

Changing Landscape of Indian Mutual Fund Industry: Impact of Technological Advancement

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Abstract

Financial technologies, also known as FinTech, seemed to have a significant and favourable impact on the services sector of the Indian financial sector. Technological advancement in mutual fund industry has brought about paradigm shift in mutual fund business. The objective of this study to assess the influence of recent advancements in financial technologies with regards to the financial services of India and its impact on mutual fund business. The review article covers the recent trends, effects that the financial technologies have had on the mutual fund business in India. The paper deliberates upon the technological advancement in mutual fund business from various aspects; distribution, marketing and promotion activities, AI and machine learning for investment strategies, innovative investment products and regulatory initiatives. In addition, potential dangers, difficulties, and possibilities that are linked with the developments of new technologies in the mutual funds business in India has also been discussed.

Keywords: Mutual Fund, AI, Digital Platform, Machine Learning, Investor Behaviour, Financial Market, AUM.

INTRODUCTION

The financial services industry is undergoing significant and unforeseen changes, surpassing our expectations from just five years ago. Inspired by the dynamic mobile telephony ecosystem, numerous financial institutions are leveraging intelligent technology to transform their branches into more advanced point of sale systems. Technology is revolutionizing nearly all aspects of financial operations, including banking, payments, wealth management, and other related activities. Over the past twenty years, the Indian financial services sector has undergone a significant transition. The focal point of these changes was financial inclusion (*Ramkrishna et al., 2019*). With the goal of improving the overall customer experience and making investing procedures more straightforward, the mutual fund business in India is aggressively using technology. A growth in the number of transactions that take place online can be attributed to the proliferation of mobile applications and online platforms, which have made it simpler for investors to conduct transactions and keep track of their investments. A further point to consider is that in recent years, robo-advisory platforms have become increasingly popular. These platforms offer investors tailored investing advice that is based on their risk tolerance and investment objectives (*Oxera, 2015*). The mutual fund distribution business was not an exception to the rule that technology played a crucial role in reducing the turnaround time for various business activities. Mutual Fund distributors became aware of the enormous power that technology possesses in terms of transforming their operations and promoting the expansion of their businesses because of this paradigm shift. The adoption of technology has proven to be a game-changer, as it has enabled MFDs to improve their efficiency, serve to a wider clientele, and provide better services, which has eventually led to significant development in the business

(Das et. al,2020). Investment in mutual funds is significantly impacted by technology in a significant way. Time is saved, accurate information is provided, costs are reduced, and a wider selection of products is made available when using this method. It's possible that different investors will use technology in different ways, but if the Asset Management Company (AMC) takes the appropriate steps, then the amount of technology that investors use can be expanded to a certain level (Zetzsche et. al., 2020).

TECHNOLOGICAL ADVANCEMENT IN MUTUAL FUND BUSINESS

In recent years, several technological innovations; *Artificial intelligence (AI)*, *Cloud technology*, *Blockchain*, *APIs (Application Programming Interfaces)*, *Data Analytics for Informed Decision Making* etc has led to paradigm shift in investment management.

AI has already made its mark on Investment Management with the introduction of robo-advice. Several institutions are now exploring the potential of deploying AI technologies in a manner similar to the motor industry's introduction of driverless cars, which are believed to operate more safely than humans. We are now transitioning into the third era of computing technology, where machine-learning is intersecting with big data. This offers progress that has previously been unattainable for many investment management companies. AI's applications in Asset Management are poised to significantly influence the entire value chain. From optimising sales and marketing interactions to utilising AI bots for transaction processing, the focus is on predictive market modelling, portfolio management, and instant processing of vast amounts of data (Abis,2020). *Cloud technology* has proven to be highly advantageous in asset management and other areas, especially during the pandemic. Companies that had already started moving to the cloud were in a much better position once employees began working from home. Using cloud technology offers four distinct advantages such as *Rapid scalability*, *Effective cost management*, *Leveraging provider information security investment* and *Clear financial picture (cassinfo.com)*. Using *Blockchain technology*, AMC operations and communication with third parties (such distributors, custodians, banks, stock brokers, depository, etc.) can be greatly simplified. Performing security screenings, allocating assets, conducting research and analysis, constructing portfolios, reviewing performance, etc. The total expense ratio (TER) is the maximum amount that an AMC can charge for its expenses. SEBI capped this ratio to reduce mis-selling and churning and to provide transparency in the allocation of expenses. This indicates that operational optimisation of the AMC is necessary in order to decrease or eliminate various sorts of expenses, including distribution charges, fees for securities transactions incurred by the fund, fees for shareholder transactions, and fees for fund services. Data placed on the distributed ledger allows blockchain to automate processes using smart contracts, which in turn reduces operating cost and saves *time (Manda and Rao, 2019)*. *APIs (Application Programming Interfaces)* are already commonplace in the financial sector. Asset managers are working on them to link up with traditional industry service providers like administrators and custodians as well as FinTechs. APIs accelerated the FinTech revolution because they facilitate the integration and deployment of solutions more quickly and at a lower cost. With application programming interfaces (APIs), asset managers can easily choose the best source of data or content rather than depending on a specific third-party provider to aggregate it, and they don't even need to create major in-house infrastructure to have access to extensive collections of industry-leading data (Benmoussa, 2019).

