

EVOLUTION OF THE Broker-Dealer

Clearing a Path to the Future



FOREWORD

We are releasing this comprehensive research and analysis on the broker-dealer universe at a uniquely complex and challenging moment, characterized by uncertainty across geopolitical, regulatory, economic and technology landscapes.

The convergence of these factors and the distinct change in sentiment felt throughout 2022 make this moment an essential time for leaders of broker-dealers to clarify their ambitions, take no-regret steps that build near-term resiliency and selectively continue to invest in building for the future. And while we must recognize and respond to the challenges of the current environment, the themes we identify in "Evolution of the Broker-Dealer: Clearing a Path to the Future" have emerged over years, not quarters.

To that end, we provide a framework that can help leaders define a target future state, discuss some of the key levers available for execution and review the trade-offs implicit in making these decisions. Broker-dealers will play varied critical roles in the future financial services ecosystem – and we look forward to continuing to partner with you in developing and executing your vision for success.

INTRODUCTION

Many broker-dealers currently face both short- and long-term strategic pressures. Costs have increased, growing 37% since 2012.¹ The largest institutions are capturing greater share, with the top 10 firms by revenue globally accounting for over 50% of the Equity Capital Markets (ECM) global market share and 41% of the Debt Capital Markets (DCM) global market share.² And regulatory and compliance demands are having an impact on small to midsize providers, limiting their ability to invest in their operating model and innovation.

These pressures call for change. Over the same ten-year period, the number of broker-dealers globally has declined by approximately 25%, either through acquisition or closure.³ Without understanding the shifts and forces that have created these trends – and new factors that are now accelerating them – more broker-dealers will face additional pressures in a rapidly shifting and increasingly competitive landscape.

What the industry needs is a map, orienting broker-dealers towards a more resilient and ambitious future while also navigating challenges along the way. To help draw that map, BNY Mellon explored these complex trends in depth, leveraging its unique position as a financial services orchestrator and provider to broker-dealers worldwide.

research METHODOLOGY

We conducted **an online survey** to identify the priorities and initiatives of capital markets stakeholders.



Leaders from institutional brokerdealers and other capital markets firms



Representing Asia, EMEA and North America



Firm Size: 2021 FY revenues from \$10M to >\$10B

We conducted more than 40 interviews with clients and industry thought leaders to expand on survey findings.

45b

23 C-Suite decision-makers (CEO, CFO, COO and leaders in trading, technology, operations and strategic functions) generating more than \$45B of industry revenue

17

Experts in topics such as product, regulation, data, technology and financing within the broker-dealer industry Our research examined two aspects of the journey facing broker-dealers: external drivers of change (Section 2) and the levers available to help each institution navigate the future (Section 3).

In our analysis, broker-dealers that purposefully employ these levers, with an honest view of where they are today and a clear vision of the destination, can look to five archetypes for future success (Section 4).

And while firms are reaching towards different models for future success, each with benefits and challenges, it was consistently recognized that the status quo is increasingly less tenable. Firms must act now – with vision and intent – to find stability, create resiliency and unlock future growth.

Drivers of Change: **Turbulent Waters**

- Shifting market structures
- Proliferating data
- Evolving client demands
- Changing talent market
- Regulatory headwinds

Levers of Change: Charting a Course

- Rethinking **target markets**, clients, and geographies
- Re-examining products and solutions
- Redesigning infrastructure and operations
- Reshaping hiring and retention

