FINASTRA

Finastra Essence. Digital. Composable. Agile

Unlock Banking Insights - capitalize on data opportunities

Unleash your data, drive growth, improve customer experience

Actionable Insights

INNOVATING
FINANCE
TOGETHER

Turning raw data into actionable insights

For banks, success depends on delivering what customers want – better than your competitors can. The foundation of this is data: the data you have and how you use it

Data is the new oil. At least that's what Clive Humby, a British mathematician and data scientist, said in 2006. And he should know, his work was instrumental in helping Tesco, the British multinational retailer launch the first mass customization loyalty program in the world. But what did he mean?

Data, in its raw form is a little like crude oil in that it does have some value but with a little refining it can be turned into something much more valuable. However, unlike crude oil, data is not a finite resource; according to Statista, global data creation is expected to surge to approximately 527.5 zettabytes by 2029.

Is GenAI the answer?

Use it or lose it?

What's a zettabyte?

One zettabyte = 1,000,000,000,000,000,000,000 bits, or a trillion gigabytes

That is enough data to fill up 223 million DVDs. To put this in perspective, if you stacked the DVDs one on top of another, the stack would be 67 times taller than Mount Everest.

What does it mean for storage / processing?

The total installed base of storage capacity worldwide in 2020 was about **6.7 zettabytes**, which means that most of the data created in that year was lost.

Winning the shadow war

Generative AI offers tremendous advantages across virtually all industries, including financial services.

McKinsey estimates that Gen AI could increase productivity in the banking industry, resulting in an increase of 2.8 to 4.7 percent of annual revenues. Or to put it another way Gen AI could generate an additional $200 billion to $340 billion.[1]

In addition to generating substantial revenue increases, the correct deployment of the new technology could also enhance customer satisfaction and improve decision making while delivering better employee experiences and reducing risk.

Tapping into the benefits depends on the availability of Gen AI tools that address business issues in cost effective ways.

Peeking behind the curtain

Since their introduction in 2022, Gen AI tools have dramatically evolved in many ways, including the cost of training them. GPT-4 has 1.8 trillion parameters, which is 10 times larger than GPT-3.

Researchers say the computing power needed for a model is doubling every 6 to 10 months.[2] This means training costs could escalate into billions of dollars within just a few years. And that's if the models do not run out of training data by then, as some experts are forecasting.

A shadow war for data is underway, with implications around availability, privacy, ownership and authenticity. Financial services firms are floating on an ocean of data. Exploiting it quickly and cost effetively requires a holistic approach.

Holistic approach to turning data into actionable insights

Generative AI

Use advances in Gen AI from industry leaders. Automate business processes, improve operational efficiencies, and turn revenue into profit.

Artificial Intelligence

Deploy in-house models in areas such as risk management & fraud prevention, product design & promotion, credit scoring & customer servicing.

Foundational Data Services

Every financial interaction generates a torrent of data, data that is stored inside the financial institution. However, because the data is stored in raw form, often spread across disparate systems, turning that data into actionable insight can be tremendously challenging.

Analytic systems have been designed to help address these kinds of challenges, but they still need to be configured so that they understand the data. This configuration process is time consuming, expensive and needs to be repeated when the underlying data structures change. Systems specifically designed to understand the data structures eliminate these problems while also providing rapid-start capabilities.

1. Source: McKinsey – The economic potential of generative AI
2. economist.com/science-and-technology/2023/06/21/the-bigger-is-better-approach-to-ai-is-running-out-of-road

Unleash your data, drive growth, improve customer experience

Designed specifically for banking, Finastra Essence Analytics transforms raw data into actionable, contextual insights. The solution helps improve business performance, tap into new revenue streams, while predicting customer behavior to reduce churn, and increasing cross-selling opportunities.

It is a business insights solution that offers a scalable and secure platform for banking analytics. It enables business users to generate and visualize meaningful insights and allows banks to use the platform as a central data warehouse for their business, creating an integrated view from disparate data sources.

With Essence Analytics, business users can derive rich insights about customers, design better products based on detailed understanding of product performance across various customer segments and geographical regions, and continuously monitor their business and financial performance.

Moreover, it provides significant operational efficiencies by reducing the effort and time required for insights generation, empowering business users to generate dashboards on their own and eliminating their dependencies on IT teams for report generation.

