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FORRSight



AI Needs Better Data, Not Just More Data

Creating Value by Turning
Data into a Strategic Asset

Managing Models and Data

From Individual
Prototyping to Enterprise
Operations with GRYT

Investment Operations and AI-Readiness

About the Importance
of Architecture in
a New World

The Architecture of AI Intelligence

The Data Perspective

FORRS

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Dear Readers,

What does it really mean to manage data in the age of artificial intelligence?

Across financial institutions and energy trading firms, data has become one of the most critical strategic assets. Artificial intelligence (AI), advanced analytics, and increasingly data-driven trading strategies are reshaping the competitive landscape and redefining how organizations position themselves in the market. Yet as firms accelerate their AI initiatives, many are discovering that the real challenge is not simply accessing data, but accessing the right data.

Over the past decade, market data environments have expanded rapidly. New feeds, specialized datasets, and analytical services have been added to support trading, investment, and risk management. In many organizations, this growth has created complex data landscapes where transparency around usage, licensing obligations, and data ownership is limited and not always fully understood.

As a result, questions around data governance, licensing, and cost transparency are moving quickly to the top of management agendas. Organizations are now recognizing that the value of data isn't determined by its volume, but by how effectively it's governed, managed, and used.

In this edition of FORRSight Magazine, we bring together perspectives from across the industry to explore how market participants are addressing these challenges. Through articles, interviews, and expert insights, this issue examines how firms are rethinking market data governance, licensing, and the evolving role of data in financial markets.

The organizations that succeed will not simply be those with more data. It will be those that understand how to govern data wisely, manage it efficiently, and use it to create real value. The future belongs to those who turn data into a true strategic advantage.

Goeksel Yildiz

Director License Management at FORRS



Dear Readers,

Enterprise decision-making has been based on IT infrastructure for decades. Cloud environments have accelerated this trajectory, making automated, consistent decisions a standard expectation rather than a competitive differentiator. Artificial intelligence is now introducing the next structural shift, operating at a different order of magnitude.

Awareness is already high. AI tools are actively used every day at the individual level across organizations. The opportunity lies at the enterprise level, where data quality, process coherence, and governance frameworks determine how much of the available AI capability an organization can deploy systematically. Most organizations clearly recognize this: capabilities exist from external vendors, but the internal assembly capabilities need to catch up.

The implication is structural. Organizations cannot realize compounding advantage without the ability to operate existing businesses stably while simultaneously adopting new AI capabilities at pace. Each delayed adoption cycle is an opportunity surrendered to competitors who are better prepared. The two-gear operating model is not optional – it is the condition under which enterprise AI value is captured or forfeited.

The analytical demand is precise. Organizations need a platform that can bridge the gap between AI capability and operational readiness. This platform must be able to run machine learning models in production, automate AI-driven processes, and integrate with evolving data and governance architectures without disrupting the enterprise core.

Recognizing precisely this execution gap, FORRS has built GRYT as an enterprise platform product that absorbs the complexity of enterprise technology, so that clients can direct their full attention towards business value creation rather than the construction and maintenance of underlying technology capabilities.

Martin Otzelberger

Head of Product at FORRS

AI Needs Better Data, Not Just More Data

As financial institutions and energy trading firms accelerate their AI strategies, many are discovering a fundamental challenge: their data landscapes aren't ready. Fragmented data environments, rising market data costs and unclear ownership all limit the value of AI initiatives across both industries.

AI Ambition Meets Budget Reality

AI has rapidly moved from experimentation to strategic priority. Market data spending has steadily increased over the past decade as firms added new feeds, analytics services, and specialized datasets and invested in machine learning, advanced analytics and modern data platforms. As a result, many organizations are now facing growing budget pressures.

More and more, senior management is asking how these investments translate into measurable business value. AI initiatives are expected to deliver results, yet many organizations are discovering that their data landscape is woefully unprepared to do so.

When Data Complexity Limits AI

AI depends on high-quality, structured, and traceable data. It requires not only large volumes of data, but datasets that are transparent, governed, and trusted across trading and analytical systems.

In practice, many market data environments evolve organically. New data feeds are added to support new trading desks, and this often results in fragmented data landscapes where ownership is unclear, and usage transparency is limited.

Financial and energy trading organizations face similar challenges integrating exchange prices, broker data, weather, and other external datasets. Energy trading adds production and grid data, increasing complexity and the need for strong governance.

Hidden Inefficiencies in Data Landscapes

One of the most underestimated consequences of fragmented data environments is cost inefficiency. Many organizations face issues such as:

- Redundant data sources and overlapping vendor contracts
- Real-time data used only for end-of-day analysis
- Limited transparency of data usage across teams

Another common pain point among organizations is limited visibility of how market data flows through internal systems. Data

is often distributed across multiple applications, analytical tools, and reporting environments. Transparency into these data flows is essential; otherwise, understanding how datasets are used across the business will remain a struggle.

If organizations don't know how data is consumed across trading desks and analytical systems, market data spending can rise sharply with little evidence of corresponding business value.

AI Governance: The Success Factor

As organizations scale AI initiatives, a key insight is emerging: success depends less on algorithms and more on data quality and governance. AI requires reliable, transparent, and well-governed data. However, many data environments – built over years from fragmented market, analytics, and internal sources – were never designed for large-scale AI, making basic questions hard to answer:

- Who owns the data?
- How is it used across systems and teams?
- Which licensing restrictions apply to analytics or AI use cases?

Without clear visibility into data ownership, licensing conditions, and internal data flows, organizations risk building AI initiatives on datasets whose usage rights and quality aren't fully understood. That's why leading companies are strengthening their governance frameworks to create transparency across the data lifecycle – from vendor licensing to internal data distribution to AI model usage.

The Return of Market Data Cost Discipline

Many organizations are refocusing on cost transparency and efficiency within their market data environments. As cost pressures grow and spending reaches historic highs, senior leaders want clear visibility into how these investments deliver business value. As a result, key questions are emerging:

- Which datasets are actually used?
- Where do we pay for overlapping data feeds?
- Which licenses are underutilized?

In many organizations, market data environments have developed over time without a clear demand management framework. As a result, redundant feeds, overlapping vendor contracts, and over-licensing are common challenges. Traditional cost-control approaches are often insufficient, since they focus primarily on vendor negotiations rather than on the actual usage and business value of data.

From Cost Control to Data Value Management

Instead of focusing only on vendor negotiations, they are introducing structured governance models that connect data usage, infrastructure, business demand, and cost transparency. Leading organizations are moving beyond simple cost reduction and adopting a more strategic approach to market data management. This typically includes:

- Structured demand management processes
- Transparency of data usage across trading desks and analytics teams
- Clear ownership for market data
- Strategic vendor and license management

Greater transparency not only strengthens governance; it also helps organizations better understand the true business value of their data. When firms can clearly trace the positive influence of datasets on trading decisions, analytics, or revenue, market data spending shifts fundamentally.

