July 2024

Indian Capital Markets: **Transformative shifts achieved through technology and reforms**

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Acknowledgement

This report is developed by NSE Data and Analytics to assess and share the impact of the technology-led initiatives and regulations launched in the Indian Capital Market ecosystem in recent years.

National Stock Exchange of India (NSE) and NSE Clearing Limited (NCL) have given invaluable inputs. The regulators were consulted frequently while writing this report. The industry participants including brokerage houses, asset management companies, custodians, industry associations and market infrastructure institutions have also been consulted for their inputs.

McKinsey & Company has provided analytical fact-base for the report.

* The statistical data in the report is as of 31st March 2024

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Executive Summary

The Indian growth story has dominated news headlines and economic forecasts over the last few years. All eyes are fixed on the country's performance at the global stage as it prepares to claim two key milestones in the coming decade: emerging as the world's third largest economy by 2027 and reaching a GDP of USD 10 trillion by 2033.[1] Several macro trends serve as tailwinds, from a widening working population to favourable supply chain environment, but India's capital markets stand out as a critical growth lever, encouraging economic activity and attracting investment domestically and from across the world.

In search of higher returns, Indian investors are increasingly choosing capital markets, often over bank deposits. Interest from retail investors is particularly high, evidenced by a sharp 20% per annum growth in demat accounts since FY13, to the current 151 million.[2] India's depth of investor coverage has also increased substantially - today, only 31 pin codes out of over 19000 do not have capital market investors in India.[3] There are several factors driving this shift.

Primary market: IPO listings grew six times to 209 in FY24 from 33 in FY13. SME listings jumped six times too in the same period. In fact, India was ranked 1st globally, in terms of number of IPO listings and 5th in terms of capital raised through IPOs in FY24.[4]

1 Oxford Economics statistics as of 7th February 2024
2 NSE Market Pulse report, NSDL and CDSL statistics; data as of 31st March 2024
3 NSE Market Pulse January 2024
4 NSE, World Federation of Exchanges statistics

Secondary markets: Nifty 50 has outperformed leading global indices over recent years and India is the 4th largest capital market by market capitalization. Domestic institutional investors have played a significant role in driving optimism by investing aggressively in Indian equities; with their increasing share of holding in listed companies. Further, Indian exchange continues to be largest derivatives exchange in the world, fifth year in a row, by number of contracts traded.[5]

Asset Management: India's asset management industry, including Mutual Funds (MF), Portfolio Management Services (PMS) and Alternative Investment Funds (AIF), has seen a growth of 19% in the last decade. Specifically in the MF industry, India is seeing rapid penetration with more participation from tier-2 and tier-3 cities and overall growth in Systematic Investment Plans (SIP).[6]

While currently the participation of Indian households in financial assets such as direct equities and mutual funds remains comparatively low to leading global markets, this could grow in the coming decade with an increasing investor interest in these areas. Cash and deposits' share of household financial assets will thus likely see a drop (52% in FY24 vs 40–41% expected in FY33) and the combined share of equities and MFs is expected to rise from the current 16% to 23-25% in FY33.[7]

The Securities and Exchange Board (SEBI), India's capital markets regulator, recognizes the growing prominence of capital markets in the investor landscape. It has been developing key technology-led initiatives to further strengthen the markets. SEBI envisions growing and enriching the markets across three broad areas:[8]

- **Investor enablement:** Empowering investors to make informed decisions and promoting active participation in the markets.
- **Market development and growth:** Developing and shaping capital markets by enhancing ease, transparency, and innovation.
- **Risk management and governance:** Ensuring investors and issuers stay protected to maintain integrity and stability of the capital markets.

Over the last few years, several technological innovations and reforms have been successfully developed and implemented, offering investors benefits and protection in equal measure. Some of these are global-firsts, putting Indian capital markets on the map:

- Move to T+1 settlement, with optionality for T+0, allows Indian investors to settle transactions within relatively shorter duration than in other countries.
- Application Supported by Blocked Amount (ASBA) for secondary trading, already well-established in primary markets, makes sure investors do not lose out interest income while subscribing to an issue or trading.
- Segregated account level (fully ID markets) monitoring available with stock exchanges and clearing corporations, protects investors from misuse of their funds/collateral.
- Two-way portability among clearing corporations (through SaaS module), ensures business continuity.
- Investor Risk Reduction Access (IRRA) platform, in cases of outages/ technical glitches at the brokers' end, gives investors an opportunity to square off open/pending positions directly with the exchange.

5 NSE, Thomson DataStream, World Federation of Exchanges statistics
6 AMFI statistics
7 NSE analysis
8 SEBI Annual Report 2022–2023

The success of these and other reforms covered in this report cannot be attributed to the regulator alone. Playing an equally critical role are market infrastructure institutions (MIIs) including the stock exchanges, clearing corporations, depositories as well as market participants i.e., brokers, asset management companies, custodians, and several others, that have adopted and implemented changes with speed and technological agility.

To further assess the impact of technological innovations and reforms, a retail investor survey was conducted, recording responses from 1250 participants across 12 Indian cities. It captures feedback from three investor archetypes—the active investor, the inactive investor and mutual funds investors, offering insight into how recent changes in the market have impacted them directly. Key highlights are presented below:

Active investors

- Ease of opening demat accounts via eKYC was the most impactful enabler followed by faster (T+1) settlement
- About 50% believe easy access to relevant market data and insights in one place will enable them to continue or increase trading

Inactive investors

- Investors stopped trading due to lack of advice and expertise
- This group prioritized having access to reliable stock market advisors, access to market data and transparent insights

Mutual Fund investors

- Mandatory account payments, one-time KYC and low value SIPs were considered most helpful
- Top changes desired include faster purchase and redemption as well as introduction of new types of MF schemes

When benchmarked against the US, the UK and Singapore, India stands out in investor enablement and risk management. For example, its exchanges host the highest volume of transactions/trades globally[9] and do so at one of the fastest settlement times (T+1 days). The visibility and risk protection offered, with market infrastructure institutions (MIIs) at an individual account level, are also unique to the country. Meanwhile, India's corporate governance is ranked 13th in the world in terms of protecting minority shareholders as per the World Bank's Ease of Doing Business rankings, surpassing developed nations such as the United States, Korea, Australia and EU members.[10] The rankings are based on several corporate governance factors such as disclosures, director liability, shareholder rights, ownership and control, corporate transparency, etc.[11]

9 World Federation of Exchanges
10 The World Bank's Ease of Doing Business 2020 rankings (latest available rankings)
11 The Ease of Doing Business (EoDB) index presents data for 190 economies and aggregates information from 10 areas of business regulation: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency

At the core of these technology-driven innovations and reforms is the vision to provide investors with access and control over their finances, ensuring they truly benefit from convenient processes. A recent NSE analysis of key market reforms reveals that 100% adoption and implementation of certain reforms could lead to significant investor benefit in terms of freed up capital and superior experience. The analysis shows:

- Key changes including ASBA for secondary market, T+1 settlement, shorter MF redemption, faster IPO listing could potentially lead to about INR 3,900 crore in annual benefits for investors.
- Reforms around eKYC, availability of low value SIPs, enhanced transparency in IPOs, pledging/repledging have enabled easier access to the market, along with building trust in investors, leading to higher investor participation as witnessed by rise in demat accounts, MF folios, trading volumes, etc.
- Reforms around end account visibility at MIIs, interoperability and two-way portability among clearing corporations, IRRA, and others, have helped mitigate counter party risks, operational risks and technology and cyber risks in the market.[12]

Looking ahead, while Indian capital markets are experiencing a substantial growth, there exist opportunities for further development. Leveraging investor feedback and global benchmarks from peers, the final section of the report delves into future opportunities, offering insights on how the markets can enhance operations to reach their full potential. These include:

- Enhancing market access, such as readiness for 24/7 trading and creating a unified platform for market insights and information.
- Broadening capital markets with new assets and deepening existing ones, e.g., developing REITs, InvITs, and debt markets, and fractionalizing assets.
- Ensuring market integrity by combating misinformation e.g., through frameworks for financial influencers and establishing a suitability framework requiring investment firms to assess investors
- Modernizing market infrastructure with advanced cybersecurity measures, compliance with the DPDP Act, and clear guidelines for AI usage.

With this report, the NSE endeavors to digs deeper into the most significant reforms and technological innovations in the Indian capital markets and assess their impact on the average investor in the country. By doing so, it aims to highlight the current strengths of the ecosystem that benefit and protect India's investors, while also identifying future actions to increase participation and develop these markets further.

[12] NSE analysis


992 +6.39%
397 +2.14%
183 +5.10%
102 +7.51%
397 +2.14%
206 +4.07%
102 +7.51%
56 +1.13%
56 +1.13%

01

India rising – macroeconomic and capital market growth

India has emerged as a bright spot in an otherwise tense global economic and geopolitical environment over the last few years. Its journey from the 10th largest economy in 2010 to the 5th demonstrates[13] its dynamism and resilience. The country's growth story is anchored by macro trends such as a younger workforce, widening consumer class, growing focus on infrastructure, burgeoning digital economy and a favorable position in exports and global supply chains. However, robust capital markets have and would continue to be crucial in achieving sustained growth.

There has been a substantial increase in household savings directed towards these markets, accompanied by improved accessibility and penetration in tier-2 and tier-3 cities. Technological interventions have also played an important role, led in particular by the market regulator (SEBI - Securities and Exchange Board of India). As India progresses on the world stage, its capital markets continue to remain an important and watched area, responsible for driving overall economic development.

[13] Oxford Economics statistics as of 7th February 2024

Macro trends influencing growth

India could emerge as the 3rd largest economy in the world by CY27, leaping ahead of Germany and Japan (Exhibit 1),[14] with real and nominal GDP expected to grow at an average of 6.5% and 12.1% respectively. The country's USD 3.6 trillion economy today[15] is estimated to cross USD 10 trillion by CY33.

[14] Oxford Economics statistics as of 7th February 2024
[15] Nominal GDP

Exhibit 1

India's growing nominal GDP ranking, US$

Rank	CY10	CY15	CY20	CY23	CY27 (India becomes the 3rd largest economy)	CY33 (India's GDP crosses the $10 Tn mark)	GDP CY33 ($ Tn)
1	US	US	US	US	US	US	39.4
2	CH	CH	CH	CH	CH	CH	36.8
3	JP	JP	JP	GR	IN	IN	10.0
4	GR	GR	GR	JP	GR	GR	6.9
5	FR	UK	UK	IN	JP	JP	6.2
6	UK	FR	FR	UK	UK	UK	5.3
7	BR	IN	IN	FR	FR	FR	4.8
8	IT	IT	IT	IT	CN	CN	3.6
9	CN	BR	CN	BR	IT	AU	3.4
10	IN	CN	SK	CN	AU	IT	3.2

Tailwinds
Factors augmenting economic growth

- Rising working age population, and growing consuming class
- Increased government expenditure on physical infrastructure
- Rapidly growing digital economy
- Potential to capture shifts in global supply chains
- Strong position in service exports
- Deepening of capital markets

Headwinds
Factors that could impact economic growth

- Geopolitical uncertainty along with potential rise in 'protectionism' globally
- Weakening of Indian rupee currency with respect to USD
- Increase in inflationary trends
- Potential uncertainty in policy making (i.e., risk of change in priorities with change in political environment)

Source: Oxford Economics statistics as of 7th February 2024

This growth is supported by several tailwinds:

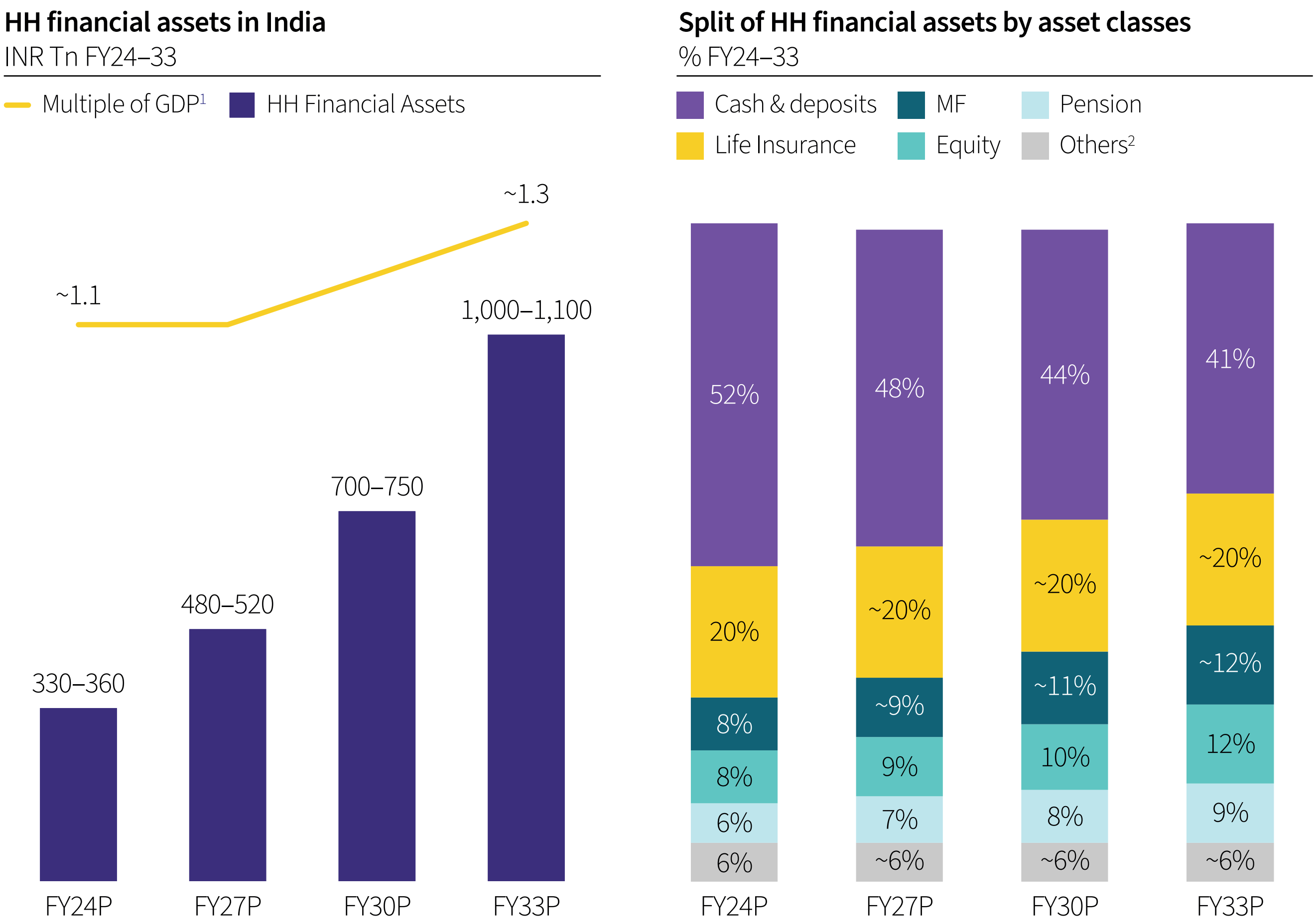
- **Rising working age population and widening consumer class:** While the rest of the world ages, India is driving the global talent engine by being home to nearly 20% of the world's total working population for the next two decades. Leveraging this strength, it is aims to become a global manufacturing and services hub. Growing working population is also widening the consumer class, evidenced by a projected growth in nominal per capita income to USD 5,000 by CY30 from USD 2,500[16] in CY23.
- **Increased government spend on physical infrastructure:** In the interim union budget FY25, India stated its outlay for infrastructure to be 3.4% of GDP, a 11% increase from the previous year. Continued investment in infrastructure is seen across sectors such as energy, roads, railway, urban, rural, and digital, driving economic growth, enhancing standard of life, and fostering overall development. Infrastructure initiatives are a major undertaking, for example, the National Infrastructure pipeline (NIP) is the umbrella initiative covering nearly 9,600 projects in 54 sub-sectors, with an expected outlay of USD 2 trillion (FY19-25). Other key projects in the pipeline include Gati Shakti to improve connectivity, Sagarmala Project for port development and Bharatmala Pariyojana Program for highways.[17]
- **Rapidly growing digital economy:** Digital adoption by billions of individuals and businesses, particularly during and after the COVID-19 pandemic, has helped promote financial and social inclusion and positioned the country for the internet age. This has been notably driven by the 'India Stack' – a series open APIs and digital public assets (e.g., UPI – Unified Payments Interface) that aim to unlock the economic primitives of identity, data and payments at population scale. Engagement with the India stack has been significant with nearly 67 billion digital identity verifications to date, INR 14 trillion worth monthly real-time mobile payments, about 97% of the country's population recording digital biometrics and 800–900 million smartphone users.[18]
- **Well-positioned to capture global supply chain shifts:** Backed by supportive government incentives such as the production-linked incentive schemes (PLIs) with a total outlay of about USD 25 billion[19], India could capture the shift in global supply chains, particularly in cases where corporates are looking for alternative manufacturing hubs to China.[20]
- **Strong position in service exports:** India's share in global service exports rose from about 1% in 2000 to about 5% in 2023 driven notably by IT service exports (12% growth per annum in the past decade[21]). This trend in IT is expected to continue to grow in coming decades, backed by India's expertise in the area and adoption of new technologies such as artificial intelligence, cloud, etc.

16 Oxford Economics statistics as of 7th February 2024
17 Interim budget 2024–2025 released on 1st February 2024, National Infrastructure Pipeline website
18 IndiaStack website, NPCI, Sahamati database, UIDAI statistics
19 Invest India statistics as of October 2023
20 McKinsey Global Institute statistics
21 Oxford Economics statistics as of 7th February 2024

- **Deepening capital markets:** As India moves towards becoming a USD 10 trillion economy in 2033, a higher share of financial assets is expected to move to the capital markets. Today, direct equity and mutual funds account for 16% of the household financial assets, this number could increase to 24% by FY33; taking share away from cash and deposits currently at 52% and expected to go down to 41% by FY33[22] (Exhibit 2).

Exhibit 2

India expected to become USD10 Tn economy in 2033; growth in household savings with increase in share of equity and MFs expected



[1] Nominal GDP
[2] Includes debt securities
Source: NSE analysis, RBI, MOSPI statistics

These tailwinds are also tempered by a few headwinds including geopolitical uncertainty along with potential rise of 'protectionism' globally; weakening of the Indian rupee against the US dollar; inflationary trends increasing raw material prices; potential uncertainty in policy making (i.e., risk of changes in priorities with changes in political environment).

[22] NSE analysis, RBI, MOSPI statistics

Ascendance of capital markets

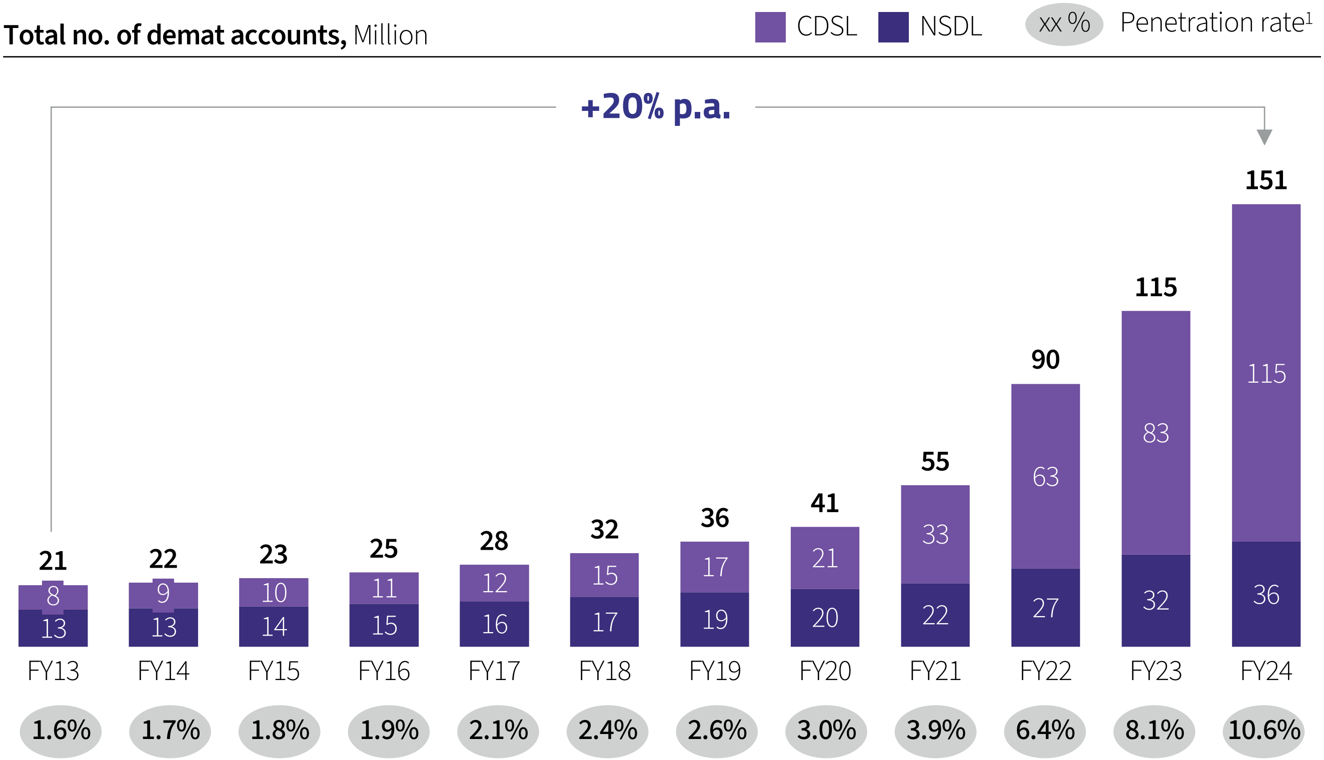
As investors increasingly pursue higher returns and expand their knowledge of investment avenues, the appeal of bank deposits is dwindling, while interest in the capital markets rises. There are several factors that attract investors. Technological advancements have made it easier for individual investors to access the capital markets. Further, with inflation often eroding purchasing power, capital markets have emerged as the preferred choice to grow wealth sustainably.

India's resilience in capital markets is reflected through several new IPO (Initial Public Offering) listings, strong and sustained equities trading, a leading position in equity derivatives trading and launch of new products. As of 31st March 2024, the country recorded 151 million demat accounts, a sharp 20% per annum growth since FY13; with a substantial jump during and after the COVID-19 pandemic (Exhibit 3).[23] India's unique PAN number demat accounts stood at 92 million as of 31st March 2024. India's depth of investor coverage has also increased — today, only 31 out of over 19000 pin codes do not record capital market investors.[24]

[23] NSDL and CDSL statistics
[24] NSE Market Pulse May 2024

Exhibit 3

Growth in demat accounts and unique registered PAN numbers

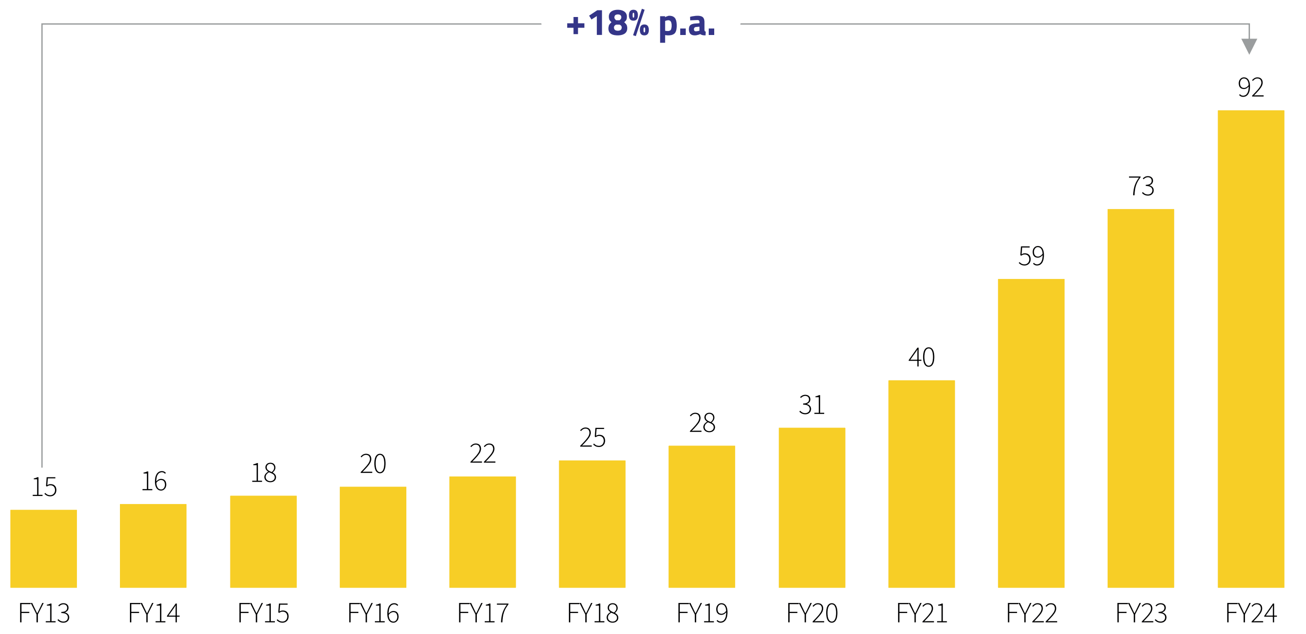


[1] Penetration rate calculated as demat accounts in March of given year / total population of India in December of previous year

Note: Data as of last day of the period (e.g., 31st March 2024 for FY24)
Source: NSDL and CDSL statistics, IMF statistics

Continuation

Total no. of unique registered PAN numbers, Million



Source: NSE statistics

Primary markets: IPO

India's IPO market has grown considerably over the last decade with listings growing more than six times to 209 in FY24 from 33 in FY13. This jump is reflective of several trends in the market. For one, it underscores India's economic growth on the back of rising investor confidence in the country's businesses. Next, the number of companies ready to go public suggests a surge in entrepreneurial ventures across multiple sectors. In fact, SME or Small and Midsized Enterprises saw a significant uptick in the same period with number of listings jumping five times and capital raised jumping nearly 10 times. Third, it highlights the right level of appetite among investors e.g., in FY23, India saw its biggest IPO ever in the form of Life Insurance Corporation of India (LIC) with a listing size of INR 210 billion. Finally, the current growing state of the IPO market indicates the success of multiple reforms and regulations aimed at simplifying the listing process, increasing activity in the primary capital markets.

India's IPO market is taking center stage even at the global level. In 2024, the country was ranked 1st in terms of number of IPO listings and 5th in capital raised globally (Exhibit 4). It has also witnessed a surge in public issuances of debt securities with number of issues growing to 45 in FY24 from 21 in FY16, driven by a rising retail investor base that seeks alternatives to bank deposits and to add fixed income products to their portfolios.[25]

[25] NSE and World Federation of Exchanges statistics

Exhibit 4

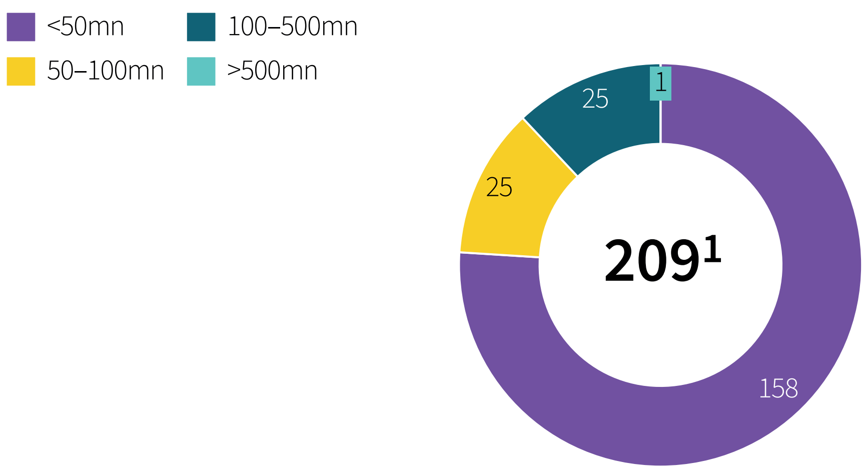
India ranks No. 1 and No. 5 in terms of IPO issuances and capital raised

IPO issuances

# of IPOs issued	FY24	FY19–FY24 CAGR (%)
National Stock Exchange of India	209[1]	46%
Shenzhen Stock Exchange	121	20%
Shanghai Stock Exchange	91	12%
Japan Exchange	91	-1%
Nasdaq - US	90	-10%
Korea Exchange	74	-1%
Indonesia Stock Exchange	70	3%
Hong Kong Exchanges & Clearing	63	-19%
Borsa Istanbul	54	78%
Tadawul	39	37%

Capital raised through IPOs, US$ Bn	FY24	FY19–FY24 CAGR (%)
Shanghai Stock Exchange	25	17%
Shenzhen Stock Exchange	17	20%
Nasdaq - US	13	-12%
New York Stock Exchange	11	-10%
National Stock Exchange of India	8[1]	49%
Hong Kong Exchanges & Clearing	6	-31%
Japan Exchange	4	-31%
Abu Dhabi Securities Exchange	4	121%[2]
Tadawul	4	41%
Borsa Istanbul	3	43%

Number of companies split by amount raised through IPO on NSE, FY2024



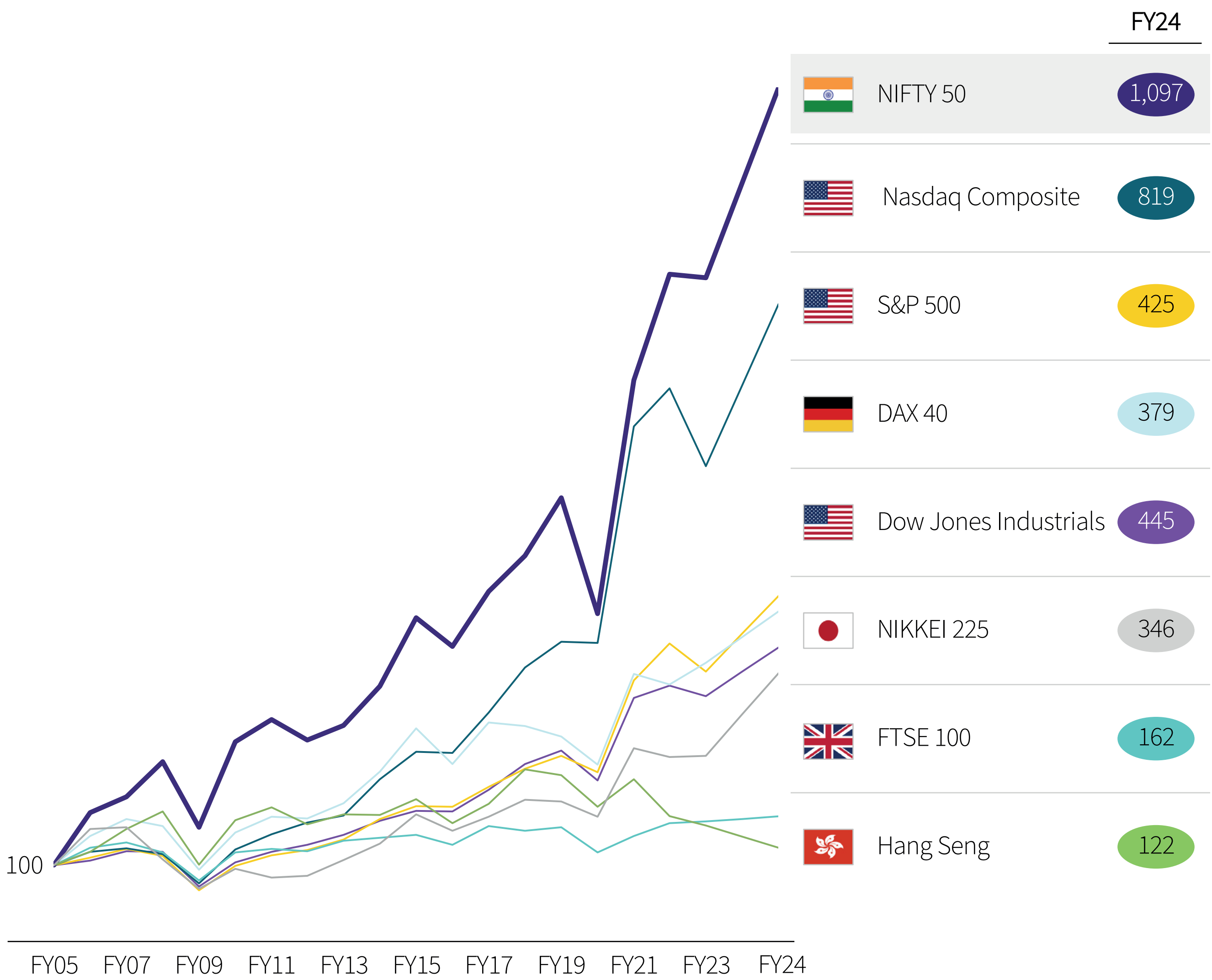
[1] Excludes non-convertible debenture initial issues
[2] 2021-2023 CAGR considered
Note: Constant exchange rate of 82.601 INR/USD used to avoid effect of currency fluctuations
Source: NSE, World Federation of Exchanges statistics

Secondary markets: Cash

In an otherwise slow global environment, NIFTY 50 has strongly outperformed several global indices (Exhibit 5).

