



Empowering Investment Bankers with Data Science

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Stock market crash in 2008 followed by a long-drawn recession not only shrunk the profit margins of the investment banks but also tied their hands with massive regulatory compliance requirements intending to provide transparency. **Firms' executives are now being held accountable for every transaction not only by the regulators but also by the banks' shareholders and the board.** This prompted executives wanting to have clear visibility into every deal to make sure that they are compliant. Over the years keeping track of everything and anything related to their transactions resulted in a substantial administrative burden for banks.

Technology advancements in the areas of Artificial Intelligence (AI), Data Science and cloud-based Customer Relationship Management (CRM) platforms are paving the way to **help the bankers not only to have information at their fingertips but also recommend next best actions based on predictions drawn from the analysis of qualitative and quantitative data.** Secure mobile technologies bring this actionable intelligence to the bankers anywhere, anytime with the tap of a finger on their smartphone or mobile device. Over the past decade, we have witnessed algorithmic trading replacing traders at major investment banks but Artificial Intelligence and Analytics built into the modern CRM Platforms can be a great enabler for the investment bankers in a wholly re-imagined way. Let us examine how these technologies can help the bankers across LOBs at an investment bank.

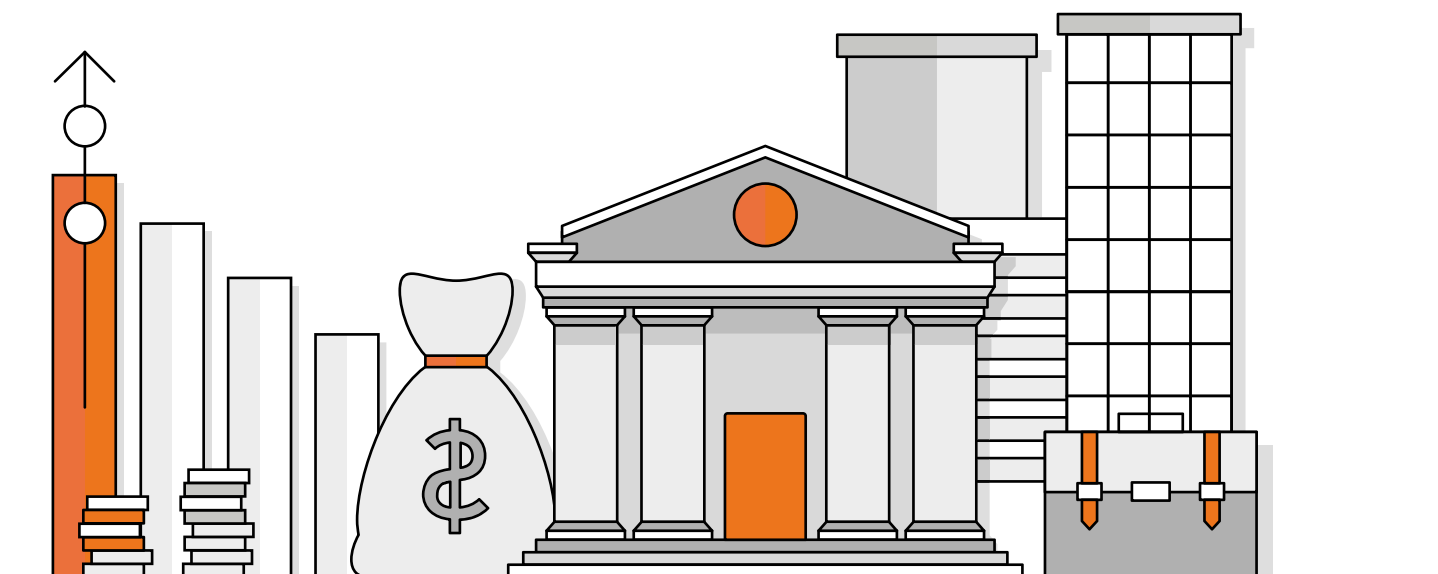
Investment Banking

Successful investment bankers have always used the right tools and technologies at their disposal to make the right decisions related to their business, but they are still constrained by the amount of data they need to process to reach the right decisions. A CRM platform with built-in AI can help investment bankers service their clients and grow business in unique ways.