ADOPTION OF DIGITAL PLATFORMS FOR DISTRIBUTION AND INVESTOR ENGAGEMENT AND MARKETING & PROMOTIONAL ACTIVITIES THROUGH DIGITAL MARKETING & SOCIAL MEDIA

There are various reasons behind the increasing use of digital platforms in asset management. Firstly, there is a growing demand for convenient and digital access to investment information and tools, driven by changing investor preferences, especially among younger generations. Furthermore, the ever-evolving landscape of technology, with the emergence of mobile devices, vast amounts of data, and the power of artificial intelligence (AI), is opening up fresh avenues for digital involvement in asset management (*Dewi et. al, 2020*). Technologies enhance the investor experience by providing more personalised and efficient services. At long last, changes in regulations are making it easier for asset management firms to embrace digital platforms. These shifts are allowing firms to use digital communication and record-keeping practices, which in turn simplifies compliance processes. These factors highlight the increasing significance and acceptance of digital platforms in the asset management industry (*Mhlanga and D., 2020*). The incorporation of digital platforms in asset management provides a wide range of advantages. First and foremost, it allows asset managers to broaden their reach and connect with a larger pool of potential investors from various geographic locations and demographic segments. Digital platforms enhance efficiency by automating manual tasks associated with investor communication and distribution, resulting in cost reduction and operational efficiency gains. In addition, these platforms offer a higher level of personalisation, providing customised content and recommendations that align with each investor's specific preferences and goals (*Oxera, 2015*).

The incorporation of digital platforms in asset management raises a number of important factors to take into account. Ensuring the security of data is of utmost importance for asset managers, who must safeguard investor information from cyber threats. Adhering to relevant regulations governing communication and marketing practices on digital platforms is equally important, just like regulatory compliance. In addition, the integration of these platforms with current systems presents difficulties in terms of complexity and expenses (*Pham et.al., 2021*). It is important to strike a balance between fintech innovation and regulation in order to ensure the protection of investors and the stability of the market. Furthermore, with the growing availability of digital platforms, it is crucial to continuously educate investors in order to enhance their financial literacy and enable them to make well-informed decisions. Therefore, it is crucial to implement strong cybersecurity measures in order to safeguard sensitive investor data in the digital world, which will help maintain trust and confidence in asset management practices (*Lodgal, 2018*).

Robo-advisors and micro-investing platforms have brought about a significant transformation in mutual fund investing, especially for younger investors or individuals with limited capital. Robo-advisors utilise advanced algorithms to carefully manage and monitor customised investment portfolios, offering more affordable options compared to traditional advisors (*Astha et. al., 2021*). This accessibility opens mutual fund investing to a wider range of individuals, allowing them to participate with smaller amounts. Similarly, micro-investing platforms make it easier for investors to purchase fractional shares and get involved in mutual funds with smaller initial investments. This helps to reduce the barriers to entry and promote financial inclusion. These fintech innovations are transforming the investment landscape, allowing a wider range of individuals to easily access and obtain mutual funds (*Antoncic 2020*).