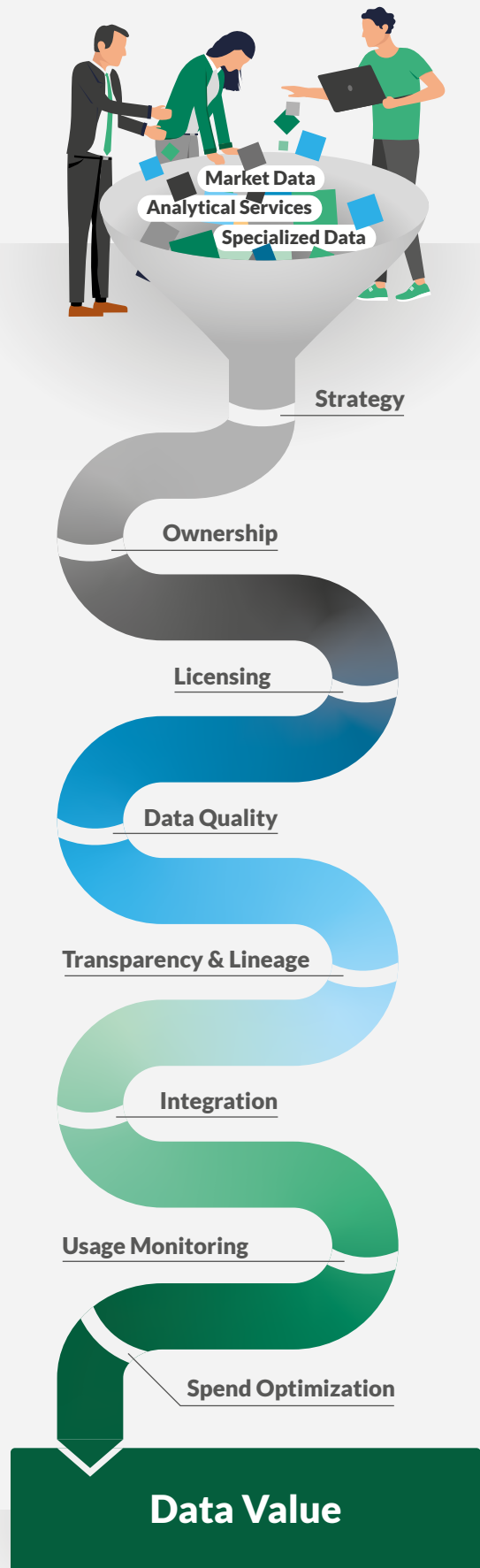
This shift also requires a change in mindset. Traditionally, market data has been treated primarily as a cost center. Now organizations are reframing the conversation, moving beyond cost control toward understanding and actively managing data value.

When organizations understand which datasets support trading strategies and decision-making, they're better positioned to determine which data truly creates value – and what data is worth paying for.

Conclusion

Rather than treating data purely as an operational expense, forward-looking firms are turning market data into strategic assets.

In this age of artificial intelligence, the competitive advantage won't come from collecting more data, but from understanding which data truly creates value.



Smarter Contract Renewals and Ordering

How alternative vendors, market data, and demand challenges drive better outcomes.



ALISTAIR BOOKER
VP General Manager, Market Data at Calero

The way organizations procure, manage and consume market data is a growing driver of cost, compliance and competitive advantage. As contracts approach renewal and data demand increases, procurement and vendor management teams face three key questions: are we buying the right products, from the right vendors, at the right price?

Answering these requires a connected view across the market data Procure-to-Pay (P2P) lifecycle, supported by strong contract management, taxonomy, market intelligence and benchmark pricing.

The Market Data Procure-to-Pay Lifecycle

Proactive organizations operate a market data P2P lifecycle spanning contract sourcing, ordering, approval and demand challenges, service provisioning, inventory updates, and invoice validation. While each stage matters, contract management is the cornerstone, defining commercial terms, licensing structures, and compliance obligations that flow through ordering, provisioning, and billing. Weak contract discipline drives cost leakage and compliance risk.

Contract Renewals: From Risk to Informed Choice

Contract renewals are a common risk area. Many organizations still struggle with contracts that auto-renew by default, often without sufficient scrutiny of usage, changing needs, or market alternatives. Effective due diligence should include:

- **Preventing accidental auto-renewals** through proactive alerts, precautionary cancel notices, and workflows
- **User-base validation and re-certification**, ensuring that only active, justified users retain access
- **Assessment of value for money**, asking “are we paying the right rate?”, especially if half the user base no longer requires access
- **Market comparison**, exploring if competitive vendors can supply similar data at a lower cost or on more flexible terms

The outcome should be an educated decision to renew as-is, renegotiate, downsize, or switch based on data, not habit.

Using Taxonomy and Data Catalogs to Surface Alternatives

One of the biggest challenges during renewal is understanding what other options exist beyond incumbent suppliers. Taxonomy data and data catalogs unlocks this view. By classifying services consistently by asset class, data type, and delivery model taxonomy-driven catalogs can:

- Identify competitive vendors and services aligned to existing contracts
- Highlight functional substitutes and emerging, trusted providers
- Provide structured insight into where to look for potential savings or innovation

Taxonomy and catalogs transform renewals into market-aware decisions, supported by structured intelligence, not informal vendor conversations.

Benchmarking: Are We Paying the Right Rate?

Complementing catalogs, benchmarking data introduces another essential area: price transparency. While precise pricing isn’t always available, benchmarking provides useful pricing ranges for comparing vendors and services across the market.

Used effectively, benchmarking data enables organizations to:

- Sense-check renewal pricing against market norms
- Strengthen negotiation positions with incumbent vendors
- Support business cases for switching suppliers
- Educate stakeholders on realistic cost expectations

Importantly, benchmarking supports both contract management and ordering, ensuring commercial awareness throughout the lifecycle.

Data Usage Rights: A Critical, Often Overlooked Contract Dimension

Data usage rights define what a consumer organization can and cannot do with purchased data, whether directly or through downstream systems. This may include rights related to:

- Storage and retention
- Distribution and sharing
- Derivation, manipulation, or creation of derived datasets
- Licensed entities, locations, or user thresholds

Failure to comply with these rights can expose organizations to material regulatory, legal, and financial penalties. Effective management of data usage rights isn't optional; it's a core governance requirement.

Four Market Approaches to Capturing Data Usage Rights

When it comes to extracting and managing data usage rights from contracts, four main approaches are emerging:

A: Internally Built Rights Modelling

Organizations read contracts and translate usage rights into a structured digital rights format (such as ODRL or an XML-based standard). Then load this metadata into systems such as Calero's Market Data Management (MDM) platform. This approach offers precision and strong enforcement capabilities but requires internal effort and expertise.

B: Contract Workflow Questionnaires

A more common and pragmatic approach involves capturing usage rights via structured questions during contract renewals, posed to vendor managers or sourcing teams. This approach:

- Typically captures 6–10 common rights attributes, such as storage, distribution, derivation, and user thresholds
- Is cost-effective and quick to implement
- Relies on manual interpretation of contractual clauses

While simpler, this approach can introduce interpretational risk if not carefully governed.

C: Internal AI-Based Contract Analysis

Some organizations are developing internal AI engines that can ingest contracts and produce summarized rights and obligations. This mirrors Option A conceptually, but automates extraction and interpretation through machine learning and natural language processing.

D: Vendor-Provided Digital Rights Files

With this future-looking model, vendors deliver contract terms directly in ODRL-compliant digital formats.

When this becomes mainstream, inventory systems like Calero MDM will be able to ingest structured rights data directly, significantly reducing manual interpretation and error.