Exhibit 5

NIFTY 50 strong performance vs global indices



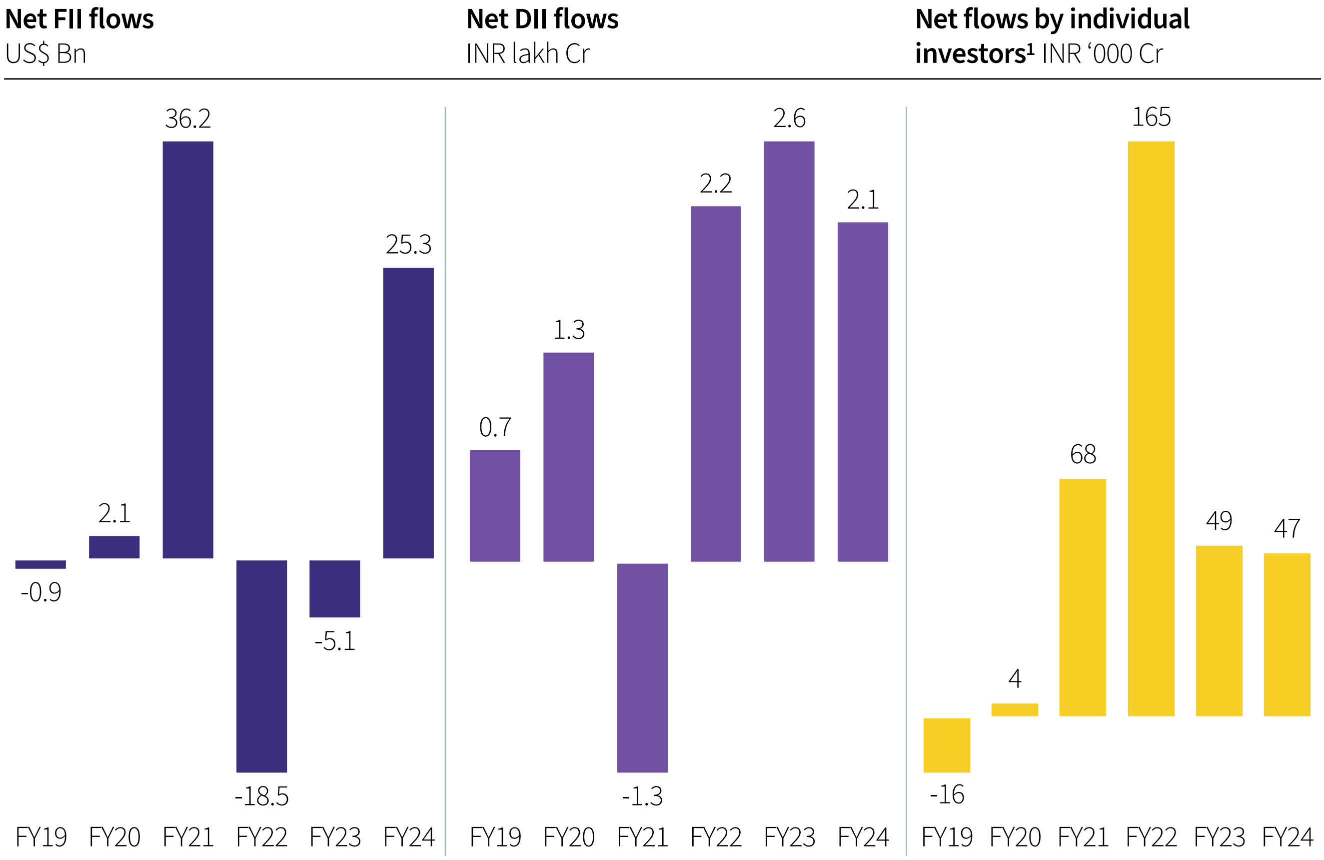
Note: 2005 values rebased to 100. Data in local currency as of 31st March of each year

Source: Thomson DataStream

This strong equity performance was not dependent on international inflows but driven by solid domestic investor participation[26] (Exhibit 6).

Exhibit 6

Domestic investors play significant role in net inflow to equities



[1] NSE's CM segment only (Secondary market)

Source: NSE Pulse report May 2024

As a result of the substantial surge in demat accounts, heightened IPO activity, and robust market returns, Indian exchange currently ranks 6th globally in total market capitalization of listed equities, trailing[27] major exchanges like the NYSE, NASDAQ, and Euronext. In terms of countries, India is the 4th largest by market capitalization.

The NSE stands out as the 3rd largest exchange globally in terms of number of cash equities trades, surpassing both the NASDAQ and NYSE (Exhibit 7).

[26] NSE Pulse Report May 2024 and EIU data

[27] World Federation of Exchanges statistics

Exhibit 7

India's leading position in cash equities

Cash equities market capitalization rankings, FY24

Rank	Exchange	Market capitalization (US$ Bn)
1	New York Stock Exchange	**28,416**
2	Nasdaq - US	**25,430**
3	Euronext	**7,223**
4	Japan Exchange Group	**6,660**
5	Shanghai Stock Exchange	**6,552**
6	National Stock Exchange of India	**4,610**
7	Shenzhen Stock Exchange	**4,099**
8	Hong Kong Exchanges and Clearing	**3,870**
9	London Stock Exchange	**3,423**[1]
10	TMX Group	**3,210**

Country wise, India is the **4th largest** by market capitalization after the US, China and Japan

Cash equities ranking # of trades, FY24

Rank	Exchange	# transactions (Bn)
1	Shenzhen Stock Exchange	**11.1**
2	Shanghai Stock Exchange	**8.0**
3	National Stock Exchange of India	**6.8**
4	Korea Exchange	**4.9**
5	Nasdaq - US	**3.9**
6	New York Stock Exchange	**3.0**
7	Cboe Global Markets	**3.0**
8	Borsa Istanbul	**1.8**
9	Japan Exchange Group	**1.1**
10	B3 - Brasil Bolsa Balcão	**0.6**

Cash equities ranking traded value, FY24

Rank	Exchange	Traded value (US$ Bn)
1	New York Stock Exchange	**27,224**
2	Nasdaq - US	**24,916**
3	Shenzhen Stock Exchange	**16,898**
4	Cboe Global Markets	**15,569**
5	Shanghai Stock Exchange	**12,574**
6	Japan Exchange Group	**6,954**
7	Korea Exchange	**3,754**
8	National Stock Exchange of India	**2,401**
9	Taiwan Stock Exchange	**2,270**
10	Euronext	**2,204**

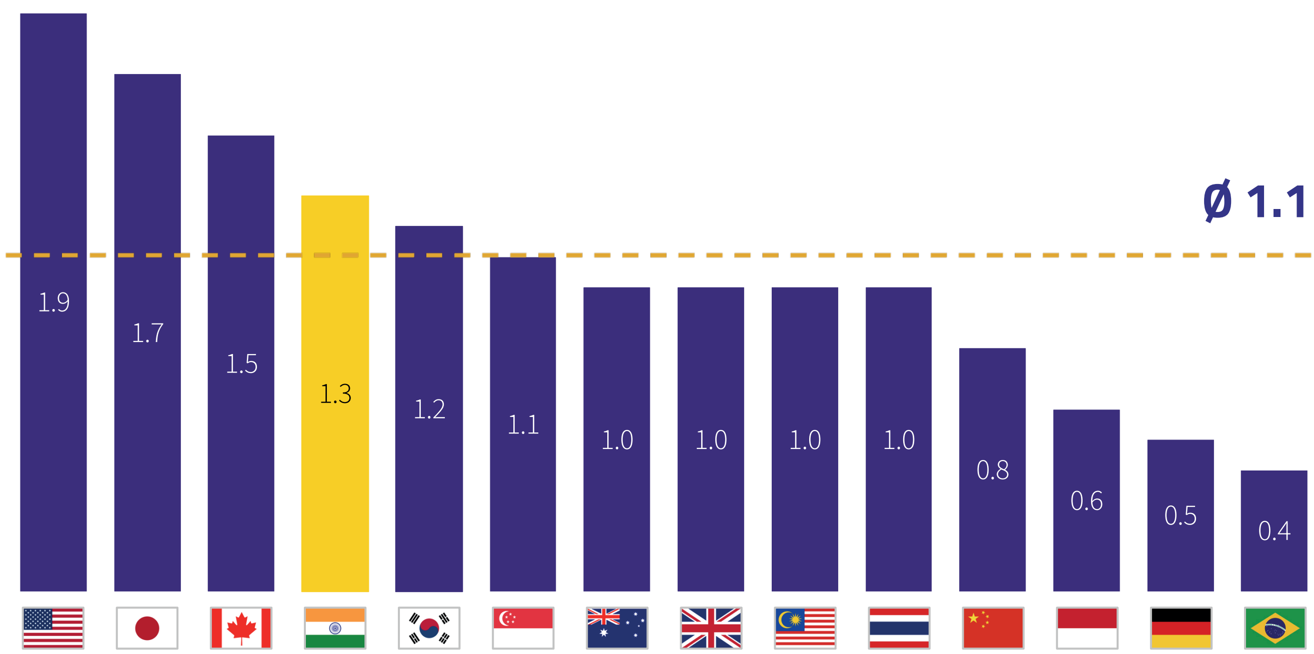
[1] As of September 2023
Source: World Federation of Exchanges statistics

Further, India is above the global average in terms of market capitalization penetration, touching a 1.3x multiple, outperforming other emerging market equities due to its promising growth, as substantiated by the rise of its weight in the MSCI Emerging Market Index[28] (Exhibit 8).

Exhibit 8

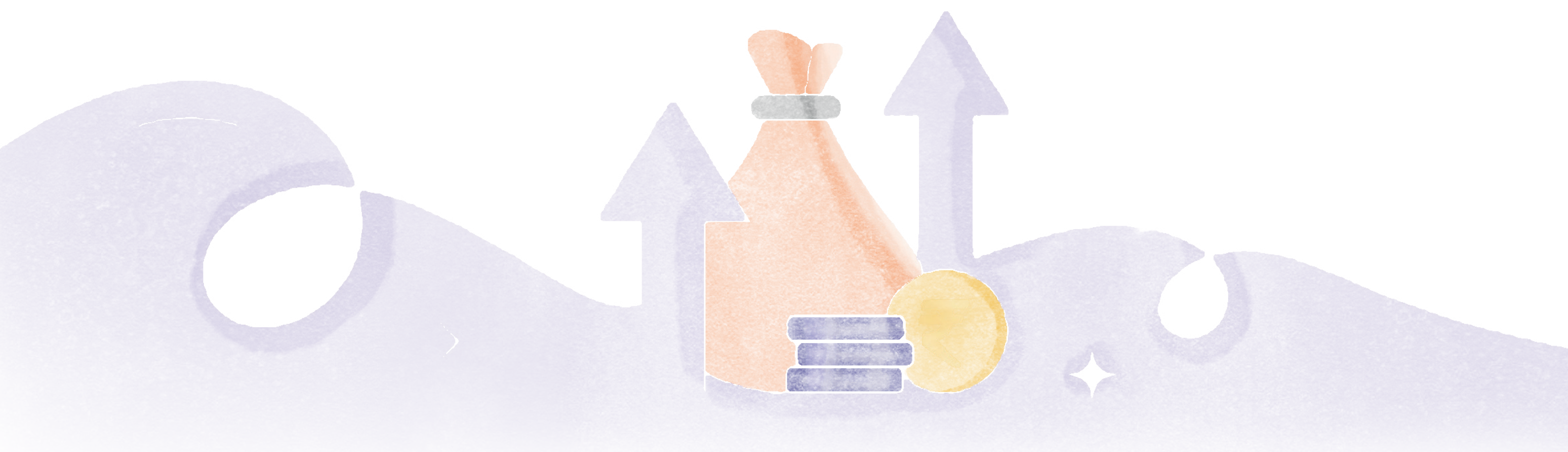
India vs Rest of World: Market Cap / GDP

Market cap to GDP[1] (Multiple, FY24)



[1] Market cap as of 31st March 2024; GDP for FY 2024. Market capitalization of September 2023 considered for UK
Source: World Federation of Exchanges, Oxford Economics and MOSPI statistics

[28] The Economic Times - MSCI index rejig: India's weightage climbs to record high on MSCI Global Standard index - dated 13th February 2024



Secondary market: Derivatives

India's growth story in derivatives is unique. Today, it is the largest equities F&O (futures and options) market in the world by both number and contract value (Exhibit 9). Driving this growth are several product and market changes, be it facilitating ease of access to the market through digital applications or introducing weekly options. Further, rapid digital adoption during the COVID-19 pandemic saw investors readily embracing algorithm trading, further spurring activity and volumes.

F&O trading in India encompasses single stock futures, index futures, single stock options, and index options. The bulk of trading activity occurs in index options, accounting for approximately 98% of the market.[29]

[29] World Federation of Exchanges statistics and NSE data

Exhibit 9

India ranks No. 1 in equities derivatives by contracts traded and value

Equity derivatives[1] ranking, # of contracts traded, FY24

Rank	Exchange	# transactions (Bn)
1	National Stock Exchange of India	95.2
2	B3 - Brasil Bolsa Balcão	7.1
3	Cboe Global Markets	2.4
4	Borsa Istanbul	1.9
5	Korea Exchange	1.9
6	Nasdaq - US	1.8
7	CME Group	1.6
8	New York Stock Exchange	1.1
9	Deutsche Boerse AG	1.1
10	MIAX Exchange Group	0.9

Equity derivatives[1] ranking, traded value, FY24

Rank	Exchange	Value traded (US$ Tn)
1	National Stock Exchange of India	963
2	CME Group	267
3	Korea Exchange	53
4	Deutsche Boerse AG	41
5	B3 - Brasil Bolsa Balcão	18
6	Japan Exchange Group	15
7	MIAX Exchange Group	14
8	ICE Futures Europe	12
9	China Financial Futures Exchange	12
10	Taiwan Futures Exchange	11

[1] Includes single stock options, single stock futures, stocked index options and stock index futures

Source: World Federation of Exchanges statistics

Asset management

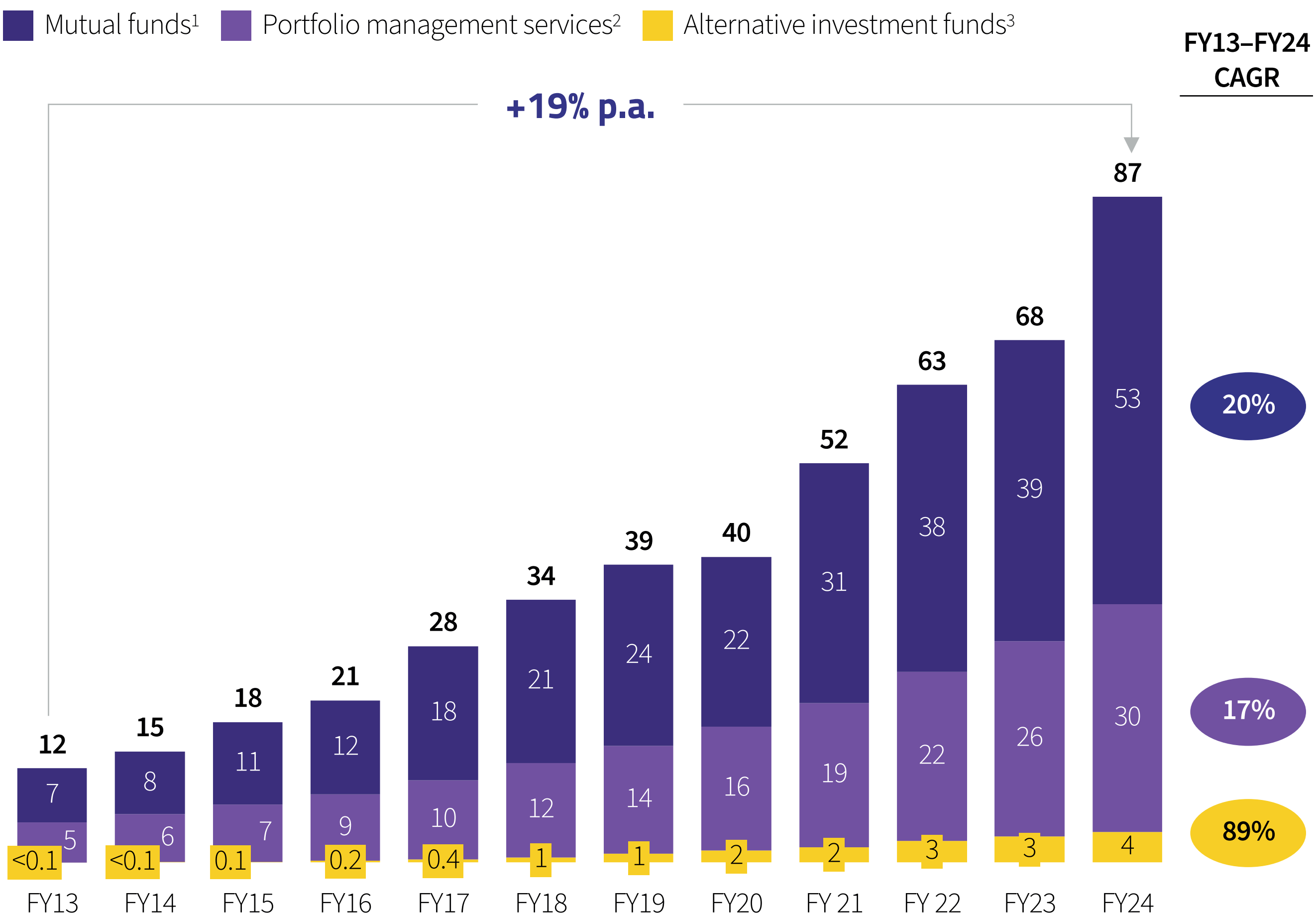
In India, the asset management landscape includes Mutual Funds (MF), Portfolio Management Services (PMS), and Alternate Investment Funds (AIF). These asset classes have witnessed substantial growth, collectively growing at about 19% per annum since FY13. Mutual fund penetration is growing in India with a gradual increase in share coming from tier 2/3 cities. AIFs, which were first introduced more than a decade ago with a low base, have grown the fastest[30] (Exhibit 10).

[30] AMFI statistics

Exhibit 10

Strong growth in overall asset management industry

Asset management AUM in India, INR Tn (as of end of period)



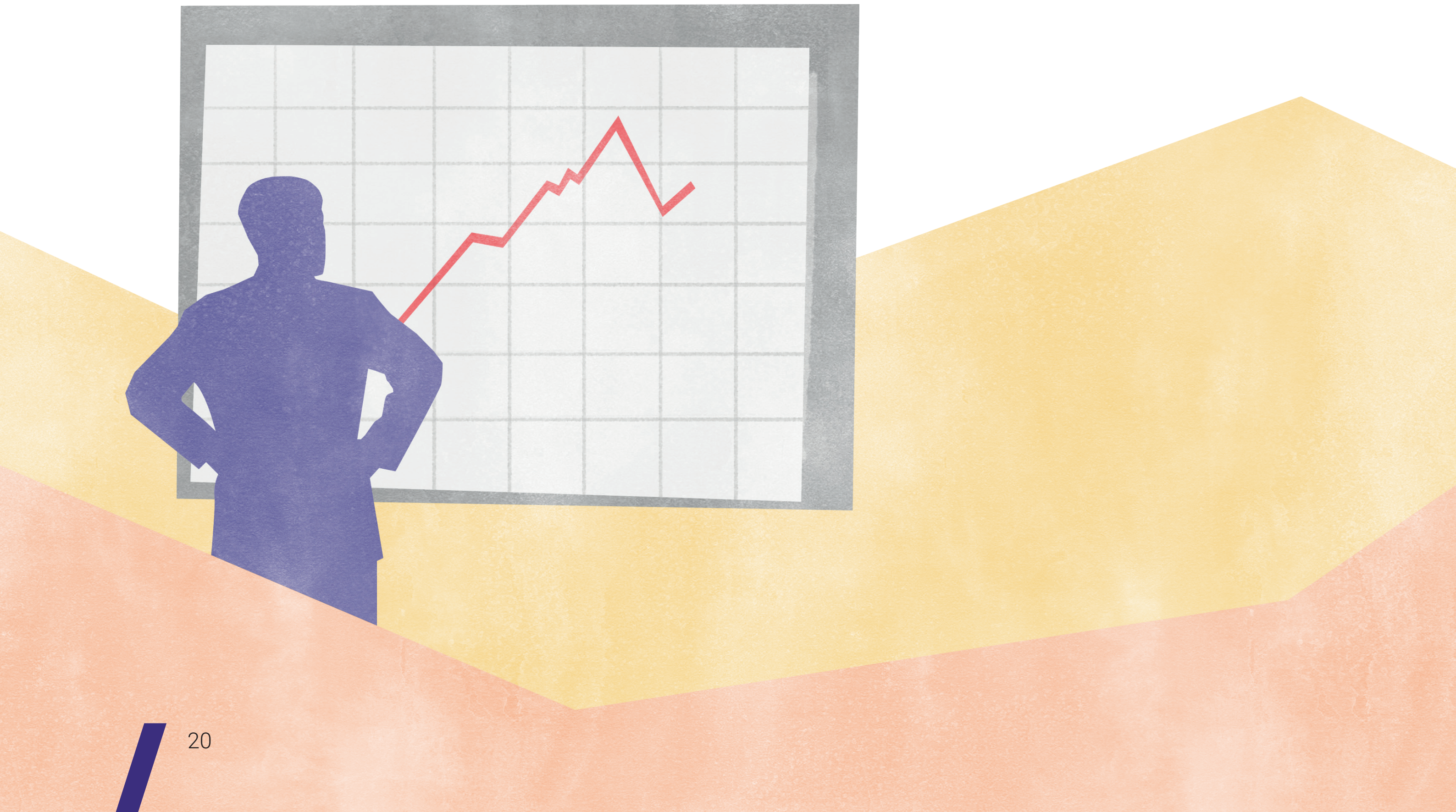
¹ Includes equity MF, debt MF, liquid MF, ETFs and FoFs
² Includes discretionary, non-discretionary and EPFO assets; as of February 2024 for FY24
³ AIF refers to cumulative investments made; as of December 2023 considered for FY24

Note: Data as of last day of the period (e.g., 31st March 2024 for FY24)

Source: AMFI and SEBI statistics

Key highlights from the growing mutual fund industry in India include:

- **Rising share of equity schemes, ETFs (Exchange Traded Funds):** Equity MF schemes AUM share rapidly rose from about 27% in March 2013 to 62% in March 2024. ETF and FoF share has also risen from about 2% to 13% in same period (Exhibit 11).
- **Fast growing SIP book:** India has witnessed one of the fastest growing SIP (Systematic Investment Plan) book globally, recording about 33% CAGR jump in SIP accounts to 8.4 crore in FY24 compared to 1.5 crore in FY18. Contribution of retail SIPs in total retail AUM rose from 17% to 32% since 2018 (Exhibit 13).
- **Rising penetration of mutual funds in tier 2/3 cities:** In MFs, share of top 5 (metro) cities in MF AUM declined from 63% in March 2018 to 53% in March 2024. In the same period, share of tier 3 cities grew from 8% to 19%.
- **Growth in passive MF schemes:** Predominantly concentrated with institutional investors, these schemes saw an increase in AUM share from 7% in March 2020 to 17% in March 2024.
- **Increased mass retail participation:** While the MF market has been fairly concentrated with HNIs or affluent investors (55–60% on average), this share has seen a consistent decline over last four years driven by the rise in mass retail segment participation after COVID-19 pandemic. The non-HNI retail segment share is expected to continue increasing going forward, on the back of rapid rise in mass retail participation in the MF market.

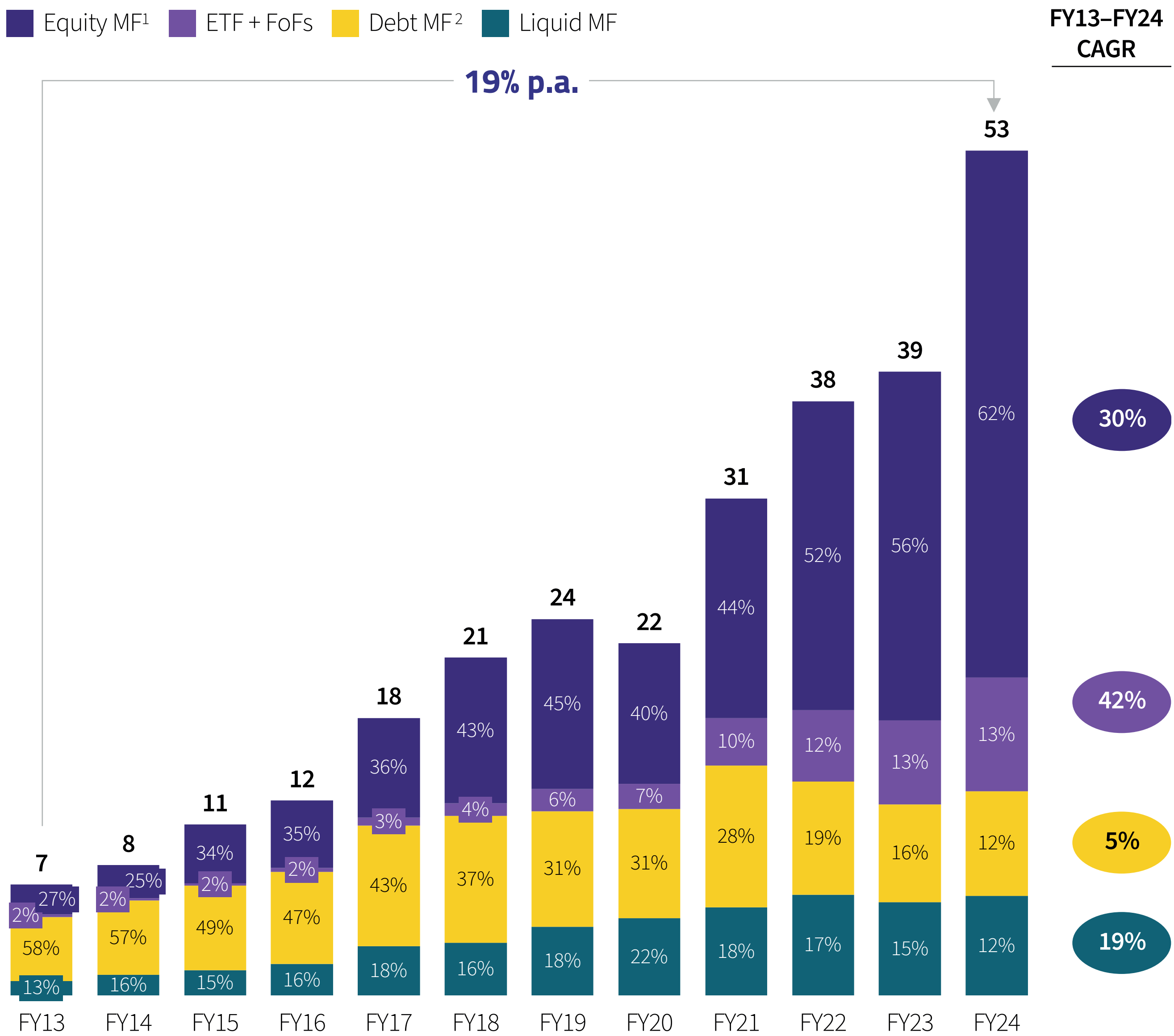


From emerging as the 3rd largest economy by CY27, to bigger and stronger IPOs to an expanding demat account user base, there are several favorable trends supporting India's growth in the coming decade. Since capital markets play such a critical role in this growth journey, market regulators, the government and industry stakeholders are collaborating to build superior investor experience. Several strategic reforms and technological advancements are being considered (many already rolled out) to cultivate investor support. In the next chapter, the report delves deeper into these initiatives as well as their impact and implications.

Exhibit 11

Equity MF schemes, ETF and FoFs have seen significant rise in AUM share while debt MF schemes continue to lose share

MF AUM in India, INR Tn (as of end of period)

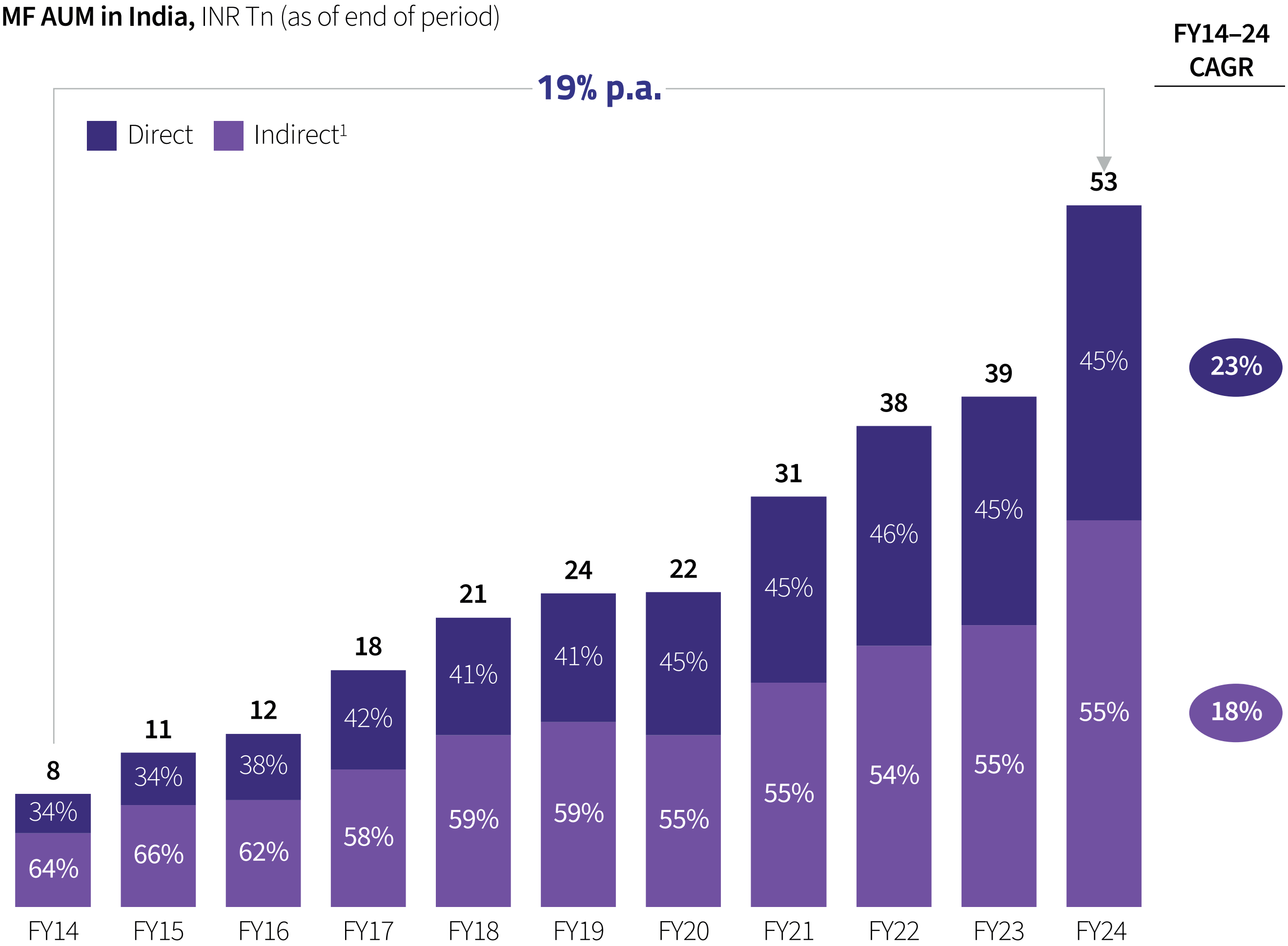


[1] Includes equity MF, balanced MF, hybrid funds, index funds and solution funds
[2] Includes Gilt funds and debt-oriented mutual funds
Source: AMFI statistics

Exhibit 12

MF investments through direct plan have been growing faster compared to the indirect channel

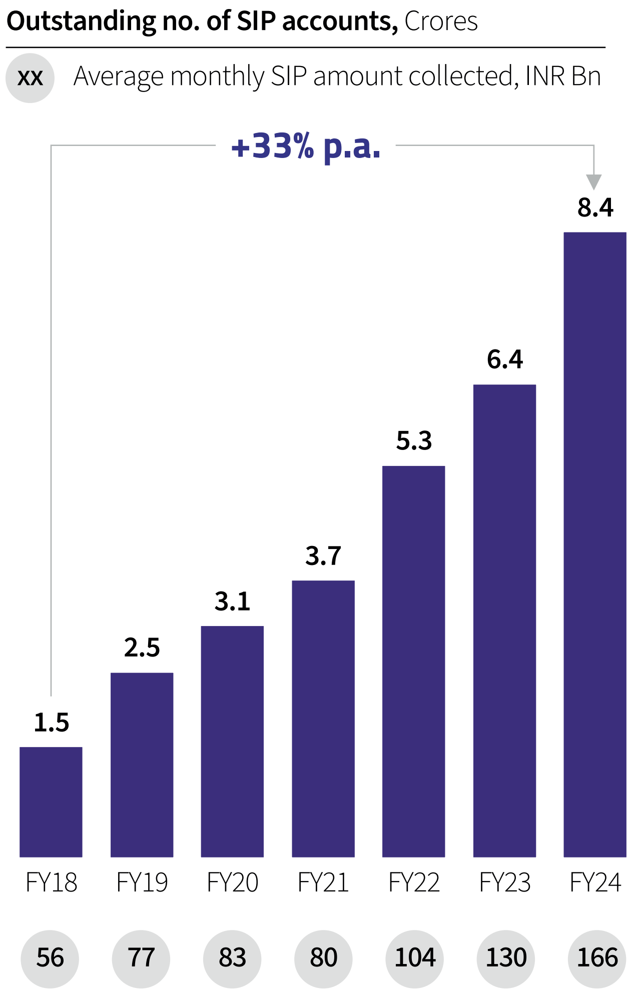
MF AUM in India, INR Tn (as of end of period)

