

**INDUSTRY  
FOCUS**

# **DATA BOOM OR DATA BUST?**

**Analytics Challenges  
and Solutions in the  
Financial Sector:  
Use Cases with SQream**

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## DATA BOOM – OR DATA BUST?

As with most industries, the financial sector has experienced a data boom. The last two decades have seen technological advancements – from the internet, to AI to 5G – contributing to this data explosion, as devices have proliferated, and data has continued to grow with no end in sight.

With the dizzying pace of data volume growth, new and more complex financial business models have become the norm, as organizations seek to use their data to answer critical business questions: What is our competitive advantage? How can we better meet the needs of our customers through product and services? Where can we optimize processes for increased performance?

Together with this, enterprise data environments have become increasingly complicated, built on multiple silos, data lakes, data warehouses and solutions, with legacy systems in place that can't keep pace. Financial firms often hit the wall trying to meet these challenges, struggling to meet regulatory compliance, with antiquated data architectures that were not designed to handle their massive and growing data stores, nor the complex queries required in today's financial environment.

The data boom can mean data 'bust' for the unprepared organization.

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## SQREAM EMPOWERS FINANCIAL SECTOR TO MEET DATA ANALYTICS CHALLENGES HEAD-ON

With data-driven decision making pushed to the forefront, data has become a best friend – and greatest challenge – to anyone doing business. Increasingly, financial organizations – from the Fortune 500s and down to the local city bank – have been understanding the potential value of their untapped data stores and leveraging it in use cases in which they can gain the most from their analytics. As more and more organizations are realizing: Insights are the crux to achieving sustainable business but require continual organizational analysis in order to be reached. Below are two examples of use cases in which the SQream data analytics acceleration platform was used to achieve cost-efficiencies, deeper customer insights, operational improvements, risk reduction, and adherence to standards, among others.

### SQream - Built for Peta-Scale Analytics



**Powered  
by GPUs**



**Massively  
Scalable**



**Lightning  
Fast**



Analyze  
**100x**  
More Data



Queries  
**20x**  
Faster



Cost  
**10%**  
Of Resources

# SQREAM ENABLES BANKS TO MEET COMPLIANCE STANDARDS WITH RAPID, HIGH FREQUENCY REPORTING

As financial organizations prepare consolidated financial reports, there are accounting calculations that must be carried out to merge and aggregate data from subsidiaries into parent companies. These consolidated income statements and balance sheets need to be prepared in accordance with US GAAP, IFRS, Basel III or other global reporting standards. The process of preparing these reports includes resolving accounting anomalies such as foreign currency translations, resolution of intercompany transactions, adjusting general ledger entries, and consolidation with respect of mergers, partial ownerships, and joint ventures. The latter can vary based on size of ownership, whereby consolidation will be determined based on controlling stakes.

Preparing these reports from multiple entities and subsidiaries often involves consolidating data from legacy data warehouses such as Netezza, Teradata, Exadata, and data stores like Hadoop, and then executing complex calculations to prepare the consolidated financial reports. From the point of ingest through the execution of multi-table joins across multiple dimensions, it can take up to a week to prepare the consolidated reports for first review by the accounting and finance teams. Changes, corrections, and updates can add even more time to getting final reports in-hand. The processes are time consuming and can be a drain on resources.

Another challenge lies in the Oracle Financial Services Regulatory Reporting Solution, which many financial institutions select to manage the complexity of the adaptive and automated regulatory reporting framework. This process can take many hours and requires dozens of data sources with a large record set. SQream can significantly accelerate OFSAA reports and processes. For example, in a recent project SQream reduced the runtime of the daily profit calculation for a leading European bank from 5-hours to less than 2-hours with out-of-the-box end-to-end OFSAA acceleration capabilities.

By rapidly correlating siloed data from disparate sources and accelerating data preparation and analysis, SQream significantly reduces the time required for financial report preparation, while enabling high-frequency reporting and helping banks create and meet formal compliance structures and systems. Complex joins are made easy by combining data with SQream's ability to join any table, on any key immediately, with no pre-computations like indexing or cubing.



## KEY BENEFITS

1

Correlation of siloed data from disparate sources, for full-picture analytics.

2

Ingestion of terabytes to hundreds of petabytes of raw data, cutting prep time.

3

Queries go down from days to hours, and hours to minutes, for more rapid reporting.

4

Ability to create ad-hoc queries and carry out ad-hoc analytics as needed.

5

Carry out complex joins on any table, without the need for precomputation.

# SQREAM HELPS FINANCIAL ORGANIZATIONS REDUCE FRAUD RISK WITH MORE ACCURATE ANALYTICS

To combat money laundering, regulations have been put into place at the national and international levels. Financial institutions must take these regulations into account when processing their monetary transactions. They must systematically monitor and track the huge amounts of data in transactions carried out worldwide for information on money laundering. They must also analyze historical data to uncover anomalies and potential threats that need to be investigated further.

Factors such as the size of the transaction and the flow of assets across diverse geographical areas between thousands of entities and participants can play a critical role. Some of the complex analysis that needs to be performed includes: cross-checking customer information using external information sources to identify potentially risky customers then using AI to help uncover anomalies, customer onboarding and monitoring processes, and historical trend analysis and behavior analysis to uncover specific transaction patterns that indicate money laundering or corresponding deviations from regular transaction patterns.

These huge populations of data pose enormous challenges for companies in the financial services industry. Data is continuing to grow into massive data stores, and these need to be analyzed in near real-time and across multiple dimensions. Existing solutions can take days or hours to complete execution of complex queries on very large data stores, often taking the resulting analytics out of the realm of relevance.

SQream helps financial companies minimize losses from money laundering and fraudulent claims, and by integrating with AI/ML models, enables more accurate and effective predictions, and faster remediation of threats.



## KEY BENEFITS

1

Queries on greater amounts of data to uncover anomalies and potential threats, reducing fraud risk.

2

Rapid data analysis across multiple dimensions on complex queries for near-real time insights.

3

Analysis of historical data and monitoring of systems processes to identify trends.

4

Integration with AI / ML models to enable more accurate predictions.

5

Scales with growing data stores no matter how large.

## ABOUT SQREAM

Visit [sqream.com](https://sqream.com) to learn more about how financial organizations around the globe turn their data analytics challenges into business opportunity.

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