Enforcing Compliance Through Demand Challenge

Once captured in an inventory system such as Calero MDM, data usage rights can be enforced through demand challenge during ordering. End users are made aware of restrictions,

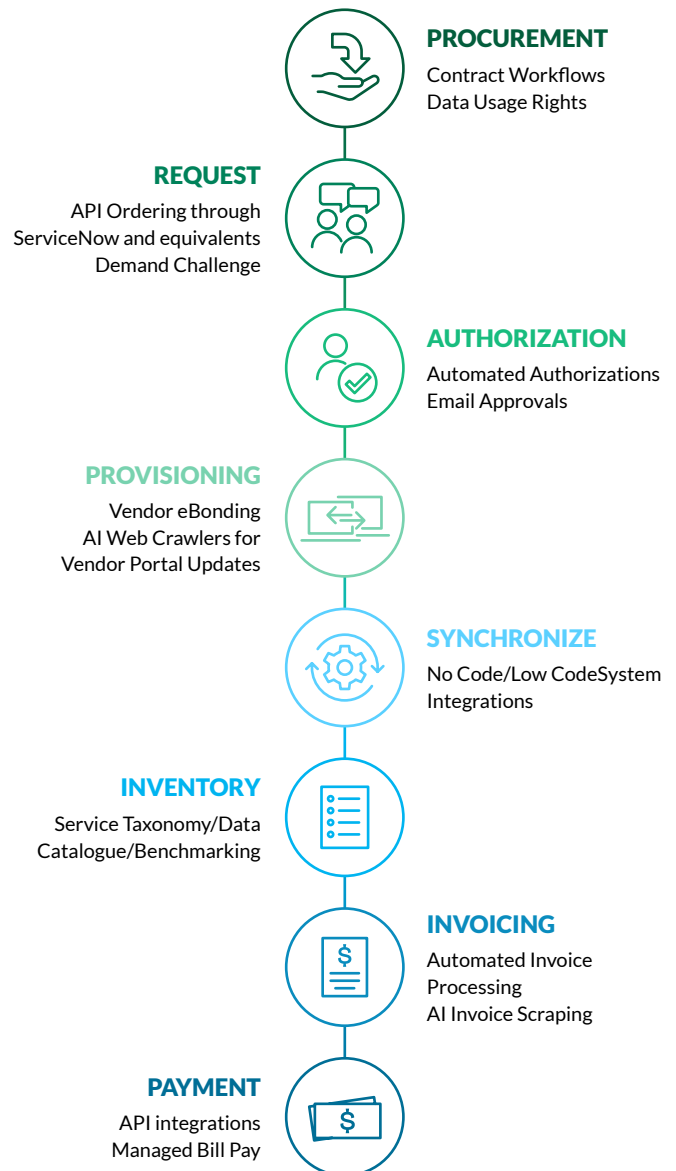
acknowledgements are recorded, and compliance is auditable. Embedded taxonomy, catalogs, and benchmarking further guide users toward compliant, cost-effective choices.

A Unified View Through Inventory

Bringing together contracts, taxonomy, benchmarking, rights metadata, and order workflows within a single inventory system such as Calero MDM, creates a powerful foundation for:

- Improved renewal decision-making
- Stronger negotiation leverage
- Reduced compliance risk
- Lower total cost of ownership
- Greater transparency across data landscape

As data consumption continues to accelerate, organizations that treat contract renewals and ordering as strategic control points, rather than as administrative tasks, will be best positioned to extract value while managing risk.



Managing Models and Data: From Individual Prototyping to Enterprise Operations

As financial markets undergo rapid transformation, data and model management have become hidden sources of operational risk. The journey from an individual prototype to enterprise-grade operations is longer and more demanding than most organizations anticipate. Without disciplined system design, the gap between the two becomes a source of technical debt that compounds silently over time in cost and complexity.

Rising Challenges in Financial Markets

Financial markets are increasingly driven by speed, complexity, and regulatory scrutiny. Compliance with frameworks such as DORA and BCBS 239, as well as other regulatory requirements, all demand that data pipelines and automated decisions remain accurate, consistent, and fully auditable at enterprise scale. These frameworks leave no room for individually built tools outside of governed IT infrastructures.

The pressure to automate decision taking has intensified this challenge. Where human judgment once provided a natural checkpoint between a model's output and a consequential action, automated decision taking removes that buffer entirely. What works reliably on a single analyst's workstation often fails to meet the availability, governance, and auditability standards that enterprise operations require.

The Hidden Cost of Growing Model and Tools Landscapes

A pattern observed across financial institutions of all sizes is what might be called model sprawl: As the scope of automated decision taking grows, so does the number of interdependent models and tools operating in production.

Models and tools are almost always conceived and built by individuals, including:

- Quant analysts exploring a new pricing signal
- Risk managers automating a recurring calculation
- Developers prototyping a data transformation

Common examples include:

- Excel sheets and VBA macros for P&L calculation or collateral management
- Python or R scripts for credit scoring or volatility forecasting
- ML models built on internally aggregated data to predict prices, detect anomalies, or classify counterparty risk (at that stage, speed and flexibility are the priorities; documentation, dependency management, versioning, and auditability are secondary concerns.)

From Individual Prototype to Enterprise Value

A critical gap opens when individual prototypes graduate informally into enterprise operations and into automated decision taking, without ever being re-engineered for that purpose. Enterprise operations demand far more than functional correctness. Models must be reproducible, resilient to upstream data changes, auditable, and maintainable by people other than their original author.

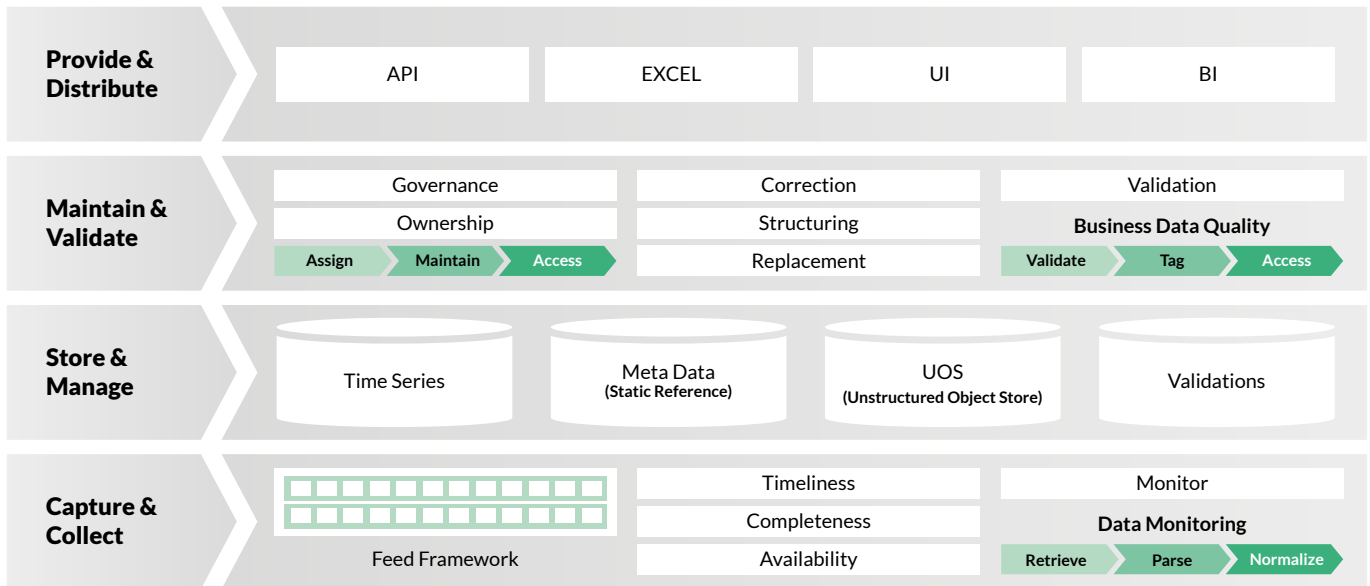
This is particularly critical for AI-based decision taking. AI models require a stable, governed, and continuously validated data foundation. Feeding AI-driven decisions with data from informal scripts or ungoverned pipelines doesn't meet this requirement. Inconsistent input data reduces model accuracy, and renders AI-based automated decision taking operationally unsafe and regulatorily indefensible.