The ease of online platforms allows you to invest whenever you want, wherever you are, and from the comfort of your own device. While traditional brokerages with brick-and-mortar locations typically have higher overhead costs, these platforms typically have reduced overhead costs, which could result in lower fees for investors. The ability to purchase fractional shares of pricey stocks is made possible by certain platforms, which makes investment more accessible with smaller quantities (*Lukkarinen et. al., 2016*). Numerous platforms include both educational resources and tools to assist investors in making well-informed decisions. These platforms offer account aggregation features that allow users to combine and track their investments across

multiple accounts in a single location (*Jiang et. al.,2018*). To increasing productivity, streamlining operations through the implementation of automated processes can also reduce the amount of administrative work that needs to be done. In addition, these platforms have the capacity to gather valuable information regarding the actions and preferences of investors, which has the potential to facilitate targeted marketing and the development of products (*Das et. al,2020*).

Distributors of mutual funds can use digital platforms and technologies to target their marketing efforts and turn browsers into buyers. With the use of social media, MFDs may build a reputation for themselves, communicate with customers, and display their skills. Credibility and trust are cornerstones of any successful firm, and this helps establish both (*Ather, 2018*). Like many other aspects of contemporary life, the mutual fund business has begun to rely heavily on mobile apps. An increasing number of online services are developing web portals and mobile apps to facilitate the smooth running of mutual fund distributors' day-to-day activities. Not only do mobile apps make things easier to access, but they also let MFDs run their operations whenever and wherever they like. Their entire business seems to revolve around that convenient item. With the help of fintech applications, one can stay informed about the market and have easy conversations with clients, which can help build greater relationships with them (*Alt et. al.,2018*). AMFI has begun a campaign called Mutual Fund Sahi Hai. As part of its "mutual fund sahi hai" programme, the AMFI promotes mutual funds to prospective investors. The ad campaign portrays commonplace scenarios to convince potential investors that mutual funds are the best solution for their money. In addition to debunking common misconceptions, the campaign seeks to educate the general public about mutual funds. There is a necessity to encourage households to shift from physical savings to financial avenues, especially mutual funds. With this objective in mind, under SEBI's guidance, AMFI has launched this investor awareness outreach program (*amfi.com*).

The following aspects of the Digital India Initiative have contributed to the expansion of India's mutual fund industry.

Improvements to the digital framework: More consumers are able to access financial services online thanks to the widespread availability of inexpensive cell-phones and the creation of high-speed internet connectivity. Consequently, more people, even in more remote places, have access to the mutual funds business.

Streamlined information access: Mutual fund scheme details are now easier for investors to find thanks to the Digital India Initiative. Because of this, investors may now choose from a broader variety of investment opportunities and make better-informed decisions.

Streamlined orientation: New stockholders in the MF business can now be onboarded more quickly and easily thanks to online platforms and fintech companies. Online platforms make it easy for customers to participate in MFs, submit the necessary paperwork, and finish the Know Your Customer (KYC) process.

Financial dealings conducted electronically: It is now much simpler for investors to conduct transactions pertaining to their Mutual Fund investments, thanks to the proliferation of digital payment platforms. Because of this, not only are current investors finding it more convenient, but new investors who choose digital transactions over more conventional means have also been drawn in.

Increased financial literacy: The population's knowledge of personal finance has increased, in part, because of the Digital India Initiative. Many groups, both public and private, have taken to the internet to educate the public about mutual funds and other financial instruments. More people are willing to put their money into the industry now that the investment procedure is less mysterious.

Types of Digital Distribution Channels:

With their diverse range of cutting-edge platforms, digital distribution networks are revolutionising the investment landscape (*comparteinvest.com*):

AMCs Websites: AMCs can sell their mutual funds directly through their own websites. These websites typically provide fund details, investment goals, and historical performance, utilize calculators to plan finances, manage account with online opening, transactions, and SIP setups, and access educational resources and customer support all in one place.

Mobile apps: The AMC mobile apps provide functionality that is comparable to that of direct websites, but with the added benefit of being able to use them while on the move. Investors can conduct research on funds, make investments, and manage their portfolios using their mobile devices, such as smartphones and tablets.

E-commerce platforms: This new and emerging route, which is known as e-commerce platforms, is making it possible for mutual funds to be distributed to investors. Together with other financial products and services, these platforms make it feasible for investors to purchase mutual funds as well as other financial products and services.