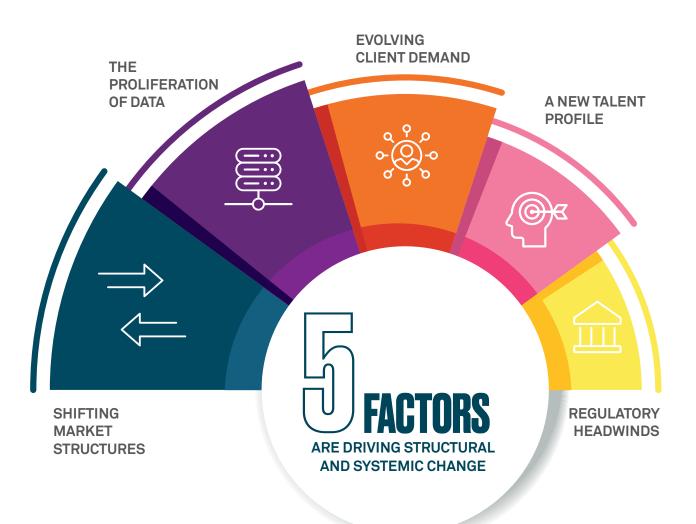
Destinations: Archetypes for the Future

- The Alliance Builder
- The Digital Driver
- The Global Giant
- The Product Sophisticate
- The Regional Champion

DRIVERS OF CHANGE: TURBULENT WATERS

In the United States, the number of FINRA-registered firms shrank by 1,200 over the past ten years, a 25% decline.⁴ In 2021, there were 54 M&A transactions made across stock exchange/trading venues and brokerages in Europe.⁵ As a result, broker-dealers outside the top ten are competing for a smaller share of the market.

Rising costs have also impacted broker-dealer commercial viability. Moreover, the rate of cost increases has accelerated – the five-year compound annual growth rate (CAGR) of 4.94% between 2017 and 2021 is more than double that of the prior five-year period, i.e., 1.94% between 2012 and 2016.⁶



Shifting Market Structures and Foundational Change

Industry leaders in our research highlighted changing competitive dynamics, the shortening of the settlement cycle (and balance sheet implications) and the emergence of distributed ledger technology as the three main structural factors driving evolution.

Changing competitive dynamics are creating new lines of engagement.

We see many participants extending their reach in search of new pools of revenue and opportunity. This diversification helps them create more touchpoints with clients and capture a greater share of the data and revenue wallet. It also creates challenges in areas where broker-dealers historically tended to compete only amongst each other. These strategic moves have occurred across the value chain, with broker-dealers expanding at the same time as other players have been encroaching.

SELL-SIDE

Diversification gives broker-dealers front-to-back capabilities, spanning settlement, custody and collateral management, a move particularly prevalent among bank-owned broker-dealers.

BUY-SIDE

Diversification allows a more active role in execution to help better manage credit, liquidity, and market risk. Some firms are bringing trading in-house, building sophisticated algorithms and electronic trading capabilities. This resource-intensive move is prevalent among larger firms.

EXECUTION VENUE

Diversification has emerged across the value chain. Firms are deploying data and technology to generate revenue by capturing execution flows and serving as post-trade data and analytics providers.

CUSTODIANS

Are expanding their pre- and post-trade reach, developing execution and clearing capabilities, and enhancing collateral management and data and analytics tools.

Shortening of the settlement cycle is a double-edged sword.

Electronification is accelerating, triggering an "industry overhaul," according to our interviewees. Settlement models and principles proven in the equity markets are now migrating to the fixed-income and FX spaces, driving greater efficiency and boosting the velocity of cash and securities.

Alongside efficiencies gained through operational and technological advancements, shortening settlement cycles to T+1, as proposed by The Depository Trust & Clearing Corporation (DTCC), will reduce risk and margin requirements.

DTCC estimates that moving to T+1 "could bring a 41% reduction in the volatility component of National Securities Clearing Corporation's (NSCC) margin."⁷ Less volatility has significant implications for broker-dealers' balance sheets, collateral mix and infrastructure. At the same time, as one leader at a global prime broker mentioned, compressing settlement times will force firms to completely rethink their risk and processing models.

Looking further ahead, the adoption of T+0 would further serve to reduce volatility exposure while leading to an increase in margin calls. Although the immediacy of settlement reduces risk, it would limit the ability of broker-dealers to realize netting benefits with clearing and settlement agents.