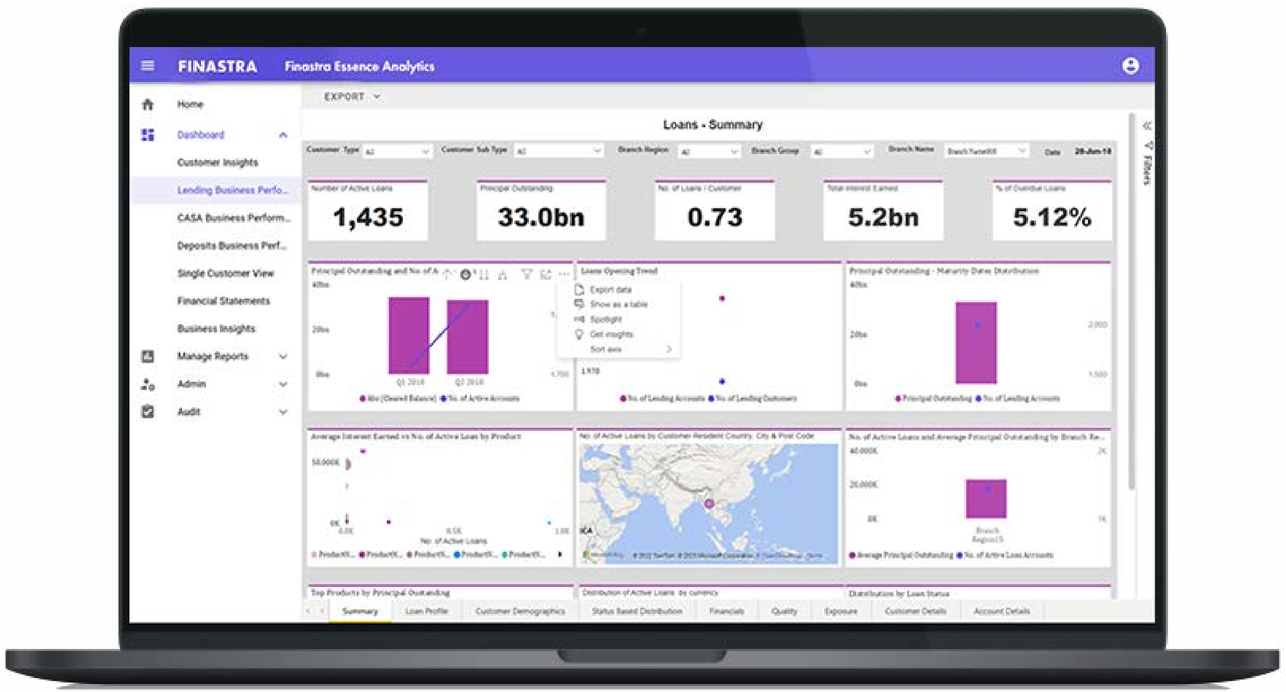
Extracting relevant data from a range of systems and transforming it into actionable intelligence, it enables decision-makers to take decisions based on detailed insights into products, customers, branches and profitability. Authorized users can access pre-packaged reports on business and financial performance, and users can build their own dashboards using a curated data model built for analytics.

Finastra Essence Analytics includes advanced machine learning capabilities that can be trained on bank data and can incorporate further models. Using extensible architecture that includes a flexible data model, banks can build their own dashboards to complement the set delivered by Finastra. In-memory data cubes provide a curated data model that is extensible through Finastra and non-Finastra data sources. It can be used for a range of AI/ML models, including Customer Churn, Next Product Recommendation and Cashflow Prediction.

To ensure information and insights are always at a bank's fingertips, Finastra Essence Analytics provides a 360° customer view in a single dynamic dashboard. Enhanced with dynamic visualizations, it also includes standard dashboards that provide business and financial insights along with real-time updates.

Available in Azure Cloud and on-premise deployments, Finastra Essence Analytics offers a common data model. It leverages the Microsoft stack (SQL Server for on-premise/Azure for Cloud) for storage and processing and Microsoft Power BI for visualizations. It is built using the Azure Databricks (Hadoop) platform.

Finastra Essence Analytics: Built-in dashboards for a fast start



Built-in, ready to go dashboards

- Current and Savings Business Performance
- Customer Insights
- Business Insights
- Deposit Business Performance
- Single Customer View
- Financial Statements
- Lending Business Performance

Build your own dashboards & views

- **Start from a blank canvas or clone & amend**
- **Rapidly create in minutes**
- **Intuitive drag-and-drop creation**
- **Build without IT intervention**

- Easily accessible user-assigned dashboards
- Easily export data, support real-time data streaming
- Pre-defined dashboards cover most needed insights
- Assess demographics of specific products
- Compare insights across different time periods
- Filter options for granular or focused insights
- Use insights to assess and evaluate risks

Data Model: Pre-configured, pre-integrated with deep understanding of banking

Designed for ease of use, the centralized data repository turns low-level, raw data fields into business-oriented, easy to understand information.

Banking is sophisticated and it generates vast quantities of data. The process of turning this raw data into actionable starts with understanding what the data is.

Finastra Essence Analytics understands banking, and it understands the underlying data structures in core banking systems. The system uses that understanding to provide users with data points categorized into logical, business-oriented groups such as customer, loans, CASA, payments, transactions and cashflow.