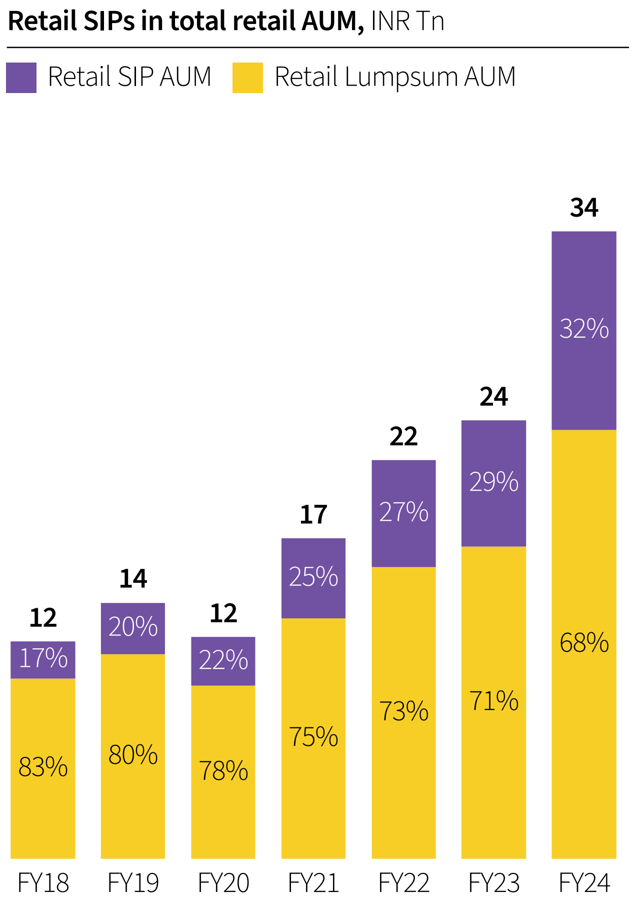


[1] Includes through associate and non-associate distributors
Source: AMFI statistics

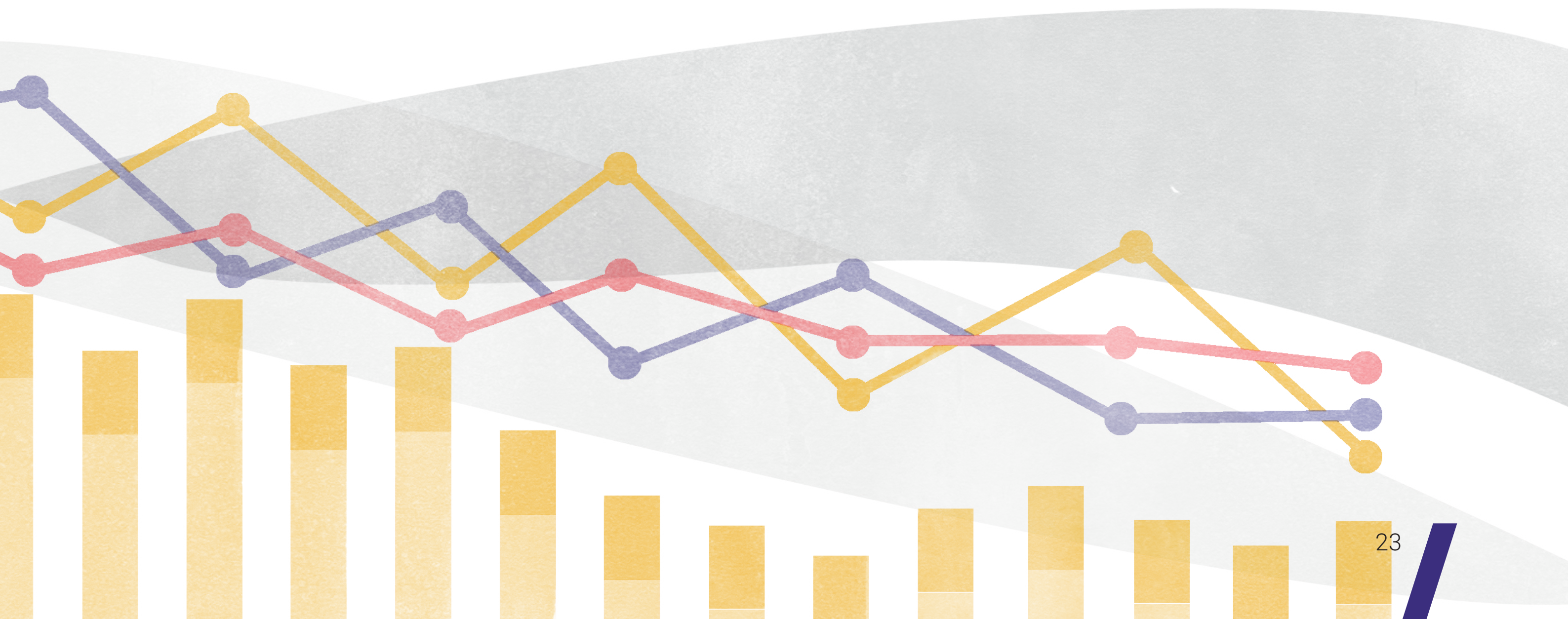
Exhibit 13

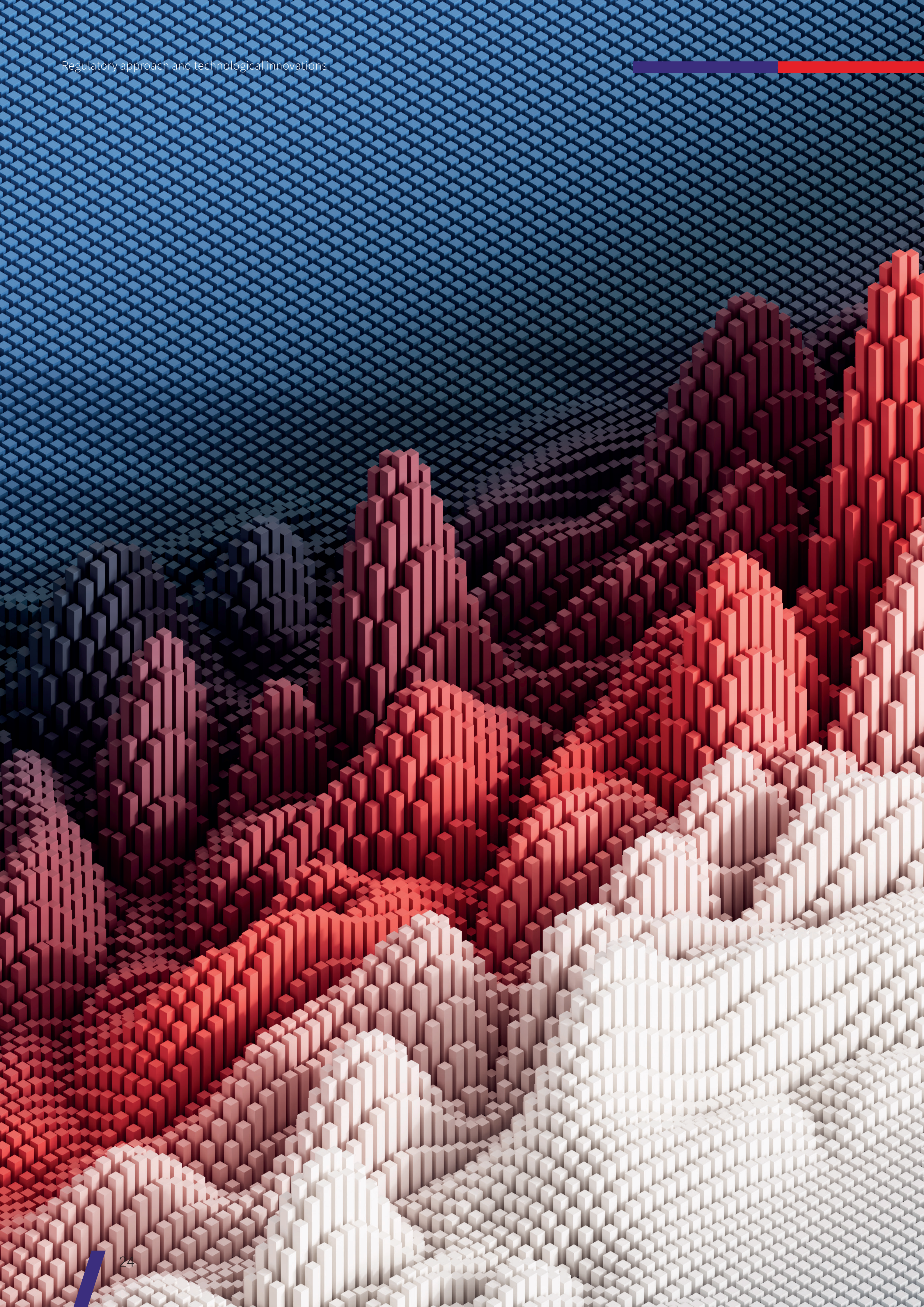
India SIP accounts have jumped significantly over the last 6 years





Source: AMFI statistics





02

Regulatory approach and technological innovations

Indian capital markets have been growing substantially over the last few years marked by a strong IPO market, increasing demat accounts, above global average market capitalization penetration as well as dominance in derivatives, among other factors. The Securities and Exchange Board — India's capital markets regulator — is cognizant of this ascent and has been coordinating key interventions to balance market development with adequate investor protection. In recent years, SEBI has particularly embraced technology to strengthen reforms.

SEBI's regulatory approach

SEBI focuses on both developing the market for better investor experience and also protect the investor with appropriate regulations. The regulator recently has been focusing on technological interventions as a key enabler to achieve its objectives.[31]

SEBI's objectives are based on five levers:

- Balance between market supervision and market development
- Consultative approach to regulation
- Segmented approach to regulation
- Glide path to policy implementation
- Technology as an enabler

Balance between market supervision and development

SEBI strives to balance its key objectives of market supervision and development — ensuring investors are protected while facilitating ease of doing businesses with technology and reforms. Over the last five years (CY19–23), SEBI issued nearly 650 circulars — 46% focused on market development compared to 54% on market supervision. Historically India has inclined towards supervision given the complex market and expanding retail participation. This balance would mean, for example, bringing new products and services with a mitigation or protection plan, or simplifying processes to ensure complete compliance, and reduced cost of compliance.

Consultative approach to regulation

SEBI encourages collaboration and co-creation in policy making by taking a consultative approach, much like its counterparts across the world. To ensure well-informed decisions, it convenes advisory committees and working groups comprised of seasoned experts. In fact, critical proposals are also placed for public consultation. This inclusive methodology is in line with global practices in countries such as the United States, United Kingdom, EU and Singapore.

Segmented approach to regulation

The regulator recognizes the diverse investor landscape in the country with varying levels of understanding and risk preferences. A one-size-fits-all approach in such a complex market could be ineffective, pushing SEBI to move towards a segmented approach to regulation. In its recent annual report, SEBI showcases an example of this thinking – creating a separate regulatory approach for accredited investors, those who possess a greater understanding of the markets and require lower regulatory protection. Investor segmentation could also occur on the basis of product complexity. Active mutual fund schemes, for example, are a complex product with millions of investors relying on fund managers for decisions and thus require stringent supervision. In comparison, mutual funds that offer passive investment products such as ETFs and mirror index funds could be regulated by fewer compliance requirements.

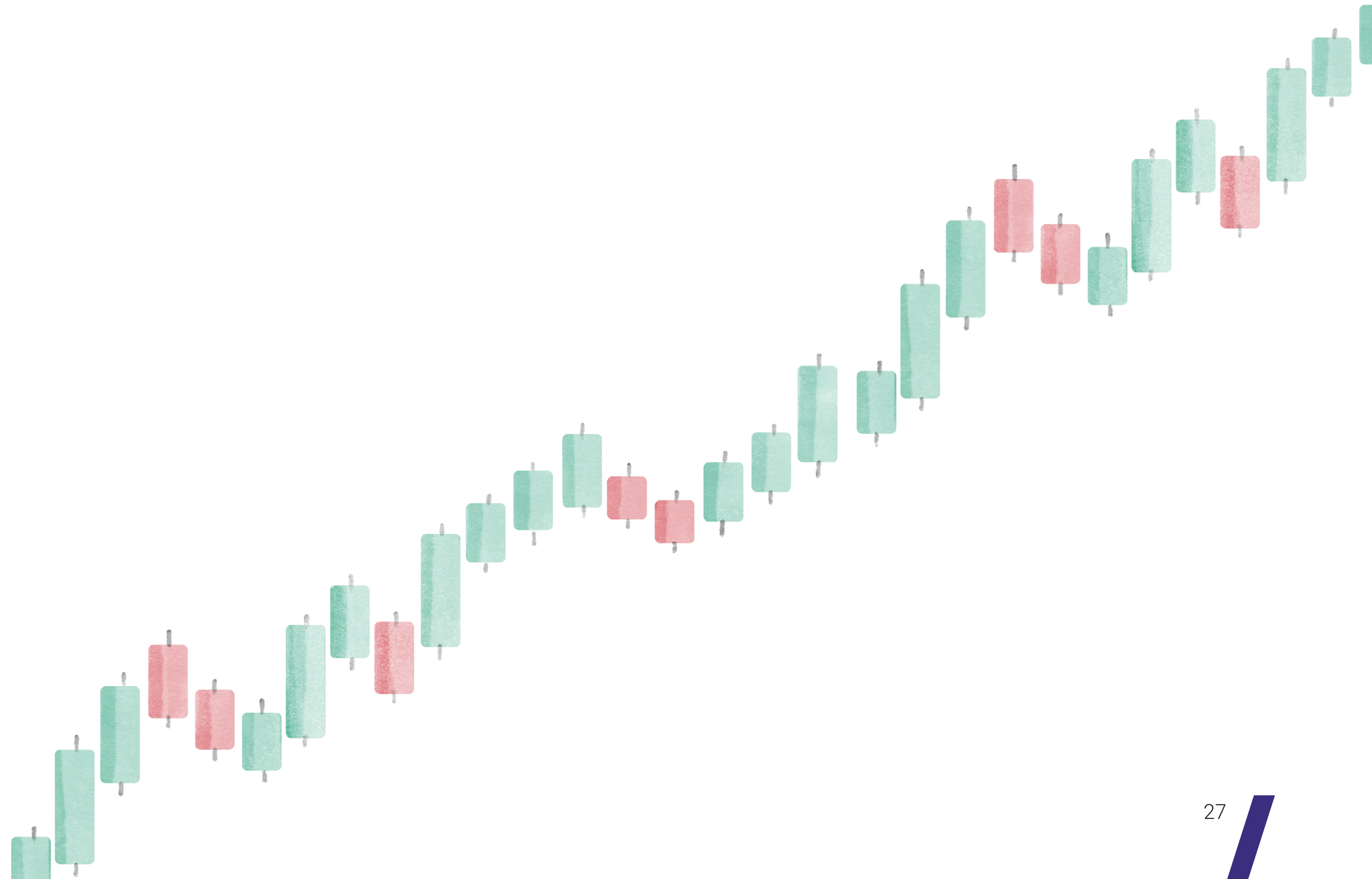
[31] Unless otherwise stated, all data in this section is from SEBI's website and annual reports

Glide path to policy implementation

SEBI's regulatory frameworks typically evolve gradually, and the regulator often takes a systematic approach to implementation spread over a period of time versus drastic changes. This ensures minimal market disruptions. For example, amendments to Related Party Transactions (RPT) were launched in a glide path, with less stringent norms activated initially, followed by more strict norms after a period of time. According to the SEBI Annual Report, unless the agency is acting to avert an imminent crisis, compliance requirements are to be adopted in a staggered manner. Entities at high risk are required to adopt compliances at a short time period, while those with limited risk may be given more time.

Technology as an enabler

Technology has emerged as a gamechanger for markets world over. In India, SEBI leverages it as an enablement tool to improve productivity, optimize costs and enhance accessibility of the markets to the masses. Significant wins over the years include use of digital KYC, digital apps, shortest settlement cycles, integration with India’s robust digital payments infrastructure, application supported by blocked amount (ASBA), among others.



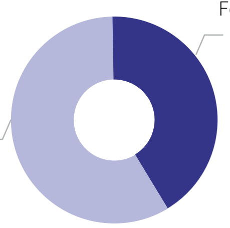
Evolution of key regulatory changes and technology innovations in Indian capital markets

Key regulatory changes and technology innovations in India between 2014–2018

Regulatory changes
Tech-led regulatory changes

	Issuers, corporates and AMCs	Investors (Retail & Institutional)	Intermediaries (brokers, etc.)	Market Infra institutions (exchanges, CCP, CSD)	Regulator
Primary markets	Relaxed listing eligibility norms for startups, SMEs Guidelines for issuance of green bonds Streamlined mechanism for tender offers (buy back / delisting) Banks allowed debt-for-equity swap for defaulting publicly traded borrowers Additional methods to achieve minimum public shareholding (MPS)	ASBA for IPO applications via UPI		IPO listing time reduction from T+12 to T+6 for securities allotment	
Secondary markets		Introduction of options in the commodity derivatives market NRIs permitted to participate in Exchange Traded Commodities Derivatives (ETCD) segment Streamlined framework for brokers providing Margin Trading Facility to clients Streamlined FPI entry, KYC and eligibility norms	Introduction of single registration for brokers across all market infra players	Integration of commodities and securities derivative markets by integrating the participants, brokers, and operational frameworks	
Funds (MF, AIF, PMS)	Allowing MFs to invest in REITs and InvITs Allowing participation of Category III AIFs in Commodity Derivatives market Amendments in AIFs to provide ease of doing business for angel funds and increase investments in start-ups	Use of e-wallet for investment in MFs		Allowing to use stock exchange infra for purchase/ redemption of MF (e.g., BSE STAR MF and NSE, NMF)	
All		Streamlined customer onboarding through Aadhaar based KYC Simplified procedures for transmission of securities in the event of death of holder Consolidated Account Statement (CAS) for all securities assets	Standardized account opening documentation across brokers	Detailed framework on cyber security and cyber resilience with respect to MIIs Created capacity planning framework for all market infrastructure institutions	Streamlined investor grievance mechanism

2014-2018 | **Total number of SEBI circulars during the period** **~380**



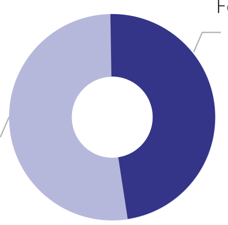
Source: SEBI circulars, SEBI annual reports

Key regulatory changes and technology innovations in India between 2019–2023

○ Regulatory changes
● Tech-led regulatory changes

	Issuers, corporates and AMCs	Investors (Retail & Institutional)	Intermediaries (brokers, etc.)	Market Infra institutions (exchanges, CCP, CSD)	Regulator
Primary markets	○ Option for confidential pre-filing of offer documents ● Fastrack IPO clearances/ approvals based on tech enabled process re-engineering at SEBI ○ Facilitating development of REITs and InvITs market ○ Enhancing transparency in IPOs through disclosures of key performance indicators (KPIs) and price per share	● Enablement of e-voting through demat accounts for retail investors ○ Reduction in minimum ticket size of privately placed debt securities (INR 10k)		● Introduction of "Social Stock Exchange" ● Reduction in IPO listing time from T+6 to T+3 for securities allotment; Reduction in listing time of debt securities issued on private placement from T+4 to T+3	○ Strengthening of regulatory framework for green bonds and introduction of yellow & blue bonds ● Introduction of Electronic Gold Receipts (EGRs) ● GenAI driven automated compliance checks on public disclosures by issuers for IPO approvals ● Standardized XBRL reporting for public offer and issue documents
Secondary markets	● Disclosure of material events to stock exchanges and verification of rumors by listed companies ○ Strengthening of governance at listed companies ○ Business Responsibility and Sustainability Reporting (BRSR) disclosures by listed entities on ESG parameters	● Introduction of ASBA for secondary markets ● Automated alerts & disclaimers provided at point-of-trade in cash equities & F&O trading ● Direct market access facility to FPIs to participate in exchange traded commodity derivatives (ETCD)	● Introduction of revised pledging/ repledging system ● Mandatory rolling settlement with clients on a quarterly/ monthly basis ● Introduction of peak margins collection and reporting regulations	● Shift to T+1, T+0 & real-time settlement ● Segregation and monitoring/visibility of collateral at client level	● Regulatory framework for online bond platforms ● Centralized database for corporate bonds/ debentures ● Prevention of inadvertent trading and self trading ○ Establishment of Corporate Debt Market Development Fund (CDMDF)
Funds (MF, AIF, PMS)	○ Standardized approach to valuation of investment portfolio of Alternative Investment Funds (AIFs) ○ (Proposed) 'MF Lite' regulations for passive funds	● (Proposed) Enablement of low value SIPs ● MF Central Platform, a one-stop investment management platform		● Reduction of MF redemption timelines to T+2 ● Dematerialization of AIFs to improve transparency	● Advanced analytics driven transaction level monitoring of mutual funds
All		● Streamlined KYC enabled through Aadhar-based eKYC , making customer onboarding seamless & fully digital ● Centralized mechanism to streamline deceased account claim processes for securities and MFs ● Online dispute resolution system for protecting investor interests ● Dedicated investor website and SaaRthi Mobile App by SEBI for investor education	● Enhanced monitoring and surveillance of QSBs	● Inter-operability among clearing corporations ● Two-way portability across clearing corporations CC through a SaaS module ● Investor Risk Reduction Access (IRRA) platform ● DLT-enabled unique asset identification and security and covenant monitoring for non-convertible securities	● Introduction of Regulatory Sandbox and Innovation Sandbox ● Cyber Incidents Reporting Portal (CIRP) ● Streamlined framework for adoption of cloud services by SEBI registered entities

2019-2023 | **Total number of SEBI circulars during the period** **~650**



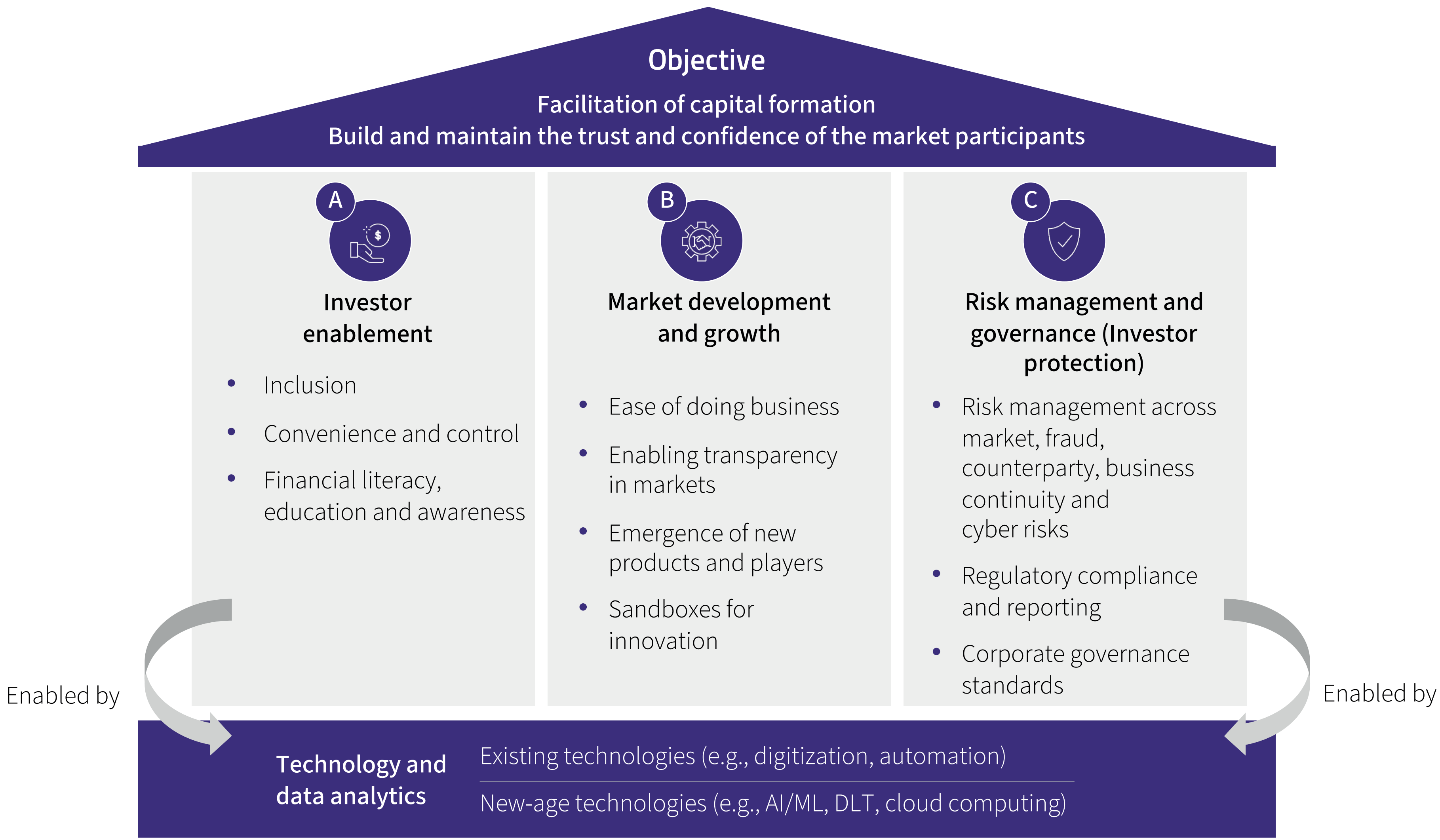
Market regulation priorities

SEBI structures its regulatory approach into three key pillars of priorities aimed at facilitating capital formation while concurrently fostering and upholding trust and confidence among market participants. The three pillars (Exhibit 14) are defined as:

- **Investor enablement:** Enable investors to make informed decisions and promote active participation in the markets. This manifests in the form of:
  - Inclusion – Access to the capital market for different investor types, across the country with a focus on the retail investor.
  - Convenience and control – Ease of access to the capital market with investors benefitting from complete control and visibility over their own financial assets.
  - Financial literacy and education – Market education tools to ensure investors are knowledgeable and make informed decisions.
- **Market development and growth:** Promote development of capital markets by enhancing ease, transparency and innovation.
  - Ease of doing business – Easy access and trading within the markets.
  - Enabling transparency – Enhanced transparency to reduce information asymmetry and boost investor confidence in the system.
  - New products and players – Innovation through development of diverse products while simultaneously protecting investors with appropriate measures.
  - Innovative Sandboxes – Controlled testing of innovative financial products, services, and technologies.
- **Risk management and governance:** Ensure investors stay protected to maintain integrity and stability of the capital markets through:
  - Risk management – Initiatives such as ASBA, shorter redemption cycles, prevention of inadvertent trading to protect investor interests.
  - Regulatory compliance and disclosures – Stringent requirements in the form of disclosures for IPO approvals, standardized reporting mechanisms, strong governance at listed companies.
  - Surveillance – Advanced-analytics-led monitoring of key markets.

Exhibit 14

Capital markets regulatory approach



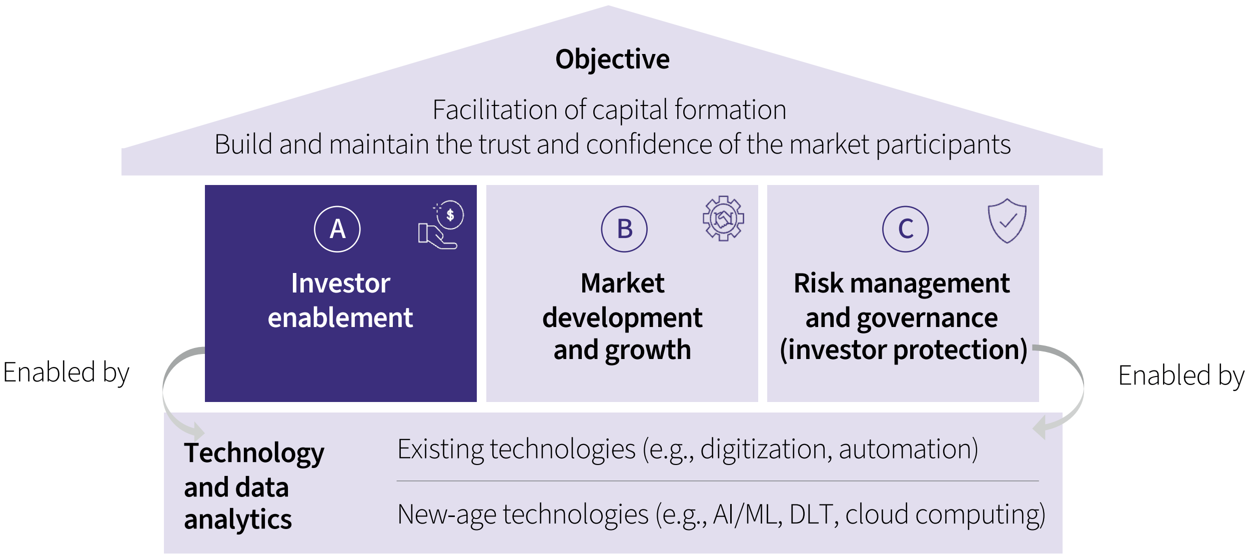
Pillar A: Investor enablement

SEBI ensures investor enablement through rigorous regulatory frameworks aimed at streamlining processes, ensuring investor control and doubling down on investor education. By launching initiatives such as eKYC, MF Central, online dispute redressal as well as investor awareness alerts, it empowers investors with the knowledge and protection necessary to make informed decisions, thereby bolstering confidence in the Indian capital markets. Described below are key initiatives under this mandate (Exhibit 15).

Exhibit 15

Investor enablement

Primary markets | Secondary markets | Asset management | All



Themes	Sub-themes	Key examples from Indian capital markets
A Investor enablement	I. Inclusion	1 **Streamlined KYC** enabled through **Aadhar-based eKYC, KYC registration agencies (KRA);** making customer onboarding seamless and fully digital, reducing the cost of onboarding of investors and driving inclusion
		2 *(Proposed)* **Democratization of investments in MFs** by enablement of **low value SIPs** (bringing min. SIP value to INR 250) to drive inclusion across low-income population
		3 **Reduction in minimum ticket size of privately placed debt securities** (to INR 10,000) to make the market more accessible for retail investors

Continued

Primary markets | Secondary markets | Asset management | All

Themes	Sub-themes	Key examples from Indian capital markets
A Investor enablement	II. Convenience and control	4 **MF Central Platform,** a one-stop investment management platform to manage and transact in mutual funds across all folios linked to a PAN in one place
		5 Centralized mechanism to **streamline deceased account claim processes for securities and MFs,** aimed to ease the burden on claimants and facilitate **swift transmission of financial assets**
		6 **Online dispute resolution system** for protecting investor interests and offering speedy resolutions
	III. Financial literacy, education and awareness	7 **Investor awareness and informed decision making** through **automated alerts and disclaimers provided at point-of-trade** in cash equities and F&O trading (e.g., loss making companies, companies not in compliance with SEBI circular, etc.)
		8 **Dedicated investor website** and **SaaRthi Mobile App by SEBI** for **investor education** – providing useful information on personal finance, basic concepts of securities market, etc. in English, Hindi and regional languages

Source: SEBI circulars, SEBI annual reports

A.I Inclusion

SEBI aims to enhance financial inclusion within the capital markets, striving to make products and services accessible to investors in every corner of the country. Technology serves as a crucial facilitator in this endeavor, enabling cost-effective expansion without compromising security measures.

1. **Streamlined KYC:** KYC or Know Your Customer is a critical processes to verify investor identity and ensure compliance. In the past, this process has been lengthy and tedious for investors. However, recent digitization efforts — Aadhaar- based KYC — smoothen customer onboarding, making it 100% digital. Customers or investors are no longer required to visit a bank or any office to begin their investment journey, minimizing slippage during the registration process. Aadhar-based eKYC (allowed as a valid eKYC for new clients by brokerages in 2016) has cut registration timelines from 5–7 days to mere minutes. According to market intermediaries and retail investors, transition from physical KYC document submission to e-KYC has been one of the key factors for the growing demat accounts and increase in MF folios in the country. SEBI has also established KRAs (KYC Registration Agencies) namely NSDL (National Securities Depository Limited), CDSL (Central Depository Services Limited), CAMS and KARVY, which maintain KYC investor records centrally on behalf of capital market intermediaries. This robust KRA system is interoperable and portable, enabling investors to use their one-time validated KYC with multiple intermediaries.

2. **Democratization of investments in MFs:** SEBI aspires to welcome more investors to the capital markets, enabling participation from all segments of retail investors as well as fostering a culture of systematic investment. MFs, gradually emerging as one of the most popular investment choices in India, are key to this plan. Over the years, MF investments have been democratized through low-ticket SIPs (as low as INR 500) and lump sum investments, opening up the markets to lower income segments. SEBI further aims to make SIPs as low as INR 250 economically viable for AMCs (Asset Management Companies), to further drive inclusion.

   To attract participation in MF from smaller cities, SEBI had also incentivized MF houses by introducing an option to charge an additional expense of 0.3% for retail inflows from smaller cities. However, these were paused in March 2023 due to cases of misuse of the incentives and lack of uniformity in applicability across AMCs.

