest of your finances.

monikahalan.com/lets-talk-money-english

The Psychology of Money

Morgan Housel · 2020

Short essays on luck, greed, saving and knowing when you have enough. An easy place to start if you understand the maths and still find yourself doing stupid things with money.

panmacmillan.com

The Four Pillars of Investing (2nd ed.)

William J. Bernstein · 2023

Investment theory, market history, psychology and the business of finance in one book. A good next step when you want to understand why a simple diversified portfolio makes sense.

mheducation.com

MORE BOOKS WORTH YOUR TIME

Some of these are longer or more technical. Pick the subject you want to understand rather than treating this as homework.

Winning the Loser's Game: Timeless Strategies for Successful Investing (8th ed.)

Charles D. Ellis · 2021

The book behind this book's tennis analogy. For most of us, investing is won by avoiding mistakes, and a bear market is when the mistakes are most tempting.

mheducation.com

Against the Gods: The Remarkable Story of Risk

Peter L. Bernstein · 1996

A history of how people learned to think about uncertainty, probability and risk. Useful background for understanding what a financial model can tell you, and where its answers run out.

wiley.com

Deep Risk: How History Informs Portfolio Design

William J. Bernstein · 2013

Separates "shallow risk", the kind of fall that recovers within a few years, from "deep risk", the inflation, confiscation and war that destroy wealth permanently. It is short, and it is the right frame for deciding what to be afraid of.

efficientfrontier.com

Triumph of the Optimists: 101 Years of Global Investment Returns

Elroy Dimson, Paul Marsh and Mike Staunton · 2002

Sixteen countries over a century, including the ones whose markets were wiped out. It is the best evidence that equities reward patience, and an honest account of where they did not.

press.princeton.edu

Investing Amid Low Expected Returns: Making the Most When Markets Offer the Least

Antti Ilmanen · 2022

An AQR researcher on what can and cannot be done about returns, from timing and factors to costs and diversification. His case for discipline, humility and patience rests on evidence.

wiley.com

Your Money and Your Brain

Jason Zweig · 2007

How expectations, fear and the prospect of a reward affect financial decisions. Read it when knowing what you should do has failed to stop you doing the opposite.

jasonzweig.com/books/your-money-and-your-brain

The Intelligent Investor (with commentary by Jason Zweig)

Benjamin Graham; commentary by Jason Zweig

Start with Chapter 8 on Mr. Market and Chapter 20 on the margin of safety. The stock-picking sections need more work than buying an index fund; Zweig's commentary helps put Graham's examples in context.

jasonzweig.com/books/the-intelligent-investor

Devil Take the Hindmost: A History of Financial Speculation

Edward Chancellor · 1999

A history of speculation, from tulips to Japan in the 1980s. Useful for seeing how sensible ideas, easy money and the fear of missing out can turn into a very expensive combination.

openlibrary.org/isbn/0452281806

Where Are the Customers' Yachts? or A Good Hard Look at Wall Street

Fred Schwed Jr. · 1940

The funniest book about finance, written after 1929, about advisers who are confidently wrong and the clients who pay them. It is still accurate.

wiley.com

The Little Book of Common Sense Investing (10th anniversary ed.)

John C. Bogle · 2017

The case for owning the whole market at the lowest cost, made by the man who launched the first index mutual fund for individual investors. It is the short version of this book's "So what should you do?"

wiley.com

Enough. True Measures of Money, Business, and Life (revised ed.)

John C. Bogle · 2010

Bogle's reflective book, written in the 2008 crash, on cost, speculation and knowing when you have enough.

wiley.com

Adaptive Markets: Financial Evolution at the Speed of Thought

Andrew W. Lo · 2017

Markets are efficient until fear takes over, and then they are not. Lo explains why both camps are partly right and why strategies stop working when conditions change.

press.princeton.edu

The Missing Billionaires: A Guide to Better Financial Decisions

Victor Haghani and James White · 2023

How much to invest, how much risk to take and how much to spend. More technical than the books above, but useful if you're trying to turn a portfolio into a plan for living off it.

elmwealth.com/MissingBillionaires

PEOPLE, BLOGS AND NEWSLETTERS

Read a few people regularly, and read their old pieces when markets are falling. You do not need a feed full of people agreeing with one another.