Beyond this impact, staggered global adoption of T+0 settlement cycles will push some markets towards using only collateral types that have a short and reliable settlement cycle network. However, until this truly efficient collateral marketplace emerges, greater emphasis is placed on the need for an optimized balance sheet and collateral management. In particular, broker-dealers must determine how a wider network of providers and market interconnectivity can help them manage collateral better.

Analysis by EY indicates achieving optimization presents an opportunity to drive annual funding cost upside of \$150M+ for large global sell-side organizations, \$75M+ for smaller global and regional sell-side organizations and the largest global buy-side organizations, and \$25M+ for other institutional buy-side firms.⁸

The emergence of distributed ledger technology may bring future disruption

Even while broker-dealers face current shifts in market structure, they are aware that another trend is on the horizon: digital assets and the operational use of Distributed Ledger Technology (DLT).

There are currently only small pockets of adoption, but many leaders highlighted this area as reaching critical mass. Some believe that central banks' introduction of stable coins may constitute a tipping point that will accelerate cross-network standardization of regulatory frameworks and technology.

Others speculate on the use of DLT as the mechanism to drive settlement towards T+0. Research participants highlighted that the decentralization and efficiency of blockchain, combined with the benefits of asset tokenization, could enable near-instantaneous settlement.

2 The Proliferation of Data

Broker-dealers are struggling to manage increasing amounts of data and make effective use of it. By 2025, the amount of data generated daily is expected to reach 463 exabytes.⁹ Securities represent one such data-rich area. Asset- and marketlevel data, as well as less traditional financial data, offer the potential for insights on investments and client needs. Unlocking the power of this data is at the forefront of business leaders' minds as they seek to secure a competitive advantage.

By allowing the unbundling of services, MiFID II and the resulting industry changes have increasingly commoditized execution. As a result, these changes have shifted broker-dealers' reliance on execution for revenue. Unable to utilize a research-led approach, broker-dealers seek new ways to differentiate their products and services. They see the untapped client and product data within their systems as the key tool in differentiating and enabling quicker and more accurate margin-driving decisions. A CEO at one global capital markets firm also highlighted the value of data in developing new relationships and providing more targeted services.

70%

of firms who responded to our survey intend to increase their investments in data (across integration, connectivity and analytics capabilities). Generalizing responses in our research, we see three areas of focus for firms' investments in data and capabilities, representing the various stages of maturity for data strategy:

Data acquisition, sourcing, aggregation and

normalization: Broker-dealers are buying data from new sources and building infrastructure to better capture data across their platforms. Firms are also investing in tools to aggregate and cleanse the data produced by ongoing operations and transactions, i.e., data exhaust, so they can feed it back into their systems, improve processes and enhance relationships.

Development of insights: Investment in technology and, importantly, people to extract insights and value from data. Nearly three-quarters (74%) of firms are allocating more capital to support the development of their data and analytics capabilities.

Insights into Action: Broker-dealers are focused on developing platform capabilities on both the client and business sides. For the client, they are working to build a deep data-driven client profile that delivers a better understanding of their preferences, needs and behaviors. On the business side, they prioritize investments that help drive insights to client-facing teams.

Despite the potential market value of their data, **only 8% of firms are considering commercializing** it as a product or revenue-generating solution available to other stakeholders in the investment lifecycle, such as funds or intermediaries.

Demands Evolving Client

Both retail and institutional clients are becoming increasingly sophisticated, with ever-higher expectations for their overall experience. The shift to platform interaction was a key theme in our research. One leader highlighted a generational change in the way their clients interact, noting that a new generation of clients is emerging who want less personal interaction in favor of data insights, push messaging and simplified decision-making. This trend played out in our quantitative survey, too, especially among the larger institutions, 88% of which outlined plans to increase investments in digitizing their client experience.