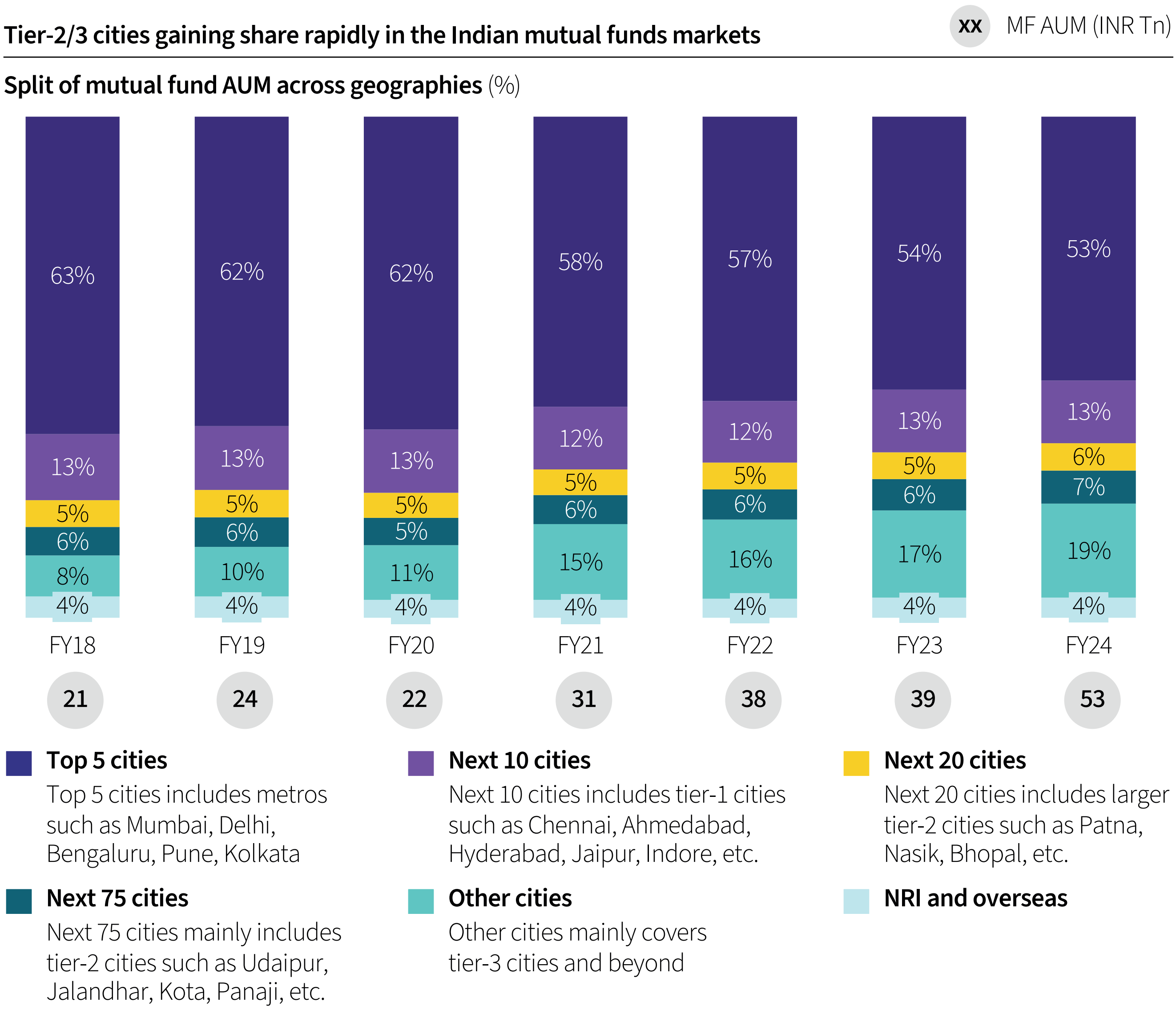
   These initiatives have led to greater MF penetration in tier-2 and tier-3 cities in India (Exhibit 16). Between March 2018 and March 2024, MF AUM for tier-2 and tier-3 cities gained 13% share.

Exhibit 16

Increasing penetration of mutual funds in Tier 2/3 cities in India

Tier-2/3 cities gaining share rapidly in the Indian mutual funds markets

Split of mutual fund AUM across geographies (%)



Source: AMFI statistics

3. **Driving inclusion in debt securities market:** Prior to October 2022, the minimum ticket size for privately placed debt securities was INR 10 lakhs. The high-ticket size acted as an entry barrier for non-institutional investors, making the debt market inaccessible. To increase participation from non-institutional investors, SEBI reduced the minimum ticket size to INR 1 Lakh, which is further reduced to INR 10,000 as per a recent SEBI circular in July 2024.[32]

A.II Convenience and control

A robust capital market not only provides investors with convenient access to a diverse array of products and offerings but also offers them with greater control over their investment decisions and transactions. SEBI is overseeing several initiatives that simplify investment processes and offer transparency and control. Some of these are discussed below.

4. **Introducing MF Central:** Built by Registrar and Transfer Agents (RTAs), Computer Age Management Services (CAMS) and Karvy (KFintech) at the directive of SEBI, MF Central offers a one-stop platform to manage one's MF portfolio. Any investor can view their consolidated portfolio, conduct transactions and submit new service requests. The platform is simple yet sophisticated. It requires the Permanent Account Number (PAN) and a phone number for sign up. It is scalable; with standardized processes and a future-ready architecture primed for API integrations. MF Central has seen strong adoption across investors and fintech looking to connect through API integrations (Exhibit 17).

[32] SEBI circular dated July 2024

Exhibit 17

Adoption of MF Central platform across investors and FinTechs (through APIs)

Adoption by retail investors

1.3k–1.5k
Average user registrations per day in FY23

340k+
Mobile app downloads as of March 2023

1.4k–1.6k
Service requests per day in FY23

10k–15k
Logins per day in FY23

Adoption by fintechs (through APIs)

6.5Mn
API hits in Q3FY24

13.3Mn
API hits in 9MFY24

82
Clients onboarded as of December 2023

Source: CAMS Limited Annual Report FY22–23; KFintech Limited Investor Presentation Q3 FY24; MF Central

5. **Deceased account claim process:** In a move welcomed by the investor community and market intermediaries, SEBI implemented a mechanism to streamline the transfer of securities and mutual funds in the event of an investor's demise. As part of the process, SEBI introduced a single touchpoint for family/representatives[33] (notifier) of the deceased to notify all intermediaries of the investor's passing. Within five days of verifying the death through KRA, the notifier will receive information about the transmission procedure along with the necessary transmission request form and a list of required documents.[34]

6. **Online dispute resolution system:** SEBI's Online Dispute Resolution (ODR) portal aims to offer online conciliation and arbitration for resolving disputes between investors and market participants or listed companies in the Indian securities market. The portal is expected to provide online, cost-effective and time-bound resolutions for investor grievances to significantly enhance the standard of dispute resolution available to investors in India.

A.III Financial literacy, education and awareness

SEBI has introduced an effective alert system for high-risk products, that notifies investors about the potential risk they maybe undertaking with certain investment decisions. It has also been actively promoting investor education across various segments through consistent communication channels, including its dedicated website and mobile application.

7. **Automated alerts and disclaimers:** SEBI is aware of the diverse investor mix in the country with varying levels of knowledge about the capital markets. To ensure retail investors stay protected while making transactions in high-risk products, the regulator and stock exchanges have mandated stockbrokers to alert investors at the point of trade. The notification or alert highlights the potential risks associated with trading in derivatives and select stocks. Alerts are also shared when certain companies are a red flag, for example, making losses or not in compliance with SEBI regulations (Exhibit 18 and 19). In addition, to bring more transparency about transaction costs, exchanges in consultation with SEBI have decided that the details of brokerage, statutory and regulatory charges shall be prominently displayed to the investor on the order placement window/screen[35].

33 Can be joint account holders, or nominees, or legal representatives or family members
34 SEBI Circular – May 2022
35 NSE Circular – October 2022

Exhibit 18

Surveillance in cash equities trading

SEBI and the Exchanges have introduced **various surveillance measures** from time-to-time to improve market integrity and protect investor interests. Investors trading in the securities under the surveillance frameworks mentioned below are **alerted at the point-of-trade** (e.g., through disclaimers, alert pop-ups).

Surveillance measures such as **reduction in price bands, periodic call auction** and transfer of securities to **trade-to-trade segment** based on various market activity parameters such as:

- Price variation
- PE
- Market cap
- Liquidity

Graded Surveillance Measures (GSM) for securities where the price is not commensurate with financial health and fundamentals through factors such as:

- Earnings
- Book value
- Fixed assets
- Net worth
- PE
- Market cap

Additional Surveillance Measures (ASM) for securities with concerns based on market-based dynamic parameters such as:

- High low variation
- Client concentration
- Close to close price variation
- Market cap
- Volume variation
- Delivery percentage
- No. of unique PANs
- PE

Enhanced Surveillance Measures (ESM) for **micro-small companies**
(on main board, with market cap < INR 500 Cr) based on market-based dynamic parameters such as:

- High low variation
- Close to close price variation
- Market cap
- Standard deviation

Additional surveillance indicators based on company performance, corporate governance, regulatory compliance and derivative activity:

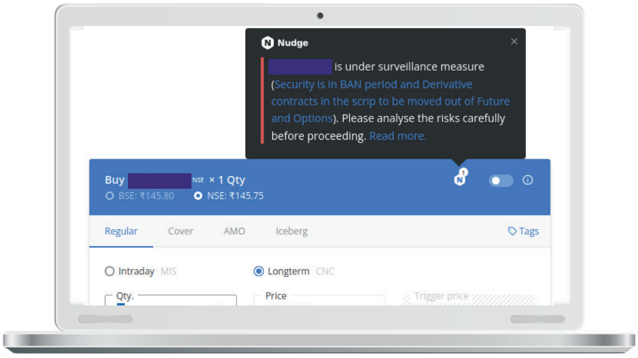
- Loss making company for last eight quarters
- Encumbrance of promoter shareholding >50%
- Non-compliance with SEBI LODR SOP[1]
- Failure to pay annual listing fee
- Derivative contracts for the scrip being moved out of F&O
- Ban on trading due to breach of 95% MWPL[2]

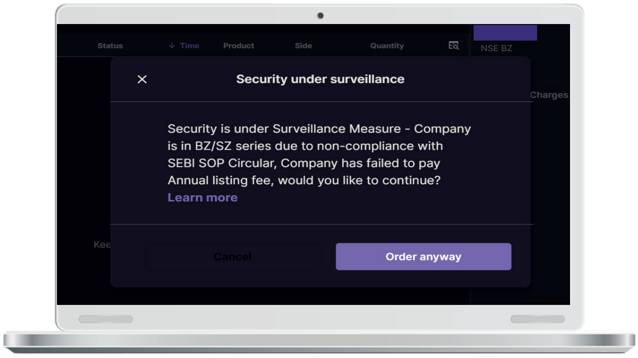
[1] Listing Obligations and Disclosure Requirements (LODR) Standard Operating Procedures (SOP)
[2] Market wide position limit - maximum number of open F&O contracts permitted for an underlying stock; defined by the exchange
Source: NSE circulars

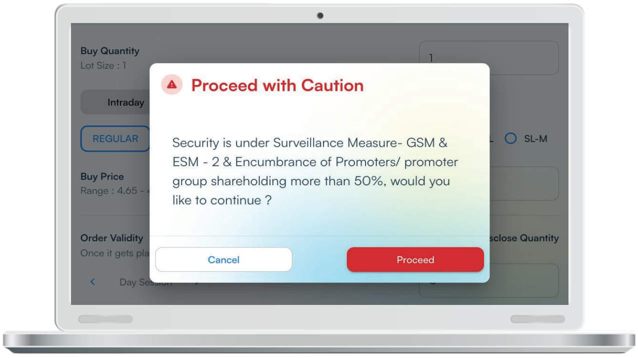
Exhibit 19

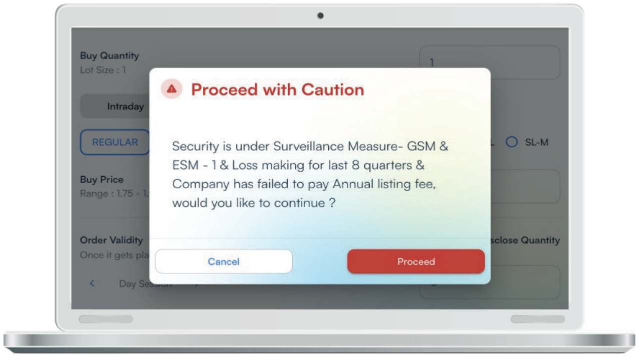
SEBI and the exchanges have mandated stock-brokers to alert investors at the point-of-trade about the potential risks of trading

Disclaimers and alerts for investors at the point-of-trade









SEBI and the stock exchanges have also mandated all stockbrokers to display 'risk disclosures' with the following instructions for F&O traders[36] (Exhibit 20):

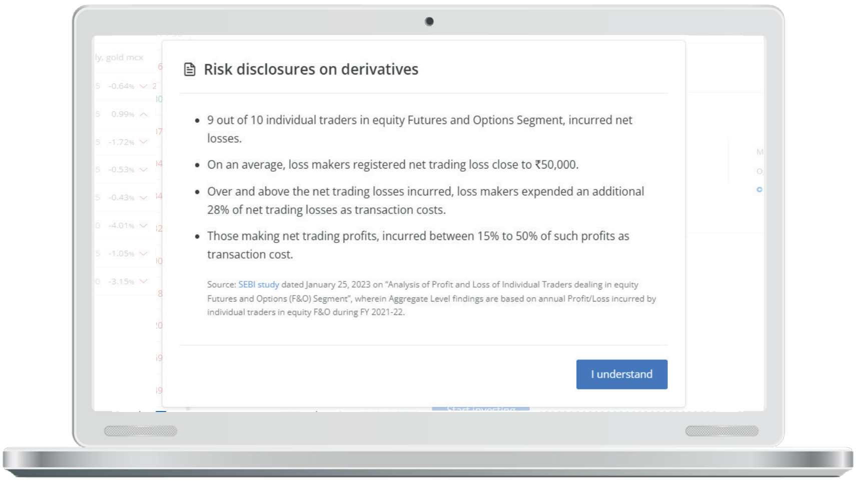
- The 'risk disclosures' must be displayed prominently, covering at least 50 percent area of the screen.
- Clients are prompted to read the disclosures every time they log into their trading accounts.
- Clients are allowed to proceed ahead only after acknowledging the same.

In addition, SEBI published a public report in January 2023 called 'Analysis of Profit and Loss of Individual Traders dealing in Equity F&O Segment' that highlights 89% of the individual traders (i.e. 9 out of 10 individual traders) in equity F&O segment incurred losses, with an average loss of Rs. 1.1 lakh during FY22, ensuring transparency and visibility at a market level for investors.

Exhibit 20

SEBI has also asked brokers to put mandatory warnings for F&O trading

As per SEBI all stockbrokers must display the risk disclosures on derivatives during login



- The 'risk disclosures' must be displayed prominently, covering at least **50 percent** area of the screen
- Clients are prompted to read the disclosures **every time they log into their trading accounts**
- Clients are allowed to proceed ahead **only after acknowledging the same**

8. **SEBI investor website and app:** The SEBI investor website offers comprehensive basic educational content in multiple formats and languages. It has been a popular hub for the investor community with 400K+ annual visits on average and a 52% growth in visits over the last three years. The website covers topics related to personal finance and the capital markets, educating investors on topics such as investment avenues, risk management, investor rights and responsibilities, investor protection mechanisms, regulatory policies and updates, prevention of frauds and scams, among others. The content is delivered in multiple formats including articles, FAQs, tutorials and explainer videos, interactive quizzes and games, glossaries and financial calculators, downloads and brochures.

   Further, SaaRthi is a highly-rated mobile platform designed by SEBI to radiate knowledge about the securities market. It covers fundamental concepts of the securities market such as KYC process, trading procedures, MFs, latest market trends, and process for investor grievances redressal, etc. It is available in English and Hindi and has seen 150K+ downloads since launch in 2022.[37]

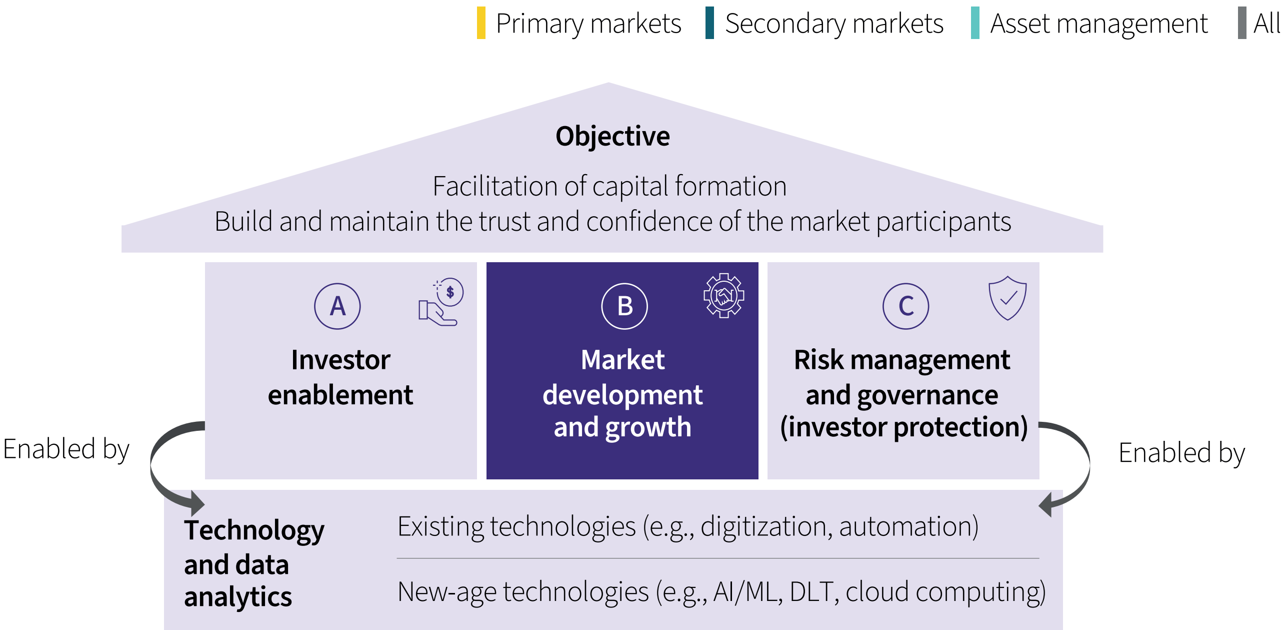
[36] SEBI Circular – May 2023
[37] SEBI data

Pillar B: Market development and growth

Promoting capital market development is a key SEBI mandate. The regulator ensures this by facilitating a conducive environment for companies and investors alike. It has launched several initiatives to smoothen the IPO process, reduce redemption timelines, encourage transparency as well as development of new products (Exhibit 21).

Exhibit 21

Market development and growth



Themes	Sub-themes	Key examples from Indian capital markets
B Market development and growth	I. Ease of doing business	9 **Option for confidential pre-filing of offer documents** to safeguard issuer's interests by limiting sharing of confidential information in the market and providing **flexibility in decision making** for IPO issuance
		10 **Fast-track IPO clearances/approvals** based on tech enabled process re-engineering at SEBI, also bringing **transparency** in the process and making **investment banks answerable to clients for delays**
		11 **Reduction in IPO listing time** from T+6 to T+3 for securities allotment; reduction in **listing time of debt securities** issued on private placement from T+4 to T+3
		12 **Reduction of MF redemption timelines to T+2 days**
		13 *(Proposed)* **'MF Lite' regulations for passive funds** to reduce the compliance requirements in the passive fund ecosystem, as part of segmented approach to regulation

Source: SEBI circulars, SEBI annual reports

Continued

Primary markets | Secondary markets | Asset management | All

Themes	Sub-themes	Key examples from Indian capital markets
B Market development and growth	II. Enabling transparency in markets	14 Enhancing **transparency in IPOs** (esp. in cases of startups) **through disclosures of key performance indicators (KPIs) and price per share** based on past transactions and fund-raising exercises
		15 **Regulatory framework for online bond platforms** to bring **standardization and transparency** among the online bond platforms to enable investor protection
		16 **Centralized database for corporate bonds/debentures** to provide ease of access of information for investors
		17 Enablement of **e-voting through demat accounts** for retail investors and **mandatory voting by mutual funds** to improve shareholder participation and enhance overall voting process
		18 **Standardized approach to valuation** of investment portfolio of Alternative Investment Funds (AIFs)
	III. Emergence of new products and players	19 **Introduction of "Social Stock Exchange",** a regulated electronic fund-raising platform for **social enterprises and non-profits**
		20 **Strengthened regulation** for green bonds and introduction of yellow and blue bonds
		21 Introduction of **Electronic Gold Receipts (EGRs),** an exchange traded security with underlying physical gold assets, to increase tradability of physical gold assets
		22 Facilitating **development of REITS and InvITs** market through faster listing timelines, standardized guidelines, regulatory framework for **small and medium REITs** (with asset value as low as INR 50 Cr), etc.
		23 **Direct market access facility to FPIs** to participate in **exchange traded commodity derivatives (ETCD)** to improve depth and liquidity of ETCD market
		24 **Dematerialization of AIFs** to improve transparency and enable effective monitoring of transactions
	IV. Sandboxes for innovation	25 **Introduction of Regulatory Sandbox** for SEBI regulated entities and Innovation Sandbox for Fintech players and non-SEBI regulated entities providing live environments for testing new solutions, **fostering innovation** among market participants

Source: SEBI circulars, SEBI annual reports

B. I Ease of doing business

SEBI has launched and continues to develop initiatives to promote ease of doing business in the Indian capital markets. These measures are aimed at simplifying regulatory processes, enhancing transparency, and fostering investor confidence.

9. **Option for confidential pre-filing of offer documents:** In 2022, SEBI amended the provisions of SEBI ICDR (Issue of Capital and Disclosure Requirements) regulations 2018 and introduced optional pre-filing of offer documents for issuers. Under this, issuers have the option to confidentially pre-file the Draft Red Herring Prospectus (DRHP) with SEBI, receiving SEBI's feedback before making the issue documents public. This optional pre-filing enables flexibility for issuers contemplating IPO by protecting sensitive information until the IPO decision is finalized, while still allowing for valuable pre- launch clarity from SEBI (Exhibit 22).

Exhibit 22

SEBI introduced an option to confidentially pre-file the offer documents to protect issuer interests

Pre-filing offer documents process protects interests of issuers exploring IPO issuances

Key shifts from existing process to confidential pre-filing process

Activities	Existing process	Pre-filing process
Filing of documents	DRHP filed with SEBI. **Available in public domain**	Pre-filing draft offer document. **Not available in public domain. UDRHP-I** post incorporation of SEBI's observations made **publicly available**
Publicity and marketing	**Permitted** from the date of filing of DRHP	**Not permitted.** Limited marketing permitted
Compliance with ICDR requirements at time of filing	**DRHP** to be in compliance with ICDR Regulations	**PDRHP** to be in compliance with ICDR Regulations with exemptions/flexibility in certain cases
Validity of SEBI observation	Issue shall open **within 12 months** from the date of SEBI observation	Issue shall open **within 18 months** from the date of SEBI observation subject to filing of UDRHP-I within 16 months
Applicability of schedule XVI	Applicable from the **date of filing of DRHP**	Applicable from the **date of issuance of SEBI observations on pre-filed document**

Key benefits for issuers

Protects interest of issuer by not releasing sensitive information to public at the time of filing draft offer document	Provides flexibility to issuer in decision making of IPO issuance	Facilitates disclosure of information when issuer is ready for listing

Source: SEBI circular - May 2022

10. **Fast-track IPO clearances/approvals:** SEBI has taken several steps to streamline and fast-track the IPO approval process, e.g., in 2018, SEBI standardized the disclosure requirements and reduced the financial disclosure requirements from five to three years. Owing to such steps, the median time taken for regulatory approval of IPO applications at SEBI (excluding time at other regulators and intermediaries) has reduced from 42 working days in FY20 to 28 working days in FY23. SEBI's tech-enabled process engineering could further simplify the approval process by introducing a new format with a clear checklist of requirements. The new process could also enhance transparency at the investment banker's end, thereby making them more accountable for any delays at their end.

11. **Reduction in IPO listing time from T+6 to T+3 for securities allotment:** In 2023, SEBI approved reducing timeline for listing of securities after the close of public issue from T+6 days to T+3 days. Revised timelines were implemented in two phases – 1) Voluntary implementation starting September 1, 2023, 2) Mandatory implementation after December 1, 2023. The revised timelines enable release of blocked investor funds two days earlier (i.e., from T+4 to T+2 initially), thereby accelerating the availability of unallocated investor funds and potentially yielding an opportunity cost gain of nearly INR 130 crore annually for investors (Exhibit 23).[38]

[38] NSE analysis

Exhibit 23

SEBI has reduced the IPO listing time from T+6 to T+3, freeing up the liquidity for investors and enabling faster access to capital for issuers

Overview and impact of faster IPO listing timelines

Sequence of activities	Before: T+6 timelines	After: T+3 timelines
Application submission	T	T
Finalization and approval of basis of allotment	T+3	T+1
Completion of funds transfer and unblocking	**T+4**	**T+2**
Completion of credit of shares to demat account	T+5	T+2
Listing and commencement of trading	T+6	T+3

Potential benefits to investors enabled through early unblocking of unallocated funds (Opportunity cost)

Potential annual benefit accrued to investors = **INR 6.3L Cr** × **2 days** × **3.7%** = **INR ~130 Cr**

- **INR 6.3L Cr**: Unallocated investor funds[1] (IPO Subscriptions – Allocations), FY23
- **2 days**: Faster unblocking of unallotted investor funds by ~2 days
- **3.7%**: Opportunity cost = Risk free return (7.2%[2]) - Savings bank interest rate (3.5%[3])

[1] Excluding anchor investors; entire QIB share assumed to be anchor investor share
[2] 10-year G-Sec yield for India as of end of December 2023 (as reported by RBI)
[3] Large public and private banks in India (SBI, Bank of Baroda, Union Bank of India, HDFC Bank, ICICI Bank, Axis Bank) offer SA interest rate in the range of 2.7–3.5% (as of 12th March 2024); max rate considered

Source: SEBI circular – August 2023, NSE analysis, SEBI statistics, RBI National Summary Data Page (NSDP), SBI website, Bank of Baroda website, Union Bank of India website, HDFC Bank website, ICICI Bank website, Axis Bank website

Further, SEBI has reduced listing time of debt securities issued on private placement from T+4 to T+3.

12. **Reduction of MF redemption timelines to T+2 days:** Before November 2022, the redemption timelines for mutual funds were capped at 10 working days (however, usually, processing was completed in three days), a limit set back in 1996. Technological and regulatory developments such as robust real-time payments infrastructure, operational improvements at RTAs and AMCs, among others, enabled SEBI to reduce the upper cap for MF redemption to T+3 days. Further, In January 2023, as Indian securities market shifted to T+1 settlement cycles for cash equities, mutual funds too shifted to a T+2 redemption timeline across all equity schemes starting in February, allowing investors faster access to redeemed funds. Quicker timelines are also expected to further attract retail investors to mutual funds as an investment tool. Reduction in MF redemption timelines can potentially accrue an annual benefit of INR 100 crore[39] for investors (Exhibit 24).

13. **'MF Lite' regulations for passive funds:** MF Lite regulations are currently being developed by SEBI to reduce compliance requirements in the passive fund ecosystem. By doing this SEBI aims to boost product innovation and flexibility for market participants.

    This effort is a part of SEBI's segmented approach to regulation i.e., passive funds, which have no fund manager risk as they replicate underlying index, have fewer compliance and disclosure requirements compared to traditional/active funds, where investment decisions are at the discretion of the fund manager.

[39] NSE analysis

Exhibit 24

T+2 MF redemption timelines enabled by the shift to T+1 settlement cycle in cash equities, can potentially accrue an annual benefit of INR ~100 Cr to investors

India shifted to T+1 settlement cycle for all securities in equity segment starting January 2023. Enabled by this shift, mutual funds have also shifted to a T+2 redemption timelines for equity and hybrid schemes

Potential benefit to investors enabled through early payout of MF redemption

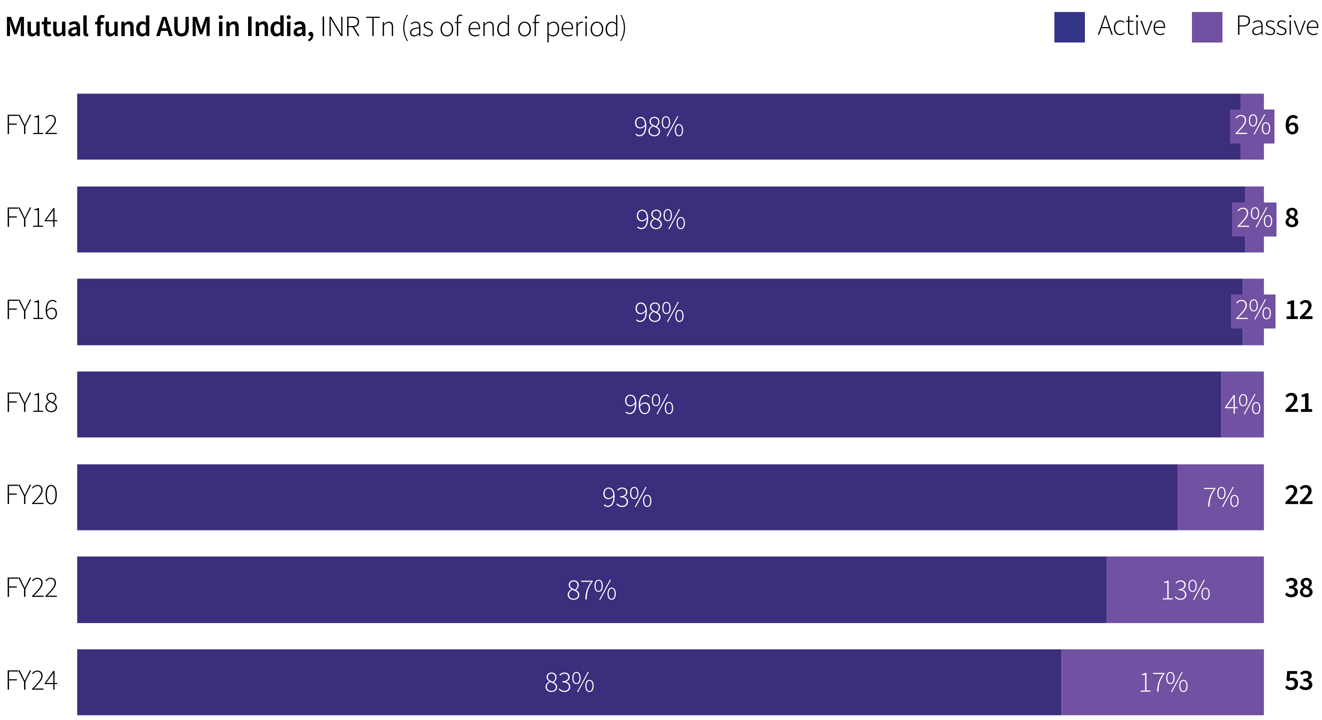
Potential annual benefit accrued to investors	=	INR 5.3L Cr Total MF redemptions across equity and hybrid MF schemes, FY23	×	1 day MF redemption timelines changed from T+3 to T+2; enabling 1 day faster payout to investors	×	7.2% Risk free return[1]	=	INR ~100 Cr

[1] 10-year G-Sec yield for India as of end of December 2023 (as reported by RBI)

Source: NSE analysis, SEBI circular, AMFI statistics, RBI National Summary Data Page (NSDP)

Exhibit 25

Share of passive funds has increased significantly in the recent years



Source: AMFI statistics

B. II Enabling transparency in markets

SEBI's market transparency initiatives aim to reduce information asymmetry and boost investor confidence in the overall system. Transparent markets also incentivize all stakeholders to act responsibly and ethically.

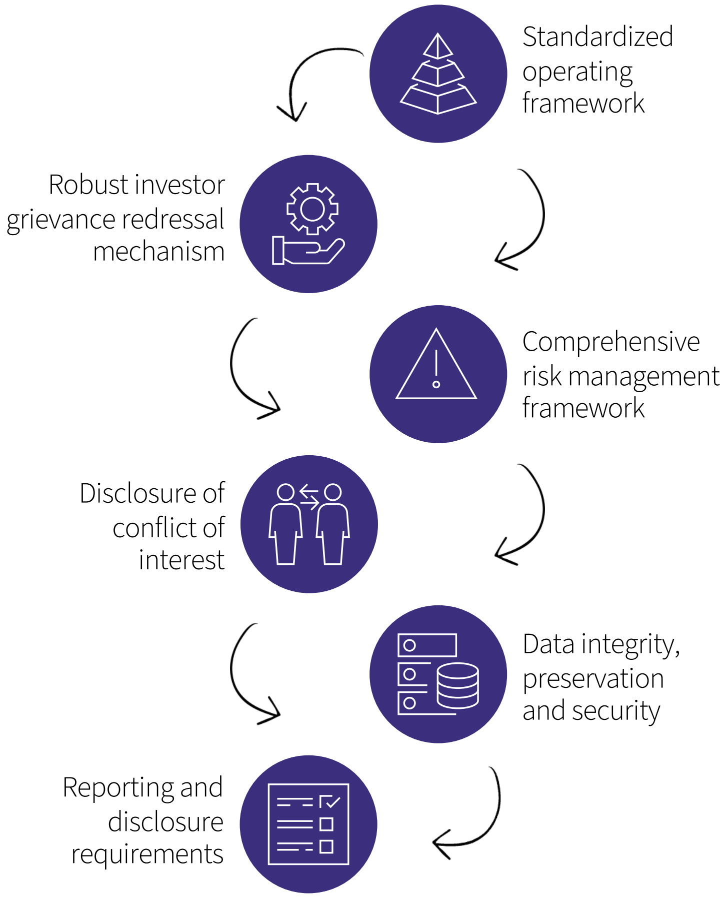
14. **Enhanced transparency in IPOs:** SEBI has mandated IPO issuers, particularly startups and new-age technology companies, to disclose key performance indicators (KPIs) and past valuation data in the offer documents. This move was aimed at enhancing transparency and augmenting traditional IPO disclosures, given the rise of listings from startups and technology companies with no track record of profitability. Disclosure of these non-traditional metrics will allow investors to make informed decisions.

15. **Regulatory framework for online bond platforms:** In November 2022, SEBI introduced a new regulatory framework for entities operating as online bond platform providers (OBPP) to streamline operations and protect investor interests. Online bond platform providers will now have to register themselves as stockbrokers under the debt segment of a stock exchange. SEBI has also restricted online bond platforms from offering products other than listed debt securities and debt securities proposed to be listed through public offering (Exhibit 26).