Models executing decisions autonomously without meeting enterprise-grade standards aren't just a technical liability; they're a direct operational and regulatory risk. This entanglement manifests as P&L reconciliation failures, unintended automated trades, or pricing deviations that only appear under specific market conditions, often at the worst possible moment.

Core Challenges in Financial Data and Model Management

Selecting the right technology platform is rarely a purely technical decision. It requires aligning data governance practices, licensing obligations, regulatory reporting workflows, and budget constraints. A narrow focus on database technology often produces solutions that satisfy IT requirements but fail to support the trading, risk, and compliance processes they were intended to serve.

Data licensing is a particularly underestimated risk. Major data providers, exchanges, and pricing services enforce strict usage policies, and non-compliance carries significant financial penalties.



Here’s a common example: Let’s say a quant builds a pricing model, using a personally licensed Bloomberg or Refinitiv feed. Once deployed to enterprise operations and integrated into automated decision taking workflows, it may be consuming that data in direct violation of licensing terms, without anyone noticing, until an audit makes it impossible to ignore.

Capability Architecture as a Structural Answer

One proven approach is designing solutions around a capability architecture, a methodology that deliberately separates business requirements from technological decisions. This principle guides both small-scale configurations and large platform designs, ensuring that the path from individual prototyping to enterprise operations is governed by clear standards, rather than by the habits of individual contributors or the constraints of any vendor.

GRYT: Bridging Individual Prototyping and Enterprise Operations

To address the full lifecycle of managing models and data, FORRS developed GRYT, a software suite built around one central insight: The transition from individual prototype to enterprise operation is an engineering discipline, not a deployment event. When models move into a production environment where they autonomously execute consequential financial decisions, every undocumented dependency and untested configuration becomes a potential point of failure, at speed and at scale.

GRYT enforces a clearly defined pipeline, ensuring that models are systematically validated, documented, and hardened before they reach production. Encapsulated prototyping environments allow individuals to develop and experiment freely. In addition,

controlled deployment gates ensure that only enterprise-ready models – reproducible, auditable, and resilient – enter live operations.

The result is an ecosystem in which individual creativity and the reliability demands of enterprise-grade automated decision taking are no longer in conflict, but are structurally integrated.

Conclusion

The gap between individual prototyping and enterprise operations is one of the most significant and underestimated sources of operational risk in financial institutions today. As automated decision taking becomes the norm, models executing autonomous decisions without enterprise-grade validation can affect market positions, trigger regulatory scrutiny, and cause damage that’s difficult to reverse.

Models drift, pipelines break silently, and configurations grow beyond the understanding of any single person. The risks compound slowly, and the damage becomes visible only when it’s already costly to repair.

Institutions that invest in governance, structured deployment pipelines, and capability-driven architectures are not just reducing operational risk. They’re building the infrastructure needed to automate responsibly, adapt to market changes, and maintain a competitive edge.

Voices from the Market I

Data governance, AI integrity, cloud convergence, the rise of tokenized assets - the true challenge in 2026 is not adopting AI but building the data foundations it demands. As organizations shift from experimentation to industrialization, the focus moves to clean, traceable, and compliant data across the entire value chain. These expert voices make clear: AI does not compensate for structural weaknesses but rather exposes them.



DR. GENE ÁLVAREZ
Principal, Executive Management
Consultant | AntePartners

AI's effectiveness and ethical standards depend on the data it uses. To maintain model integrity and dependability, an organization must diligently protect against data poisoning. Also, to avoid AI reinforcing historical disparities, it's crucial to reduce bias amplification. Achieving this involves strong data governance, ongoing validation, and proactive measures for algorithmic fairness. All of this helps develop trustworthy, resilient AI systems.



MARTIN WEITHOFER
Strategic Advisor
Fembeck Finance GmbH

Digital assets and tokenization have entered a strategic phase, where the question is no longer whether digital assets matter, but how they're integrated. The focus is shifting from experimentation to industrialization. Value emerges when tokenized assets operate within the same post-trade, custody, reporting, and risk frameworks as traditional instruments. Institutions are prioritizing seamless access, capital efficiency, and supervisory clarity over novelty. Strategically, tokenization succeeds when it disappears into existing market infrastructure, enabling scalability, governance, and trust. At that point, digital assets become operationally normal and economically useful across the institutional ecosystem.



ROBIN JONSSON
Head of Market Data | Swedbank

The shift toward cloud-driven data and analytics platforms has created a powerful convergence between traditional market data management and broader enterprise data practices. The resulting opportunity is clear: scalable platforms, richer tooling, and faster insights.

The challenge is equally real: these environments often overlook market data's contractual, technical, and entitlements complexities. As enterprise standards push for "one platform", market data leaders must protect the specialist controls that financial institutions rely on.



JANOS BOHNKE

Director, Head of Market Data | Allianz Global Investors GmbH

In 2026, the transformation of market data will be driven by how organizations establish robust data foundations to support AI-powered workflows. With agentic AI becoming integrated into everyday operations, the primary challenge will shift from model complexity to ensuring that data is clean, reliable, contractually compliant, and thoroughly traceable throughout the entire value chain.

Concurrently, market demands are evolving from standardized data packages to flexible, workflow-oriented access models that enable teams to consume exactly what they need. Organizations that successfully unite strong governance with transparency, automation, and adaptable data ecosystems will be well positioned to leverage AI securely and efficiently.



BERNARD SCHUT

Business Director | BIQH

Financial institutions don't have a data problem; they have a control problem. Years of adding vendors, feeds, and point-to-point solutions have created fragmented architectures, rising costs, and limited transparency. At the same time, regulatory pressure is intensifying, and data governance has become a board-level concern.

In this context, AI isn't the starting point; it's the consequence. Without structured, governed, and traceable data, AI will not scale beyond experimentation. The real shift in the market is clear: from more data to better control. Those who get this right will define the next generation of financial infrastructure.



EDOUARD ALLIGAND

CEO | Quasar AI

The market is exiting its "we'll figure it out later" phase. With AI, data must be high-quality, queryable, and cost-efficient at scale. This is why teams come to us: not for peak benchmark numbers, but to make large, real-world datasets usable without cost blowups.

The winners start with a focused use case and build on it; the rest overspend on vague AI ambitions. AI is both overhyped and underestimated. Those who fail to operationalize data efficiently will struggle to compete.



MICHAEL BABILON-TEUBENBACHER

Executive International | CPC AG

Many customers expect AI to be a game-changer, only to stumble over their own shortcomings. Poor data, fragile processes, and inflexible organizations are not masked by AI, but brutally amplified. AI is not a problem-solver, but an amplifier, and it does not forgive structural weaknesses.



**BERNHARD
BRUNNER**
Partner at
finccam GmbH

Interview with Bernhard Brunner

From Risk Premia to Platform Thinking: Building Robust, Risk-Managed Portfolios in Practice

Institutional asset management is increasingly shaped by the need to balance simplicity with sophisticated risk control. A disciplined approach focused on risk premia, transparent decision-making, and integrated risk management aims to deliver robust portfolio outcomes for professional investors across market cycles.