Larry Swedroe

Larry Swedroe

Research on diversification, factors, active management and the gap between a convincing story and evidence. Start with his explanations of the academic papers rather than looking for a market forecast.

larryswedroe.substack.com

Cullen Roche

Cullen Roche

Clear writing on matching money to the time you need it, which is this book's buckets idea, from someone who understands monetary plumbing.

disciplinefunds.com

Joe Wiggins, Behavioural Investment

Joe Wiggins

Why investors chase returns, mistake a good outcome for a good decision and abandon sensible plans. Short posts with a useful habit of questioning whatever the market is currently excited about.

behaviouralinvestment.com

Jason Zweig

Jason Zweig

The Wall Street Journal's Intelligent Investor columnist, on behaviour, costs and the business of selling investments. His columns from past crashes are particularly useful when the present one feels unprecedented.

jasonzweig.com

Ben Carlson, A Wealth of Common Sense

Ben Carlson

Market history and charts explained for ordinary investors. His archive is useful when a bad week starts to feel like something that has never happened before.

awealthofcommonsense.com

Cliff Asness, "Cliff's Perspective"

Cliff Asness (AQR)

Funny, combative essays from the man whose papers on international diversification and market timing this book quotes. AQR runs funds, so read the product talk accordingly.

aqr.com/Insights/Perspectives

William Bernstein

William J. Bernstein

The source of this book's shallow-risk and deep-risk idea. His short books are the best place to start, and his podcast interviews are worth hunting down.

efficientfrontier.com

Michael Batnick, The Irrelevant Investor

Michael Batnick (Ritholtz Wealth Management)

Short, honest posts on market history and investor behaviour, and the Animal Spirits podcast with Ben Carlson. His book Big Mistakes is about famous investors getting it wrong.

theirrelevantinvestor.com

Barry Ritholtz, The Big Picture and "Masters in Business"

Barry Ritholtz

Decades of blogging on markets and the business of advice, and long interviews with serious investors on Bloomberg's Masters in Business. His book How Not to Invest is about avoiding the big mistakes.

ritholtz.com

Morgan Housel

Morgan Housel (Collaborative Fund)

Short essays on money, luck, ambition and how people behave under pressure. His blog is a useful companion to The Psychology of Money.

collaborativefund.com/blog

Michael Mauboussin

Morgan Stanley Investment Management

Careful, evidence-heavy papers on skill, luck and where an investing edge really comes from. The four edges in the "expensive ways to be clever" chapter are his.

morganstanley.com

Howard Marks, Oaktree memos

Howard Marks (Oaktree Capital)

Decades of memos on market cycles and risk. The ones written during the 2000 and 2008 crashes are worth reading in a bear market. Oaktree manages money, so read the product talk accordingly.

oaktreecapital.com/insights/memos

Nick Maggiulli, Of Dollars and Data

Nick Maggiulli

Data-led, plainly written posts on saving and investing, including some of the clearest work on lump sums, SIPs and buying the dip.

ofdollarsanddata.com

Aswath Damodaran, Musings on Markets

Aswath Damodaran (NYU Stern)

The valuation professor whose data this book uses. His blog explains markets, risk premiums and valuations, including India's, with unusual honesty about what he doesn't know.

aswathdamodaran.blogspot.com

Peter L. Bernstein, an interview worth keeping

Peter L. Bernstein; interviewed by Jason Zweig

The historian of risk who wrote *Against the Gods*, and a different Bernstein from William. Start with this long interview on uncertainty, survival and diversification. This is an archive, not a current newsletter.

jasonzweig.com

Rick Ferri

Rick Ferri

Practical work on low-cost index funds and asset allocation. His books and Bogleheads podcast interviews are useful when building a portfolio has become an excuse to keep adding funds. US account and tax details need adapting.

rickferri.com

Christine Benz

Christine Benz (Morningstar)

Retirement, spending and matching a portfolio to the money you will need. Her book *How to Retire* and *The Long View* interviews also cover what makes retirement worth having. The US pension and tax rules don't carry over to India.

morningstar.com/people/christine-benz

Meir Statman

Meir Statman (Santa Clara University)

Behavioural finance that takes people's goals, fears and desire for status seriously. *Finance for Normal People* is a useful next book if you want to understand why a mathematically tidy portfolio can be so hard to live with.

scu.edu

Antti Ilmanen

Antti Ilmanen (AQR)

Research on expected returns, diversification and the risks investors get paid to bear. His books are demanding but rewarding if you're ready to go beyond historical averages. AQR manages money; its research also informs its products.

aqr.com/Search

Rob Carver

Robert Carver

Portfolio construction, position sizing and the practical problems of systematic investing. Start with Smart Portfolios; the futures books and blog are more technical, especially on costs, leverage and testing a strategy without fooling yourself.

systematicmoney.org

Gary Antonacci, Optimal Momentum

Gary Antonacci

A clear introduction to relative and absolute momentum, and how he combines them. Read it alongside this book's timing tests. A strategy's backtest still needs scrutiny of costs, taxes, trading delays and the markets it was tested in.

optimalmomentum.com

INDIAN WRITING AND PRACTICAL HELP

The principles travel. The tax rules, insurance, fund choices and household problems often do not.