Exhibit 26

SEBI introduced a regulatory framework to bring the online bond platform providers under its purview to standardize their operations and protect investor interests

Key elements of regulatory framework for OBPPs
(Online Bond Platform Providers)



Adoption of OBPs
(Online Bond Platforms)

As of December 2023

17
Online bond platform providers registered

11Cr
Cumulative trade volume across OBPs (till date)

18k
Cumulative trade value across OBPs (till date, INR Cr)

"The framework appropriately sets a correct code of conduct for growing this industry in the safe interest of investors[1]

– Co-founder, Indian bond investment platform

"The regulation will protect retail investors and provide authenticity to online bonds platforms that are serious about investor protection[2]

– Co-founder, Indian fixed income investment platform

[1] Zee Business article titled - Online Bond Platforms Providers: SEBI formulates regulatory and registration framework - dated 17th November 2022
[2] Times article titled - Wint Wealth bags online bond platform license from SEBI - dated 26th July 2023
Source: SEBI circular - November 2022, SEBI data

16. **Centralized database for corporate bonds/debentures:** SEBI had issued a circular in 2013 requiring depositories to jointly create and maintain a centralized database for corporate bonds held in demat form. In 2021, to further streamline the information available to investors via this database, SEBI issued an additional circular to all market participants highlighting roles and responsibilities of each. SEBI outlined additional disclosure requirements for issuers while credit rating agencies and debenture trustees must verify the same and share with stock exchanges in case of any discrepancies.
17. **Enablement of e-voting through demat accounts and mandatory voting by mutual funds:** Before 2020, there were multiple e-voting Service Providers (ESPs) facilitating e-voting services to listed entities, which necessitated shareholders to register across several platforms and maintain multiple login credentials. SEBI has now streamlined this process by enabling e-voting for shareholders through their demat accounts and websites of depositories. Further, the regulator has also been encouraging mutual funds to exercise their voting rights in the interest of the unitholders. In 2021, it made it mandatory for all mutual funds (including passive funds) to vote on corporate resolutions (e.g., appointment and removal of directors, changes to capital structures, stock option plans, etc.) that might affect the interests of unitholders. Mutual funds were also mandated to disclose such votes to all unitholders.
18. **Standardized approach to valuation of AIF portfolio:** In June 2023, SEBI unveiled a standardized approach to valuing investment portfolios within Alternative Investment Funds (AIFs). This comprehensive framework not only assigns duties to managers but also establishes stringent eligibility criteria for independent valuers to foster uniformity and clarity within the AIF market (Exhibit 27).

Exhibit 27

The recent AIF regulations by SEBI are expected to bring standardization and transparency in the valuation of AIFs

Key shifts expected

	From...	...To
Valuation methodology	**Lack of standardization in valuation methodology** Any principle/ methodology/ standard for valuation of investment portfolio of the AIFs could be adopted by managers	**Standardized valuation approach** Valuation to be carried out as per SEBI MF Regulation norms, if valuation of security covered under the SEBI MF regulations, else Valuation to be carried out as per guidelines endorsed by any AIF industry association, which represents at least 33% of SEBI registered AIFs
Disclosures on valuation methodology	**No disclosure on modality of valuation methodology** Modalities relating to valuation of investment portfolio were neither disclosed in the Private Placement Memorandums (PPMs) at time of submission nor reported to SEBI	**Increased disclosure to investors and SEBI** **To investors –** Details and changes in approach and valuation methodology and reasons for material deviation to be disclosed to investors **To SEBI –** Details of changes in valuation methodology and approach, accounting practices/ policies and impact of the changes on valuation of investments to be disclosed in the PPM on an annual basis
Reporting timelines for valuation details	**Long timeline for reporting valuation** Performance benchmarking reports outdated due to reporting timelines	**Timely reporting of valuation** AIFs to report valuation based on audited data of investee companies as of March 31 within six months
Criteria for independent valuer	**No criteria** for independent valuer	**Eligibility criteria** for independent valuer introduced

Source: SEBI circular - July 2023

B. III Emergence of new products and players

India's growing capital markets require dynamism and competitiveness to thrive, and continue offering of new, attractive investment avenues. The depth of healthy capital markets is often demonstrated by the availability of diverse instruments and products to investors. SEBI has been developing a series of innovative products but at the same time implementing appropriate measures to safeguard investor interests.

19. **Introduction of Social Stock Exchange:** The Social Stock Exchange (SSE) introduced by the Securities and Exchange Board of India (SEBI) is a novel initiative aimed at facilitating fundraising for social enterprises and organizations working towards social welfare objectives. Unlike traditional stock exchanges that primarily focus on financial returns, the SSE prioritizes the raising of capital for entities dedicated to addressing social and environmental issues. In March 2024, NSE's Social Stock Exchange celebrated the listing of two new NPOs (non-profit organization) taking the total number of SSE listings to five. These NPOs together raised about INR 8 crore for development projects.[40]

20. **Strengthened regulation for green bonds and introduction of yellow and blue bonds:** SEBI has fortified the regulatory framework for green bonds by expanding the definition of 'green debt securities' and offering guidance on avoiding greenwashing. The new framework aligns with the 'Green Bond Principles' recognized by the International Organization of Securities Commissions (IOSCO). As part of the initiative, SEBI also introduced yellow and blue bonds as new modes of sustainable finance. Yellow bonds are associated with solar energy generation and the associated upstream and downstream industries, while blue bonds are associated with the maritime sector including sustainable fishing, sustainable water management, etc.

21. **Introduction of Electronic Gold Receipts (EGRs):** In January 2022, SEBI introduced an approach for operationalizing, buying and selling EGRs with underlying physical gold (Exhibit 28). EGR is an electronic receipt issued by the vault manager against the gold deposited with them. EGRs are specified as 'securities' under the Securities Contracts (Regulations) Act, 1956 by the Finance Ministry of India in December 2021. BSE became the first exchange in India to launch EGR in October 2022; NSE is expected to launch EGRs soon.

[40] Hindu Business Line article titled - Five firms raise INR 8 crore via social stock exchange listing - dated 14th March 2024

Exhibit 28

Introduction of Electronic Gold Receipts, an exchange traded security with underlying physical gold assets

End-to-end process for onboarding and trading of EGRs

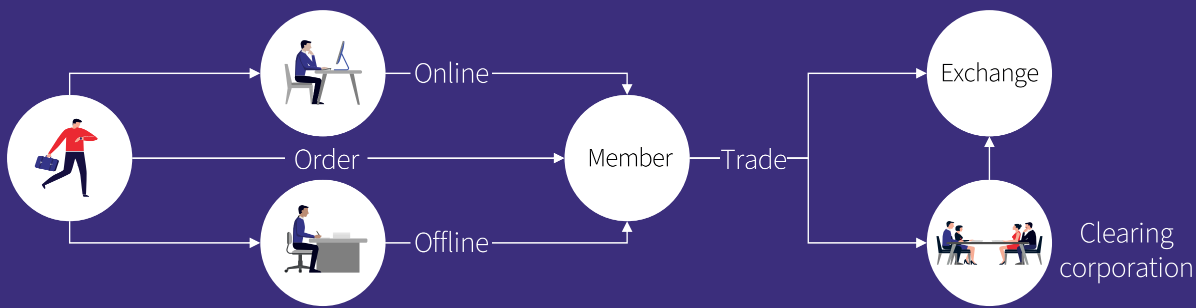
Step 1 – Conversion from physical gold to EGR

Gold depositor
Deposits the gold in the vault

Vault manager
On receipt of gold, the vault manager will validate and create the EGR

Depositories
EGR is credited in depositor's demat account and is available to trade on the exchange

Step 2 – Trading of EGR on exchange



- All trades at exchange take place through a nationwide electronic trading platform that can be accessed from terminals located with members of the exchange.
- Participants can trade through trading members of the exchange. Participants need to open a trading account and demat account with a trading member/DP.
- Investors can also use their existing trading and demat account for investing/trading in EGRs.

Step 3 – Conversion of EGR to physical gold

Depositories
Beneficial owner intending to obtain physical gold against the EGR shall place a request to the depository

Vault manager
The vault manager executes the conversion of EGR to physical gold

Gold depositor
The beneficial owner collects the gold from the vault location

Source: SEBI circular - June 2023, BSE website

22. **Development of REITs and InvITs:** REITs and InvITs are investment vehicles that pool funds for infrastructure projects, allowing for monetization of infrastructure while offering investors the opportunity to invest without owning the underlying assets. SEBI has been involved in strengthening regulatory framework as well as simplifying the process for these products.

    Policy developments introduced in 2022 and 2023 encompassed a range of significant reforms. These included streamlining listing timelines, introducing governance norms, facilitating individual investor participation through the use of UPI mechanism, reduction in minimum size for small and medium REITs, etc. SEBI has also been considering bringing in norms for follow-on offers by REITs and InvITs, introducing provisions for special rights to unitholders and establishing self-sponsored IMs of REITs and InvITs.

23. **Direct market access for FPIs to participate in exchange traded commodity derivatives:** SEBI allowed the inclusion of FPIs in exchange traded commodity derivative trading in 2022 to enhance the liquidity and depth in commodity markets, enabling them to become a global benchmark and shift from a price taker to price setter. In 2023, SEBI allowed stock exchanges to extend direct market access facility to FPIs for participation in the exchange traded commodity derivatives. Direct market access lets clients directly access the exchange trading system through the broker's infrastructure to place or execute orders without manual intervention by the broker. It enables clients to have direct control over orders, faster execution of orders, reduced risk of errors associated with manual order entry, maintaining confidentiality, lower impact costs for large orders and enablement of better hedging and arbitrage strategies.

24. **Dematerialization of AIFs:** In 2023, to encourage digitization of financial markets in India and to improve ease of doing business, SEBI mandated all Alternative Investment Funds (AIFs) to hold their units in dematerialized form. All schemes with corpus greater than equal to INR 500 crores were given a deadline of October 31, 2023, to dematerialize their units while schemes with corpus less than INR 500 crores were given a deadline of April 30, 2024. Any new units issued post these dates would have to be in dematerialized form.

B. IV Sandboxes for innovation

25. **Introduction of Regulatory Sandbox:** Under SEBI's Regulatory Sandbox, entities regulated by SEBI are granted certain facilities and flexibilities to experiment with FinTech solutions in a live environment and with a limited set of real customers. Further SEBI's Innovation Sandbox is a testing environment where FinTech firms and entities not regulated by SEBI are permitted to use for offline testing of their proposed solutions in isolation from the live market. These sandboxes foster innovation among market participants by allowing players to test new solutions in a controlled setting and also providing valuable data for regulators to inform future policies (Exhibit 29).

Exhibit 29

Select examples of innovations from SEBI's sandboxes

NSE

Nerve Solutions, a real time risk management system used by brokers, successfully completed Stage-1 testing in 2021–22, using data and APIs shared by NSE as an additional feature on "n.prime".

INDmoney CDSL nerve

Finzoom Investment Advisors Private Ltd. (parent company of INDMoney) in 2021–2022 in collaboration with CDSL, tested a solution that allows users to track investments on a single platform. It also offered investment management advice.

Finzoom used unformatted account statement (in data format) provided by CDSL to develop dashboards and reports for consolidated investment data for investors.

arthachitra BSE

Arthachitra is a fintech innovation that provides a comprehensive and user-friendly platform for investors by making financial information more accessible, transparent, and easy to understand. It allows users to develop their own financial metrics, by using BOW API from BSE

AMFI Association of Mutual Funds in India

The Association of Mutual Funds in India (AMFI) has launched an internship plan in 2021 under a regulatory sandbox initiative to groom new individuals to become mutual fund distributors (MFDs) aiming to raise the number of MFDs and promoting financial inclusion.

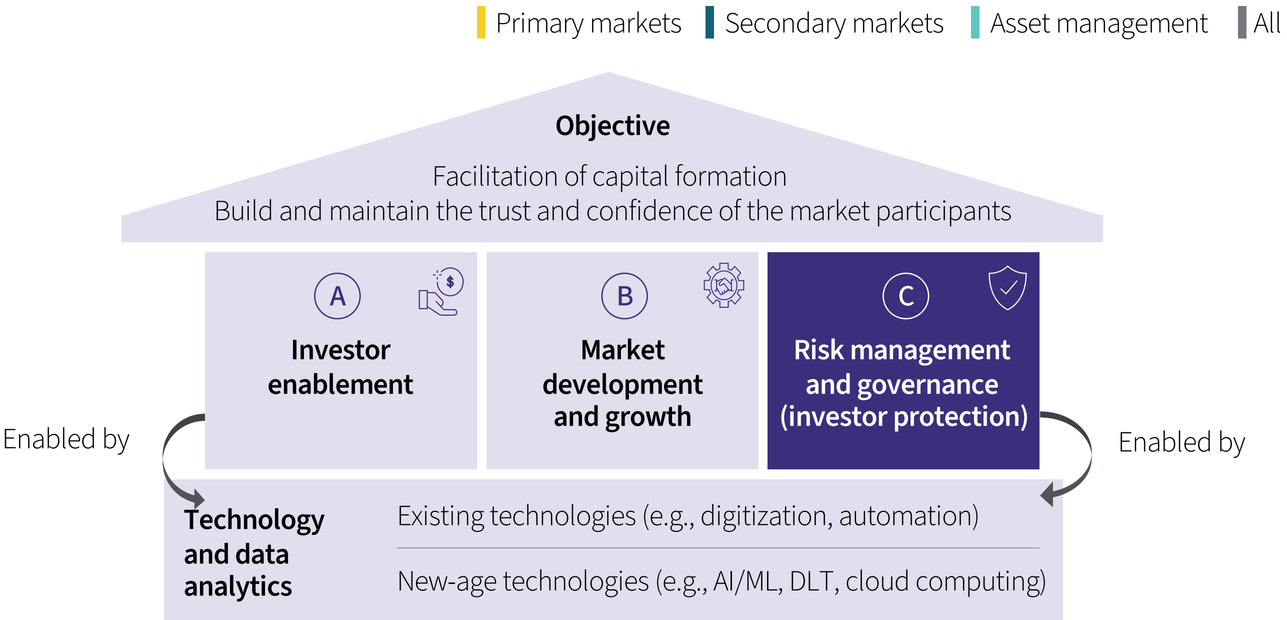
Source: SEBI website, SEBI annual reports

Pillar C: Risk management and compliance

Ensuring investor protection is important for the integrity and stability of capital markets. SEBI safeguards investor interests by fostering a compliance culture, launching initiatives to prevent fraud (more recently with a greater focus on cyber fraud activities) and leveraging technology to monitor key market activities (Exhibit 30).

Exhibit 30

Risk management and compliance



Themes	Sub-themes		Key examples from Indian capital markets
C Risk management and Governance (Investor Protection)	I. Risk management	Market risk	26 Introduction of **ASBA for primary and secondary markets**
			27 Shift to **T+1 settlement cycle** completed, **T+0** started on an optional basis; **real-time settlement** proposed
			28 **Segregation and monitoring/visibility of collateral at client level,** i.e., exchange/CC having full visibility of investor collateral at account level, to prevent misuse of investor collateral and minimize risk of defaults
			29 Introduction of **peak margins collection and reporting regulations** to prevent highly leveraged risky trading and ensure market stability
			30 Establishment of **Corporate Debt Market Development Fund (CDMDF),** a regulated backstop facility to **enhance the liquidity of the corporate bond market** during stressed market situations

Continued

Primary markets | Secondary markets | Asset Management | All

Themes	Sub-themes		Key examples from Indian capital markets
Ⓒ **Risk management and Governance (Investor Protection)**	**I. Risk management (Cont.)**	**Fraud/ Counter-party risk**	**31** Introduction of **revised pledging/repledging system,** strengthening investor safeguards by ensuring pledged securities remain in investor accounts, thereby **mitigating the risk of misuse by brokers**
			32 **Prevention of inadvertent trading** (e.g., through automated blocking of **accounts of key management personnel) and self trading**
			33 **Mandatory rolling settlement with clients on a quarterly/monthly basis** on the same day by brokers to prevent misuse of investor funds
		Business continuity risk	**34** **Inter-operability among clearing corporations,** a mechanism allowing market participants to select the clearing corporation of choice to clear and settle trades across any exchange, to **prevent over-dependence on a closed group of related entities** for trading, clearing and settlement activities
			35 **Two-way portability across clearing corporations** (CC) through a **SaaS module,** to provide **business continuity** to members of CC in case of major software issues, thereby **increasing resiliency of markets**
			36 **Investor Risk Reduction Access (IRRA) platform, to reduce investor risk in cases of outages/ technical glitches** at brokers' end, giving investors an opportunity to **square off open positions directly with the exchange**
		Cyber risk	**37** **Cyber Incidents Reporting Portal (CIRP)** for reporting cyber incidents by MIIs, stockbrokers, MFs, portfolio managers and RTAs to facilitate reporting and tracking of cyber incidents at one place
			38 Streamlined framework for **adoption of cloud services** by SEBI registered entities

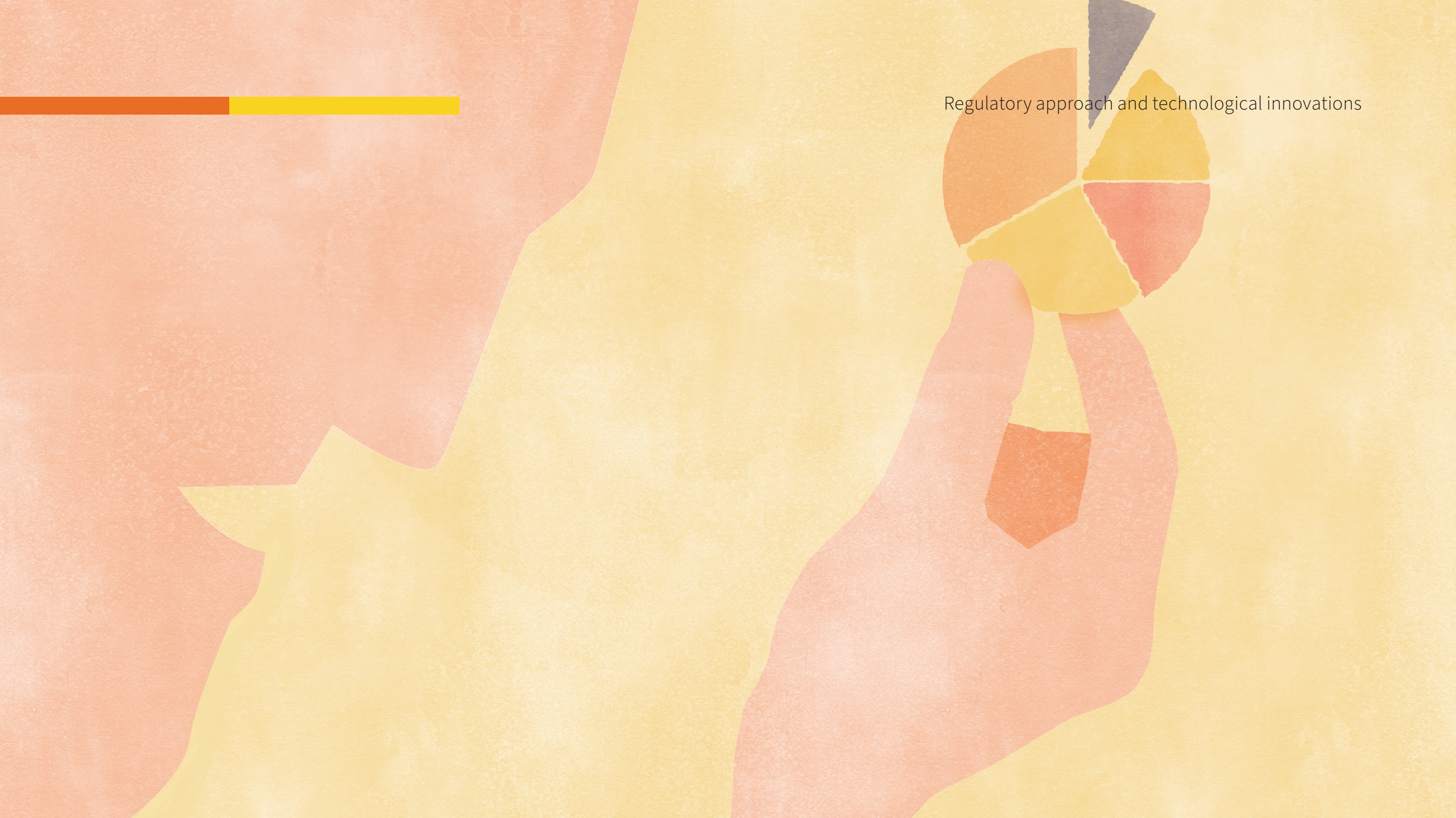
Source: SEBI circulars, SEBI annual reports

Continued

Primary markets | Secondary markets | Asset Management | All

Themes	Sub-themes	Key examples from Indian capital markets
Risk management and Governance (Investor Protection)	II. Regulatory compliance and reporting	39 **GenAI driven automated compliance checks** on public disclosures by issuers for IPO approvals
		40 **Standardized XBRL reporting** for public offer and issue documents by companies and AMCs (under pilot for AMCs)
	III. Corporate governance standards	41 **Strengthening of governance at listed companies** (e.g., composition of board, minimum no. of independent directors) under the Listing Obligations and Disclosure Requirements (LODR) regulations
		42 **Disclosure of material events by listed companies** to stock exchanges and **verification of rumors** to reduce information asymmetry and promote transparency
		43 **Business Responsibility and Sustainability Reporting (BRSR)** disclosures by listed entities on **ESG parameters** t o ensure responsible business conduct by corporates
	IV. Surveillance	44 Enhanced monitoring and surveillance of the largest brokers with high influence on the markets under the **Qualified Stock Brokers (QSB) framework**
		45 Advanced analytics driven **transaction level monitoring of mutual funds**
		46 **DLT-enabled unique asset identification** and **security and covenant monitoring** for non-convertible securities to enable recording, verification and tracking of assets

Source: SEBI circulars, SEBI annual reports



C.I Risk management

SEBI has launched several initiatives and is developing new measures to strengthen the capital markets and ensure they stay resilient. Doing so enhances overall market integrity and protects investor interests.

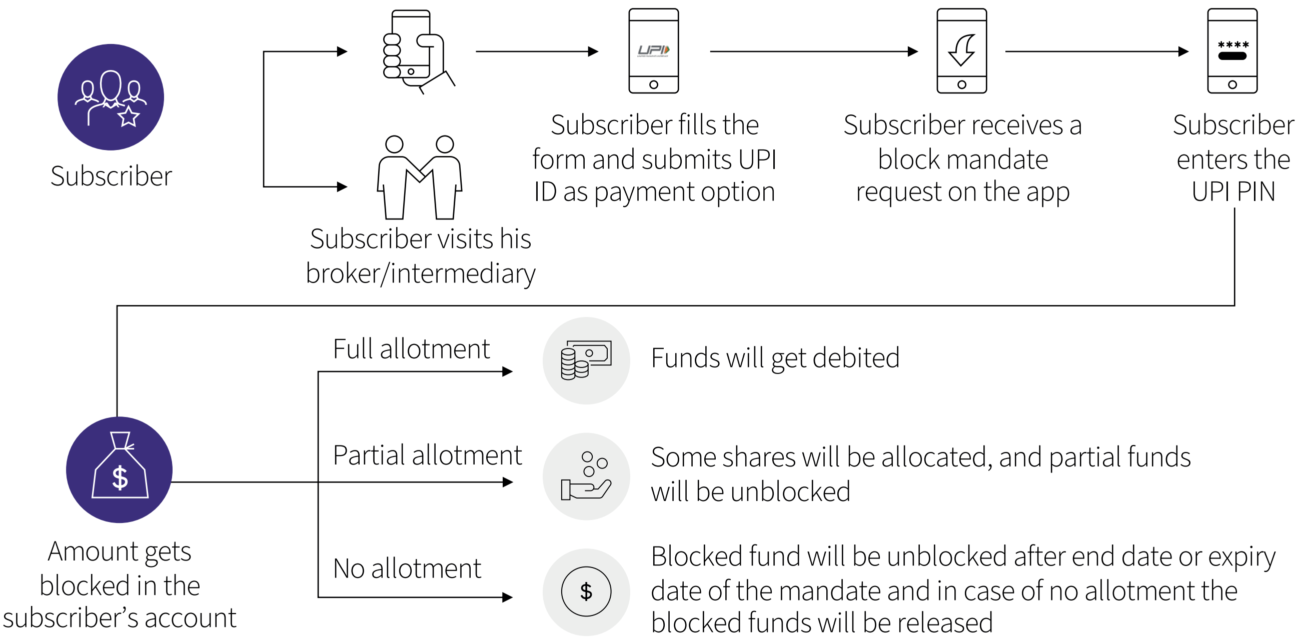
26. **Introduction of ASBA for primary and secondary markets:** Application Supported by Blocked Amount or ASBA allows investors to apply for shares in IPOs and rights issues without making the upfront payment. While ASBA for primary markets has existed since 2009, UPI-based ASBA was introduced in 2019, offering a simplified IPO application process for retail investors. Under this feature, investors authorize their bank accounts to block the requisite application amount, which remains in investors' bank account until the finalization of share allotment. The UPI interface facilitates seamless fund blocking and ensures a smoother and more efficient IPO application experience for investors (Exhibit 31). Introduction of ASBA in primary markets could potentially accrue up to INR 320 crore[41] of annual benefit for investors.

[41] NSE analysis

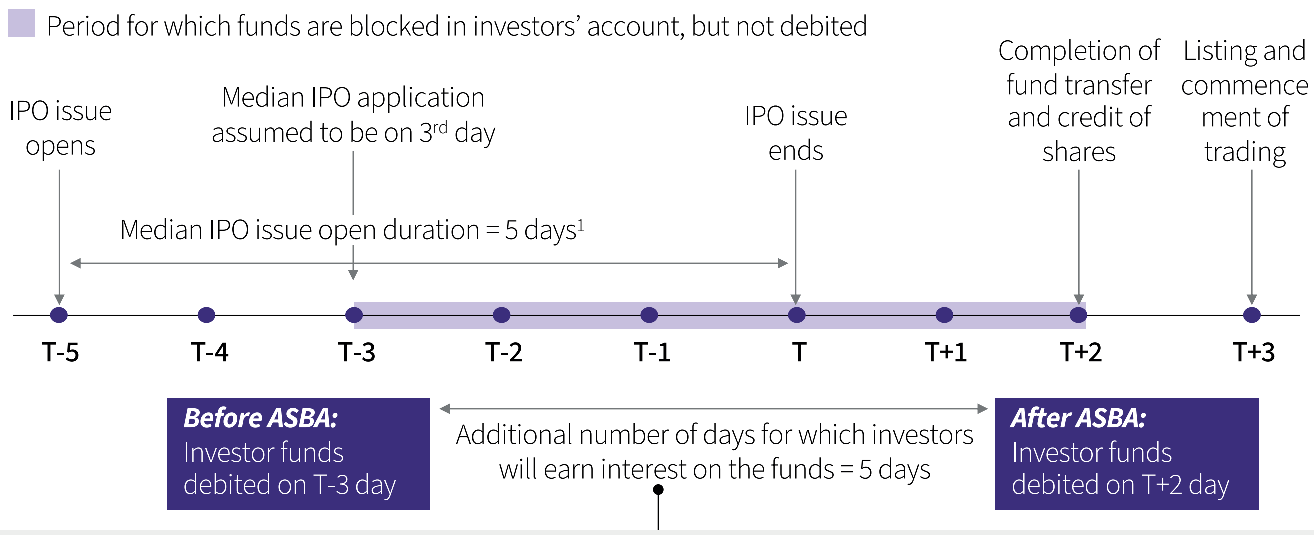
Exhibit 31

UPI-based ASBA for primary markets has led to ease in IPO applications for investors

Illustrative process for applying to IPOs using UPI-based ASBA



Introduction of ASBA for primary markets can potentially accrue INR 320 crore of annual benefit for investors



Potential annual benefit accrued to investors =	**INR 6.6L Cr** Primary market subscriptions, including oversubscription in FY23[2] ×	**5 days** Average no. of days for which funds will remain in investor bank accounts ×	**3.5%** Savings bank interest rate[3] =	**INR 320 Cr**

[1] Based on median issue open duration for IPOs in FY23

[2] Excluding anchor investors; entire QIB share assumed to be anchor investor share

[3] Large public and private banks in India (State Bank of India, Bank of Baroda, Union Bank of India, HDFC Bank, ICICI Bank, Axis Bank) offer SA interest rate in the range of 2.7–3.5% (as of March 2024)

Source: SEBI circular – March 2021, NSE analysis, SEBI statistics, SBI website, Bank of Baroda website, Union Bank of India website, HDFC Bank website, ICICI Bank website, Axis Bank website

In June 2023, SEBI introduced an ASBA-like facility for secondary markets which went live in January 2024. Investors can trade in secondary markets based on blocked funds in their own bank accounts, eliminating the need to transfer funds to brokers (Exhibit 32). This system enables direct settlement of funds and securities between investors and clearing corporations and enhances client level visibility at clearing corporation level. The ASBA system can potentially mitigate the risks associated with misuse of investor funds by brokers and minimize investor loss in cases of broker defaults. It can also unlock interest income on investors' funds, otherwise remaining with brokers till settlement of the trades. ASBA in secondary market can potentially unlock up to INR 2800 crore[42] of annual benefits for investors, in the scenario where all investors shift to ASBA-based trading.

[42] NSE analysis

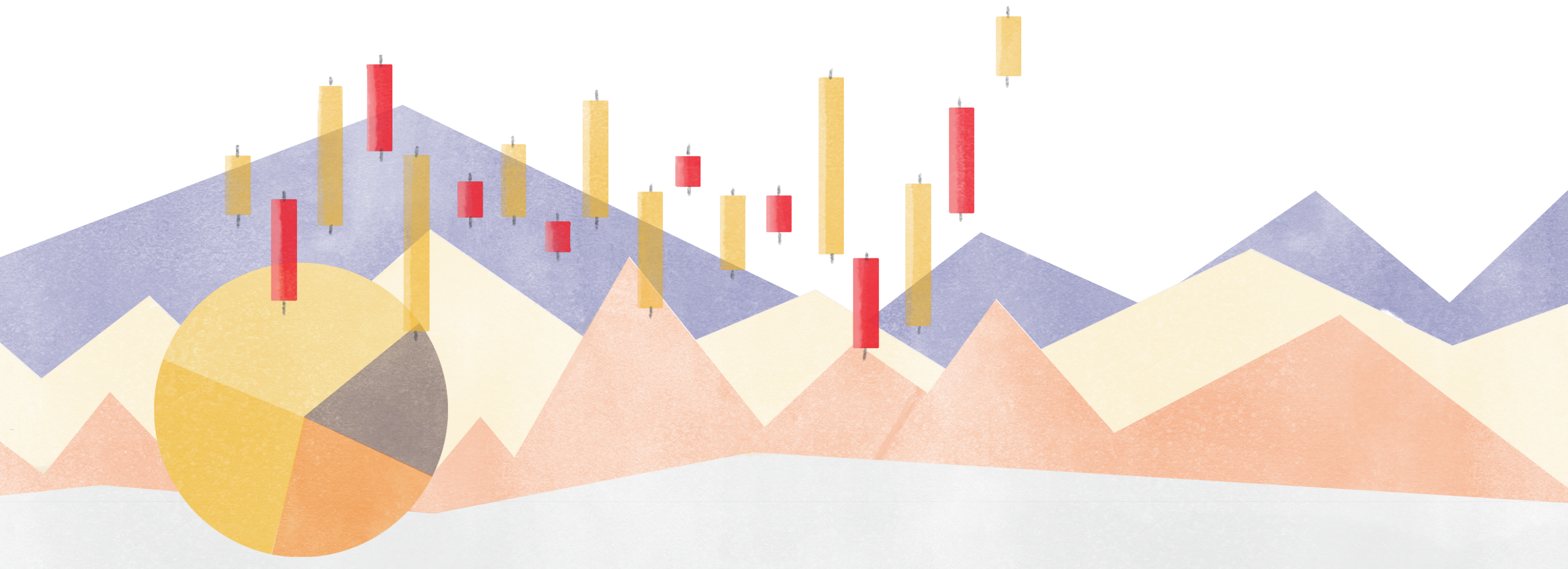
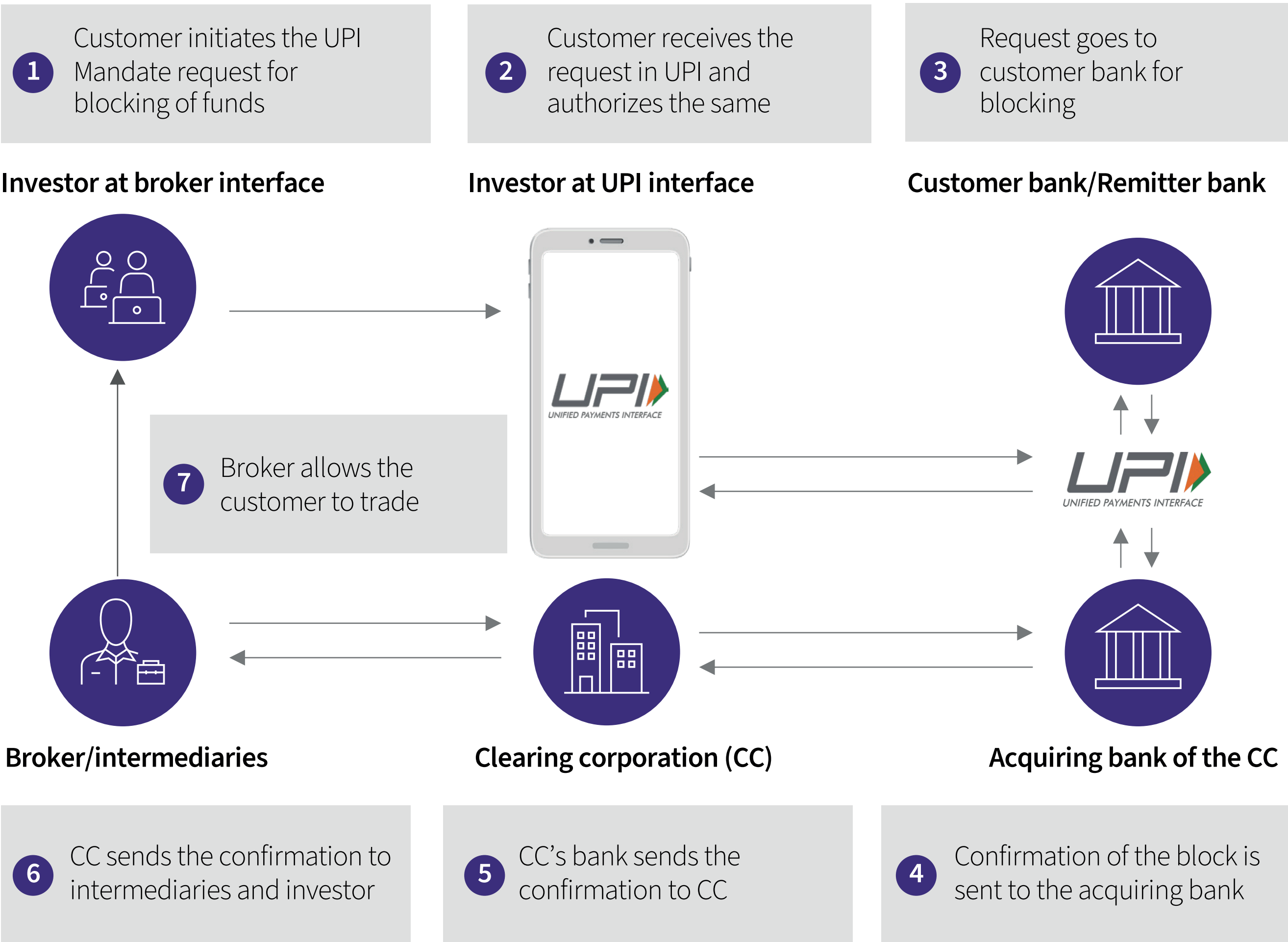


Exhibit 32

The introduction of ASBA for secondary markets will enable investors to trade based on funds blocked in their own bank accounts

Transaction flow for ASBA based trading in secondary markets



Investors will continue to earn interest on the funds in bank accounts till settlement; earlier funds were transferred to broker wallets

Potential annual benefit expected to be accrued to investors = **INR 79k[1] Cr** Average daily cash collateral collected from retail investors by TMs[2] (as reported to NCL), October–December 2023 × **365 days** The funds will continue to remain in investor accounts throughout the year × **3.5%** Savings bank interest rate[3] = **INR 2,800 Cr**

[1] Average daily cash collateral received from clients by trading members (TM) considered for 17 randomly chosen days in the October – December 2023 quarter
[2] Assuming, in long run, all the retail investors shall utilize ASBA in all segments
[3] Large public and private banks in India (SBI, Bank of Baroda, Union Bank of India, HDFC Bank, ICICI Bank, Axis Bank) offer SA interest rate in the range of 2.7–3.5% (as of 12th March 2024); max rate considered

Source: SEBI circular – June 2023, NSE analysis, SEBI consultation paper. SEBI circulars, NSE Clearing Limited data, SBI website, Bank of Baroda website, Union Bank of India website, HDFC Bank website, ICICI Bank website, Axis Bank website

27. **Shift to T+1 settlement cycle:** In a major move in 2021, SEBI enabled stock exchanges to move to a T+1 settlement cycle for all the securities available in the equity segment (Exhibit 33). Market infrastructure institutions finalized the roadmap for the implementation of the T+1 settlement cycle in a phased manner starting from February 2022, following which it was launched in January 2023, making India the first country to move to this model. This shift to T+1 settlement cycle has enhanced investor convenience through faster settlement of trades, reduced settlement risk and also freed up blocked margins at market level, thereby freeing up investor capital and potentially accruing an annual benefit of nearly INR 350 crore.[43] Contrary to popular belief that shorter settlement cycles could lead to higher defect rate, India's defect rate (trades not confirmed/rejected by custodians) has halved after the implementation of T+1 settlement, falling from 0.82% in January 2023 to 0.41% in October 2023. Further SEBI also introduced optional T+0 settlement of securities in March 2024.