Robo-Advisors: Automated financial systems called robo-advisors are great for people who aren't familiar with investing or who have a lot on their plate. Based on your risk tolerance and goals, they use algorithms and surveys to design a personalised investment portfolio and take care of rebalancing. Imagine it as always having a personal financial advisor at your fingertips, but at a fraction of the cost of more conventional methods.

Challenges to Consider:

While digital distribution offers a plethora of benefits, there are challenges to consider. Security is a top priority. Robust cybersecurity measures are essential to safeguard investor data and assets from cyberattacks. This requires continuous investment in security infrastructure, data encryption, and employee training to combat ever-evolving cyber threats (*Kacperczyk et. al., 2016*). Financial literacy is another crucial aspect. As online investment platforms become more accessible, educating investors about the potential risks becomes even more important. Investors need to understand the inherent risks associated with specific investment products, the fees involved, and the potential vulnerabilities of online platforms. This empowers them to make informed decisions and manage their investments responsibly (*Janor et.al., 2016*). Keeping pace with evolving regulations is an ongoing challenge for businesses operating in the digital financial space. Regulatory frameworks are constantly adapting to address the risks and opportunities presented by new technologies. Businesses need to stay updated on these regulations and ensure their practices comply with the latest requirements. This can be complex and require ongoing legal expertise (*Gomber et.al., 2017*). Reliance on technology introduces a vulnerability dependence. Outages or technical glitches on online platforms can disrupt access to investments and cause frustration for users. Mitigating this risk involves building robust and redundant systems, implementing disaster recovery plans, and ensuring clear communication with investors during any downtime. By acknowledging these challenges and proactively addressing them, the financial services industry can foster a secure and trustworthy digital investment landscape (*Mhlanga and D., 2020*).

The Future of Digital Distribution:

The future of investment distribution is undoubtedly digital. We can expect to see:

Investors are investing in a world where digital distribution networks are changing everything. At the vanguard is artificial intelligence (AI), which is able to manage portfolios and provide individualised investment suggestions. Using your risk tolerance, objectives, and current financial status as inputs, AI can sift through mountains of data and recommend assets that are a perfect fit. You may save time and make better judgements based on objective analysis with

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this automation (*Gomber et.al.,2017*). Another development that has improved the safety and openness of financial transactions is blockchain technology. Blockchain technology, which uses a distributed ledger system, can increase confidence and decrease fraud risk. This can be especially helpful for cross-border transactions or complicated financial products (*Ozile and P.K., 2018*). The underlying technology is important, but it is not all. Customer satisfaction (CSAT) must be the first priority. For a smooth experience, it is crucial to have user-friendly interfaces and features. Investing, keeping tabs on your portfolio, and having access to instructional materials may all be done from one user-friendly website. Digital platforms can open up investment to more people and keep their attention by putting user experience first (*Arslanian et. al., 2019*). Problems must be solved in light of this digital revolution. First and foremost, investors prioritise security. Protecting investor data and assets requires strong cybersecurity safeguards. Equally important is knowing how to manage one's own money. It is critical for investors to stay informed about the possible hazards associated with using online platforms as the investment landscape changes (*Gabor et. al., 2020*). Investors and enterprises alike can benefit from digital distribution networks as long as they take responsibility when faced with obstacles. Access, convenience, and a broader selection of investment alternatives are all improved for investors. A larger customer base, reduced operating expenses, and the flexibility to tailor products and services are all positive outcomes for businesses. Everyone should be able to take part in building wealth, and this digital change could make that possible by making the financial system more efficient and accessible (*Zetzsche et. al., 2020*).

Fintech is revolutionising the investment landscape, allowing a wider pool of investors to participate in mutual funds, regardless of their income or financial expertise. It emphasises enhanced transparency through convenient access to information and effective communication, guaranteeing investors are well-informed. In addition, fintech improves the user experience with the help of mobile apps, user-friendly interfaces, and personalised investment tools, making investing more engaging and accessible (*Abdullah, 2018*). Fintech's influence on the mutual fund industry is undeniable. By embracing these advancements, traditional mutual fund companies can stay competitive and cater to the evolving needs of modern investors (*Alt et. al.,2018*).

