

# Reimagining Investment Research with Digital Innovations

## Abstract

Sell-side firms offer investment research services to the institutional customers or buy-side firms. Under MiFID II, research services are un-bundled from execution services and buy-side firms have to pay separately for research services. However, cost pressures and shrinking research budgets pose challenges. This, coupled with the rise of independent research firms is putting pressure on sell-side firms underscoring the need for service differentiation to retain market share. Sell-side firms see technology as a key enabler for value differentiation and in turn improving customer experience.

This paper discusses the ways sell-side firms can differentiate their services by adopting digital innovations in investment research. It also highlights the need for automation to increase research analyst productivity, optimize costs, and offer quality research to clients.

## MiFID II: Impact on Investment Research Industry

The implementation of the Markets in Financial Instruments Directive (MiFID) II regulation in Europe has significantly changed the research model of sell-side firms. Fees for research services are un-bundled from trade execution commissions and clients have to pay separately for research services. With investors increasingly shifting to low cost index funds, research budgets of buy-side firms are shrinking. Cost and margin pressures are resulting in buy-side firms engaging fewer brokers for quality research – a Greenwich Associates survey reveals that MiFID II has shrunk European equity research business by 20% in 2018.<sup>1</sup> In addition, some large buy-side firms are strengthening in-house research to reduce reliance on sell-side research. The rise of independent research providers and lack of experienced analysts has also added to the pressure. To retain market share in such challenging conditions, sell-side firms must distinguish themselves by offering value-differentiated research services. In our view, adopting digital enablers built using intelligent technologies is the way forward for sell-side firms.

## Transforming Sell-side Research

Embracing digital innovations in sell-side research will help firms create exponential value by offering value-differentiated research services at optimal cost. We believe sell-side firms must embrace digital innovations across two main dimensions – the channels used to distribute services and offerings – to achieve value differentiation and gain an edge over the competition. The business model canvas (BMC) in Figure 1 illustrates the key incremental changes along with the related digital innovations required to enhance the research model.

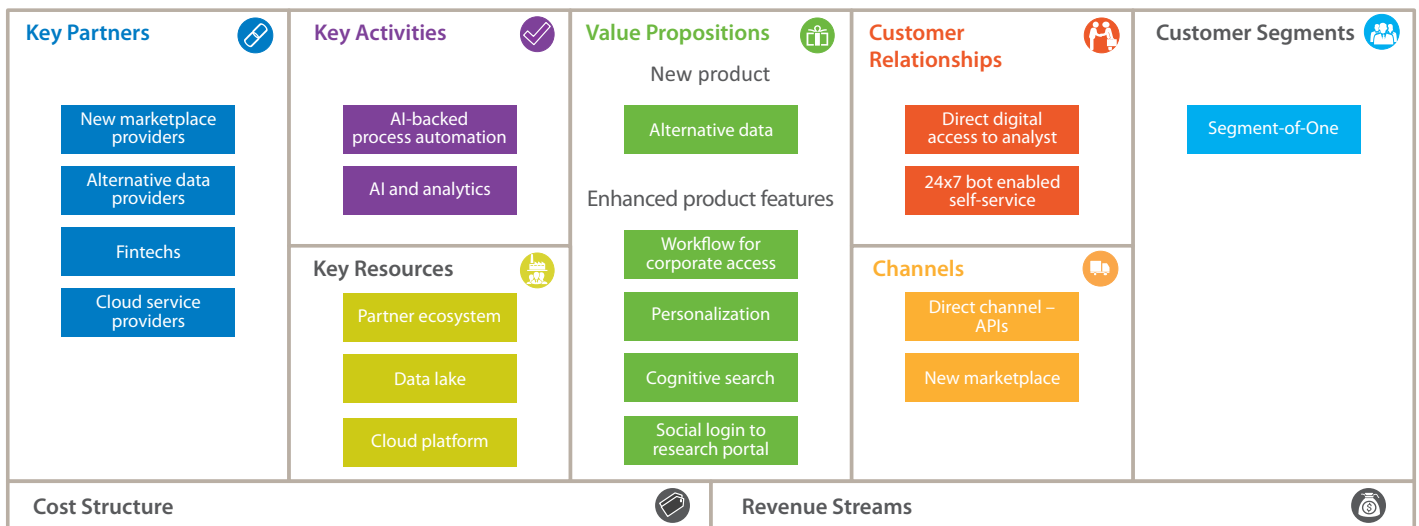


Figure 1: Business Model Canvas and Digital Innovations to Enhance the Research Model

## Channels

Proprietary research portals are the traditional channels for disseminating research services. To ensure anytime, anywhere access to research services, many sell-side firms have enabled access to their portal through mobile devices. However, application programming interfaces (APIs) are emerging as the distribution channels for research services. In addition, regulatory change has led to the emergence of new marketplaces to cater to the investment research needs of firms. Sell-side firms must also leverage these marketplaces to distribute research reports.

### APIs

Sell-side firms must consider building APIs to enable clients access the datasets and research reports in real-time. This data can then be integrated into clients' systems. Sell-side firms can build APIs to feed pricing information, historical data across asset classes, and so on directly into their client's data analytics platforms in real time. Similarly, APIs can be incorporated to deliver research reports directly into clients' research management systems (RMS) and publish reports on marketplaces.