FORRS: What is finccam and what exactly do you do?

Bernhard Brunner: finccam is an independent asset manager that was founded in July 2018. We provide tailored support along the entire value chain in advisory and asset management, with a focus on overall portfolio construction, risk premia management, and risk management.

Our investment solutions are characterized by simplicity and perfection. To achieve this, we rely on deep research and state-of-the-art technologies. Our internal platform provides the necessary flexibility to deliver customized solutions that achieve optimal outcomes for our clients.

FORRS: Why did you start finccam? How was it possible to start an investment firm from scratch?

Bernhard Brunner: The decisive factor was our many years of experience in institutional asset management. All three founders held senior roles over the past 20 years at risklab and Allianz Global Investors, including:

- Managing Director, CIO Multi Asset & Solutions
- CIO Multi Asset Alternatives and Hedging
- Head of Risk Management Overlay
- Lead Portfolio Manager for a wide range of national and international investors

In the areas of overlay management, risk premia strategies, and fiduciary management for institutional investors, we've been pioneers for many years. We wanted to offer this expertise to our clients as independently as possible, then combine it with the advantages of an investment boutique, particularly in the use of the latest technologies and developments in asset management.

FORRS: What were the big milestones so far for finccam?

Bernhard Brunner: One major milestone is creating a solid client base for our investment advisory and management offerings. Since our early days, we've worked together with high profile clients in the DACH region and Middle East. This trust was the basis for finccam's growth over the last years.

Another is our mutual fund around volatility risk premia. Since we've been pioneers in this field for over 25 years, we're especially proud that we now manage more than 600 million EUR in this strategy. Our deep expertise helps us perform particularly well within our peer groups, which is very important to us.

An additional key milestone was reaching 5 billion EUR in assets across all our products. This rapid growth, based on our clients' trust, was enabled by our flexible internal platform and, of course, our team of 18 professionals. They remain our most important asset, and together with client satisfaction, they represent one of our greatest successes.

FORRS: When did you understand that finccam works?

Bernhard Brunner: We were very fortunate that our clients placed a high level of trust in us right from the beginning. Shortly after founding finccam, we realized that we'd be able to continue the strong relationships we'd built with our clients over many years in our former roles. This is also what motivates us the most: to repay this trust with strong and predictable results for our investors.

FORRS: What truly differentiates finccam from other asset managers in the market?

Bernhard Brunner: As an independent boutique, we offer direct access, personal relationships, and full transparency. There are no black boxes; our clients always understand how and why decisions are made. At the same time, our proprietary in-house technology enables us to deliver highly customized, risk-managed solutions with institutional quality and efficiency, even for more specialized mandates.

For us, risk management is not an add-on, but an integral part of every investment decision. We do not only mitigate risk, we systematically integrate it as a source of value across all strategies. This allows us to build portfolios that are robust, efficient, and aligned with our clients' long-term objectives.

FORRS: What are the typical clients that you're servicing?

Bernhard Brunner: We exclusively serve professional clients. Our biggest client groups are family offices, pension schemes, endowments, and unregulated investors such as churches. Depending on their needs, we can act either as an advisor or as an asset manager for public funds or specialized funds. Family offices particularly value our independence as an investment boutique, along with our extensive experience in capital allocation across all asset classes. For pension schemes, our strong familiarity with regulatory requirements is a key advantage, as we've always maintained close dialog with the relevant committees and legal authorities.

FORRS: How would you describe your investment approach?

Bernhard Brunner: Our investment approach can best be described by the term "puristic investing", focusing on the essentials of institutional asset management. We were inspired by William of Occam and the principle associated with him: Occam's razor, also known as the principle of parsimony. Applied to investing, this primarily means avoiding unnecessary complexity, and focusing on the fundamental drivers of investment success, and their interaction within portfolio allocation. The goal is to identify substantial risk premia within the growing universe of investment strategies, to measure the associated risks, manage them effectively, and select efficient implementation methods. On this basis, it's possible to achieve strong returns while taking only justifiable risks.

FORRS: How are you managing the current increase in geopolitical uncertainty in your investment approach? Did you change anything so far to adapt?

Bernhard Brunner: Over the past 25 years, we've guided our clients through several challenging market phases. Risk management has always played a crucial role for us. Substantial losses should be avoided with a high degree of confidence. This is important, not only to stay within risk budgets, but because avoiding large losses is essential for benefiting from long-term compounding effects. Losses that are avoided don't need to be recovered, and future returns are generated on a higher capital base.

In this respect, more challenging market environments highlight the value we add through our systematic risk management across all our services. As a result, we can avoid making reactive or hasty adjustments during times of crisis.

FORRS: What are the next milestones in finccam's journey?

Bernhard Brunner: Going forward, we naturally aim to grow in our core areas: overall portfolio construction, risk premia management, and risk management. Our powerful proprietary platform, combined with our outstanding team (which is growing), provides the perfect foundation for continued growth.



The 2026 Market Data Shift: Beyond Human Insight



**EVERT-JAN
TEN BRUNDEL**

Managing
Consultant
at Silver Fox
Advisory

As the industry transitions from AI hype to operational reality, the focus shifts toward data provenance and agent-ready architectures. Organizations must navigate a landscape where autonomous agents are the primary consumers of data, which demands a rethinking of governance and ROI metrics.

The Silent Crisis of Data Provenance

While much of the current discourse surrounds the sheer volume of information, the market is significantly underestimating what is known as the “data provenance” crisis. As generative AI and synthetic data – information created by AI to train other AI – become mainstream, the original source of information is becoming blurred. This creates a systemic risk of “AI autophagy” or model collapse. This occurs when AI models begin training on each other’s outputs, rather than verified primary sources, which rapidly degenerates accuracy.

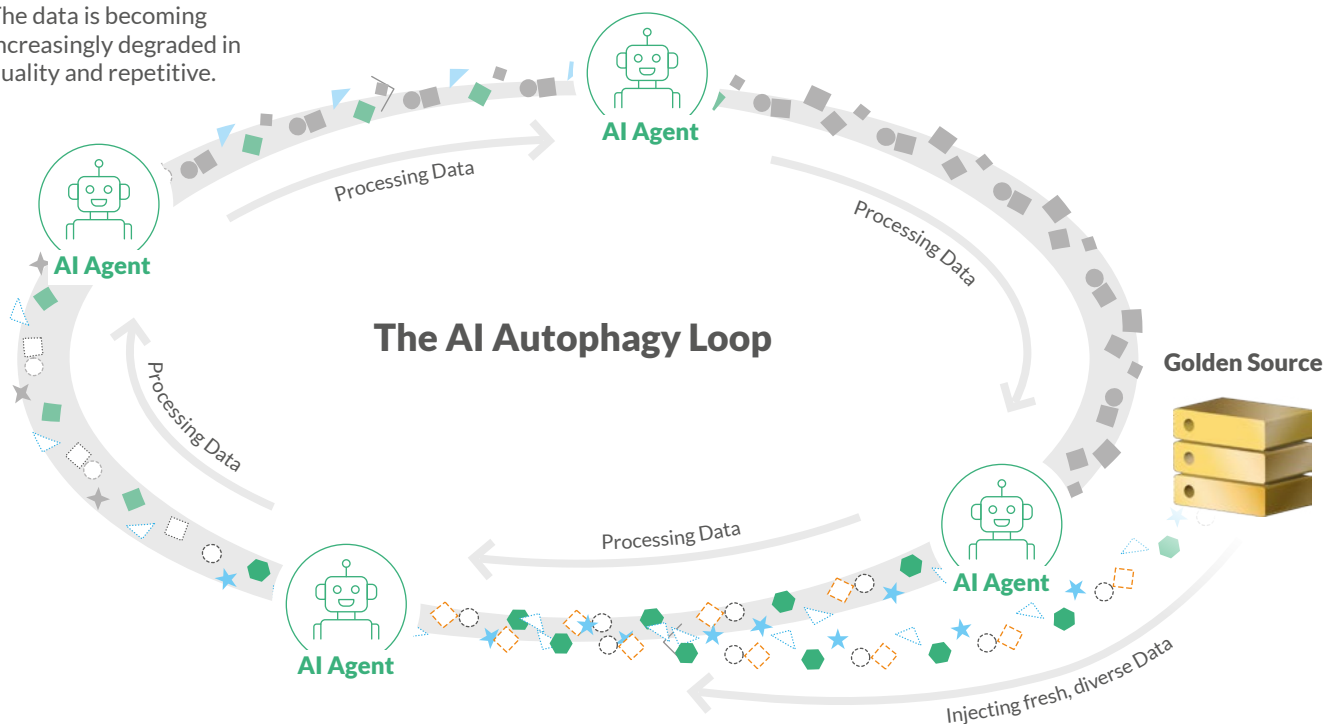
For market data leaders, the value of a dataset in 2026 will be defined less by its exclusivity and more by its traceability. Establishing a “golden source” is no longer just a technical preference; it is a defensive necessity against the erosion of truth in financial models.