Deepak Shenoy, Capitalmind

Deepak Shenoy (Capitalmind)

Sharp, data-heavy commentary on Indian markets, rates and SIP history. The SIP charts that prompted this book's look at whether SIP returns have come down are his firm's. Capitalmind manages money, so read the product talk accordingly.

capitalmind.in

Dhirendra Kumar, Value Research

Dhirendra Kumar

Indian mutual funds and personal finance explained through the decisions a saver has to make. Read the columns for the reasoning; a fund-rating table is not an investment plan.

valueresearchonline.com

Zerodha Varsity

Zerodha

The publisher's own free courses. The personal-finance and mutual-fund modules are the right next step after this book. Full disclosure, Varsity is ours.

zerodha.com/varsity

freefincal

M. Pattabiraman

Calculators and detailed work on Indian retirement planning, mutual funds and asset allocation. The methods are usually explained, so you can inspect the assumptions rather than copying a return number.

freefincal.com

PODCASTS WORTH LISTENING TO

The interviews are often long. Choose the guest or subject that interests you; there is no prize for keeping up with every episode.

Rational Reminder podcast

Benjamin Felix, Cameron Passmore, Ben Wilson

Evidence-first conversations with the academics themselves, among them Fama, French, Dimson and Bessembinder. It is the best investing podcast for people who prefer evidence to opinion.

rationalreminder.ca

The Long View

Morningstar

Conversations about retirement, spending, behaviour and building a portfolio you can live with. Some of the tax and pension detail is American; the questions about uncertainty and running out of money travel rather better.

morningstar.com/podcasts/the-long-view

Corey Hoffstein and "Flirting with Models"

Corey Hoffstein

Long, technical conversations with the people who build quantitative strategies, useful for seeing how fragile clever models are.

flirtingwithmodels.com

Meb Faber, "The Meb Faber Show"

Meb Faber (Cambria)

His 2007 trend-following paper is one this book tests. The podcast has hundreds of interviews with serious investors. Faber runs funds, so read the product talk accordingly.

mebfaber.com/podcast

Niels Kaastrup-Larsen, Top Traders Unplugged

Niels Kaastrup-Larsen and fellow hosts

Long conversations about systematic trend following, managed futures and portfolio diversification. The Systematic Investor series is a useful starting point. Many participants work in the strategies they discuss; this is a specialist view of investing.

toptradersunplugged.com

RESEARCH, ARCHIVES AND ORIGINAL DATA

For checking a claim, looking up a method or going further into the evidence. Several also publish useful free summaries for readers who do not want to work through the full paper.

The Bogle Archive (speeches, papers, op-eds)

John C. Bogle Center for Financial Literacy

Speech PDFs from 1987 to 2015. The 2001–02 and 2008–09 talks were given in the middle of bear markets.

boglecenter.net/bogle-archive

AQR Research Library

AQR Capital Management (Cliff Asness, Antti Ilmanen and colleagues)

Rigorous, readable papers on timing, trend, value and expected returns, including “Market Timing: Sin a Little”, which this book cites.

aqr.com/Insights/Research

Hendrik Bessembinder's research

Hendrik Bessembinder (Arizona State University)

Research on how stock-market gains are concentrated in a small share of companies. Useful for understanding why picking a few stocks and owning the market can produce very different results.

ideas.repec.org/e/pbe151.html

Kenneth R. French Data Library

Kenneth R. French (Dartmouth)

US factor and portfolio returns back to 1926, plus international data with shorter histories. Useful for checking research on whether an investment strategy earned more than the risks it took.

mba.tuck.dartmouth.edu

Damodaran Online, data sets

Aswath Damodaran (NYU Stern)

Annual US stock, bond and bill returns since 1928, equity risk premiums and India country risk data, updated every January. This book's long US stock/bill chart uses it.

pages.stern.nyu.edu

UBS Global Investment Returns Yearbook 2026

Elroy Dimson, Paul Marsh, Mike Staunton (for UBS)