LEVERAGING ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR INVESTMENT STRATEGIES

Fintech companies are playing a significant role in reshaping the mutual fund landscape by leveraging technology to make investing in mutual funds more accessible, affordable, and engaging, particularly for these key areas:

Investor Education and Engagement: The mutual fund industry is being transformed by fintech, which offers interactive tools and simulations, goal-based investing, and advanced data visualisation and analytics. Interactive applications provide users with a comprehensive understanding of investment concepts, allowing them to evaluate their risk tolerance and gain insights into the workings of mutual funds (*Astha et. al.,2021*). Fintech platforms provide guidance to investors looking for mutual funds that align with their specific financial goals, such as planning for retirement or saving for a down payment on a house. In addition, the intuitive dashboards and reports provided enable investors to easily monitor the performance of their mutual funds and make well-informed decisions using straightforward and succinct information (*OECD 2017*).

Cost Efficiency: Transparency and accountability in financial markets rely on disclosure requirements and registration and reporting regulations. Regulatory bodies require companies to regularly disclose financial information, such as financial statements, important news, and

ownership structures (*Lightbourne and J.,2017*). This registration process ensures proper oversight and traceability of their activities, which helps maintain the integrity and stability of the financial system. Registered entities are required to follow strict reporting standards, ensuring that regulators receive comprehensive information about their operations, transactions, and adherence to legal requirements (*Josyula et al., 2021*).

Evolving Investor Preferences and Behavior:

Investor preferences and behaviour in mutual funds are changing, driven by a combination of factors like technology, demographics, and financial literacy. Here is a breakdown of some key trends:

Shifting Priorities: Given the evolving demographics and shifting investor preferences, there is a noticeable trend towards balanced or thematic funds that cater to the younger generations. These funds are designed to appeal to Millennials and Gen Z, who have a greater inclination towards taking calculated risks. Furthermore, there is a growing fascination with Impact Investing, as investors are increasingly looking for funds that are in line with ESG factors. These funds aim to combine financial returns with positive societal and environmental impact (*Parual,2020*). Investing in mutual funds is being revolutionised by digital onboarding and robo-advisors, which provide investors with automated investment options and online platforms that are simple and offer cheaper fees. These developments are drawing new demographics and appealing to younger generations who are concerned about cost. (*experian.co.uk*). There has been an increase in the demand for fund houses to be more transparent as the level of financial awareness among investors has increased and they have gained access to more information. The industry is being driven towards increased openness and responsibility as a result of this empowered investor base, which expects transparent disclosure on fees, investing strategies, and performance (*Bucher,2019*).

Regulatory Reforms and Industry Challenges: The Indian mutual fund industry has come a long way since its inception, with regulatory reforms playing a key role in its growth and development. However, there are still challenges that need to be addressed.

Regulatory Reforms: The future of the Indian mutual fund industry hinges on a two-pronged approach: regulatory reforms and industry innovation. While regulators focus on investor protection, streamlining processes, and making it easier to do business, the industry needs to prioritize investor education, expand distribution networks, and offer fresh product options (*Ozile and P.K., 2018*). Technological advancements like robo-advisors and online platforms hold immense potential to improve accessibility and convenience for investors. Consolidation within the AMC space through mergers and acquisitions could lead to a more efficient industry structure (*Geo and L., 2020*). By embracing these changes, the Indian mutual fund industry can stay relevant and empower a wider audience to achieve their financial goals. Regulatory authorities in India, like the Securities and Exchange Board of India (SEBI), are pushing for stricter disclosure standards. This means investors will have clearer information about what funds actually hold, the fees involved, and the potential risks. SEBI is also prioritizing investor protection through measures like limiting exit loads and enforcing strong KYC (Know Your Customer) standards (*Paul and Das, 2021*).

Industry Challenges: There is still a sizeable percentage of the Indian populace that is not familiar with mutual funds and the benefits they offer, which continues to impede their widespread adoption. In addition, access is further restricted by limited distribution networks, particularly in smaller communities that are located outside of major urban areas (*Das et. al., 2020*). The sheer number of mutual fund options can be confusing for new investors, which highlights the necessity of both initiatives to simplify products and initiatives to educate

investors. As a last point of discussion, mutual funds are subject to competition from well-established investment vehicles such as fixed deposits and real estate. Because of this, it is essential to highlight the long-term growth potential, diversification benefits, and overall transparency of mutual funds (*Beyon et.al., 2018*).