INTELLIGENT DEAL SOURCING

Deal sourcing/origination is perhaps the most daunting task for investment bankers whether they are covering general business or industry verticals. Whether it's buy/sell side of an M&A, Advisory, IPO or raising capital with equity or debt, it's nearly impossible to predict the right conditions and timing to engage with prospective clients. The decision-making process which typically involves crunching lots of quantitative information through software packages/spreadsheets is not only a time-consuming exercise but, when combined with other qualitative data coming out of CRM systems and other sources such as market sentiment analysis tools, it becomes much more challenging.

Modern CRM platforms with embedded AI not only help analyze quantitative data coming from sources like Thomson Reuters, they can also take qualitative data such as market sentiment, broad market surveys, and competitive information into account to appropriately rank the prospective clients in the context of a particular transaction. AI technologies which use cognitive search algorithms also help the bankers run their sensitivity and scenario analysis with the context of a potential deal using more variables they may not have used in the past to prospect the right clients at the right time.



Investment Banking

PREDICTIVE DEAL INSIGHTS

Historically traditional CRM systems helped bankers capture and manage contacts, deals, and pipeline related data in one place providing some level of visibility into the transactions to the executives. But the bankers themselves perceive CRM systems as an additional administrative burden that is not giving them the necessary information to close their deals successfully. Modern CRM platforms are built to address these deficiencies. With Natural Language Processing (NLP) and Cognitive Search capabilities built into the platform, current CRM systems can parse through deal history, account history, call notes, contracts and other related structured and unstructured data to determine the propensity of a deal closing on time. Early warning systems are built into the CRM platforms to send notifications to the bankers in case of a potential slowdown or slippage of a deal. Predictive deal insights can help bankers to stay focused on the most critical transactions they are working on, giving them context-sensitive information on the progression of a deal throughout the deal cycle.

Mergers and Acquisitions (M&A) work is a vital offering for any investment bank, a highly profitable line of business, and an AI solution can help drive the entire process. M&A is highly research-intensive, and this research can be a drawn out and ineffective when done manually. An AI-powered solution can save hundreds of person-hours on manual research and can help match potential acquirers, buyers for newly issued shares or bonds, and can help in the book building process.

Data aggregation using AI technology built into the platform can unify data from disparate internal and external data sources (e.g., social media and earnings call transcripts, emails, and call notes) in the CRM itself making the CRM the system of

Insight. The insights help bankers to get automatic recommendations on potential upsell, cross-sell and to find new opportunities with the existing clients. Dashboards offering actionable intelligence can provide executives more profound insights into the deal execution process so that they can intervene as and when required. This information can be fed to the compliance systems to provide early warnings on any intentional or unintentional malicious activity.

CONTEXT-SENSITIVE COGNITIVE SEARCH

Context-sensitive cognitive search acts as a foundation for a CRM system to provide critical predictive insights based on a multitude of data from disparate data sources across multiple internal and external systems containing structured and unstructured data. These insights are becoming more critical than ever before as the amount of financial and non-financial data the analysts have to analyze to execute a deal successfully has grown enormously. Changing market conditions always throw several unknown variables into a deal cycle, exacerbating the odds of failure of a deal. Even though several software packages can help analyze the quantitative aspects of the data, analysts still have to spend their valuable time collecting and making sense of the qualitative aspects of the data in context to make those last-minute go/no-go recommendations. What if the analysts can have access to a tool where the quantitative data is merged and analyzed in the context of associated qualitative data using cognitive methods to help analysts validate their decisions? That would be a huge leap forward! Context-sensitive cognitive search allows analysts, vice presidents and managing directors at the investment banks confirm crucial decisions they make by providing the decision support mechanism during the deal cycles at every step of the way.