[43] NSE analysis

Exhibit 33

India's shift to T+1 settlement cycle for equity segment can potentially increase liquidity in the market and reduce the settlement risk

Overview and key benefits of T+1 settlement cycle

Process	T+2 settlement	T+1 settlement	T+0 settlement
Trade initiated by investor	T day	T day	By 1:30pm on T day
Trade confirmation by custodian	By 1:00pm on T+1 day	By 7:30am on T+1 day	In discussion
Pay-in of funds/securities to CCs	By 10:30am on T+2 day	By 10:30am on T+1 day	By 1:45pm on T day
Pay-out of funds/securities by CCs	By 1:30pm on T+2 day	By 1:30pm on T+1 day	By 4:30pm on T day

Shift to T+1 settlement cycle has freed up margin worth one settlement

Illustrative transactions: Value of securities traded = INR 100 **Frequency of transactions** = Daily **Margin rate** = 20%

Before: T+2 settlement cycle

Day of trade	Trade value	Margins blocked on T	T+1	T+2	T+3	…
T	100	20	20			
T+1	100		20	20		
T+2	100			20	20	
T+3	100				20	20
.	.					
Total margin blocked on a daily basis					40	

After: T+1 settlement cycle

Day of trade	Trade value	Margins blocked on T	T+1	T+2	T+3	…
T	100	20				
T+1	100		20			
T+2	100			20		
T+3	100				20	
.	.					
Total margin blocked on a daily basis					20	

20

Margin freed up due to faster settlement

Source: SEBI circular – September 2021 and January 2023, NSE analysis, Margin data as shared by NSE Clearing Limited, SEBI statistics, RBI National Summary Data Page (NSDP)

Continued...

The freeing up of margin from the shift to T+1 settlement cycle can potentially accrue INR 350 crore of annual benefit for investors

Potential annual benefit accrued to investors

Potential annual benefit accrued to investors	=	INR 4.7K Cr	×	365 days	×	7.2%	=	INR 350 Cr
		Average daily margin levels at NCL level, YTDFY24[1]		Margin for one settlement freed up due to faster settlement		Risk free return[2]		

Transition to T+0 settlement cycle could enable same-day margin free up for investors, potentially generating annual benefits of INR ~180 crore for investors

Scenario: In long run, all retail investors shift to T+0 settlement cycle and utilize ASBA for secondary markets

Potential annual benefit accrued to investors	=	INR 4.7K Cr	×	365 days	×	3.7%	=	INR ~180 Cr
		Average daily margin levels for cash equities at NCL level, YTDFY24[1]		Margin freed up on same day in T+0 settlement cycle		Opportunity cost = Risk free return (7.2%[2]) - Savings bank interest rate (3.5%[3])		

[1] For period: 1st April 2023 to 12th March 2024

[2] 10-year G-Sec yield for India as of end of December 2023 (as reported by RBI)

[3] Large public and private banks in India (SBI, Bank of Baroda, Union Bank of India, HDFC Bank, ICICI Bank, Axis Bank) offer SA interest rate in the range of 2.7–3.5% (as of 12th March 2024); max rate considered

Source: NSE analysis, Margin data as shared by NSE Clearing Limited, SEBI circular, RBI National Summary Data Page (NSDP), Bank websites (SBI, Bank of Baroda, Union Bank of India, HDFC Bank, ICICI Bank, Axis Bank)

Methodology for estimation of impact due to shift to T+1 and T+0 settlement cycles

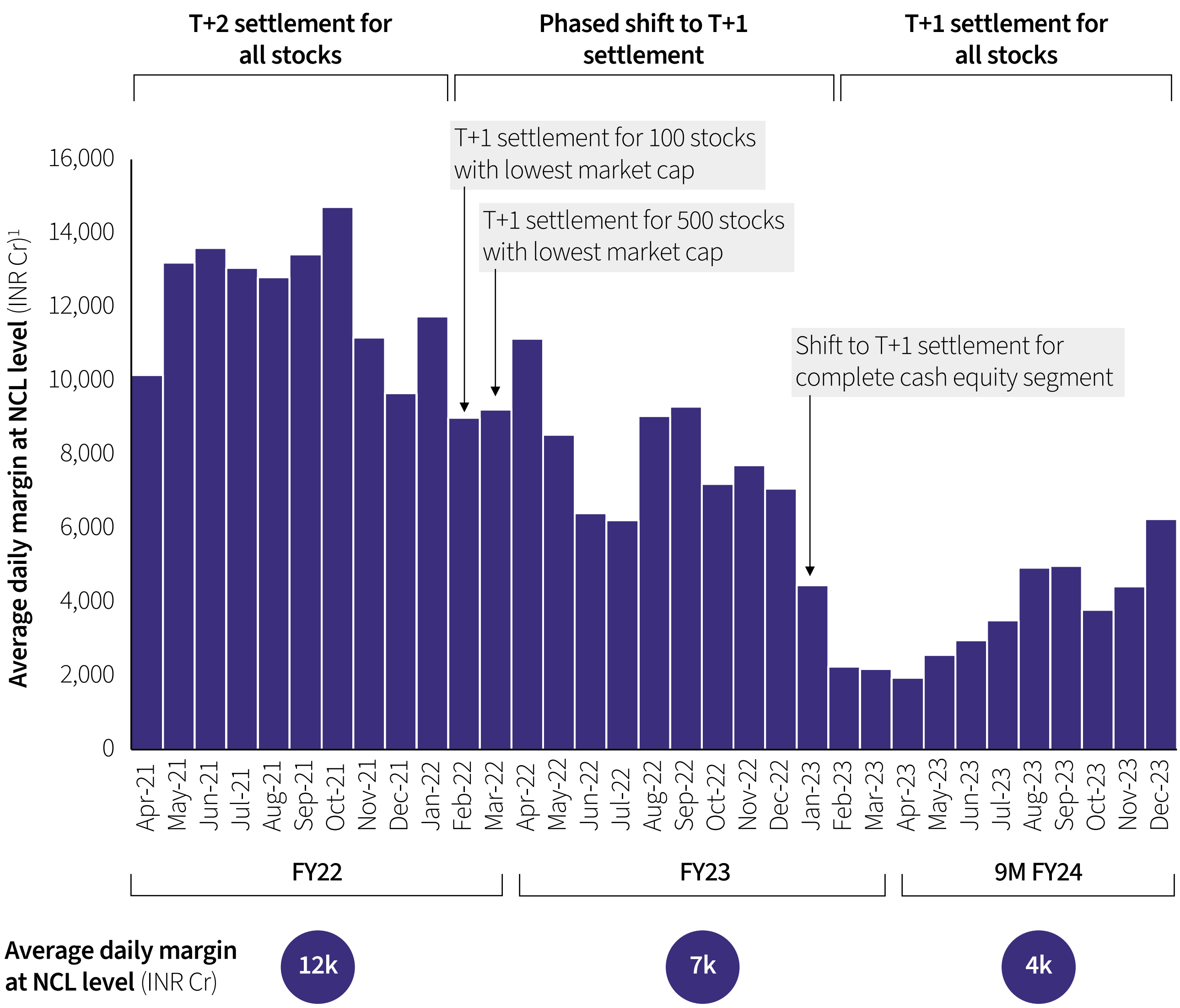
The shift to T+1 settlement cycle will free up margin equivalent to one settlement day, as opposed to the T+2 cycle where margins for two days is blocked. This means that one day's worth of total margin will be released across the market. The average daily margin, estimated at INR 4.7k crore, is calculated based on the daily margin at the clearing corporation level over a year. The duration considered for this release is 365 days, ensuring full margin release for investors. For T+1 impact estimation, the risk-free rate of return is used, while for T+0 impact estimation, the rate is adjusted to the risk-free rate minus the savings account rate, assuming retail investors will leverage ASBA for trading in secondary markets in the long run.

The impact of T+1 settlement is seen in a fall in market-level cash equity margin, demonstrating the freeing up of capital and higher efficiencies due to faster settlement (Exhibit 34).

Exhibit 34

Substantial reduction in market level cash equity margins post T+1 settlement

Analysis of trend in market level cash equity margin in FY21–24



[1] Margin includes VaR margin, Extreme loss margin, Additional Margin and MTM loss

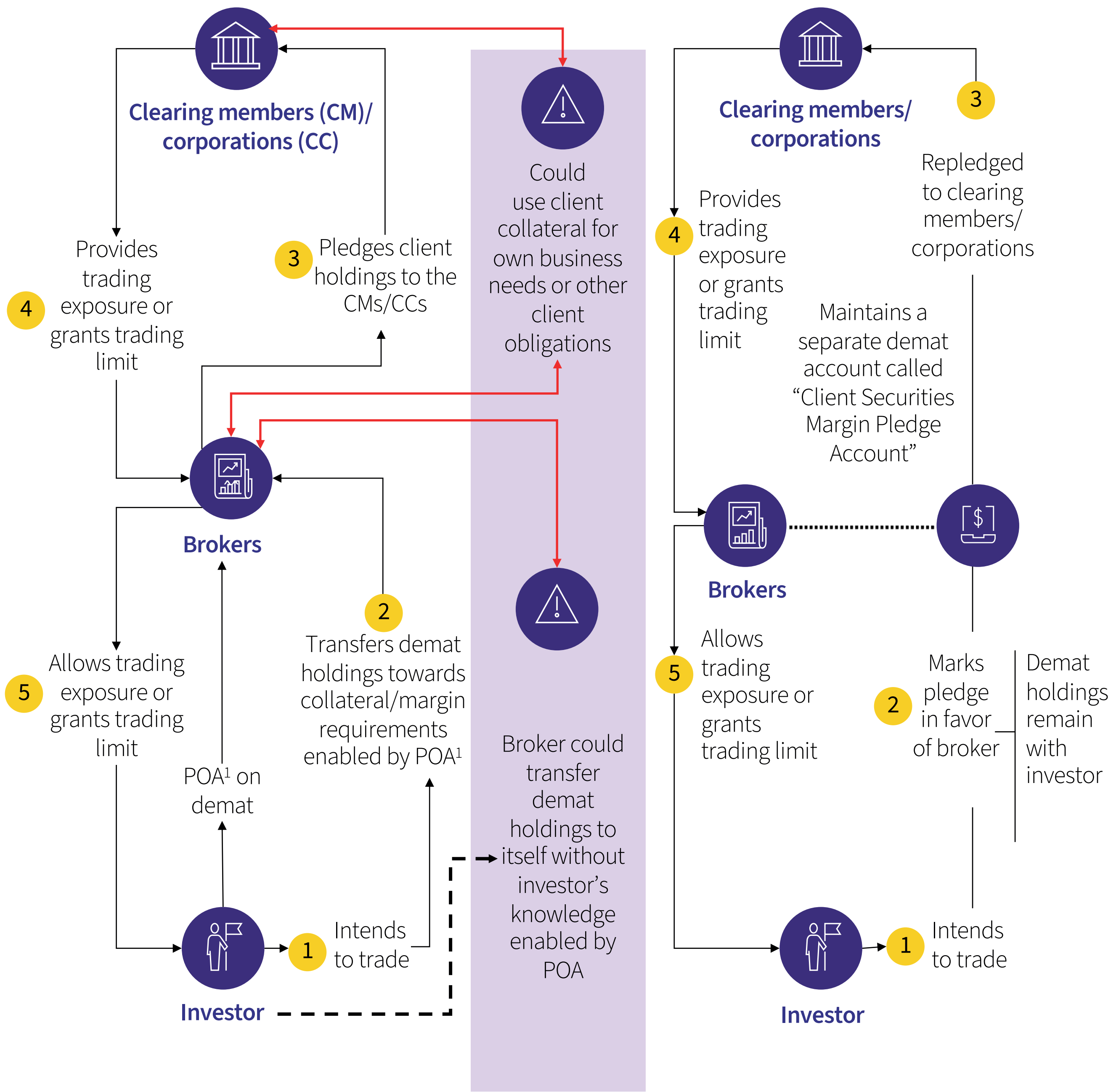
Source: NSE analysis, Margin data shared by NSE Clearing Limited

28. **Segregation and monitoring/visibility of collateral at client level:** India is the only country to establish segregation and monitoring of client level collateral to prevent misuse by trading members. SEBI has made this move despite high trading volumes, backed by technology advancements made by market infrastructure institutions (MII), allowing stock exchanges and clearing corporations to have complete visibility at the account level for each client collateral. Under this, brokers are required to disclose on a daily basis, the client wise and asset wise collateral received from clients, collateral retained with trading and clearing members and collateral passed on to the clearing corporation. Further, MIIs' accompanying web portal facility allows investors to view disaggregated collateral reporting by trading members/ clearing members, thus providing high degree of transparency, reducing risk of misreporting by brokers and minimizing risk to investors due to defaults by members.
29. **Introduction of peak margins collection and reporting regulations:** In July 2020, SEBI proposed a framework to align and streamline risk management for both cash and derivatives segments. The framework offers regular monitoring of margins from clients and levying of penalty for short collection/non-collection of margins from clients. As part of this reform, brokers are required to provide trading members/clearing members with a client-wise margin file containing both end-of-day (EOD) and peak margin requirements across intra-day snapshots. Brokers must send a minimum of four snapshots showing the intraday margin requirement per client in each segment. These snapshots are taken randomly within predefined windows. In the case of defaults, brokers face penalties to ensure adherence to regulations.
30. **Establishment of Corporate Debt Market Development Fund (CDMDF):** Corporate Debt Market Development Fund (CDMDF) was established to serve as a backstop facility for purchase of investment grade corporate debt securities during times of stress. CDMDF aims to provide stability to the corporate debt secondary market and instill confidence amongst the participants. To support the creation of the CDMDF, AMCs and specified debt MF schemes made one-time contributions based on the AUM of their specified debt-oriented MF schemes, alongside a guarantee extended by National Credit Guarantee Trustee Company Limited (NCGTC) under the Department of Financial Services, Ministry of Finance, Government of India.
31. **Introduction of revised pledging/repledging system:** After specific instances of brokers misusing client collateral, SEBI implemented a revised pledging/repledging in 2020 to de-risk investors (Exhibit 35). Under the revised mechanism, the securities do not leave client accounts while pledging for margins, but a pledge is created in the favor of brokers with user consent (through an OTP verification). Brokers maintain a separate demat account called "Client Securities Margin Pledge Account" for accepting the margin pledges. Brokers further repledge the margin pledges to clearing members, who in turn re-pledge the same to clearing corporations. This mechanism also enables client level visibility at clearing corporations for collateral pledged and repledged.

Exhibit 35

The revised pledging/repledging system introduced by SEBI is expected to de-risk investors from the misuse of funds and securities by brokers

It ensures higher control for investors vs brokers to prevent misuse of funds and securities



This pledging/re-pledging system is unique to Indian capital markets

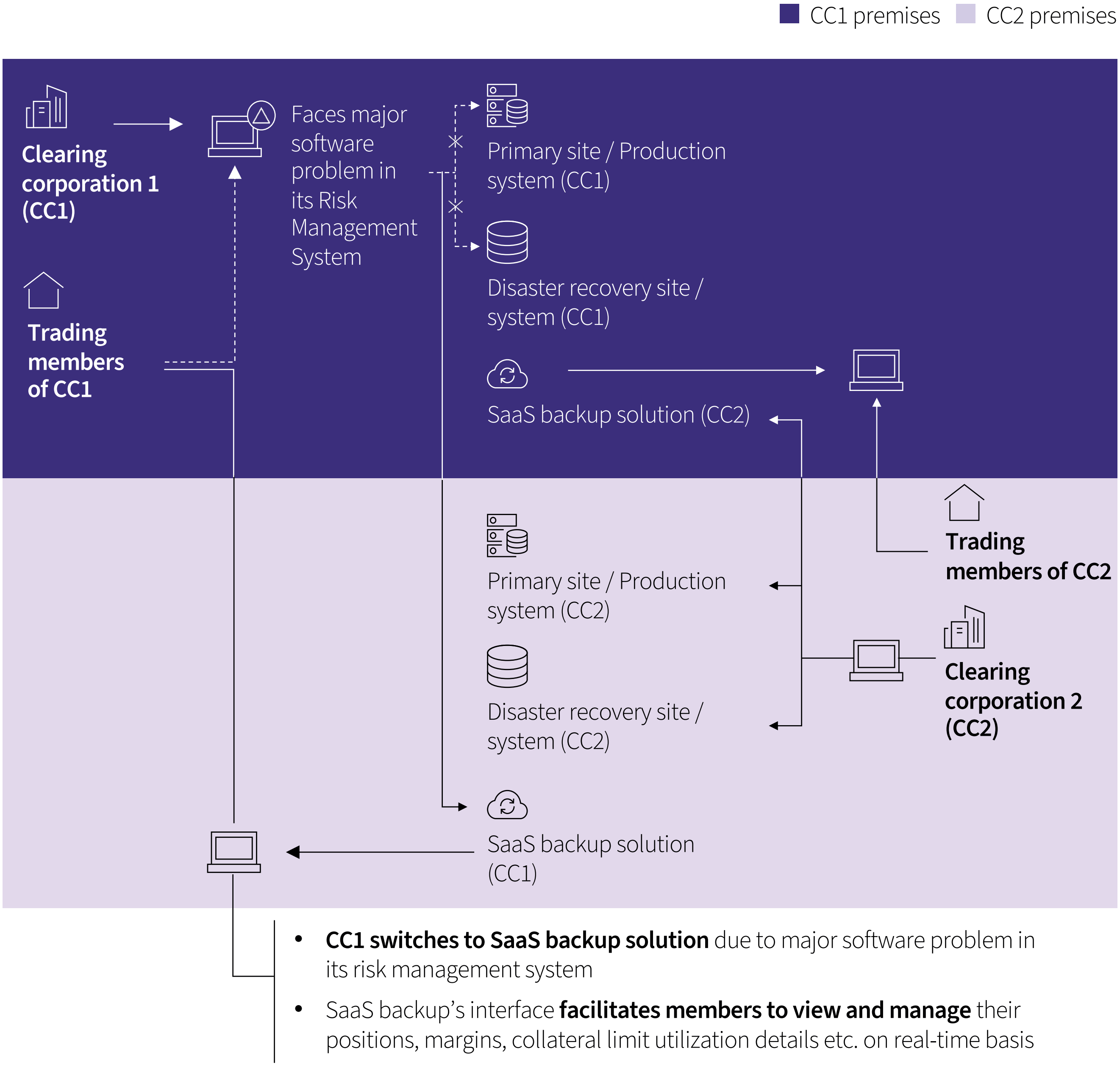
[1] Power of Attorney

Source: SEBI circular – February 2020

32. **Prevention of inadvertent trading:** SEBI introduced a framework restricting 'Designated Persons' from trading during the 'trading window closure' period by freezing their PAN. The trading window closure period refers to a designated timeframe surrounding a company's financial results release. Typically, this period spans seven business days preceding the release and two business days following it. However, the company's Compliance Officer (CO) holds the authority to define a different timeframe if necessary. During this closure period, designated persons and their immediate family members will be prohibited from trading the company's securities. SEBI intends to enforce this in a phased manner in 2024 across all companies listed across NSE, BSE and MSEI.
33. **Mandatory rolling settlement with clients on a quarterly/monthly basis:** To prevent misuse of client funds, all brokers are mandated by the regulator to settle the funds lying in client trading accounts at least once in 90 or 30 days as per the choice of the client. The act of transferring back unused funds to the primary account of client is called settlement of funds or running account settlement. Stockbrokers have the option to settle the running account of clients on first Friday/ Saturday of the quarter/month. This regular mandatory settlement reduces the risk of brokers holding onto unused investor funds for extended periods and potentially misusing it. Further, in December 2023, SEBI mandated all the brokers to settle the running accounts on a quarterly/monthly basis at the choice of the clients but on the dates stipulated by the exchanges.
34. **Inter-operability among clearing corporations:** SEBI introduced interoperability among clearing corporations, with the intent to reduce trading costs through better utilization of margin and capital resources of market participants. This arrangement enables clearing members to choose any clearing corporation to settle trades executed across multiple exchanges. The facility is provided for products traded in capital markets, equity and currency derivatives and debt (excluding triparty repo).
35. **Two-way portability across clearing corporations:** Indian Clearing Corporation Ltd. (ICCL) and NSE Clearing Ltd. (NCL) in consultation with SEBI developed a two-way portability module to allow clearing corporations business continuity in the event of software issues with risk management systems. The module is operated in a "SaaS" (Software as a Service) model to which clearing corporations can switch to in such cases. Trades for the affected clearing corporation would then be processed in this backup risk management system, maintained in the premises of the other clearing corporation. The two-way portability is unique to Indian capital markets; no other known global capital markets have such a system, showcasing the level of collaboration between two otherwise competitive MIIs (Exhibit 36).

Exhibit 36

NCL and ICCL have developed a two-way portability module which helps provide business continuity even in major cases of technical issues



- **CC1 switches to SaaS backup solution** due to major software problem in its risk management system
- SaaS backup's interface **facilitates members to view and manage** their positions, margins, collateral limit utilization details etc. on real-time basis

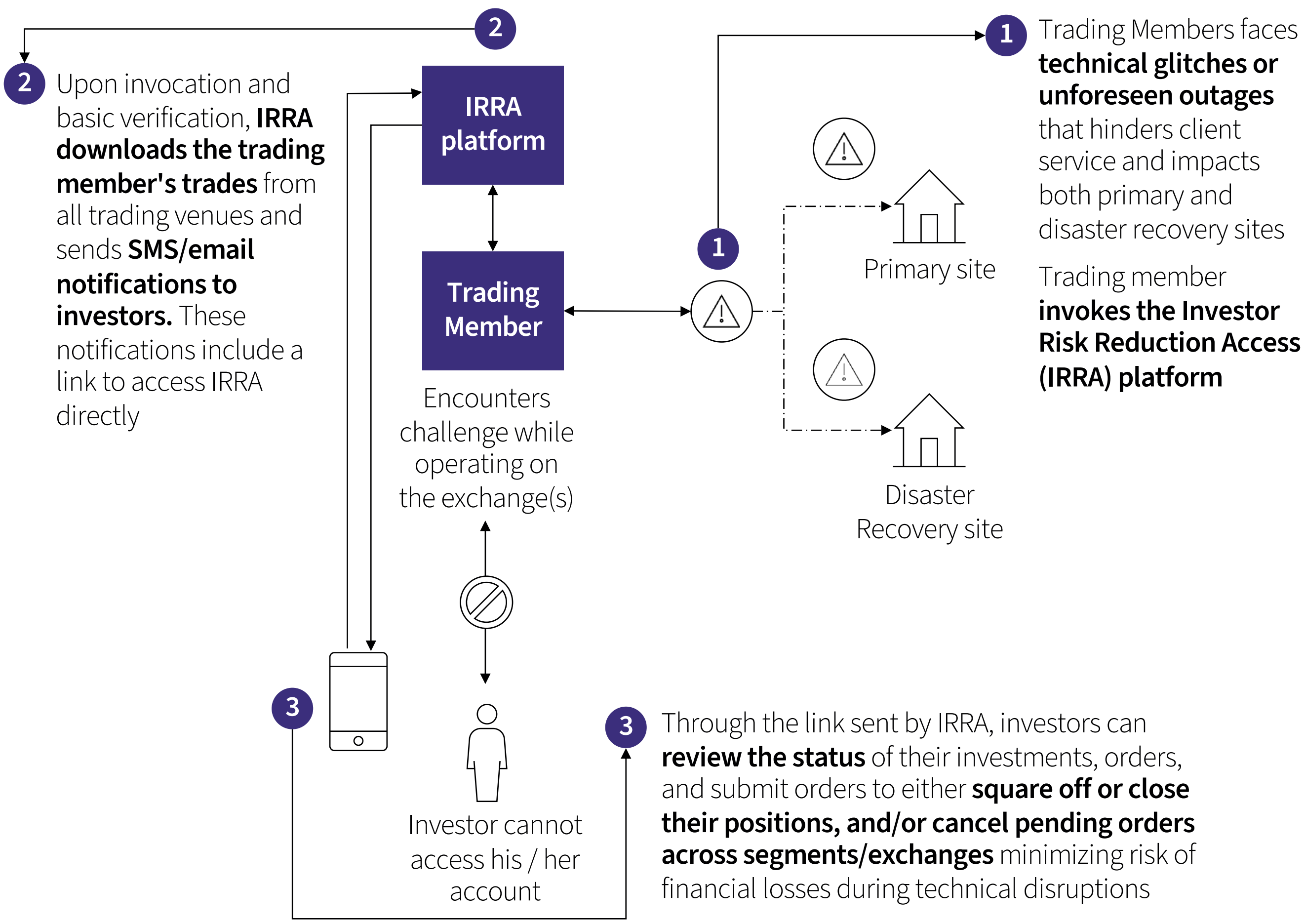
The two-way portability between clearing corporations (NCL and ICCL) is **unique to Indian capital markets**

Source: ICCL and NCL notice – March 2023

36. **Investor Risk Reduction Access (IRRA):** A platform designed to mitigate the risk of investor losses during technical glitches at brokerages, IRRA, was jointly developed by all stock exchanges in the country – BSE, NSE, NCDEX, MCX and MSE – under the guidance of SEBI. It allows investors to square off or close their positions and/or cancel pending orders, directly with the exchange, minimizing the risk of financial losses during technical disruptions. This type of a direct access platform is unique to Indian securities markets (Exhibit 37).

Exhibit 37

The Investor Risk Reduction Access (IRRA) platform has been designed to mitigate risk of investor losses during technical glitches at the trading members' end



Indian securities market is the **only market globally** offering such **direct access to the exchanges for the investors**

Source: SEBI circular – December 2022

37. **Cyber Incidents Reporting Portal (CIRP):** To enhance cybersecurity measures for market entities, SEBI established the Cyber Incidents Reporting Portal (CIRP) allowing for systematic reporting of cyber incidents by MIIs. As of 2022–23, the portal's coverage was extended to stockbrokers, mutual funds, portfolio managers and RTAs. It can only be accessed by the chief information security officers (CISOs) and also allows sharing of cyber incidents anonymously among the CISOs.

38. **Streamlined framework for adoption of cloud services by SEBI registered entities:** This framework establishes baseline standards for security and regulatory compliance. Objectives of the framework are to identify critical risks associated with cloud computing for regulated entities (REs), establish mandatory control measures for REs to implement before cloud adoption and outline regulatory and legal requirements for REs using cloud services.

    As part of the framework, REs are required to identify and address critical risks associated with cloud computing, implement mandatory control measures before adopting cloud services, develop a robust risk management strategy for cloud adoption and prioritize risk assessment and implement appropriate controls to ensure regulatory compliance.

    SEBI mandated that the framework is effective immediately for all new or proposed cloud onboarding projects undertaken by REs.

C. II Regulatory compliance and reporting

SEBI has adopted technology-enabled measures to ensure transparency, fairness, and investor protection in the Indian capital markets. These initiatives also ensure listed entities adhere to requirements set by the regulator such as composition and functioning of board directors, anti-insider trading initiatives, etc.

39. **GenAI driven automated compliance checks:** SEBI has developed a tool in-house that uses Generative AI to perform compliance checks in IPO approval processes. The tool can check various compliance requirements in the LODR (Listing Obligations and Disclosure Requirements) and significantly reduces the turnaround time, since 80% of LODR compliance checks in DRHP are currently done manually.[44]

40. **Standardized XBRL reporting for public offer and issue documents:** SEBI has introduced standardized XBRL reporting for public offer and issue documents to enhance transparency, efficiency, and accuracy in the reporting process for IPOs and further issues of securities.

    By adopting XBRL format, SEBI aims to streamline the filing process, improve data quality, and facilitate easier analysis of financial information by regulators, investors, and other stakeholders. The introduction of the Issue Summary Document (ISD) in XBRL format allows for comprehensive reporting across various types of offerings. Further, the (voluntary) XBRL Pilot Project for Mutual Funds has been set up to modernize reporting practices in the asset management industry, enabling more efficient data exchange between MF/AMCs and SEBI.

[44] The Economic Times - SEBI to use generative AI tool to clear IPO applications – January 19th, 2024

C. III Corporate governance standards

India's corporate governance standards and practices stand out globally, as highlighted by the World Bank's Ease of Doing Business (EODB) rankings. India ranks 13th globally[45] in terms of protecting minority shareholdings as per the rankings, surpassing various developed countries such as the US, China, Korea, Australia and EU nations. These rankings take into account various corporate governance factors such as extent of disclosures, director liability, shareholder rights, ownership and control, corporate transparency, etc.

Various corporate governance initiatives in Indian capital markets have played a role in strengthening India's corporate governance standards.

41. **Strengthening of governance at listed companies:** SEBI utilizes Clause 49 of the listing agreement to monitor and regulate corporate governance practices of listed companies in India. This clause outlines specific requirements that listed companies must follow for good corporate governance. SEBI draws inspiration from the OECD principles of corporate governance, an international benchmark, for the same.

    Like many other regulators, SEBI follows a rule-based policy of enforcing corporate governance norms with a special focus on protecting the rights of minority shareholders. The disclosure standards and other matters of compliance around corporate governance are updated from time to time and have, in the past, been driven by dedicated committees comprising of various industry participants. In 2017, SEBI created a committee to evaluate and improve Indian corporate governance standards with respect to global best practices. SEBI accepted several of the recommendations and implemented them in a phased manner.

    In June 2023, SEBI also amended the LODR regulations originally initiated in 2015. The new rules specifically address issues related to agreements, special rights granted to certain shareholders, board permanency as well as sale, disposal or lease of assets of a listed entity outside the 'Scheme of Arrangement'.

42. **Disclosure of material events and verification of rumors by listed companies:** The LODR regulations of SEBI go beyond setting general disclosure guidelines. There is an added layer of promptness for the top 350 listed entities by market capitalization, wherein a swift response is expected in the case of material events and market rumours. Specifically, these top companies are mandated to promptly confirm, deny, or clarify any specific reported events or information within twenty-four hours of their reporting. Moreover, upon confirmation, the listed entity must also disclose the current status of such events or information. The deadline for enforcing the verification of market rumours is scheduled for June 1st, 2024, for the top 100 listed entities and December 1st, 2024, for the top 250 listed entities.

43. **Business Responsibility and Sustainability Report (BRSR):** In order to enhance the reliability of ESG disclosures and ensure responsible business conduct by corporates, SEBI introduced the Business Responsibility and Sustainability Reporting (BRSR). The BRSR seeks quantitative and standardized disclosures from listed entities on ESG parameters to enable comparability across companies and sectors, to enable informed decision making among investors. BRSR reporting was introduced in an optional manner for FY22 and mandatory for top 1000 listed companies (by market capitalization) from FY23.