INTRODUCTION OF INNOVATIVE INVESTMENT PRODUCTS SUCH AS EXCHANGE-TRADED FUNDS (ETF) AND THEMATIC FUNDS

The financial world has seen a surge in innovative investment products, with two of the most impactful being Exchange-Traded Funds (ETFs) and thematic funds. Let's dive into what these are and how they're changing the game.

Exchange-Traded Funds (ETFs): Fintech-infused exchange-traded funds (ETFs) have grown in popularity because they give investors access to businesses that are at the forefront of financial technology innovation. These exchange-traded funds (ETFs) concentrate on companies that are leading the way in financial technology, including peer-to-peer lending, digital payments, blockchain, robo-advisory services, and cybersecurity (*David et. al., 2017*). Unlike certain investment options, ETFs keep their strategies private their holdings are publicly disclosed, providing transparent visibility. No need to wait for market open or close. Similar to individual stocks, ETFs can be purchased and sold at any point during the trading day, providing investors with control over their investments (*Lettau et.al. 2018*).

Thematic Funds: Unlike exchange-traded funds (ETFs), which follow broad indexes, thematic funds adopt a more targeted approach. These funds make investments in businesses or industries that are aligned with a particular theme or trend. For example, clean energy funds invest in businesses that are involved in renewable energy sources and sustainable technologies. Artificial intelligence funds invest in businesses that are developing and utilizing AI technologies (*Privot and Estermann 2014*). Cybersecurity funds invest in businesses that provide solutions for cybersecurity in a digital world of technology. Potential investors have the opportunity to profit from long-term trends that are influencing the future through the use of thematic funds. On the other hand, they are typically more concentrated than regular exchange-traded funds (ETFs), which means that they may be subject to higher levels of risk and volatility (*Das et. al., 2020*). The utilization in these funds, investing is made more accessible to all individuals, especially those who have limited financial resources. When it comes to aligning their investments with their views or hobbies, investors have a greater choice of options to pick from now than ever before. Exchange-traded funds, often known as ETFs, are a method of investing in certain strategies that are liquid, which helps to contribute to the efficiency of the market (*Quiros et. al., 2019*).

Quant Funds: Quantitative funds, also referred to as quant funds, are investment funds that utilise quantitative analysis to inform their trading decisions. These funds utilise advanced mathematical models, algorithms, and statistical techniques to pinpoint trading opportunities and effectively mitigate risk. The main objective of quant funds is to generate significant returns through the use of sophisticated data analysis and systematic trading strategies. Quantitative funds employ advanced algorithms to execute trades, analysing extensive amounts of data to identify patterns and make rapid decisions (*Wigglesworth, 2016*). A significant portion of the trading in quant funds is automated, which helps minimise errors and ensures consistent execution of strategies. These funds also dedicate significant resources to research and development in order to improve their models and create innovative trading strategies (*Dang, 2021*).

REGULATORY INITIATIVES PROMOTING TRANSPARENCY INVESTOR PROTECTION, AND MARKET INTEGRITY

Transparency: Transparency and accountability in financial markets rely on disclosure requirements and registration and reporting regulations. Regulatory bodies require companies to

regularly disclose financial information, such as financial statements, important news, and ownership structures. These disclosures guarantee that investors have access to precise and current information, allowing them to make well-informed decisions and evaluate the real value and risk of their investments (*Vishwanath, 1999*). Alongside the need for disclosure, regulations mandate that market participants, including brokers and investment advisors, must register with the authorities. This registration process ensures proper oversight and traceability of their activities, which helps maintain the integrity and stability of the financial system. Registered entities are required to follow strict reporting standards, ensuring that regulators receive comprehensive information about their operations, transactions, and adherence to legal requirements (*Allen and J., 2015*). These regulatory measures work together to establish a strong framework that encourages transparency, boosts investor confidence, and supports fair and orderly markets. Through the implementation of thorough disclosures and effective oversight, regulators can enhance their ability to monitor market behaviour, identify possible misconduct, and enforce adherence to regulations. This serves to safeguard the interests of investors and uphold the stability of the financial ecosystem (*Moloney, 2010*).