Enabled by greater information access and transparency across data and pricing, clients are more informed and discerning than ever before. They also expect providers to deliver a digital client experience, unique insights and comprehensive, real-time reporting. Another BNY Mellon analysis found a clear separation in asset flows based on a brokerdealer's digital adoption – strong digital adopter assets grew by 130% compared to a decline of nearly 40% for weak adopters.¹⁰

Client sophistication and expectations are also evolving on the retail side of the market. Driven by the same factors as institutions, these investors work in a coordinated manner (e.g., GameStop and Bed Bath and Beyond), resulting in scale with the power to move markets. Subsequently, we heard some institutional broker-dealers now regularly monitor discussions and behaviors on retail-focused message boards, forums and social media.

One leader said that professionals in her firm are now "tracking the information flows within online investor forums to understand how the retail investors' actions may impact their trading strategies."





Our research further uncovered a shift in broker-dealer talent requirements. A more digitized landscape, with algorithmic, data-driven, electronic trading strategies and DLT on the horizon, brings the need for new skills. As a result, firms today are seeking people who are digitally native, data literate and technically savvy.

The arms race for talent is accelerating.

In a sense, technical and analytical skills are becoming a baseline for broker-dealer industry careers at the same level as understanding the market. Moreover, this fluency with technology is critical as firms' clients continue to transition toward low-touch platforms and digitized interfaces. The volume, speed and complexity of regulatory change are creating new obligations for broker-dealers, and meeting new requirements often demands limited resources that they could otherwise invest in growth.

In the past decade, 47 new regulatory bodies have been introduced globally to exercise some degree of oversight of financial and securities industries,¹¹ such as the European Securities and Markets Authority. With the inception of these bodies comes an increasing flow of new regulations focusing on the securities industry.

The impact on firms is evident in the increased levels of spend and resources devoted to meeting regulatory and compliance demands. In 2021, financial institutions spend on compliance surpassed \$210B, increasing by over 15% from the previous year.¹² One COO based in North America described increased requirements as a distraction from the ability to focus on efficiencies and growth.

Firms cited "competition for talent" among their top three headwinds inhibiting growth.

The weight of compliance has a more significant effect on smaller firms, with 71% highlighting regulatory demand as their primary headwind (vs. only 54% of larger firms).

LEVERS OF CHANGE: HOW TO REACH HOW TO REACH THE FUTURE

Broker-dealers have many options for navigating these changes by rethinking their priorities and adapting their focus to new realities. While these considerations require complex and nuanced responses, meaningful action is possible. As they vie for clients and market share, we see four main levers of change. These levers can help them position themselves and move towards future business models, or archetypes, that will sustain them during a period of profound broker-dealer industry transformation.

Four strategic levers to drive change and deliver their business-optimization strategies:

Redefining the target market

Re-examining product and solution

Enhancing infrastructure and operating models

Reshaping hiring and retention



The differentiated use of these levers will ultimately influence which archetype a firm will migrate towards in its future state.

Rethinking Target Markets, Clients, and Geographies

Many broker-dealers are reassessing their target market in response to the drivers of change and competitor moves. The head of equities at a top 10 global institution observed that clients want to spend less and with fewer providers. Understanding which accessible client segments will control meaningful wallet in the future can help them confirm or reimagine their value proposition. In addition, strategic alliances with innovators and technology leaders will play a vital role in developing new, more targeted solutions, as one COO at a global markets and investment banking firm commented.



Three shifts are affecting broker-dealer strategies:

Increasing Client Sophistication

Market leaders recognize the need to invest in digitization to stay ahead of more sophisticated client demand. Such investment spans both products and services. Much of it includes some degree of "going digital."

68%

of broker-dealers are increasing investment in clients' digital service experience

Fierce Competition for Client Wallet

Firms are developing strategies to create more touch points along the value chain to capture more of their client wallet. In addition, strategic partnerships and M&A can help tap into complementary capabilities.