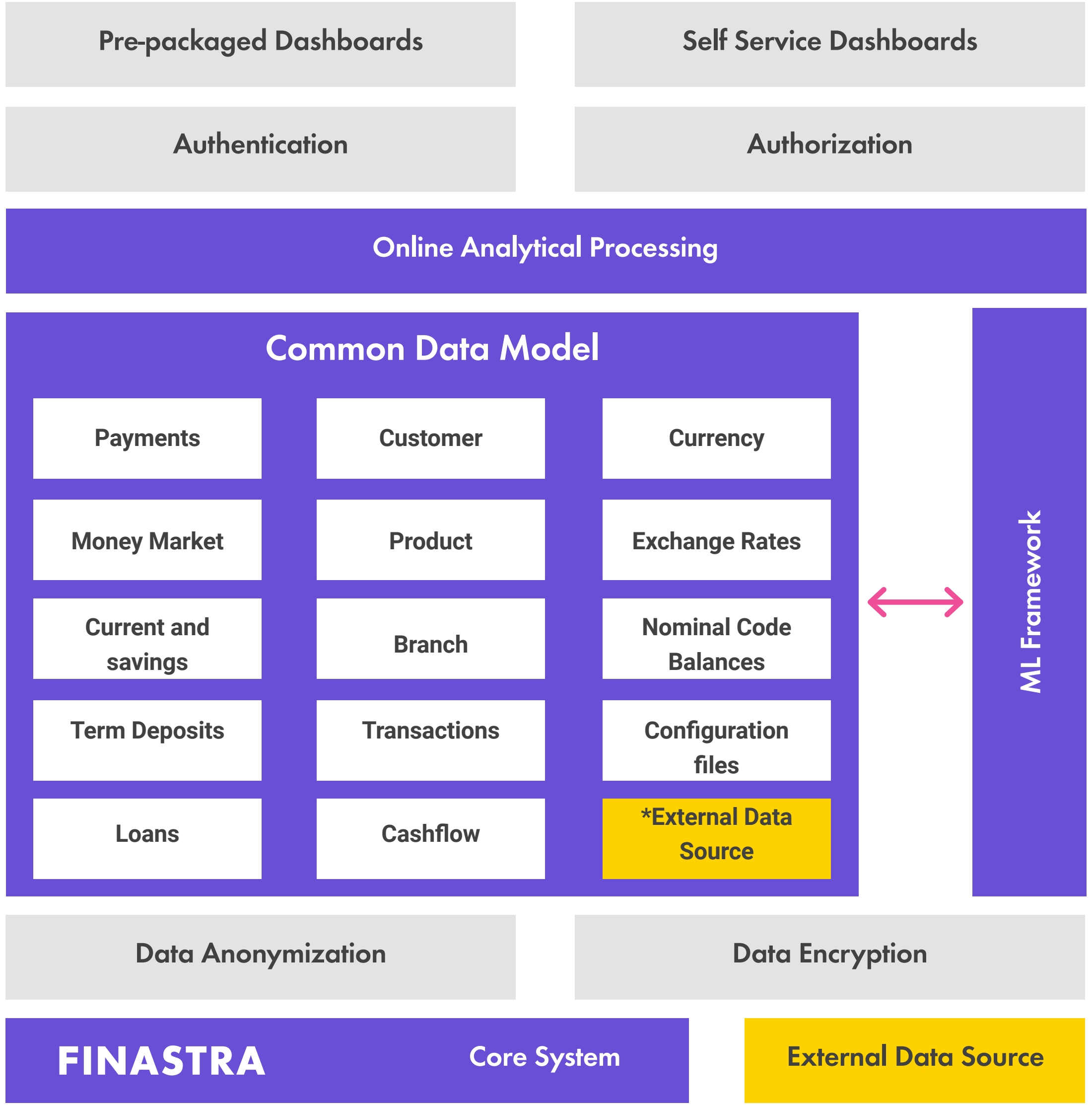
If the data structures in Finastra's core banking systems changes, those changes are reflected in the data model ensuring the ongoing utility of the system. The system also supports the integration of data from external sources providing a holistic view.

Putting the model to work

The system provides a secured framework to share data with internal and external applications. Security and confidentiality concerns are addressed with flexible, role-based access controls. Secured data transfer features ensure that customer PII data is anonymized.

Sophisticated data visualization capabilities help improve business performance. In-memory analytics ensures that latency is reduced, and variety of data-feed mechanisms ensure data freshness.

Essence Analytics future proofs analytics capabilities by leveraging machine learning models to provide predictive and prescriptive insights.



*External Data Source use cases require enhancement to the Common Data Model to ingest external data.