Investor Protection: Understanding your clients, adhering to suitability standards, and having effective complaint resolution mechanisms are essential for safeguarding investors and promoting fair market practices. Adhering to KYC norms ensures the identification and verification of investors, safeguarding them from potential money laundering activities and protecting them from making unsuitable investments. Advisors must evaluate an investor's risk tolerance and investment goals to ensure that the products they recommend are suitable and aligned with their needs (*Das et. al.,2020*).

Market Integrity: Regulations are in place to prevent market manipulation and insider trading, ensuring that unfair practices such as spreading false information or trading on non-public knowledge are not tolerated. These regulations are crucial in creating a fair and balanced environment for all investors, ensuring that financial markets operate with integrity and fairness (*Sanchez et. al., 2015*). To maintain these standards, regulators actively monitor and enforce compliance. They closely monitor trading activity to identify any suspicious patterns that could suggest possible misconduct. State-of-the-art analytical tools and cutting-edge technologies are utilised to analyse extensive market data, pinpointing any irregularities that require additional examination. When violations are uncovered, strict consequences are enforced to discourage market manipulation and insider trading, such as imposing fines, implementing trading bans, and potentially pursuing criminal charges (*Guha et. al., 2019*). The collective actions taken to prevent unfair practices and ensure diligent supervision contribute to upholding investor trust in the financial markets. They make sure that everyone follows the same rules and quickly deal with any attempts to compromise the integrity of the market. Regulators are essential in maintaining a reliable and trustworthy investment environment through their commitment to transparency, fairness, and strict enforcement (*Siering et.al., 2017*).

Compliance challenges and operational complexities for mutual fund houses

Ever-Evolving Regulatory Landscape: Alongside maintaining thorough customer verification and anti-money laundering protocols, mutual funds face the task of staying updated on regulatory modifications and navigating areas of interpretation that may lack clarity. Keeping up with the ever-changing regulations and amendments requires ongoing vigilance, careful analysis, and regular updates to internal processes to maintain compliance. By taking proactive measures to tackle these challenges, mutual funds can strengthen their regulatory compliance efforts, reduce legal and reputational risks, and uphold the trust and confidence of investors and regulatory authorities. Staying on top of regulatory changes and interpretational nuances requires a strong compliance framework, ongoing monitoring, thorough staff training, and close collaboration with industry peers and regulatory bodies (*Baumol et. al.,2012*).

KYC/AML Compliance: Mutual funds struggle with customer verification and AML regulations in addition to investing limits, valuation standards, and risk reporting. KYC regulations necessitate thorough investor identity and risk profile verification. When working with several investors, this process can be time-consuming and resource-intensive. Mutual funds must also have effective anti-money laundering systems to detect and deter money laundering. Advanced systems and procedures are needed to monitor transactions, report suspicious activity, and do client due diligence (*Kumar et.al., 2020*). Mutual funds are also under pressure to improve KYC and AML standards due to increased regulatory scrutiny and enforcement. This includes keeping up with legislative changes, developing risk assessment methods, and encouraging compliance within the company (*Smet, 2011*). Mutual funds can manage compliance risks and improve their reputation, trustworthiness, and resilience in the face of shifting regulatory expectations and financial crime concerns by investing in KYC and AML systems. Artificial intelligence and blockchain can improve KYC and AML processes, saving compliance teams time (*Fanto and J., 2018*).

Portfolio Management & Risk Control: Successfully navigating the regulatory landscape in mutual fund management requires overcoming a range of challenges that go beyond mere compliance with investment restrictions. These regulations frequently determine the types of assets or sectors in which a mutual fund can invest, which may limit portfolio diversification strategies. This limitation highlights the significance of maintaining a balance between regulatory compliance and the search for the best investment opportunities to maximise returns and effectively manage risks (*Berk et.al., 2015*). Mutual funds are required to follow specific valuation guidelines for their investments and regularly report on the risks associated with their portfolios. Ensuring precise valuations and prompt risk reporting can be operationally challenging, necessitating advanced systems and processes to handle large volumes of data with precision and efficiency. Failure to meet these requirements not only puts funds at risk of regulatory scrutiny but also erodes investor trust in the fund's openness and reliability (*Bebchuck et. al., 2017*). Successful management of investment restrictions, valuation norms, and risk reporting necessitates a proactive approach that seamlessly incorporates regulatory compliance into the fund's overall investment strategy. This involves strong risk management frameworks, frequent audits, and working closely with regulatory authorities to ensure compliance with changing standards and industry norms (*Ferreira et. al., 2013*).