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firms confirmed that they were exploring M&A as a primary method to reposition and drive growth

Repositioning Globally to Dominate or Defend

Massive firms have the global scale to invest budget and resources to sustain growth and gain market share. For other firms, by contrast, decision-making is far more nuanced and must consider how to focus on strategic geographies both offensively and defensively.



of firms highlighted "Entering New Markets" as their top strategic focus for future growth

Re-examining Products and Solutions

As broker-dealers reposition to serve existing clients' evolving needs and unlock access to new clients and revenue pools, they recognize that they will have to realign products and services with their broader strategic ambitions. Doing so requires a detailed analysis of investor and market insights. Drawing on discussions with industry leaders, we formulated a nine-question checklist that world-class firms are addressing as they examine their product and solution set mix, both today and in the future.

Product Set

- How do our different products and asset classes work together and drive our economics and growth?
 - How do clients perceive our products versus competitors'?

Delivery Channel

- How do clients prefer to interact with us and our platforms?
- How can we optimize the delivery of our products?
- What alternative channels are clients using to access products and services?

Client Demand

- What is driving clients' asset allocation?
- How well do our products align with our clients' needs?

Operating Model

- How well does our existing technology support our operations and growth ambitions?
- Which components of our infrastructure drive the greatest value for our clients?

This level of granular analysis and strategic thinking can help firms make better-informed choices about where to expand along the value chain, how to scale and how to access global markets. These choices coalesce into five product realignment strategies.



Our survey highlighted the investments and practical steps firms are taking to execute their product realignment strategies. Their top three areas of focus were alignment with expansion along the value chain, scalability and global access strategies.

Broker-dealers are actively developing new products and services to **expand along the value chain**. In our survey, **53% of broker-dealers said they intend to expand their investment banking capabilities** to differentiate their product set. As institutions develop their platforms and refine their data capabilities, they seek to tap new revenue streams, such as one interviewed COO's mention of expanding to primary offerings. Other firms told us their focus is **scalability**, specifically unlocking growth potential offered by increased electronification of the fixed-income and FX markets. Our survey found that **51% of firms** were increasing infrastructure investments to support increasing automation in three main areas: high-frequency trading, algorithmic trading, and machine learning/artificial intelligence.

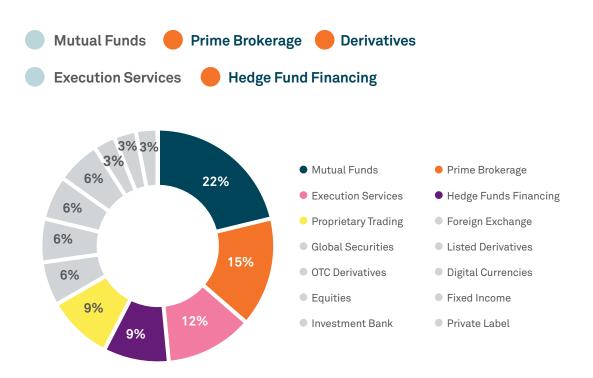
Global access is the third most favored approach by brokerdealers to reposition their product set. Such a move meets client demands for a global view while leveraging existing capability, specialism and knowledge base. In our survey, **49% of brokerdealers note an intent to widen their global access**. "Expanding our current product distribution is a lot easier than having to create new revenue streams," said one leader.

While many firms are emphasizing expansion to increase their product set, others are reducing their breadth of capability in favor of "**capital lite**" strategies. **Three out of five (59%) survey respondents said they are exploring capital-efficient portfolio strategies**. One driver of this exploration is regulatory hurdles for capital and liquidity, making it harder to leverage the balance sheet to drive growth.

Three of the top five product areas that broker-dealers are exiting are capital intensive

Regardless of approach, all firms are investing heavily in **enhancing the delivery** of their product and solution set.