Making your data work for you: Three example models, leveraging AI/ML

Preventing customer churn

1	**Churn Prediction**	Develop model to identify customers who may churn (next 90 days)
2	**Propensity Funnel**	Segment customers into high / medium / low risk categories
3	**Churn Frequency by Reason**	Profile each bucket to understand why customers may churn
4	**Communicate with customer**	Develop retention strategy for each bucket and implement plan

Next product recommendation

1	**Financial Product Recommendation**	Assess customers to understand product opportunities
2	**Lookalike or Behavior Seg.**	Determine highest conversion likelihood based on traits
3	**Channel Preference**	Identify contact scenarios based on current usage patterns
4	**Recommendation Campaign**	Executive via core software solutions & CRM systems

Cashflow prediction model

1	**Predict Payment Confirmation**	Identify customers who may go cash flow negative (next 90 days)
2	**Categorization**	Segment customers into high / medium / low buckets
3	**Reasons for being at-risk**	Profile to understand why customers may be at risk
4	**Communicate with customer**	Develop contact and offer strategy by bucket and execute action plan

Enriched data, enriched insights

*AI/ML models require further training periodically on the customer specific data to deliver benefits relevant to their use cases.

Making your data work for you: Enriched Data = Actionable Insights

Data	Preventing customer churn	Next product recommendation	Cashflow prediction model
Basic	Provides very limited insight, such as those powered by debit and credit transactions	Provides very limited insight, such as those powered by account balance and transactions	Only provides information such as firm type and location (e.g. Small clothing store in Boston)
ML/Enriched	• Searches for bank products online • Has worked at employer for 5 years • Logs into mobile banking weekly • Customer for 5 years • Drives an Audi • Uses direct deposit • Recently paid off car loan • Has a savings account & saves monthly • Has contact the call center • Recently moved home • Uses credit card every day	• Searches for bank products online • Has worked at employer for 25 years • Doesn't use mobile banking • Customer for 28 years • Drives a Chevrolet Silverado • Is nearing retirement • Has a CD • Doesn't contact the call center • Visits branch once a month • Lives in a rural location • Pays off credit card in full every month	• Income statements are available • Owner used 75% of savings to start business • Macro economic conditions • Customer for 8 years • Drives a BMW • Competitive financials (e.g NAICS, NACE, etc) • Has a personal loan • Balance sheets, cash flow statements • Contacts the call center several times a day • Requested rent relief one time • Has a credit and actively uses it

Enriched data enables the rapid generation of accurate, actionable insights

*AI/ML models require further training periodically on the customer specific data to deliver benefits relevant to their use cases.

Finastra Essence Analytics: Driving actionable insights – today & tomorrow

Finastra Essence Analytics enables financial institutions to:

- Create a complete 360 view of the customer by providing a near real-time dynamic view of their business with the bank
- Gain insights into customer behavior using advanced ML models that predict customer attrition, make product recommendations and segment customers based on their historic behavior
- Reduce risk and control costs with a holistic view of the bank's business including product utilization and profitability, performance trends for loans and deposits and exposures to specific customers/groups
- Use financial dashboards to reflect the financial health of the bank and compare the balance sheet and P&L between two time periods
- Grow revenue through improved customer retention and cross-selling of products, tailored targeting and customer product recommendations
- Benefit from secure role-based access to data provided by Microsoft's authentication and authorization capabilities
- Leverage the growing power of next-gen, data-enabled technologies such as Gen AI to accelerate innovation, drive revenue and improve customer experience

Key benefits
Digital transformation – scalable, dynamic analytics plays an important part in the digital transformation of a bank, enabling you to exploit your data effectively for business insights and to compete in an increasingly digital world
Customer engagement – with a 360° view of the customer, their status and their business
Managing data growth – high-performance analytics that can deal with large amounts of data at speed
Customer retention – machine learning algorithms that predict customer behavior: especially valuable when Open Banking presents customers with a myriad of new financial offers and products

Main features

Descriptive analytics

- Financial insights
- Business insights
- Real-time updates*

**Transaction and account balances.*

Analysis services

Predictive analytics

- Customer analytics
- Transaction analytics
- Product recommendations
- Integrate bank owned models

Azure AI/ML studio

Rich visualization

- Pre-packaged dashboards
- Self service dashboards
- Interlinked reports
- Paginated reports

Microsoft power BI

Multi deployment

- Azure deployment
- On-premise deployment
- PaaS deployment

Cloud enabled

To turn raw data into actionable insights, not only do you need an intuitive solution with a comprehensive and easily extendable data set, but you also need a flexible solution that understands banking and has a rich set of built-in dashboards. To move to the next level, you need an innovative solution that leverages machine learning for segmentation and integrates seamlessly with campaign management solutions to close the loop between concept development, execution, and results. Finastra Essence Analytics is that solution.

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