Disclosure & Investor Communication: Ensuring regulatory compliance in mutual funds goes beyond meeting legal requirements—it's about fostering transparency and trust through comprehensive communication practices. This involves the development of comprehensive fact sheets and regular reports that comply with regulatory requirements. These documents require thorough data collection, analysis, and presentation in a straightforward and succinct manner, allowing investors to make well-informed decisions regarding their investments (*Brown et.al., 2019*). It is crucial for mutual funds to establish strong communication channels in order to keep investors well-informed about different aspects of their portfolios. This involves sharing timely and transparent updates on portfolio performance, important developments, and regulatory changes. Whether through traditional mediums like printed documents or modern digital platforms such as websites, emails, and mobile apps, effective communication is crucial for establishing and maintaining investor trust (*Edelen et. al., 2012*). With the ever-changing regulatory requirements and evolving investor expectations, mutual funds need to constantly adjust their communication strategies to meet these shifting demands. This may require embracing cutting-edge technologies, improving user experience, and actively communicating with investors to address their concerns and preferences (*Firth et. al., 2013*). By emphasising detailed information, clear reporting, and effective communication, mutual funds can enhance their connections with investors, showcase responsibility, and successfully navigate regulatory challenges. In the end, effective communication plays a crucial role in ensuring compliance and

promoting the long-term success and sustainability of mutual funds in a highly competitive market (*Schoenfeld and J. 2017*).

Technology & Automation: Investing in compliance systems for mutual funds extends beyond mere regulatory obligations. It involves establishing a solid basis of trust and transparency in the financial markets. These systems, which include data management, regulatory reporting, and transaction monitoring platforms, are crucial for maintaining compliance with legal and ethical standards. However, the costs involved in implementing and maintaining these systems can be quite significant, necessitating careful financial planning and allocation of resources (*Tao et. al., 2021*). The dependence on technology makes mutual funds vulnerable to a wide range of cyber threats. Given the growing expertise of cybercriminals, the threat of data breaches, ransomware attacks, and other malicious activities is a significant concern. A single mistake can have significant repercussions, leading to financial losses and harm to one's reputation. Therefore, it is crucial to have strong cybersecurity measures in place to protect sensitive investor information, ensure uninterrupted operations, and maintain the trust of stakeholders (*Jung et. al., 2018*). Successful cybersecurity strategies require a comprehensive approach that includes ongoing monitoring, sharing threat intelligence, training employees, and planning for incident response. In addition, working together with regulatory bodies and industry peers can offer valuable insights into new risks and effective strategies for managing them (*Chuprinin et. al., 2015*).

CONCLUSION

Several strong factors are driving the future of investment towards personalisation. The use of big data and analytics has been revolutionary, enabling mutual fund houses to better understand their customers' habits and tastes. Investors' risk tolerance, long-term objectives, and motivations can be uncovered through the analysis of massive databases. This level of detail lays the groundwork for highly customised investing strategies. In conclusion, technology has been the primary factor that has contributed to the rapid expansion of the mutual fund distribution industry in the current dynamic financial landscape. The proliferation of internet platforms, digital marketing tactics, and data analytics tools has provided distributors with chances that have never been seen before, allowing them to not only grow their businesses but also communicate with a more extensive audience. Using automation and digitization, operations have been streamlined, which has resulted in transactions being more efficient and interactions with customers being more personalised. Furthermore, technology has given openness, accessibility, and convenience to both distributors and investors, cultivating trust and loyalty within the sector. This has resulted in increased profits. It is imperative that mutual fund embrace new developments to maintain a competitive advantage in the industry and make the most of the influence that technology provides to uncover even more opportunities for growth and success in the future. When it comes to mutual fund investors who want to thrive in the highly competitive world of finance, embracing technology is no longer an option but rather a condition that must be met. In this context, awareness and adoption of technology by investors is crucial aspects to further ensure the digital drive.

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