Three of the top five product areas brokerdealers are exiting are capital intensive



PP Redesigning Infrastructure and Operating Models

Investments in enhanced delivery also create the need to build or optimize underlying infrastructure. While efficient and effective processing of client activity is core for broker-dealers, new demands are also emerging for greater resiliency, support for a broader product range and the ability to connect to a myriad of both internal solutions and external platforms and providers. This evolution also requires aggregating, cleansing and directing data from point to point in real time.

In other words, broker-dealers' future operating models must make a great leap forward – often from a starting position of aging technology and infrastructure.

Digitizing and Automating Processes

All firms are investing in automating and digitizing their processes as they drive towards a low-touch or no-touch workflow spanning pre- to post-trade. As business leaders optimize their models, they must determine which components to build, buy or access via third parties and partnerships.

For larger firms, automation investments let them reduce headcount, technology expenses and risk. For smaller market players, often faced with manual processes and legacy technologies, realizing efficiencies via digitization is critical for unlocking capital for growth initiatives.

The common areas of digitization that emerged through our interviews include due diligence, onboarding, account management, trade capture, matching, settlement and reconciliation. Firms also want to develop automated solutions involving robotics and artificial intelligence. One global player spoke of his firm's "tactical use of robotics to support automation of discrete processes within the value chain," while others described using "machine learning to aggregate order flows" for their fixed-income business. 72%

of firms plan to increase investments to enhance legacy platforms

All firms are investing in automating and digitizing their processes as they drive towards a low-touch or no-touch workflow that extends from pre- to post-trade.

Elevating the team and client experience to boost productivity and satisfaction

During our interviews, firm leaders spoke about investing to give their teams the data, insights and tools to drive decisions and execution. An automated and digitized platform can offer real-time insights that pinpoint the most attractive clients and redeploy professionals to conduct value-accretive activities.

Meanwhile, client expectations are evolving, so firms are seeking to offer clients access to a full suite of services, realtime data, detailed reporting, and research and insights, often on multiple channels, including mobile. Moreover, clients using these platforms leave behind clear data about their interests and behaviors. Firms that mine this data for insights can create a positive feedback loop that informs further refinement of products, services and delivery channels.

Readiness for the future of digital assets

The broker-dealers we interviewed realize they need to keep their options open for the future of digital assets. Specifically, firms are figuring out where to place their bets in early-stage frameworks and mechanisms for new technologies, such as DLT and tokenization.

While some await a tipping point for these technologies, a few are developing in-house processes to discern what opportunities this new tech might spawn. Early adopters are collaborating with regulators, industry bodies, fintechs and even competitors to drive progression. As one industry leader noted, "[Firms] understand that in being part of the conversation, they retain some control and remain at the front of the pack once the solution has been identified."

Enablers of change

There are two key enablers of the change we see above.



of survey respondents intend to enhance their value proposition through investment in an improved digital service experience.

A separate BNY Mellon study of Wealth and RIA brokerdealers found that between 2016 and 2021, AUM grew by 130% for strong digital adopters weak adopters saw a 40% decline.¹³

A foundation of data stretches beneath all strategic endeavors

Data is the single most significant area of strategic focus and investment for broker-dealers. In our survey, the top three areas of investment were sourcing and access, management and analytics. In our interviews, firms discussed unlocking the potential of their data to serve as the primary enabler of competitive advantage.



The top three areas for investment are all data-focused: of firms increasing investment in resiliency and cloud technology of firms increasing investment in integration points and data connectivity



of firms increasing investment in data and analytics tools (to support internal decision-making)

Our conversations with industry participants highlighted varying stages of maturity in their implementation of a data strategy. For some, the focus is on capturing data internally, facilitated by automation, digitization and platforms monitoring client behaviors. This feat alone generates significant value.

For external data, firms must maintain a broad view of the data provider landscape, constantly reassess the required datasets and optimize data quality and cost.