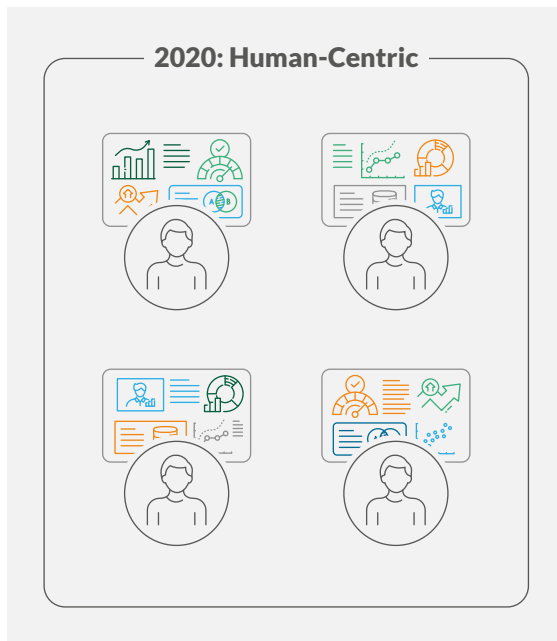
From Dashboards to Agentic Workflows

The structural foundation of market data is undergoing its most significant transformation in decades. Historically, data was structured for human consumption. It was visualized on terminals, curated in dashboards, or exported to spreadsheets. However, by 2026, the primary consumers of market data are no longer people, but increasingly autonomous AI agents.

This shift toward “agentic workflows” requires a move away from human-centric interfaces toward robust, API-underpinned solutions. An “agent-ready” architecture is the new benchmark for success. In this environment, data must be machine-readable, highly structured, and delivered with ultra-low latency to allow autonomous systems to make real-time decisions without human intervention.

The data is becoming increasingly degraded in quality and repetitive.





Firms that fail to adapt their infrastructure for these digital coworkers will find their expensive data feeds underutilized, and their AI initiatives stalled.

The ROI Challenge and the Talent Gap

As the novelty of AI wears off, boards of directors are demanding measurable Return on Investment (ROI) for their data spending. This presents a unique challenge for market data teams, as proving which specific dataset led to a specific profit is notoriously difficult. This is especially true when data is shared across complex, federated environments.

Compounding this issue is a critical shortage of specialized talent. There is a growing vacuum for “data business analysts” or “demand managers” – professionals who possess the rare ability to bridge the gap between high-level business value and low-level data engineering. These individuals are essential for translating complex data requirements into profitable outcomes. Without them, organizations risk amassing “market data spaghetti” – a tangled web of redundant feeds and underutilized licenses.

A Roadmap for 2026: The Four Pillars

To stay ahead of these shifts, market data leaders should prioritize four strategic pillars in their upcoming roadmaps:

- 1. Governance as Code:** The complexity of modern regulation and the speed of AI require automation. Leaders must move toward “governance as code”, where data tagging and privacy masking are integrated directly into the market data infrastructure. This ensures that compliance is maintained at the speed of the market.
- 2. Vendor Rationalization:** It is time to audit the feeds. Many firms are paying premium prices for real-time data that is ultimately used for end-of-day reporting. Rationalizing vendor relationships helps eliminate “market data spaghetti” and redirects the budget toward high-impact, agent-ready sources.
- 3. Data Literacy and NLQ:** Upskilling non-technical staff is vital. In 2026, the expectation is that every analyst can query data via Natural Language (NLQ). This democratizes data access, allowing staff to pull insights directly, rather than waiting for static BI reports.
- 4. Traceability and Profitability:** As the industry enters the “operational reality” phase of AI, the focus must remain on ensuring data is agent-ready, traceable, and demonstrably profitable.

In summary, the winners of 2026 will not be those with the most data, but those who can prove where their data came from, ensure it is ready for AI consumption, and link its usage directly to the bottom line. The era of human-centric data management is closing; the era of the agent is here.



EFE YILMAZER
Business Development Manager at The FintechBox

Dashboards Are Dead. Feed the AI Agent.

As AI agents become the primary consumers in 2026, institutions must rethink how data is structured, enriched, and delivered to enable real-time decision-making and autonomous execution.

For a decade, the “Holy Grail” of fintech was the perfect dashboard – a clean, real-time visualization that allowed a human trader to make a split-second decision. But as we move through 2026, the primary consumer of market data has changed. It is no longer just the human eye; it is the AI agent.

At The Fintech Box, we are seeing a fundamental shift in how financial institutions view their data infrastructure. It is no longer enough for data to be fast; it must be agent-ready.

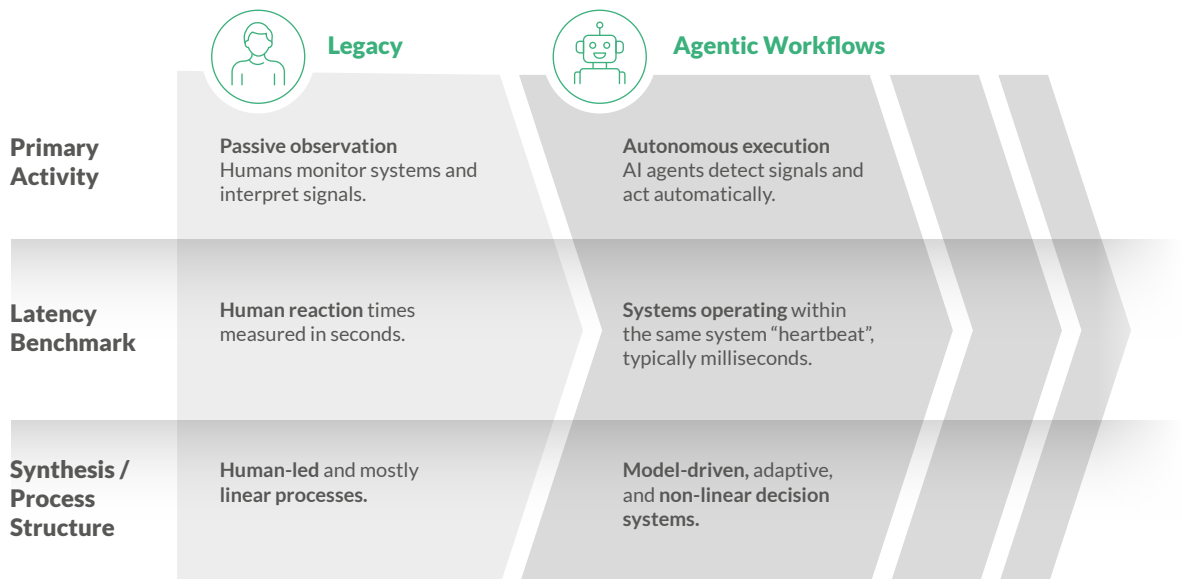
For years, financial institutions focused on building better visualization tools to help humans interpret growing volumes of information. Yet, as markets become more interconnected and data flows accelerate, the real challenge is no longer simply understanding information, but reacting to it instantly. This shift is pushing firms to rethink how market data is structured, enriched, and delivered across their trading environments.