The yearly update of Triumph of the Optimists. It covers 35 markets since 1900, India included, and the free summary is enough for most readers.

ubs.com

Shiller Data

Robert J. Shiller

Long US histories of prices, earnings, dividends and valuations. The early price observations are monthly averages, a distinction that matters when measuring old crashes.

shillerdata.com

India CAPE Data Resource

Joshy Jacob and Rajan Raju (IIM Ahmedabad)

The Sensex CAPE history published by Joshy Jacob and Rajan Raju at IIM Ahmedabad. This book uses it to compare starting valuations with later returns.

capeindia.iima.ac.in

Newfound Research blog ("Research Library")

Corey Hoffstein and colleagues

Research on trend following, portfolio construction and how rebalance dates change results. The timing-luck work is particularly useful before getting attached to a beautiful backtest.

blog.thinknewfound.com

Elm Wealth, featured insights

Victor Haghani, James White and colleagues

Short, rigorous essays on sizing bets, expected returns and why people with perfect foresight still lose money. This book uses their crystal-ball study.

elmwealth.com/category/featured-insights

Wes Gray and the Alpha Architect blog

Wesley Gray, Larry Swedroe and others

Research and paper summaries on value, momentum, factors and market efficiency. Useful for understanding why a strategy might work and why holding it can still be miserable. Alpha Architect runs investment products, so keep the research and the sales pitch in view.

alphaarchitect.com/blog

Nifty Indices (Nifty methodology and historical data)

Nifty Indices

Index methodologies and free total-return history for every Nifty index this book charts, so readers can check our numbers.

niftyindices.com

RBI Database on Indian Economy (DBIE)

Reserve Bank of India

Official interest rates, inflation, exchange rates and bond yields, the raw material for this book's debt and rupee charts.

data.rbi.org.in

SEBI Investor website

Securities and Exchange Board of India

The regulator's free investor-education site, including "SEBI Check" for verifying a registered intermediary before you send money.

investor.sebi.gov.in

AMFI (Association of Mutual Funds in India)

AMFI

Official fund NAVs, category flows and the monthly data behind this book's chart of money arriving after the run. Ignore the "Mutual Funds Sahi Hai" advertising and use the data.

amfiindia.com

BACK MATTER

How to read these charts

Where the data come from. Indian equity indices are from NSE and BSE; gold from the World Gold Council; Indian inflation from MoSPI's official CPI (2024=100, with its linked back series from 2013), chained to the Labour Bureau's CPI for industrial workers before 2011 via India Data Hub; US data from FRED; oil from FRED's Brent series; Indian valuations from the India CAPE dataset of Joshy Jacob and Rajan Raju at IIM Ahmedabad; long US annual returns from Aswath Damodaran; the Japanese market from the Nikkei 225, via FRED; Japanese bond yields from Japan's Ministry of Finance. Other new sources in this edition: NSDL (foreign portfolio flows), BSE via India Data Hub (domestic institutional flows), AMFI (mutual fund flows and launches), NSE (margin funding, market capitalisation, valuations), FBIL (Indian bond yields), the RBI (policy rates and gold prices used for checks), IMF PortWatch (Hormuz shipping), MSCI (country returns), the IMF (GDP growth), Caldara and Iacoviello (geopolitical risk index), Baker, Bloom and Davis (economic policy uncertainty, via FRED) and UCDP via Our World in Data (armed conflict and violence against civilians). Each chart names its own source.

Price versus total return. A *price* index ignores dividends; a *total return* index (TRI) assumes they were reinvested. The long Sensex, Nikkei, Nasdaq and 150-year S&P charts are price indices, which makes long waits look longer than they were for an investor who reinvested dividends. Where a chart uses a TRI, it says so.

Nominal versus real. Nominal returns are in rupees (or dollars). Real returns are after inflation. Charts that adjust for Indian inflation end at the latest available Indian CPI, September 2026. US inflation-adjusted studies end in September 2026. Both lag the daily market data.

Windows overlap. Many charts look at every rolling three-, five- or ten-year window. Neighbouring windows share most of their months, so a chart with hundreds of dots may rest on a handful of truly separate periods: the CAPE chart's 258 dots hold only a handful of separate five-year periods,

and the deep-fall bucket in the forward-returns chart is two episodes. A historical frequency is a description of the past, not the odds for your next decade.

Hindsight. Where a chart picks a crisis low, a worst window or a peak, it was picked after the fact. Nobody could have acted on it at the time.