Discrepancies in the maturity of firms' strategic data implementation arise in the areas of connectivity and aggregation, cleansing and management and ability to unlock value:

Connectivity and aggregation:

Investing mainly in application programing interfaces (APIs) and cloud technology

Cleansing and management:

Tools to validate and normalize data, producing formats that can then be ingested by analytics tools and processing models

Unlocking the value of data:

Taking insights and turning them into action

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We grabbed data out of our business systems and built an internal data mart to give salespeople and their managers tools for analyzing customers... this work allowed us to create some pretty advanced data analytics on our customers, which our peers didn't yet have.

- A CAO at a leading U.S. corporate and investment bank A small number of firms (roughly 8% of the firms who shared their views with us) are breaking new ground in seeking opportunities to turn their data into a standalone product.

Ease of integration

We observed interest in developing a unified platform and view of activities – across all asset classes, systems and markets. An open-architecture approach is increasingly common, underpinned by the belief that client relationships become increasingly sticky when the broker-dealer platform serves as the gateway to access points along the value chain. A core differentiator for this model is the ability to gain greater visibility into client interactions beyond the immediate capabilities of the broker-dealer. By discerning client behaviors and needs, firms can refine products and services to tap new revenue streams (e.g., by acting as access points to third parties and partners).

Consolidation with core providers for simplicity and leverage

Almost two-thirds of survey respondents seek to simplify their vendor models. Interviewees voiced a desire to consolidate their provider universe to a core group to reduce complexity and access economies of scale. A partner's ability to integrate with the broker-dealer's platform is a critical selection criterion.

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Every institution has the same challenge, whether it's due to historical mergers or the way they've evolved their infrastructure; we're all dealing with a fragmented application and data landscape.

- A COO at a European headquartered bank

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We choose vendors and partners mainly based on best-of-breed toolsets and functionality... but also see the potential to benefit from the work our vendors do with their other customers - particularly when they're thinking about things we're not.

- A senior leader at a U.S. capital markets firm

Reshaping Hiring and Retention

Broker-dealers are adapting their approach to talent in both hiring and retention. The desired end state is building a futureoriented culture that can deliver firms' strategic transformation plans.

Defining the talent profile and skillset:

Broker-dealers are **defining the expertise and skills required** to grow their businesses in an environment increasingly driven by data, digital and technology. The leaders we spoke with reveal a focus on mapping their current talent profile and the skills that will support their strategic execution. All subsequent steps rely on this foundation.



Training and retaining existing talent:

Optimized operating models are creating efficiencies to reallocate headcount to value-accretive business functions. As they **reshape their existing resources**, firms are investing in training and development to broaden their skills base at all levels.

Identifying new talent from nontraditional sources:

Many firms are establishing new talent pathways, growing relationships with new universities and recruiters and exploring other sectors to attract individuals with the required skills and knowledge. The two main areas of investment include **recruitment consultants and marketing materials for new audiences**.

Navigating greater competition from non-financial sectors:

Leaders told us that the competitive landscape for talent has expanded beyond the financial industry to include non-traditional sectors such as technology and media. Accordingly, they are **rethinking their incentives and workplace flexibility policies**. One chairperson of a large U.S. institution spoke of seeking ways to deliver "unique experiences and opportunities to new hires" to differentiate from competitors.

Managing the cultural shift sparked by the pandemic:

Integrating diverse expertise and skills across a transitioning talent profile requires thoughtful **management of the cultural shift**. This task is more complex in a post-pandemic, hybrid working environment. Leaders spoke at length about the challenge of building a culture in the virtual environment. A core strategy for doing so is to develop a clearly defined and visible "purpose statement."

Four best practices for reshaping the talent profile:

Define a clear purpose statement that serves as a central focus for your organizational culture and behaviors



Deliver unique opportunities for junior talent: "What can they get from you that they cannot get from anyone else?"



Initiate training programs for middle managers: Navigating a cultural shift requires leaders who can maximize the value of the firm's evolving skillset and knowledge base



Identify areas of increasing digitization and automation and retrain and reposition talent to pursue high-margin activities

DESTINATIONS FOR CHANGE: ARCHETYPES FOR FUTURE SUCCESS

As the strategies discussed above converge, they create a new market environment, one in which firms must adapt purposefully and rapidly as they seek to strengthen their business core and expand their range of future opportunities.