The Rise of the Agentic Workflow

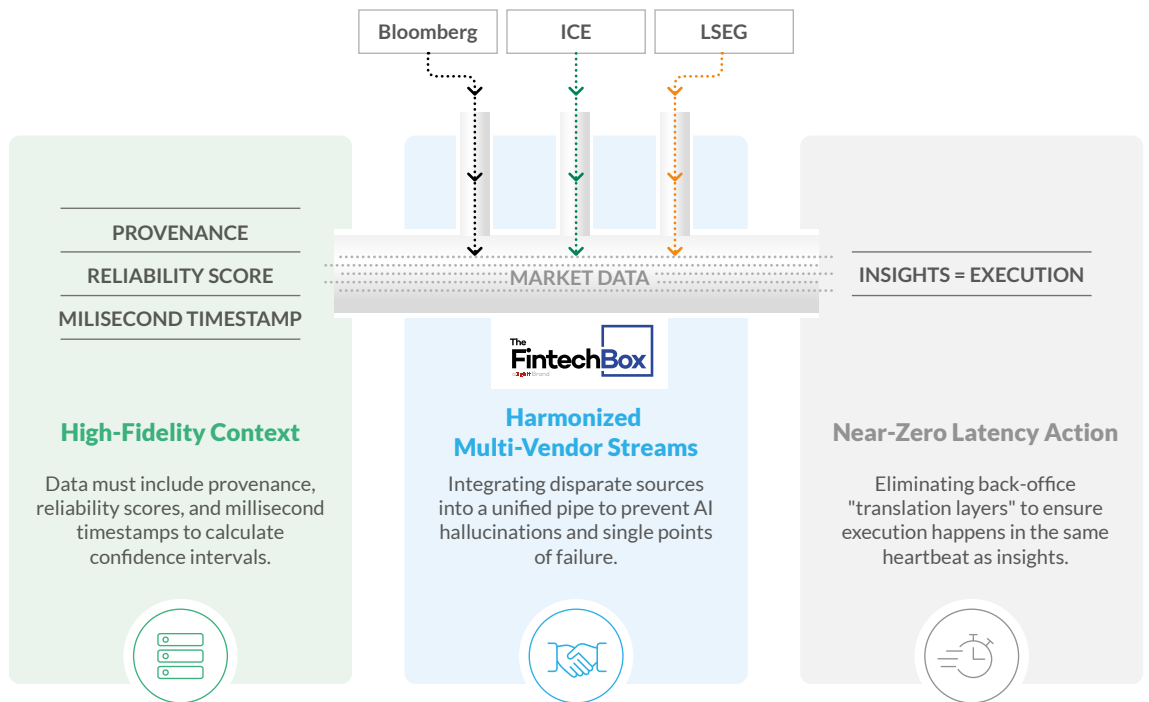
Traditional market data is designed for observation. A human looks at a Bloomberg terminal or a Refinitiv feed, synthesizes the information, then manually executes a trade or adjusts a hedge.

In contrast, an agentic workflow involves AI models that do not just suggest – they act. These agents autonomously monitor liquidity, scan for news-driven volatility, and execute complex multi-leg strategies across different jurisdictions. However, an agent is only as good as the data it receives. If that data is trapped in a legacy silo or lacks the proper metadata, the agent is essentially flying blind.

As global markets grow more fragmented and data volumes expand, relying solely on human interpretation becomes increasingly difficult. Traders must absorb signals from multiple markets simultaneously – equities, FX, commodities, and macroeconomic indicators – while reacting to breaking news and



Three Pillars of Agent-Ready Data



volatility in real time. Automated agents, by contrast, can monitor these signals continuously, enabling institutions to identify opportunities and risks far more quickly than traditional workflows allow.

What Makes Data “Agent-Ready”?

To move from a passive “datalake” to an active “agentic framework”, three components are non-negotiable:

- ① **High-Fidelity Context (Metadata):** An AI agent needs more than just a price. It needs to know the data’s provenance, its reliability score, and the exact millisecond of its last update. At The Fintech Box, our integration adapters enrich raw feeds with this critical context, allowing agents to calculate “confidence intervals” before they execute.
- ② **Harmonized Multi-Vendor Streams:** Agents thrive on cross-referencing. We integrate disparate sources from global giants like MT Newswires to local niche providers into a single, unified pipe. This provides agents with a 360° view of the market that guards against “hallucinations” caused by a single point of failure.
- ③ **Low-Latency Actionability:** In an agentic environment, the gap between insight and action must be near-zero. Our infrastructure eliminates the “translation layer” typically found in back-office systems, ensuring that when an agent identifies an opportunity, the execution happens in the same heartbeat.

Together, these capabilities allow institutions to move from simply observing markets to operating within them autonomously. When data is enriched with context, harmonized across sources, and delivered with minimal latency, AI agents can interpret signals with greater confidence and act without unnecessary friction.

Turning Information Into Agency

The competitive advantage in 2026 is not owning the most data; it is having the most actionable data. Companies that treat data merely as a resource to manage, rather than an agent to deploy, will be outpaced by leaner, automated competitors.

At The Fintech Box, our role is to enable this transition. We are not just delivering data. We are delivering the infrastructure of agency.

In an increasingly automated market environment, institutions that can convert information into immediate action will define the next generation of financial infrastructure. The ability to move seamlessly from signal to decision – and from decision to execution – will become a critical capability for modern financial technology platforms.

We are moving the industry from “what happened?” to “what are we doing about it?”.

Voices from the Market II

In an era defined by volatility, fragmentation, and accelerating change, market participants are rethinking how they source, govern, and operationalize data. AI is reshaping software economics, challenging established licensing models, and enabling new technologies to enter trading and settlement. These perspectives reveal a market at an inflection point, where the competitive edge belongs to those who combine speed with substance, and innovation with operational discipline.



FLORENT FABRE
CEO | NeoXam

The investment data market is moving fast, and the vendor noise is louder than ever. With our clients, what I see consistently is a constant pull toward speed, often at the expense of substance.

The right answer isn't about choosing between cloud, low-code, or managed services. It's about combining them intelligently around a foundation you can actually trust, scale, and adapt over time.