Back-calculated indices. Some index histories begin before the index was launched. The Nifty Midcap 150 and Smallcap 250, for example, were launched in April 2016 with histories back to April 2005. Their earlier returns describe the provider's historical reconstruction, not a fund that an investor could actually have bought then. The portfolio studies are hypothetical index portfolios, not audited returns from live investment products.

US historical prices. The long US composite uses Robert Shiller's monthly-average prices through November 1927, then month-end prices from the original market export and FRED. The daily US price series begins on 30 December 1927; earlier monthly observations are excluded from daily-return studies. It is a historical composite before the modern S&P 500, and it excludes dividends.

Gaps in history. The early Sensex daily history is incomplete, including parts of 1992. Day counts and percentages describe the recorded observations, rather than a complete exchange calendar. Missing closes can hide an intervening high or low, or delay the first recorded recovery. We have not filled those gaps with invented prices.

Debt-fund categories. These are descriptive composites using the latest category labels and full-history choices between duplicate plan classes, rather than a fund universe an investor could have selected at each historical date. Three unresolved NAV scale-like events remain flagged; only issuer-proved unit changes are adjusted.

Waits and event horizons. Portfolio waits count calendar months from the old month-end high to the first month-end recovery; an unfinished wait ends at the latest observation. The war study uses calendar-month targets and the first recorded close within seven days after each target. Other daily observation counts still reflect the incomplete source calendar.

Reconstructed data. WGC/GoldHub gold observations are daily quotes rather than a uniform LBMA fixing. Four halted rupee-gold stretches are reconstructed retrospectively from dollar gold and USD/INR, with the price premium linked at both ends; those parts are estimates, not observed tradable prices. Indian CPI combines older history with MoSPI's official linked series from 2013. The Japanese bond leg and the long-history Indian T-bill and ten-year bond legs are models based on yields, not observed fund returns. The method notes record these choices.

What is left out. Unless a chart says otherwise, returns are before taxes, fund expenses, trading costs and the very real risk that you lose your job in the middle of a crash and can't keep investing. Portfolios use indices as stand-ins for funds and are rebalanced once a year unless stated.

Data cut-off. Updated on 27 October 2026, using completed observations dated on or before 26 October. NSE equity indices, the five-year G-Sec and overnight-rate indices, Sensex, USD/INR, rupee and dollar gold, Nasdaq, MSCI USA, MSCI World and active country series reach 26 October. Discontinued country indices retain their earlier endpoints. The S&P 500 ends on 23 October. Stock breadth and debt-fund NAV studies reach 26 October, with individual fund histories ending at their own last published NAV. Margin-funding disclosures end on 23 October. No 27 October market observation is included; later-retrieved revisions to earlier observations are retained.

The US ten-year Treasury yield runs to 23 October and Brent to 20 October in the retained FRED snapshot. Ten-year yields for the UK, France, Australia, Germany and Japan are OECD monthly averages to September. Monthly market studies use completed months through September where all inputs are available. Indian and US CPI-adjusted studies and the latest IIMA CAPE reading end in September. Calendar-year comparisons end in 2025; any separate 2026 bar is explicitly labelled as a year so far. Historical case studies, such as Japan (to February 2024) and the US 1966–1981, have fixed end dates.

Glossary

Bear market	A fall of 20% or more from the previous high. The cover shows drawdowns in four Nifty total return indices since April 2005.
CAGR	Compound annual growth rate: the steady yearly return that would turn the starting amount into the ending amount.
CAPE	Cyclically adjusted price-to-earnings ratio: the index price divided by ten years of inflation-adjusted average earnings. A slow gauge of how expensive the market is.
Drawdown	How far an investment sits below its highest value so far, in per cent.
Duration	How sensitive a bond is to interest rates: roughly the percentage its price falls when yields rise by one percentage point.
FPI and DII	Foreign portfolio investors, overseas funds buying Indian shares and bonds; and domestic institutional investors, Indian mutual funds, insurers, pension funds and banks.
Real return	The return after inflation: what your money can actually buy.
Rebalancing	Selling some of what has grown and buying what has lagged, to bring a portfolio back to its target mix.
Rolling window	Every period of a fixed length, such as every five-year stretch starting in each month, rather than one chosen start and end date.
SIP	Systematic investment plan: a fixed sum invested every month, usually in a mutual fund.
Total return index (TRI)	An index that assumes dividends are reinvested. A price index ignores them.
XIRR	The yearly return on money invested at different dates, such as monthly SIP instalments. The fair way to measure a SIP.

BACK MATTER

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01 Hi, how are you?

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