### New marketplace platforms

New marketplaces such as RSRCHXchange, ResearchPool and Smartkarma offer sell-side firms an avenue to expand client reach, and increase consumption of research reports. These new marketplace platforms offer superior features including the ability to control access to research, readership analytics, and APIs to upload the research reports. Leveraging the new marketplaces along with existing marketplaces will help sell-side firms reach a larger client base and potentially increase revenues.

## Offerings

Sell-side firms must leverage natural language processing (NLP) and machine learning (ML) technologies to design high-value, differentiated offerings with features like personalization, cognitive search, data-driven research capabilities, and self-service. In our view, harnessing the abundance of partner ecosystems will be crucial to offering differentiated research services. Forging partnerships with fintech firms such as Kensho, AlphaSense, Narrative Science and Dataminr will help firms access differentiated capabilities and explore possibilities to offer greater value.

### Alternative data

Leveraging alternative data sources such as satellite data, point of sale (PoS) data, and internet of things (IoT) data can help

sell-side firms produce value-differentiated research offerings. Strong data-science capabilities driven by skilled data scientists will need to back the analysis of the enormous amounts of alternative data and generate unique insights.

### **Personalization**

Applying advanced analytics to user information including reading patterns, preference for report format (long, short, pictorial), geography, asset class and so on will yield insights that can be used to make personalized recommendations. Readership analytics can provide valuable insights on the users' areas of interest to the sales team for meaningful engagement and follow-up action. Feedback from highly engaged users can be leveraged to bring less engaged users into the fold.

### **Cognitive search**

Sell-side firms maintain a huge repository of research analyst reports covering multiple asset classes and quickly locating a specific report can be difficult. Leveraging cognitive search capabilities can enable users swiftly retrieve the right information. An intelligent search engine backed by cognitive technologies with the ability to understand the intent of the query, search the repository, and come up with accurate and relevant results would be a Godsend for buy-side firms.<sup>2</sup>

### **Self-service**

Voice and text enabled conversational agents built using NLP and ML technologies can be used to answer user queries on analyst reports, research coverage, research analyst profile and so on. Conversational agents have the capability to capture the voice or text based user queries, understand the intent, leverage domain based ontologies or data dictionaries, query the database, and relay the information to the user. Voice conversational agent can be directly invoked from smart phone or through digital assistants such as Amazon Alexa or Google Home device. Using chatbots will reduce customer calls to the sales teams and increase efficiency besides improving the experience. And, this trend is beginning to take hold -- J.P.Morgan clients can now access research through Amazon's cloud-based voice service.<sup>3</sup>

## **Automation**

In addition to reinventing the channels and offerings, sell-side firms must also revamp operational processes. Research analysts are required to provide analyst reports, analyst view of market events and investment advice. Typical tasks range from publishing research reports, sharing briefs on quarterly results and impact of market events, development and

maintenance of financial models, updating management, and handling client queries. A majority of these tasks are manual, mundane and consume significant time leading to high costs and inefficiencies. Adoption of intelligent digital technologies can enhance efficiency, cut costs and improve customer experience.

### **AI-backed process automation**

Robotic process automation (RPA) can be used to automate the well-defined and repetitive maintenance tasks such as financial modelling, report generation, data management tasks like data aggregation from a multitude of sources, and handling of data requests. This will free up analysts to take up higher value-adding tasks besides increasing efficiency and minimizing costs. Natural language generation (NLG) solutions can be leveraged to automatically convert data insights into short descriptive reports and automate research report production to a great extent minimizing manual intervention from analysts.

### **AI-backed analytics**

Identifying investment opportunities requires effort-intensive analysis of voluminous data from financial statements and regulatory filings for a large number of securities.

Implementation of cloud hosted data lakes leveraging big data technologies can help ingestion and storing of enormous data volumes. Using analytics platforms incorporated with ML capabilities can generate intelligent insights in minutes compared with hours spent by analysts on manual analysis, which is especially significant as faster access to the right insights can provide a competitive edge. Sell-side research firms can reap the benefits of cost optimization and scalable infrastructure by leveraging public cloud infrastructure and ML capabilities offered by cloud service providers.

Similarly, manually wading through enormous data sets from varied sources to gain insights and track market moving events to offer timely advice can be time-consuming and potentially error-prone. AI tools backed by NLP techniques and domain ontologies or taxonomies can help rapidly screen unstructured data and generate actionable insights. Analyst intervention will be limited to reviewing the insights and drafting appropriate advice for clients.

## Conclusion

With the changed regulatory regime in Europe and shrinking research budgets, sell-side firms leveraging digital technologies and ecosystem capabilities will be able to offer value-differentiated research services. Given digital innovations will help enrich customer experience and facilitate faster access to data-driven insightful research thereby delivering a competitive edge, firms must proactively take steps to digitalize the sell-side research function.

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### About The Author

#### Kiran Kumar

Kiran Kumar Komma is a Domain Consultant with the Industry Advisory Group of the Banking, Financial Services and Insurance (BFSI) business unit at TCS. He has over 20 years of experience and has worked with leading Wall Street firms and depositories. Komma has been involved in consulting engagements and strategic transformation programs for TCS's banking clients the world over. He holds a Master's degree in Metallurgical Engineering from the Indian Institute of Technology, Kharagpur, India.

### Contact

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