[45] The World Bank's Doing Business 2020 rankings (latest available rankings)

C. IV Surveillance

Through vigilant monitoring of regulated entities and trading activities, SEBI can detect and deter market manipulation, insider trading, and other fraudulent practices that could undermine investor confidence.

44. **Enhanced monitoring and surveillance of Qualified Stock Brokers (QSB):** SEBI introduced the QSB framework in 2023, a regulatory initiative focused on high-volume brokers wielding significant influence in the markets. These QSBs face stricter obligations and requirements across compliance, governance mechanisms, risk management, scalability of infrastructure, technical capacity, cybersecurity and investor services, particularly online complaint redressal.

    SEBI and exchanges maintain scrutiny over the QSBs, monitoring adherence to the enhanced obligations as well as additional areas such as handling of client funds and securities, financial health of QSBs, audit reports, quality of services to investors, surveillance of client behaviors, etc. This framework fosters a secure and stable functioning of the markets and also protects investor interests.

45. **Advanced analytics driven transaction level monitoring of mutual funds:** SEBI has 100+ in-house algorithms for monitoring MFs at a transaction level to check compliance of transactions, disclosures, etc. SEBI conducts these compliance checks every quarter using the entirety of data shared by AMCs and mutual funds.

46. **DLT-enabled unique asset identification and security and covenant monitoring:** SEBI has implemented a Distributed Ledger Technology (DLT) system for monitoring security and covenants associated with non-convertible securities. This initiative aims to strengthen the security creation process and ensure regulatory compliance. The DLT system tracks asset details (verification, allotment, listing), interest payments, and redemptions, and facilitates recording of charges by issuers and monitoring by debenture trustees and credit rating agencies. This initiative leverages DLT to enhance transparency and streamline security monitoring processes for non-convertible securities in India and is mandatory for all new non-convertible security issuances from April 1, 2022.

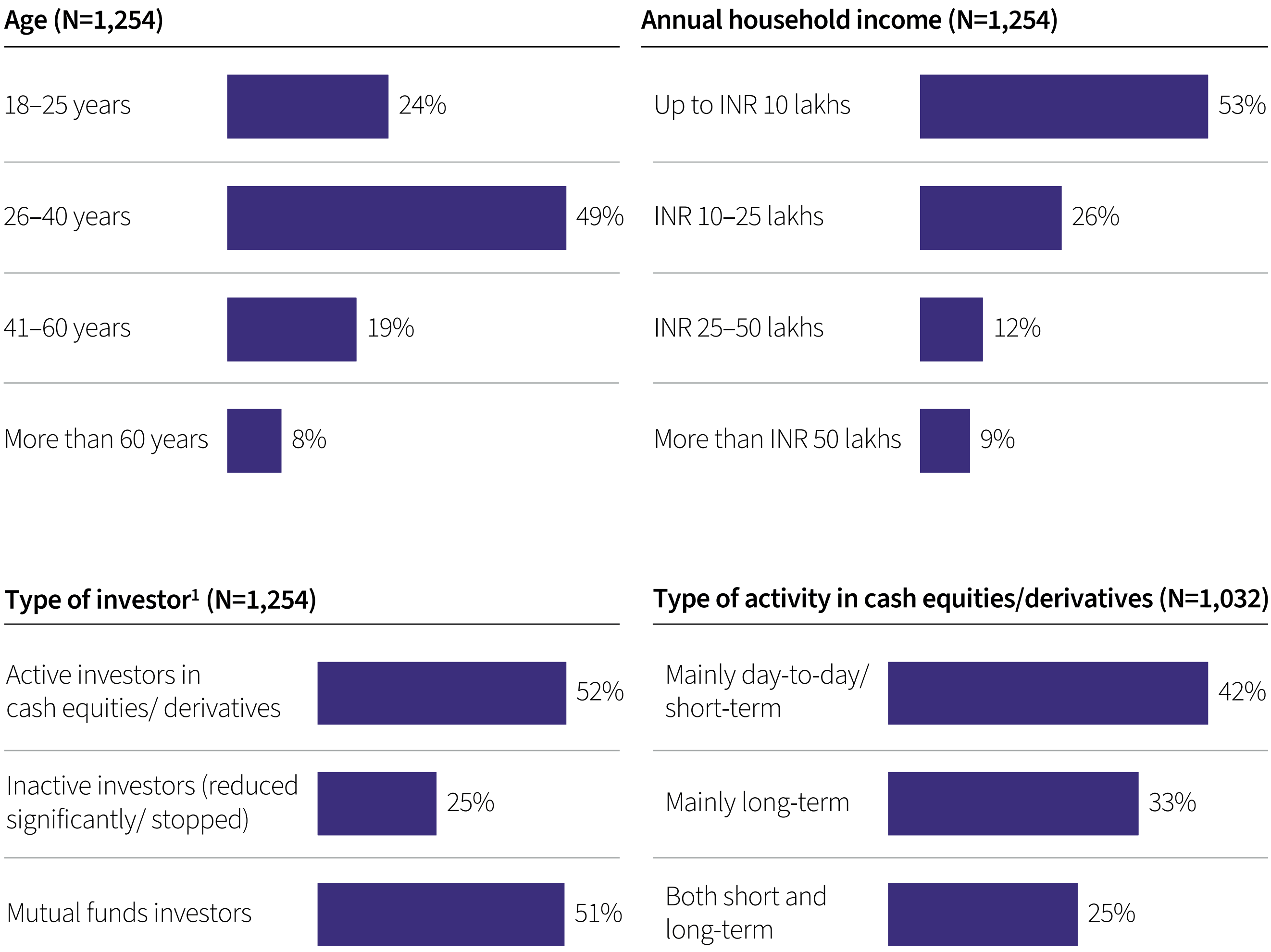
Retail investor survey

This survey was conducted to gain an understanding of the pulse of the Indian investor community and their awareness of recent technology and regulatory reforms. It covered about 1250 retail investors across 12 cities in India. Respondents covered came from a variety of backgrounds (Exhibit 38).

Exhibit 38

We have spoken to ~1,250 retail investors across 12 cities in India

Overview of respondent profiles



[1] Survey participants could be either active investors or inactive investors, along with being mutual funds investors

Source: Unless stated otherwise, all data represented in this section is based on a survey conducted for capital market investors (N=1,254) across 12 cities in India in March 2024.

The cities covered in the survey include: Ahmedabad, Bangalore, Delhi, Hyderabad, Indore, Kanpur, Kolkata, Lucknow, Mumbai, Patna, Pune, Vijayawada

The survey assessed

- Level of awareness among retail investors about recent changes in the market.
- Changes that impacted them most positively, negatively and/or had no impact on their trading activity.
- Potential changes they would like to see in the market in the future. The results are presented across three investor archetypes below:

Archetype I: Active investor

Background

- 646 individuals identified themselves as active investors in the survey.
- Nearly half had been trading for 1–3 years. 30% had traded for 3–5 years, while 15% traded for over 5 years.
- Just above half had a portfolio of INR 1–10 lakhs.
- 44% said they preferred day or short-term trading.

Insights

I. Active investors in cash equities/ derivatives

Ease of opening demat account was considered as the most impactful enabler for trading, followed by faster trade settlement

Survey question: Which of the following market and tech changes/improvements have enabled/eased trading in cash equities and derivatives the most for you in the last 3–5 years?

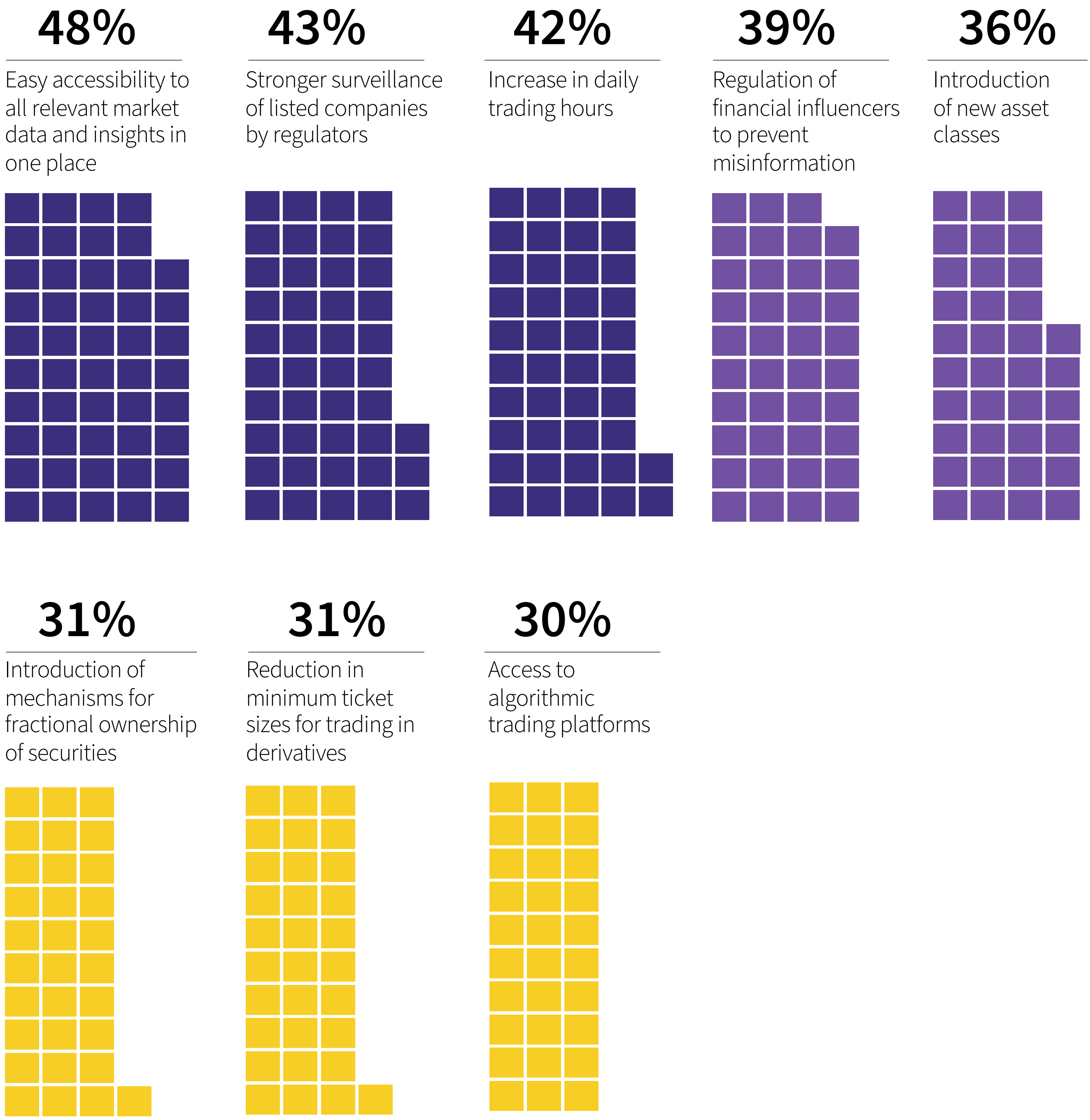
Most useful market and tech changes/ improvements, % of respondents selecting Ranks 1+2+3 (N=646)

I. Active investors in cash equities/ derivatives

Increased market trust and transparency can further enable investors to trade in capital markets

Survey question: What changes do you want to see in Indian capital markets going forward, which will enable you to continue or increase trading/investing in cash equities and derivatives?

Changes desired for increase in trading, % of respondents selecting Ranks 1+2+3 (N=646)



Archetype II - Inactive investors in cash equities/derivatives

Background

- 312 individuals identified as inactive investors
- Nearly half stopped trading in the last 1–3 years after being in the market for 1–3 years
- About 60% had an investment portfolio of INR 1–10 lakh at the time of halting

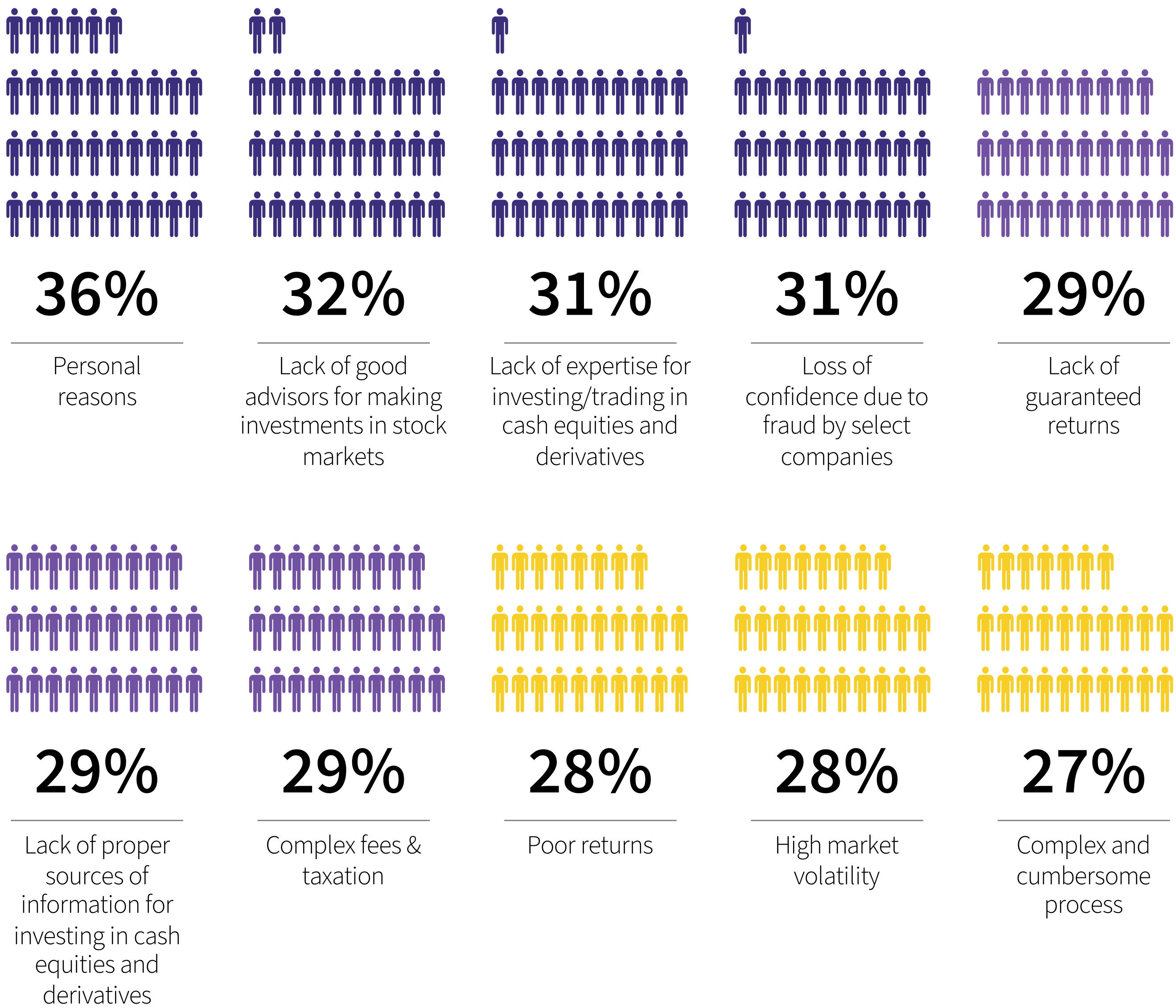
Insights

II. Inactive investors in cash equities/ derivatives

Beyond personal reasons, lack of advice and expertise were the biggest barriers to trading for inactive investors

Survey question: What were your key reasons for stopping/reducing activity in cash equities and derivatives?

Reasons for stopping/ reducing trading[1], % of respondents selecting Ranks 1+2+3 (N=312)

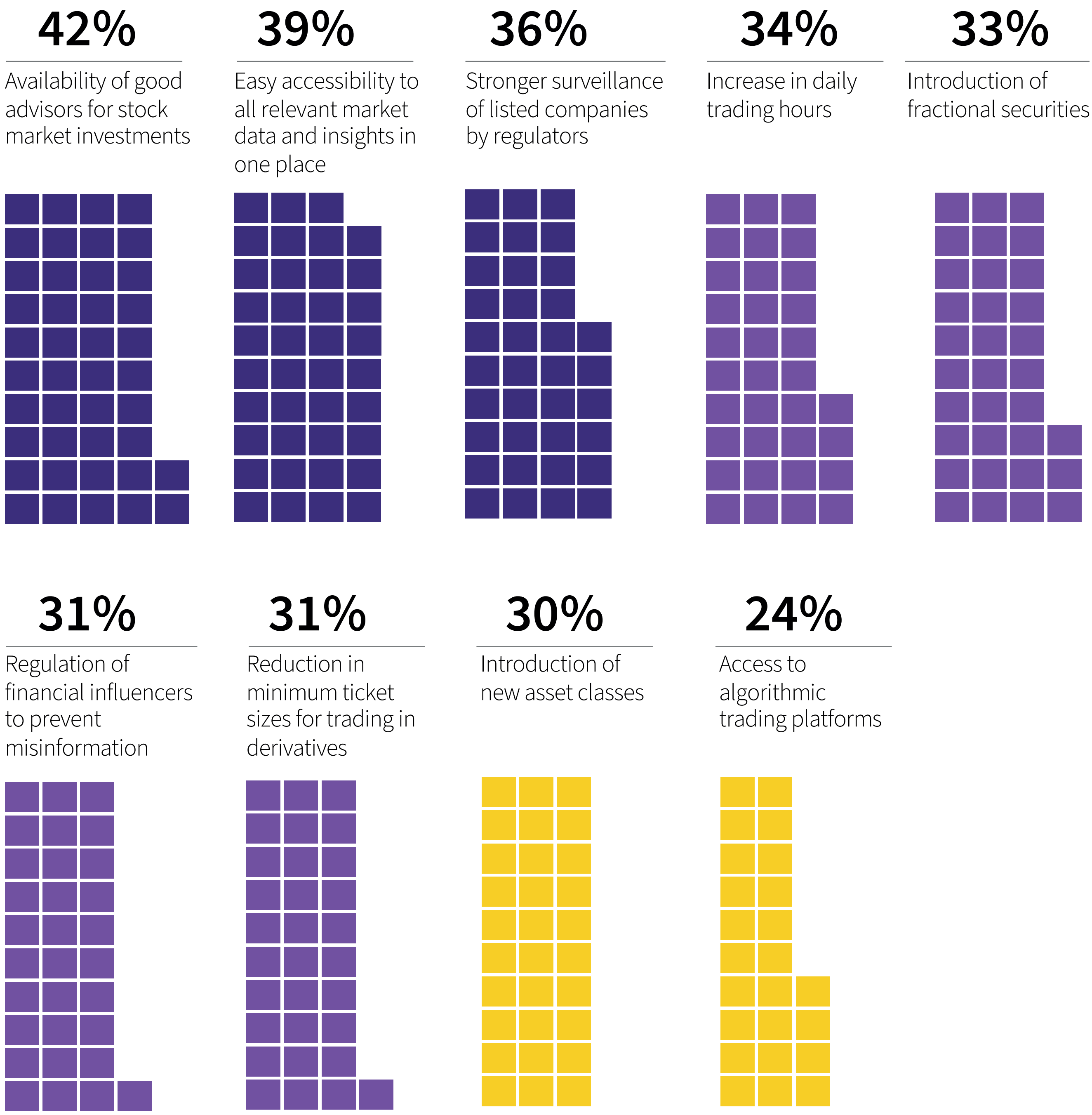


II. Inactive investors in cash equities/ derivatives

Availability of stock market advisors and insights is the most desired proposition for resuming trading

Survey question: What changes will be required to enable you to re-start trading/investing in cash equities and derivatives?

Changes required to restart trading, % of respondents selecting Ranks 1+2+3 (N=312)



Archetype III – Mutual Fund investors

Background

- 642 mutual fund investors responded to the survey
- Majority of MF investors have been investing 5–10% of their income
- About half hold a total invested value of INR 1–10 lakh

Insights

III. Mutual funds investors

Mandatory account payments, one-time KYC and low value SIPs are considered the most beneficial developments by investors

Survey question: Which of the following market and technology changes/improvements have enabled/eased investing in mutual funds the most for you in the last 3–5 years?

Most useful market and tech changes/ improvements, % of respondents selecting Ranks 1+2+3 (N=642)

III. Mutual funds investors

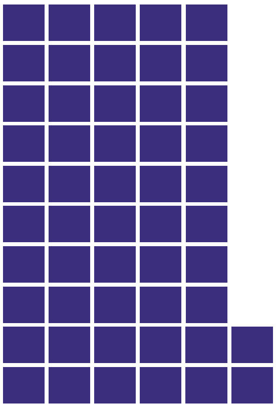
Faster purchase and redemption and broadening of product offerings are the top desired changes by MF investors

Survey question: What changes do you want to see in Indian capital markets going forward, which will enable you to continue/increase investing in mutual funds?

Changes desired for increase in investing, % of respondents selecting Ranks 1+2+3 (N=642)

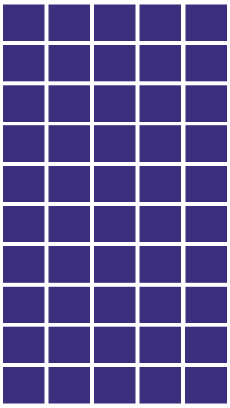
52%

Faster purchase and redemption for mutual fund investments



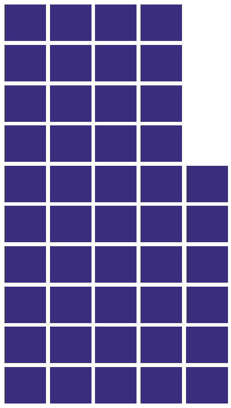
50%

Introduction of new types of mutual fund schemes



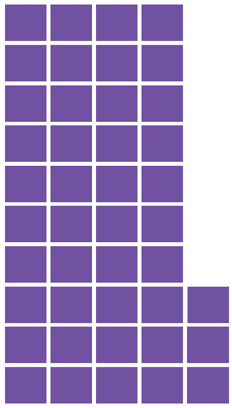
46%

Simplification of taxation on mutual fund gains across various scheme types



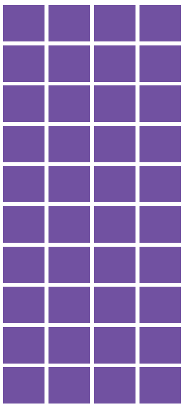
43%

Centralized rankings for mutual fund schemes based on performance, costs, etc.



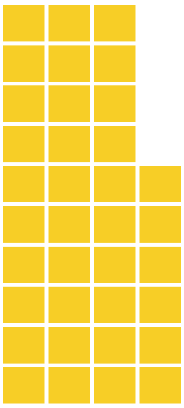
40%

Regulation of financial influencers to prevent misinformation



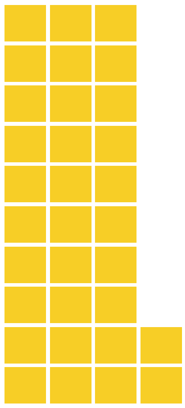
36%

Reduction in minimum ticket sizes for SIP investments



32%

Use of robo-advisors for automated investment management and advisory




763.06

03

Benchmarking reforms and technological innovations

Indian capital markets have made significant strides towards becoming future-ready and seamless in recent years. In many cases, India has launched global-first initiatives, particularly in the areas of investor protection and transparency. The NSE benchmarking exercise compares Indian capital markets with global peers: the US, UK and Singapore across three areas

A. Investor enablement

B. Market development and growth

C. Risk management and governance (investor protection)

The results reveal that India stands out with its strong performance in investor enablement and risk management, primarily due to its innovative technology-driven initiatives and the flexibility demonstrated by market infrastructure institutions and participants.

This adaptability enables India to swiftly embrace regulatory changes and continually enhance its technological capabilities – an aspect that distinguishes it at the global stage. At the same time, the benchmarking also identifies certain gaps, where there is an opportunity for the Indian capital markets to improve and grow, taking inspiration from global peers.

The following sections dive deeper into the results from this benchmarking exercise.

A. Investor enablement

As seen in Chapter 2, SEBI's priorities for investor enablement focus on three key levers

- **Inclusion –** Access to the capital market for different investor types across the country with a focus on the retail investor.
- **Convenience and control –** Ease of access to the capital market with complete control over financial assets with full transparency.
- **Financial literacy and education –** Market education tools to ensure minority investors are given a lot more importance.

India ranks higher than its peers on most metrics in this segment, helped by key innovations and reforms launched by SEBI.

When compared to global peers, even at current levels, mutual funds in India are more affordable for investors. A push towards smaller SIP ticket size for mutual fund investments have made them more available to a variety of investors from different segments and locations in the country. The SIP ticket size is expected to further reduce to INR 250 in the coming years.[46] Currently, while some mutual funds allow a minimum investment of INR 100, most funds have a minimum investment ticket size of INR 500.[47]

The US, UK and Singapore do not have any minimum thresholds mandated by their regulators for investing in derivatives and AIFs. Meanwhile, in India derivatives contracts and AIFs have a minimum investment thresholds of INR 5 lakhs and INR 1 crore. In the past, SEBI has also reduced the minimum investment ticket size for other asset classes, for example, minimum ticket size for privately placed debt securities was reduced to INR 10000 from INR 1 lakh in July 2024, to ramp up retail participation.

However, insights from the benchmarking exercise underline further scope to enhance customer convenience and control by allowing a larger trading window. For instance, UK and Singapore capital markets are live 8-8.5 hours on trading days for cash equities while Indian stock exchanges are open for 6.25 hours (Exhibit 39). Moreover, for derivatives trading, US and Singapore exchanges are open for up to 23 hours (e.g., CME Globex) and ~21 hours respectively, while Indian stock exchanges are open for 6.25 hours.

India is also working towards enhancing financial literacy and awareness. Disclaimers and alerts are issued for risky stocks and asset classes at point of trade and communication of mutual fund schemes is standardized, transparent, and simplified. In the US, UK and Singapore, while such alerts are provided independently by brokerages and exchanges, they are currently not mandated by regulators (Exhibit 39).

46 Mint article - SEBI working with mutual funds to make ₹250 SIP bets viable for industry growth: Madhabi Puri Buch - December 9th, 2023
47 Based on fund information for different mutual fund schemes across AMCs

Exhibit 39

Investor enablement – India is at par with global peers in ease of onboarding with potential to offer wider trading window

Ranking among peers: Low | Mid | High

	India	US	UK	Singapore
I. Convenience and control				
1 **Trading hours - Cash equities**	**6.25 hours** | 9:15 AM – 3:30 PM IST	**6.5 hours**[1] | 9:30 AM – 4:00 PM EST	**8.5 hours** | 8:00 AM – 4:30 PM GMT	**8 hours** | 9:00 AM – 5:00 PM SGT
Trading hours – Equity derivatives	**6.25 hours** | 9:15 AM – 3:30 PM IST	**23 hours**[2] | Sun – Fri	**8.5 hours** | 8:00 AM – 4:30 PM GMT	**Up to 21:20 hours**[3] | 7:25 AM – 6:30 PM and 7:00 PM – 5:15 AM SGT
2 **Ease of KYC across financial services**				
Availability of Digital KYC	✓ **Aadhar-based** eKYC and presence of KYC Registration Agency (KRA)	✓ **Taxpayer identification number-based** KYC	✓ Digital KYC based on documents mandated by FCA	✓ Digital KYC enabled by **'Singpass'**, Singapore's national digital identity
II. Financial literacy, education and awareness				
1 **Availability of dedicated resources and programs to enable investor education**	Several investor education initiatives by SEBI and stock exchanges. Dedicated **investor website and SaaRthi Mobile App** by SEBI for investor education – in **English, Hindi and regional languages**.	Provides online resources on investor education, financial planning tools and calculators	Has online resources on investments and risks; FCA conducts campaigns to raise investor awareness	Provides investor education through resources, campaigns and outreach programs of **'MoneySENSE'** - national financial education programme in Singapore overseen by MAS
2 **Disclaimers and alerts at point of trade to educate and protect investors**	SEBI mandated **automated alerts and disclaimers** provided at **point-of-trade in cash equities and F&O trading** (e.g., loss making companies, companies not in compliance with SEBI circular, etc.)	While such alerts may be provided by brokers, the same is not mandated by regulators	While such alerts may be provided by brokers, the same is not mandated by regulators	While such alerts may be provided by brokers, the same is not mandated by regulators
3 **Standardized approach for communicating risk in simple terms in mutual fund schemes**	SEBI mandated depiction of risk by a pictorial meter named **"Riskometer"** which is easy to understand	Standardized formulas and reporting structure mandated by SEC across statutory prospectus and summary prospectus	Standardized reporting format mandated by FCA	Standardized reporting format mandated by MAS

[1] Considered for Nasdaq
[2] Considered for CME Globex
[3] Considered for SGX FTSE Emerging Market Asia Index Futures

Source: SEBI website, U.S. Securities and Exchange Commission (SEC) website, Financial Conduct Authority (FCA) website, Monetary Authority of Singapore (MAS) website, Nasdaq website, London Stock Exchange (LSE) website, Singapore Exchange (SGX) website, moneysense.gov.sg, Investor.gov website of US SEC

B. Market development and growth

Several initiatives are underway to drive development of capital markets in India, anchored on:

- **Ease of doing business –** Easy access and trading within the markets.
- **Enabling transparency –** Enhanced transparency to reduce information asymmetry and boost investor confidence in the system.
- **New products and players –** Innovation by developing diverse products but simultaneously protecting investors with appropriate measures.
- **Innovative sandboxes –** Allows controlled testing of innovative financial products, services, and technologies.

India is catching up with global peers in terms of ease of doing business due to lower listing costs, reasonable listing time for IPOs (reduced from T+6 to T+3) and dedicated exchanges/ boards for SMEs, startups, and high growth small businesses. While the US, UK and Singapore have had these dedicated exchanges for a long time now, both NSE and BSE recently launched – SME EMERGE and BSE Startups, to provide similar benefits to Indian small businesses.

Listing costs (for IPOs) have two components – initial fees (one time) and annual fees (recurring). The initial listing fees in India amounts to about USD 625 (INR 50K) which is significantly lower compared to the US (USD 295K), UK (USD 18K–883K) and Singapore (USD 89K–164K). Annual listing fees, calculated as a % of average capital raised in IPOs in respective markets during 2019–23, for India (0.02%) are comparable with those for the UK and Singapore, while with the US (0.05%), it is relatively higher (Exhibit 40).