Capital Markets - Research Sales and Trading

While research sales and trading divisions of an investment bank can leverage intelligent prospecting, predictive deal insights, and cognitive search capabilities, CRM platforms also offer some unique capabilities in the area of research sales.

RESEARCH SALES AND DISTRIBUTION

Covering an increasing number of clients that have subscribed to a wide variety of research products is often a difficult task for a research sales manager. It is equally difficult to keep track of a client's research consumption and predict the client's interest in new products. A well configured cognitive analytical engine can not only help organize the current consumption in the form of a scorecard but also help to determine a client's product interests based on the holdings in the portfolios the client's asset managers manage (ex: mutual funds or an ETFs). Emerging technologies such as machine learning and Natural Language Processing (NLP) enable companies to use AI algorithms to produce research about companies under a banker's coverage and automatically deliver research to their clients. With an AI-driven CRM, it is possible to develop and track research consumed by the clients and also match any newly developed research to a client portfolio in case of a change in the mix of holdings. Such a system is also able to detect significant events in this incoming research affecting client positions. Based on these events, an AI-driven system can recommend tangible actions to change and modify a portfolio. Bankers can also get recommendations on which clients to touch, what events impact a client portfolio and which investment solutions to propose.

BROKER VOTING

One of the most tenuous moments for research firms is when the brokers covering the buy-side firms vote on which firms they should be buying the research from on an annual basis. Voting often is a very opaque process that does not give important insights into the clients' sentiment and their product preferences to the sell-side firms. But the sell-side firms that have been selling research to their clients for a while would have sufficient data not only to track their clients' product interests but also to determine client sentiment to predict clients' voting patterns. Analyzing client sentiment to predict clients' intent to do business and looking for discrepancies in clients' voting patterns compared to the past voting record would dramatically reduce client attrition for a sell-side research firm.

Conclusion

Investment banking is a multi-billion dollar industry, but also one that often struggles to utilize the assets at their disposal. Opportunities and deals are often missed, there is an ongoing lack of insight into clients which not only impacts client relationships but also affects the firm's bottom-line. The impact of lost opportunities can be dramatic on an organization's bottom-line. Overall, it will allow the Corporate Financial Services industry to consolidate its market position.

Artificial Intelligence and machine learning can help a core CRM platform process massive volumes of unstructured data into valuable insight to help improve client relationships and identify new clients and opportunities that otherwise would have been missed.

A CRM platform with built-in analytics and artificial intelligence capabilities not only helps the bankers with information to be productive and predictive but also improves privacy protection of the client's Material Non-Public Information (MNPI) data resulting in higher levels of compliance with the government regulations across geographies. AI combined with data discovery technologies can also be leveraged to provide early warnings on any compliance related issues.

As the AI and CRM technologies emerge over the next few years, observations from the industry experts are pointing to the early adopters such as Goldman Sachs who automated their trading floor using AI algorithms, maintaining a clear lead over their non-adopting competitors because of the reasons stated above.

About Squirro

Squirro provides Augmented Intelligence solutions. Its unique technology marries Artificial Intelligence, Machine Learning and predictive analytics, empowering organizations to transform enterprise data into AI-driven insights. Organizations using Squirro take advantage of its ability to source leads and recommend the next best action in an automated way. Its real time 360 degree client cockpit provides a holistic and comprehensive understanding of the customer journey.

Squirro's applications for Corporate Financial Services, Insurance and Manufacturing are successfully used by leading global organizations, such as ING, Investec, Helvetia, AXIS Re, Sony and Bühler. Founded in 2012, Squirro currently has offices in Zurich, London, Munich, New York, San Francisco and Singapore.

About Salesforce

Salesforce, the global CRM leader, empowers companies to connect with their customers in a whole new way. For more information about Salesforce (NYSE: CRM), visit: www.salesforce.com.

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