Five operating archetypes will define broker-dealer strategies between now and 2030

While these archetypes do not neatly accommodate the strategies of every firm, we believe that many firms will migrate toward these models in the next few years as they strive to sustain market differentiation and growth. Others may create hybrids of the models.

Archetype	Characteristics/ Value Proposition	Primary Areas of Investment Focus
The Alliance Builder	 Specialized capability (product or technology) Agile and flexible Rapid access to leading capability Enhanced expertise and resources 	 Rapidly scaling new models Alignment and integration of technologies Robust governance structure and process
The Digital Driver	 Proprietary technology Digital enablement Data-driven decision-making Lean structure 	 Data acquisition Enhancing technology stack and infrastructure resilience Digitizing process and employee/client experience
The Product Sophisticate	 Narrow but highly specialized product set Focus on niche client need Specialized knowledge and resourcing Purpose-driven technology and processing 	 Product differentiation SME talent acquisition
The Regional Champion	 Dominant/market leader in one region supporting local market and inbound needs Product set built around local market needs Localized provider network 	 Local utility integration Adapting products for market needs
The Global Giant	 Global footprint Broad product set Broad client base (region and segment) Significant capital/balance sheet capacity Extensive data access Scaled resource and infrastructure 	 Technology/data interoperability M&A Digital client platform

CONCLUSION

BNY Mellon has an unparalleled view of the global broker-dealer industry, anchored on deep relationships with industry leaders and innovators. Through this research, we discovered significant points of agreement on the drivers of change in the competitive landscape and their pressing need for broker-dealers to find a pathway to the future.

The path from today's turbulence to tomorrow's success is complex and challenging. We found significant differences between firms' sense of urgency to identify immediate steps and execute them with resolve. In other words, some firms were investing to create strategic pathways – involving talent, clients, technology, data and products – while others were adapting more slowly or, in some cases, taking a wait-and-see posture.

At this fork in the road, actions taken now will determine which firms compete, grow and succeed. No matter where your firm is today or where it is headed, BNY Mellon can be a trusted guide and provider to sharpen your business approach, strengthen your infrastructure and help you move forward with confidence.

- ⁷ https://www.dtcc.com/news/2021/february/24/dtcc-proposes-approach-to-shortening-us-settlement-cycle-to-t1-within-two-years
- ⁸ https://www.ey.com/en_us/banking-capital-markets/collateral-optimization-capabilities-that-drive-financial-resource-efficiency
- ⁹ https://www.weforum.org/agenda/2019/04/how-much-data-is-generated-each-day-cf4bddf29f/
- ¹⁰ BNY Mellon Signals Report Issue 9 February 2022
- ¹¹ https://library.cqpress.com/cqresearcher/document.php?id=cqresrre1969020500
- ¹² https://1rs.io/2021/10/11/counting-the-cost-cost-of-compliance/
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¹ https://www.sifma.org/wp-content/uploads/2022/07/CM-Fact-Book-2022-SIFMA.pdf

² Dealogic FY 2021 Rankings ECM & DCM <u>https://cortex.dealogic.com/</u>

³ FINRA CMFactbook 2022

⁴ https://www.thinkadvisor.com/2020/05/27/the-2020-broker-dealer-reference-guide-best-in-the-business/#:~:text=FINRA%E2%80%99s%20 latest%20figure%20for%20the%20total%20number%20of,year%20earlier%20and%20633%2C000%20some%2010%20years%20ago.

⁵ https://www.whitecase.com/insight-our-thinking/europes-banks-emerge-covid-19-pandemic-resolute-their-ambitions?s=European%20fig%20 ma%20sector

⁶ https://www.sifma.org/wp-content/uploads/2022/07/CM-Fact-Book-2022-SIFMA.pdf



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