Exhibit 40

Market development and growth – India ranks high in enabling transparency in the markets; however, there is potential for further innovation in new products

Ranking among peers: Low | Mid | High

	India	US	UK	Singapore
I. Ease of doing business				
1 Cost of listing (IPO)				
• **Initial fees,** US$	$605 (High)	$295k[1] (Mid)	$18k to 883k (Mid)	$89k to 164k[2] (Mid)
• **Annual fees** (as % of avg. IPO size)[3]	0.02% (Mid)	0.05%[1,4] (Low)	0.01%[5] (High)	0.02%[5] (Mid)
2 Listing time of IPO[6]	T+3 days (reduced from T+6) (Mid)	T+2 days (High)	T+3 days (Mid)	T+2 days (High)
3 Exchange for startups, SMEs and high growth companies	✓ SME EMERGE ✓ BSE Startups (High)	✓ NYSE American (High)	✓ LSE AIM (High)	✓ SGX Catalyst (High)
II. Enabling transparency in markets				
1 Democratization of market data	Live market data (real-time tick by tick, Level 1 and Level 2 data) across asset classes along with various regular publications **available for download free of cost on exchange websites** (High)	Live market feed not available without a license. Limited coverage of metrics on IPOs and trading statistics across asset classes Several market data and intelligence solutions **available for subscription, not free of cost** (Low)	Live market feed not available without a license. Limited coverage of metrics on IPOs and trading statistics across asset classes **Most datapoints and reports unavailable without a license** (Low)	Market feed available with a **10-minute delay without any charge.** Real time and Level 1/2 data can be requested from SGX for a charge Several market data and intelligence solutions **available for subscription, not free of cost** (Mid)
2 Disclosure of material events to stock exchanges and verification of rumors	Material events must be disclosed / verified, and any rumors circulated in mainstream media must be verified within **24 hours** if the share price has moved significantly[7] (High)	SEC recommends material events must be disclosed **'as soon as possible' up to a maximum of two business days** (High)	Significant and material events must be disclosed to **FCA immediately** (High)	**Immediate disclosure** of material events and clarifications on any rumor[8] (High)
3 Enablement of e-voting through demat/trading accounts for retail investors	✓ E-voting via demat account by way of a **single login credential** using website of broker (routed to the depositories) or directly via depositories (High)	✗ E-voting through trading accounts not allowed Shareholders can vote by 'proxy'[9] via materials made available online or by mailing a physical proxy card shared by the issuer / company (Low)	✓ No centralized platform; However, different brokers have individual online platforms enabling customers to e-vote in AGM/EGM (Mid)	✓ No centralized platform; Issuers/brokers may provide the optionality of an electronic voting system to help shareholders vote remotely (Mid)

Continued

III. Emergence of new products and players

1 **Introduction of new products, asset classes, etc.**	Introduced **blue and yellow bonds** as new modes of sustainable finance **REITs and InvITs** are new asset classes made available to investors to allow investing in finance infrastructure and real estate development in India SEBI is currently planning to introduce new asset class **between PMS and MF**	CME launched water futures market in 2020 – **Nasdaq Veles California Water Index Futures** CME introduced **cryptocurrency futures and options** for Bitcoin, Micro Bitcoin, Ether, and Micro Ether Coinbase Global started offering crypto futures to retail customers since 2023 after National Futures Association (NFA) regulatory approval	LSE **'Voluntary Carbon Market'** aims to provide funding for companies and funds aiming to invest into projects mitigating climate change LSE intends to accept applications for **Bitcoin and Ethereum exchange traded notes (ETNs)** in Q2 2024 HM treasury and Financial Conduct Authority (FCA) in collaboration with industry working groups have created a roadmap for **UK asset managers to create tokenized products**	**Small ticket investing** – $7.5k (S$10k) in **private equity and hedge funds** enabled by Ethereum blockchain and smart contract technology provided by players like ADDX MAS currently testing multiple pilots in **asset tokenization and DeFi as part of 'Project Guardian'** Introduced **Special Purpose Acquisition Companies (SPACs)** listings on SGX mainboard since 2021

IV. Sandboxes for innovation

1 **Sandbox initiatives by regulator**	✓ Introduced **Regulatory Sandbox** for SEBI regulated entities and **Innovation Sandbox** for Fintech players and non-SEBI regulated entities	✓ Multiple regulatory sandboxes operating at state level	✓ UK FCA pioneered the concept of regulatory sandbox	✓ Regulatory Sandbox framework established by MAS

[1] For Nasdaq
[2] Includes processing fee of USD 15k
[3] Annual listing fees as a % of average size of IPO between CY19–CY23
[4] Average annual listing fees (estimated) = average of minimum and maximum annual listing charges / average capital raised in IPOs between CY19–CY23
[5] Estimate based on annual listing fees charged as % of average capital raised in IPOs between CY19–CY23
[6] Time between IPO issue close day and IPO listing date
[7] Applicable to the top 100 listed entities from February 1, 2024, and to the top 250 listed entities from August 1, 2024
[8] As per SGX rulebook
[9] A proxy enables shareholders to vote without physically attending a shareholder meeting

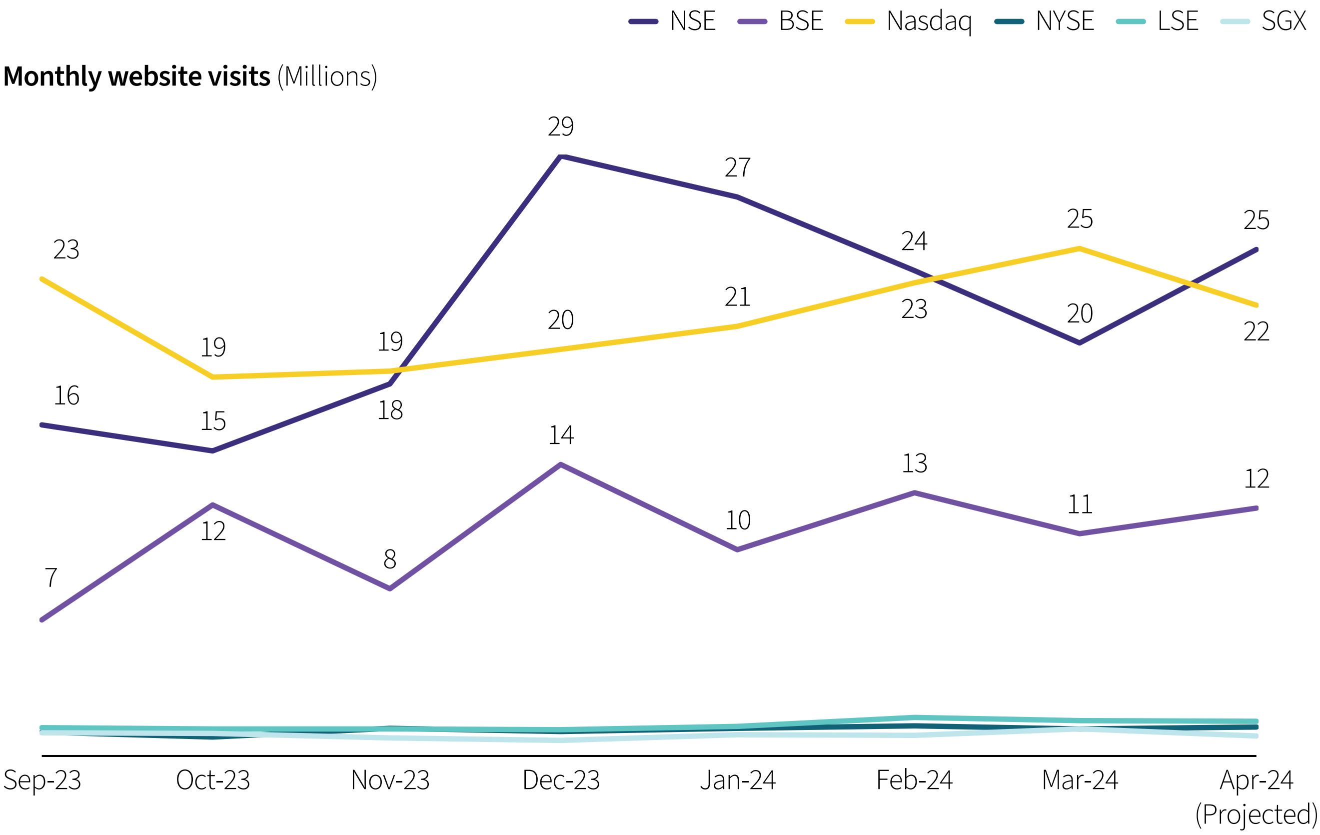
Note: Assumed exchange rate of 1 USD = 82.6 INR, 1 USD = 0.80 £ and 1 USD = 1.34 SGD, based on 2023 rates

Source: SEBI website, U.S. Securities and Exchange Commission (SEC) website, Financial Conduct Authority (FCA) website, London Stock Exchange (LSE) website, Monetary Authority of Singapore (MAS) website, ADDX website, UK Fund Tokenization: A Blueprint for Implementation (Interim report from the technology working group to the asset management taskforce)

India leads among the peers in democratization of market data. Indian exchanges offer a variety of market data and reports free of cost, in easily downloadable formats for investors and market participants. These include live market feed across various asset classes (equities, ETFs, debt securities, derivatives, gold bonds, etc.), comprehensive historical data for primary and secondary markets as well as regular market reports (e.g., NSE Market Pulse, India Ownership report). Peer markets such as the US, UK and Singapore offer limited market data in a freely downloadable manner, with most data and market intelligence offerings requiring a paid subscription. Owing to this high accessibility of market data, Indian exchanges see high traffic on their websites, surpassing almost all of the global exchanges on this metric (Exhibit 41).

Exhibit 41

Indian exchanges outperform several peer exchanges on monthly website traffic



Source: Semrush statistics for website traffic

To enable transparency in the markets, SEBI has mandated that all material events must be disclosed/verified, and any rumors circulated in mainstream media must be verified or addressed within 24 hours, in line with global peers.

The Indian regulator has also pushed to enhance retail participation in shareholder meetings for greater transparency as evidenced by enablement of e-voting through the website of brokers or depositories for any shareholder meeting using a single login credential linked to individual demat accounts, in addition to avenues such as online voting mechanisms hosted by companies themselves and physical mailing proxy cards for the ballots. In peer countries, such centralized platforms for e-voting do not exist.

To drive market development, peer markets such as the US, UK and Singapore have introduced various new products, asset classes and players in the capital markets and are among the most sophisticated capital markets globally on this metric.

In the US, the CME launched the water futures market (Nasdaq Veles California Water Index Futures) in 2020 and have since initiated cryptocurrency futures and options for Bitcoin, Micro Bitcoin, Ether, and Micro Ether.[48]

In Singapore, ADDX has started offering small ticket investing at about USD 7.5K (SGD 10K) into private equity and hedge funds enabled by Ethereum blockchain and smart contract technology.[49] Monetary Authority of Singapore (MAS) currently is also running multiple pilots for asset tokenization and DeFi as part of 'Project Guardian'.[50]

India has the opportunity to further develop in this aspect. While recently there has been an increased focus on developing the markets for REITs, InvITs, municipal bonds, green bonds, etc., these are in relatively early stages as compared to peer markets such as the US, UK and Singapore.

[48] CME Group website
[49] ADDX website
[50] MAS website

C. Risk management and governance (investor protection)

India has been doubling down on risk management and governance efforts led by various technology initiatives in the past five years. In fact, Indian capital markets are the first to launch many novel initiatives such as client level visibility and monitoring of collateral, pledging and repledging system, direct platform for investors to close positions with exchanges in the case of broker downtime and Application Supported by Blocked Amount (ASBA) in primary and secondary markets.

In most capital markets globally, including those of peers such as the US, UK and Singapore, MIIs such as the exchanges, depositories and clearing corporations do not have account level visibility of each and every investor due to the use of omnibus accounts. Data of individual client accounts is maintained by the brokers, which means MIIs visibility is limited to the brokerage level.

On one hand, omnibus account level monitoring reduces compliance complexities and costs of reporting, on the other it significantly increases risks for individual investors in the event of defaults by brokers.

In 2021, SEBI actioned the segregation and monitoring of collateral at client level to bring transparency and prevent misuse of client funds and securities. This enabled stock exchanges and clearing corporations to have full visibility of collateral at an account level. Leveraging this infrastructure, the stock exchanges and clearing corporations in India built a web portal where investors can view disaggregated collateral reporting by trading members/clearing members improving transparency in the overall system (Exhibit 42).

The stock exchanges in India – BSE, NSE, NCDEX, MCX and MSE, under the guidance of SEBI, also built the Investor Risk Reduction Access (IRRA) platform, a global first, in offering direct access to investors. In the event where a trading member (broker) might face a technical glitch both at its primary site and disaster recovery site, the trading member can invoke the IRRA platform which allows all the clients of the brokers to square off or close their positions directly with the exchanges, minimizing losses for investors.

India is also the first major capital market globally where clearing corporations (NCL and ICCL) have come together to create a SaaS based two-way portability module which helps provide business continuity in cases of major technical issues. Such a facility does not exist in peer capital markets currently.

SEBI also introduced use of ASBA – Application Supported by Blocked Amount, in primary and secondary markets, where investors can apply for IPOs and trade in secondary markets using funds blocked in their own bank accounts. These funds are deducted only on successful completion of the transactions (i.e., IPO allocation, trade settlement). This facility allows higher control for investors over their funds and also minimizes the risk of misuse of investor funds by intermediaries. Such a facility does not exist in peer capital markets.

Exhibit 42

Risk management and governance – India ranks ahead of peers in technology-enabled risk management and investor protection systems

Ranking among peers: Low | Mid | High

				
I. Risk management				
1 Investor protection				
Investor protection fund coverage as a share of average trade size, FY24	~85x	~55x	~14x	**100% coverage** on any loss suffered by the investor[2]
2 Exchanges / clearing houses have account level visibility at individual client level	Stock exchanges and clearing corporations have full visibility of client collateral at individual account level	Stock exchanges and clearing corporations do not have visibility of securities at individual account level due to the usage of omnibus structures		
• **Investor has visibility of securities pledged / repledged by broker**	Investors have full visibility of collateral pledged to brokers and collateral repledged by brokers to clearing corporations	Clients do not have visibility of pledged/repledged collateral		
3 Option to apply for IPOs through blocked amount in bank account	**Application supported blocked amount (ASBA)** for primary market facility ensures funds remain in investor bank accounts and are deducted only if shares are allotted	No such facility exists		
4 Option for trading using funds blocked in bank account	**Application supported blocked amount (ASBA)** for secondary markets	No such facility exists		
5 Two-way portability of clearing corporations	NCL and ICCL have developed a SaaS based **two-way portability module** which helps provide business continuity in cases of major technical issues	No such facility exists		

I. Risk management (contd…)				
6 **Market wide simulation for critical events to increase preparedness**	In March and May 2024, NSE and BSE conducted special live sessions while switching to their **disaster recovery site** to test their business continuity preparedness. **7 MIIs** (BSE, NSE, Metropolitan Stock Exchange, ICCL, NCL, CDSL and NSDL) participated in this live sessions	In November 2023, Securities Industry and Financial Markets Association (SIFMA) organized its yearly event – **Quantum Dawn – an industrywide resilience exercise** to test the preparedness of the US financial sector against a large-scale cyberattack. The exercise engaged over **1,000 participants** from more than **170 public and private sector institutions** around the globe, including financial firms, central banks, regulators, and law enforcement entities	In November 2022, the Bank of England conducted a 2-day market-wide simulation exercise – **SIMEX** with **50 regulated firms and financial authorities** to test the UK financial sector's resilience to major operational disruption. Next simulation exercise expected in November 2024	In May 2024, SGX conducted an industry-wide **Business Continuity Planning Exercise** with Singapore-based **securities and derivatives trading and clearing members** participating in this exercise
	Participated in cybersecurity exercise 'Quantum dawn V' organized by Securities Industry and Financial Markets Association (SIFMA)[3]			
7 **Settlement time**	T+1; move to T+0 in March 2024 (optional)[4]	T + 1	T + 2	T + 2
8 **Direct investor access to exchange in special circumstances**	✓ **Investor Risk Reduction Access (IRRA)** allows investors to square off / close their positions directly with the exchange if any trading member encounters technical glitches	✗ No such facility exists	✗	✗
9 **Inter-operability among clearing corporations**	✓ Market participants can choose any clearing corporation to settle trades, irrespective of the exchange, improving capital utilization and lowering trading costs	Interoperability not applicable; Depository Trust and Clearing Corporation (DTCC) acts as the central clearing house eliminating the need for interoperability	✓ Interoperability arrangements exist with other CCPs in EU and Switzerland	✓ Mutual Offset System (MOS) – allows settlement of futures and options contracts across SGX and Chicago Mercantile Exchange (CME)

III. Surveillance				
1 **Surveillance measures to identify risky securities, market manipulation, etc.**	Surveillance measures such as **reduction in price bands, periodic call auction and transfer of securities to trade-to-trade segment** Other surveillance measures such as **Graded Surveillance Measures (GSM), Additional Surveillance Measures (ASM)**, etc. to improve market integrity and alert investors at point of trade	SEC manages market surveillance through its Division of Enforcement, other SROs[5] such as Financial Industry Regulatory Authority (FINRA) and other initiatives such as the **Consolidated Audit Trail (CAT)**[6] Various exchanges, regulatory bodies and brokers may deploy other surveillance tools such as **Nasdaq's SMARTS**	Mandated all investment firms to maintain automated surveillance systems FCA market data processor analyses **30Mn transaction reports and 100+Mn order reports** provided by investment firms daily	Published MAS-SGX Trade **Surveillance Practice Guide** in 2019 detailing guidelines and principles for developing and implementing robust trade surveillance via trading members and exchanges

1 If the broker is member of SIPC

2 Section 187 "Claims against fund" of Securities and Futures Act 2001 point 3 – "the amount which any claimant is entitled to claim as compensation out of a fidelity fund is the amount of the actual pecuniary loss suffered by the claimant (including the reasonable costs of and disbursements incidental to the making and proof of the claimant's claim) less the amount or value of all moneys or other benefits received or receivable by the claimant from any source other than the fund in reduction of the loss"

3 Attended by Reserve Bank of India (RBI) and not SEBI as per SIFMA website

4 On optional basis

5 Self regulatory organization

6 The SEC Audit Trail (the CAT) to enable regulators to track all order and trading activity throughout the U.S. markets for listed equities and options

Note: Assumed exchange rate of 1 USD = 82.6 INR, 1 USD = 0.80 £ and 1 USD = 1.34 SGD, based on 2023 rates

Source: SEBI website, NSE website, U.S. Securities and Exchange Commission (SEC) website, Financial Conduct Authority (FCA) website, London Stock Exchange (LSE) website, Monetary Authority of Singapore (MAS) website, SIFMA website

India is also the first major capital markets globally to have a full-scale T+1 settlement cycle. In fact, an optional T+0 settlement cycle is in the process of being launched in a phase manner.

SEBI has also enforced interoperability among clearing corporations, enabling market participants to choose any clearing corporation to settle trades, irrespective of the exchange, improving capital utilization, lowering trading costs and also boosting resilience of the markets. While interoperability arrangements also exist across peer markets globally (e.g., CCPs in UK, EU and Switzerland), Indian capital markets are the first, globally, to offer real-time, trade to trade margining as part of the interoperability.

The Indian capital markets are quickly catching up (or in many cases at par) with their global counterparts in terms of technology and investor enablement. The visibility and control offered to investors is also unlike any other market in the world. At the same time there are areas where India could take inspiration from other markets – whether it is formulating regulations around new asset classes or strengthening investor protection funds. Based on this benchmarking exercise and an analysis by the NSE of overall operations, the next chapter offers some critical considerations for the Indian market.

04

Current impact and future opportunities

The reforms and technology enablement introduced in the capital markets by the regulator over the last decade have been vital in encouraging broader adoption and smoother functioning. These reforms have also enhanced the overall risk management and resilience of the market, thereby benefitting investors. For example, an NSE analysis indicates that 100% implementation of certain key reforms and initiatives could result in potential annual benefits of nearly INR 3900 for investors through the freeing up of investor capital.

At the same time, there exist certain gaps in the capital markets ecosystem where India could take inspiration from its global peers.

Based on the benchmarking exercise, industry interviews, retail investor survey and the analysis conducted by the NSE, this chapter explores the markets' current impact levels and future considerations.

Impact assessment

A. Investor enablement

NSE recently conducted an analysis to quantify potential annual benefit for investors on the back of certain reforms and initiatives that have helped free up capital and enhance liquidity in the market.

The analysis considers six key initiatives:

Implemented

- ASBA for primary markets
- Reduced IPO listing time
- T+1 settlement
- Reduced MF redemption timeline

Yet to be implemented (optional today)

- ASBA for secondary markets
- T+0 settlement

The analysis estimates an annual benefit of about INR 3900 crore for the investor community, considering a best-case scenario where all these initiatives are 100% implemented and adopted. Currently, of the INR 3900 crore, approximately INR 900 crore could be considered realized through the aforementioned 'implemented' initiatives. The remaining could be achieved through the full adoption of ‘yet to be implemented’ initiatives such as ASBA for secondary markets and T+0 settlement.

In a 100% adopted state, these initiatives would release investor cash collateral currently held by their brokers. For example, full adoption of T+0 settlement, transitioning from the current T+1, could free up margin for one day of settlement, enabling investors to earn a risk-free rate of return, potentially leading to an annual benefit of about INR 180 crore each year.

B. Market development and growth

These sets of initiatives have supported organic growth of the Indian capital market. While strong macroeconomic environment has played a role, the technology-led and regulatory reforms accelerated the pace of growth and adoption. The impact of various activities in this category, whether it is securing a leading global position in IPO issuances (209 in FY24), experiencing a substantial boost (20% CAGR in the last decade) in demat accounts, attaining top position in equity derivatives trading, or achieving one of the fastest-growing MF AUM and penetration, is detailed in the next page.

C. Risk management and governance

The implementation of key measures in this category of reform have helped enhance market integrity, increase investor confidence, and promote stability. Three key areas of impact are evident. Firstly, there's the mitigation of counterparty risk, aimed at minimizing adverse impact on investors in cases of intermediary default and reducing the risk of client funds misuse. Secondly, resilience against operational risk has been achieved through initiatives facilitating direct transfer and settlement with clearing corporations, optimizing capital utilization, and enhancing liquidity availability. Thirdly, efforts in mitigating technological risk have prioritized business continuity, preventing large-scale disruptions and ensuring smooth market operations.

Impact summary
Investor enablement

Seamless onboarding

Aadhar-based eKYC and KRA-driven KYC has enabled fully digital customer onboarding, reducing the application process timelines

Increased affordability

Rise of digital investment platforms (e.g., online brokers) as well as MII-led platforms (e.g., MF Central) is enabling ease of access for retail investors

Improved convenience and ease of use

Reduction in minimum ticket sizes for investments is driving democratization of capital market investments (e.g, low value SIPs MF)

Heightened awareness

Investor education and awareness initiatives by intermediaries, capital markets industry associations, exchanges and regulator have helped boost awareness among Indian investors

Enhanced customer service

Several initiatives such as Online Dispute Resolution (ODR) platform, simplified deceased claims process, etc. are enhancing the standard of customer service in Indian capital markets

Impact summary
Investor enablement – Benefit

Recent regulatory reforms and innovations have already accrued an annual benefit of INR ~900 Cr for investors; 100% adoption of certain other initiatives could further lead to ~INR 3000 annual benefit through freed up capital.

Initiatives implemented — INR Cr

Shift to T+1 settlement cycle — 350

Margin for one settlement day (INR 4.7k average daily margin at NCL level, FY24[1]) freed up due to faster settlement, allowing investors to earn a risk-free rate of return on the freed-up capital[2]

Introduction of ASBA in primary markets — 320

Funds towards IPO subscription (INR 6.6L in FY23, excl. anchor investors) to ***remain in investor bank accounts*** for ***5 additional days***, earning interest at savings bank rate

Reduction in IPO listing timelines from T+6 to T+3 — 130

2 days faster free-up (T+2 vs T+4 earlier) of ***unallocated investor funds*** from IPO applications (INR 6.3L Cr in FY23), allowing investors to earn a risk-free rate of return vs savings bank rate (**opportunity cost**) on freed up funds

Reduction in MF redemption timelines to T+2 — 100

1-day faster redemption (T+2 vs T+3 in past) in ***equity & hybrid MF schemes*** (INR 5.3L redemptions in FY23), allowing investors to earn a risk-free rate of return on the redeemed funds

Total annual impact delivered — ~900

Initiatives yet to be fully implemented (optional today) — INR Cr

Introduction of ASBA in secondary markets — 2800

Cash collateral from investors to remain in bank accounts, earning interest at savings bank rate (INR 79k Cr average daily cash collateral from retail investors, October–December 2023)

Shift to T+0 settlement cycle — 180

Same day margin free up (INR 4.7k average daily margin at NCL level, FY24[1]) due to T+0 settlement, allowing investor to earn a risk-free rate of return vs savings bank rate (***opportunity cost***) on the freed-up capital

Total additional annual impact potential — **~3000**

Total annual benefit to investors

₹3900 Cr

1 As of 12th March 2024
2 Contrary to popular belief that shorter settlement cycles could lead to higher defect rate, India's defect rate has halved after the implementation of T+1 settlement, falling from 0.82% in January 2023 to 0.41% in October 2023

Source: NSE analysis, SEBI circulars, SEBI statistics, AMFI statistics, NSE statistics, NSE clearing data

Impact summary

Market Development and Growth

Leader in number of IPO issuances

India is the global leader in number of IPO issuances in FY24 with 209 IPOs on NSE

Leader in equity derivatives

India remains world largest derivatives exchange for the 5th consecutive years

Top 3 in capital raised through IPOs

India ranked 3rd after China and the US in capital raised through listings

Growing REITs and InvITs markets

4x growth in InvITs net asset value in last 4 years; 2.5x growth in REITs net asset value

Rapid growth in IPO activity

6x growth in number of IPOs in last decade and 10x growth in capital raised through IPOs

Fast growing MF AUM and penetration

20% CAGR growth in MF AUM in last decade with MF AUM/GDP ratio >2x growth from 7% to 18%

Increasing debt market activity

Record number of public market issuances of corporate bonds in FY24 vs historical

Rising retail participation in MFs

Retail share in MF AUM increased from 50% to 63% in last decade

Fast growing demat accounts

India has witnessed one of the fastest growing demat accounts – 20% CAGR in last decade

Rapidly growing MF SIPs

Number of outstanding MF SIPs increased >5x in last 5 years, clocking 33% CAGR growth

Top 3 in cash equity trading

Ranked 3rd globally in cash equity trading volumes with 6.8 Bn transactions in FY24

Emergence of new asset classes and players

Introduction of new asset classes – REITs; InvITs; green, yellow & blue bonds; EGRs; SGBs; etc. Introduction of Social Stock Exchange

Impact summary

Market resilience and risk management

Mitigation of counterparty risk

Minimized adverse impact to investors in cases of **intermediary default and reduced risk of misuse of client funds and securities** enabled by:

- **High visibility on client collateral** across the value chain through client level segregation and monitoring
- **Minimization of risk of misuse of client securities** by intermediaries under the revised pledging/ repledging system
- **Higher investor control and reduction of risk of misuse of client funds** enabled by introduction of ASBA in secondary markets
- **Seamless portability** of investors across trading members enabled through client level visibility and ASBA in secondary markets

Resilience against operational risk

Reduced over-dependence on single entities and elimination of inefficiencies enabled by:

- **Direct transfer and settlement with CCs** for investors enabled by ASBA in secondary markets
- **Efficient capital utilization** through elimination of need for separate margins across CCs due to inter-operability
- **Reduced concentration of risk** through reduced unsettled exposure at CCs and **free up of liquidity** enabled by shift to T+1 settlement cycle

Resilience against technology risk

Preservation of **business continuity** and **prevention of large-scale disruptions** in cases of technology failures enabled by:

- **Two-way portability** between CCs, enabled through SaaS module enabling business continuity even in cases of major technological issues
- **Inter-operability between CCs** prevent market disruptions in cases of tech failures by routing trades through other CC
- **Investor Risk Reduction Access (IRRA) platform** helping minimize investor losses in cases of technology glitches at broker level

Future opportunities

Empowered by progressive policies and comprehensive reforms, the Indian capital markets have established a resilient foundation. However, to strengthen their position across the three regulatory pillars—investor enablement, market development and growth, and risk management and governance (investor protection)—further opportunities exist. An analysis of gaps in comparison to other global hubs, along with market survey data, has revealed five key categories and 11 specific areas of opportunity that could be considered. (Exhibit 43)

Exhibit 43

Potential ideas for Indian capital markets

Investor Enablement | Market Development and Growth | Risk management and governance (Investor protection)

Building blocks	Potential ideas for Indian capital markets
A Enable enhanced market access and connectivity	**1** Create space for new **market intermediaries** who can act as "thin" players, assisting with KYC, onboarding and providing front-end access to markets for investors.
	2 Enable readiness **for 24/7 market** for increased access, higher liquidity and global participation
B Facilitate informed investment decision making	**3** Establish a dedicated entity (e.g., through JV between MIIs) to provide investors with **unified market insights and information as "single source of truth",** while offering curated data for market intermediaries
C Broaden capital markets through new asset classes and deepen existing asset classes	**4** Explore novel **fractional assets** classes to increase tradability and accessibility (e.g., InvITs, fractional securities)
	5 Enable further **"retailization" of debt securities** market by improving accessibility and tradability of debt securities for retail investors
D Promote market integrity and safeguard investors against misinformation	**6** Introduce a **framework for financial influencers** with clear set of **guardrails,** to prevent market misinformation and protect investor interests
	7 Establish a **suitability framework** requiring investment firms to assess investor appetite and system-wide leverage to safeguard retail investors from complex and riskier products
E Modernize capital markets by embracing next-gen technology	**8** Enable **market participants and regulator** to have robust **technology cell** / functionality
	9 Adopt modern **cybersecurity simulation exercises** to test and enhance the cyber resilience of market infrastructure players
	10 Ensure **preparedness** among capital market participants to **comply with the DPDP Act** through proactive review of data collection practices (e.g., onboarding forms, marketing campaigns) and implementing a clear consent architecture for data processing
	11 Establish upfront **guidelines for usage of AI** by market participants

Investor enablement

A. Enhanced market access and connectivity

1 ***Create space for new market intermediaries who can act as "thin" players, assisting with KYC, onboarding and providing front-end access to markets for investors.***

Some of the recent key regulatory reforms such as the revised pledging and repledging system, early pay-in of securities, introduction of ASBA for secondary market, etc. are expected to minimize the handling of investors' funds and securities by brokers and drive increased direct interactions between them and the clearing corporations. This move could potentially create space for a new set of intermediaries that can act as "thin" players – players with a low touch, low price business model who can help with onboarding, KYC, providing front-end access to markets, etc. They could also have limited involvement in handling of investor funds and securities through use of ASBA, early pay-in, among other facilities.

Indian capital markets can potentially create space for such players by developing approaches and standard operating models, providing incentives for driving usage of ASBA and early pay-in facilities.

2 ***Enable readiness for 24/7 market for increased access, higher liquidity and global participation.***

A 24/7 market has the potential for Indian capital markets to improve investor accessibility, liquidity, and global engagement. This approach could strengthen Indian capital markets' accessibility for investors (e.g., trading hours) and increase competitiveness with 24/7 digital asset markets (e.g., crypto markets).

To prepare for a 24/7 market, Indian capital market players could prioritize technology infrastructure upgrades, regulatory guidelines, and collaboration model between MIIs.

B. Facilitate informed investment decision making

3 ***Establish a dedicated entity to provide investors with unified market insights and information as "single source of truth" while offering curated data for market intermediaries***

While India compares well to global counterparts in terms of democratization of market data to end investors by enabling free access to a variety of data on the exchange websites, the creation of a unified market insights and information platform could act as a one-stop shop for all market data. This platform could not only enable informed decision making, but also help prevent misinformation in the market.

Indian capital market stakeholders can potentially create a platform by collaborating with market infrastructure institutions (e.g., through a joint venture), providing curated and value added data offerings for market participants. NSE has introduced a beta version of "iInvest," an investor portal that offers a user-friendly interface for accessing information about listed firms.

Market development and growth

C. Broaden capital markets through new asset classes and deepen existing asset classes

4 ***Explore novel fractional assets classes to increase tradability and accessibility of asset classes***

Indian capital markets have seen significant capital formation over the last decade, majorly driven by the rapid growth in cash equity and mutual fund markets. Further augmentation of capital formation could be facilitated by democratizing other asset classes such as commodities, real estate, etc. for retail investors. Exploring fractional asset classes could boost accessibility for retail investors, increasing tradability and welcome a broader base of investors.

5 ***Enable further "retailization" of debt securities market by improving accessibility and tradability of debt securities for retail investors***

While the Indian debt securities market has grown both in size and maturity over the last decade, there is opportunity to increase the retail participation. This can be potentially enabled through regulatory reforms across three fronts:

- **Awareness and education:** Indian capital markets have an opportunity to build upon the successful educational programs for equities and mutual funds and replicate the success for debt market.
- **Accessibility:** While several steps have been taken to improve the accessibility of debt markets (e.g., reduction in minimum ticket size for privately placed debt securities), there is potential to further drive accessibility by increasing tradability of various types of debt asset classes (e.g., municipal bonds, government securities) and increasing affordability through fractional bonds, etc. For example, there is significant opportunity to develop the municipal bonds market in India, which is currently valued at less than 0.01%[51] of GDP. In comparison, the US municipal bonds market is 15%[52] of its GDP.
- **Convenience:** Improving convenience for investors in the debt market would potentially entail replicating the success of digital trading and investment apps in equity and mutual funds markets. Indian capital markets can potentially leverage the online bond platforms framework to unlock seamless digital experience-led growth.

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[51] SEBI statistics as of 31st March 2024
[52] SIFMA

Risk management and governance (investor protection)

D. Promote market integrity and safeguard investors against misinformation

6 ***Introduce a framework for financial influencers with clear set of guardrails, to prevent market misinformation and protect investor interests***

Financial influencers ("finfluencers") have played a significant role in financial education and awareness in the Indian capital markets. However, this has also exposed investors to misinformation and potential financial risk. To address this, a framework with clear guardrails for finfluencers could help foster a responsible market ecosystem and protect investor interests. This framework can potentially encompass areas such as minimum qualification requirements for finfluencers, disclosure requirements, content accuracy, risk management, among others.

7 ***Establish a suitability framework requiring investment firms to assess investor appetite and system-wide leverage to safeguard retail investors from complex and riskier products***

A suitability framework could help strengthen the investor protection and market integrity in Indian capital markets. A suitability framework protects investors from investing in high-risk products by preventing investment advisors and intermediaries from mis-selling unsuitable products to their clients. Such a framework involves a detailed profiling of investors and products with a standardized suitability matching assessment, ensuring alignment of system-wide leverage and long-term goals.

E. Modernize market infrastructure by embracing next-gen technology

8 ***Enable market participants and regulators with technological and data analytics support***

Technology and data analytics are critical enablers for the growth of capital markets, evident through the recent adoption of technology-driven regulatory reforms. Thus, developing decentralized yet dedicated technological support for market participants and regulatory bodies could help strengthen capabilities for each entity, while streamlining processes. For example, these entities could advise on upcoming innovations as well as manage and deliver technology projects.

9 ***Adopt modern cybersecurity simulation exercises to test and enhance the cyber resilience of market infrastructure players***

Modern cybersecurity simulation exercises could be critical for Indian capital market infrastructure players to stay ahead of ever-evolving threats. These exercises simulate realistic attack scenarios to help identify vulnerabilities, test the response plans and improve coordination between different players in the event of a real-world attack. Adopting these industry-wide resilience exercises could help test the cyber preparedness of the Indian capital markets, and could involve simulations of sophisticated cyber-attacks (e.g., ransomware attack targeting major financial institutions and market participants).

10 *Ensure preparedness among capital market participants to comply with the DPDP Act through proactive review of data collection practices (e.g., onboarding forms, marketing campaigns) and implementing a clear consent architecture for data processing*

The Digital Personal Data Protection (DPDP) Act, 2023 is India's first cross-sectoral law on protection of personal data. The DPDP Act aims to safeguard personal data and provide more control to individuals over their information. It establishes comprehensive frameworks for collection, usage and processing of personal data of individuals. As this act comes into force, it may entail significant changes in way of operations for capital market infrastructure institutions and intermediaries to comply with the DPDP Act, owing to the large amount of customer data handled by these institutions. These changes may entail a review of data collection practices, implementation of a robust consent architecture to inform investors about the personal data collected, its intended purpose and usage, and obtaining consent for the same. Additionally, it could involve support from relevant data protection officers and independent data auditors, ensuring compliance of fintech partners with DPDP regulations, and training staff on relevant DPDP provisions.

11 *Establish upfront guidelines for usage of AI by market participants*

As usage of AI (artificial intelligence) continues to gain traction in capital markets, clear guidelines will be crucial for market participants. An approach to adoption of AI in the capital markets could help mitigate various risks such as biases in algorithms, lack of explainability, data security and privacy, etc. Proactively developing these guidelines would help promote transparency and also ensure market trust and integrity.


Q3
Q4
Q2
Q1

Conclusion

Indian capital markets are amid a transformational phase, spurred by pivotal, industry-first technological innovations and reforms. At the heart of these changes is the vision to offer ample benefits, access and control to the Indian investor community while ensuring guardrails for protection.

As the world moves into an era chiefly influenced by technology and more investors participate in these markets, the regulators and MII leaders can help foster a culture of innovation.

Achieving this could mean continued collaboration among diverse stakeholders, consistent review of regulations, and swift tackling of emerging risks. It could also mean India developing critical reforms that emerge as the gold standard for capital market innovation and investor experience.

NOTES

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