ANJA HOHENACKER
Director Customer Organization Europe
TRG Screen

What are the market data trends that are gaining the most traction among decision makers in 2026? I'm seeing three themes dominate conversations:

1. Organizations are consuming more data to power AI models, yet most still can't fully account for what they spend, with whom they spend, or whether their usage is compliant.
2. CFOs are now asking hard questions about a cost line that has grown by over 40% in five years (from TRG Screen Partners Substantive Research & BCG Expand, "2025 Market Data Pricing Report").
3. Vendor pricing complexity is accelerating, with renewal increases consistently outpacing budgets.

The firms that are gaining an edge are those investing in transparency, governance, and the right partnerships.



DANIEL BURKHARDT
Chief Operating Officer
BST Banking Software Training AG

Another defining shift in market data isn't just tighter licensing or AI-driven compliance – it's the collapse of standardized software economics. AI now enables smaller tech firms to deliver hyper-customized solutions at scale, eroding the traditional trade-off between flexibility and cost. This challenges the dominance of one-size-fits-all platforms and even raises a provocative question: If data consumers can shape data around their own processes, how long will they accept rigid licensing models and pricing structures? The next battleground won't be data access, but control over how it's operationalized.



ANDREAS GILLHUBER

CCO and Co-Founder | &act – andact GmbH
CFO | German Data Science Society (GDS) e.V.

VUCA (volatility, uncertainty, complexity, ambiguity) is more omnipresent than ever. In fact, the new term BANI (brittle, anxious, non-linear, incomprehensible) best describes the chaotic and unpredictable world we're living in.

What does that mean for data and AI? Predicting the future is difficult, as Mark Twain said. What's more, you can't lean on historic data anymore to predict further business developments in energy and financial markets. As a business leader, you can't ignore politics. Follow them closely and observe how they affect your business. Leverage original (company) data, rather than the 90% artificially generated internet data, which diminishes in value. Implement small use cases fast. Avoid long-term, complex projects, where you depend on stable environments. Use agentic AI and vibe-coding, to exponentially reduce time from proof-of-concept (POC) to production. And have a strategy for sovereign enterprise AI and data.



MARC BURGHEIM

Head Flow Trading | BayernLB

In my current role, I focus on trading issues, market structure, and ongoing developments in increasingly volatile and fragmented markets.

New technologies, such as distributed ledger technology, crypto-assets, and stablecoins are playing increasingly important roles in trading, settlement, and market infrastructure.

Another key focus is the use of AI to analyze market data, support trading decisions, and assess structural changes in the capital markets.



MAXIM PERTL

Partner Strategic Business Development
DACH | Clearwater Analytics (CWAN)

Investment operations leaders know that the real barrier to AI isn't the technology; it's the data foundation beneath it. Fragmented data, manual reconciliations, and siloed processes can slow teams down, and even block meaningful AI adoption entirely.

Firms must move beyond legacy tools on fragile processes and invest in architecture-led transformation. Every day, front-to-back operations, analytics, and AI must rely on clean, unified data across trading, accounting, risk, and compliance. Those that build a robust operational backbone – with standardized workflows and strong governance – will let AI transform investment operations, not just document them.



NORBERT BOON

Managing Director
Easybroker DMA Europe

Photonics is quietly reshaping the physics of computation. By replacing electrons with photons, data can move at light speed with far less heat and energy loss. In algorithmic trading, this means ultra-low latency decisions, where nanoseconds define profit.

In crypto mining and AI, photonic chips promise massive parallelism without the energy drain of silicon. As data volumes explode, light – not electricity – may become the backbone of faster, greener computation.



DKF



**DR. ALEXIS
EISENHOFER**
CFO | financial.com
AG Founder | DKF

Interview with Dr. Alexis Eisenhofer

The Brokerage Industry is Reinventing Itself for the Self-Directed Investor

The brokerage industry is undergoing a fundamental shift – from fee-driven execution portals to AI-enabled, integrated investment platforms. A new approach is emerging that puts financial information at the heart of investing, combining modular technology and professional-grade data for the next generation of self-directed investors.

FORRS: After more than 27 years successfully building Financial.com, and over 15 years at DKF, there's now "MyMarkets". Why did you embark on this new adventure now?

Dr. Alexis Eisenhofer: We've been developing brokerage platforms, primarily in North America, since 2010. Although we're very successful internationally, our platform has yet to find a customer in our home market. Mainly because our information platform always required integration with each bank's order management system. This hurdle is lower for large banks in North America, because they serve a larger market.

When I saw how Baader Bank established a white-label custodian business for many neo-brokers, the opportunity arose to bring our trading platform to life here in Germany. The partnership with Baader is a perfect fit, because we also pursue a white-label business. Together, we can offer turnkey platforms for B2B clients.

FORRS: What was your impression of the market for brokers and neo-brokers? Why is there room now for a new player, challenging successful existing players?

Dr. Alexis Eisenhofer: The history of the brokerage market has been characterized by ever-decreasing trading fees. The platforms are essentially execution portals, and offer little in the way of financial information.

We come from the opposite perspective, having developed over 250 information solutions for banks over the last 25 years. Financial information is the foundation of investment success. Anyone who saves 1€ in transaction costs but loses 1,000€ on the wrong stock will understand this.

To my knowledge, we have the first fully integrated information and transaction platform in Germany. It's much better to have everything in one place. You can also react much faster and seize market opportunities before others have even started gathering information.

FORRS: What are you doing differently than other neo-brokers?

Dr. Alexis Eisenhofer: Because we come from the world of professional investors and operate active trading platforms in North America, our challenge is to make the platform accessible to everyone. We were like IKEA a generation ago, which made everyone into a carpenter. Using modules and assembly instructions, anyone can build a cabinet.

We have a completely modular platform that reflects any workflow and perspective for financial decisions. Our tutorials come from influencers who can easily share their views with their followers via a link. We also offer extensive AI features that configure customized dashboards for investors' specific questions.

FORRS: What are the typical clients that you're servicing?

Dr. Alexis Eisenhofer: We target self-directed investors who manage their investments independently, without investment advice. Today, 53% of all investors are self-directed; among young people, almost no one goes to a bank anymore.

There's a growing number of young, high-earning individuals investing their savings in the capital market. They would be tomorrow's private banking clients ("emerging affluents"), but they no longer need a bank. Instead, they need a platform like MyMarkets.

FORRS: Are you expecting any shift in client behavior that you'll be addressing better than others?

Dr. Alexis Eisenhofer: Currently, 68% of all fund units are still sold through intermediaries, even though over 53% are self-directed investors. As young investors make larger savings over their working lives, intermediary sales will quickly fall below 50%.

Because we offer our platform as a white-label solution, we can support fund companies in developing a direct-to-consumer business. Alternatively, we can offer banks a competitive advantage against neo-brokers, who are now becoming full-fledged banks and handling all aspects of banking, such as checking accounts and credit cards.

FORRS: Are you focused only on the German market?

Dr. Alexis Eisenhofer: Our BaFin license allows us to provide financial services throughout the EU. From a regulatory perspective, we're already prepared for other markets.

The same applies to our data and trading interfaces, as we've integrated the global data of the London Stock Exchange. Expansion depends solely on how well the platform is received by customers.

FORRS: Have you built all the technology from scratch internally, or are you leveraging existing solutions?

Dr. Alexis Eisenhofer: We've developed everything ourselves. We benefit from having developed and operated real-time systems for 250 banks over more than two decades. Building such a brokerage firm from scratch and purchasing software services for it would quickly cost over 50 million US dollars. This figure was determined by a management consultancy in the USA as part of a make-or-buy decision for one of our clients, and I can confirm this from my own experience.

FORRS: What are your plans for MyMarkets for the future? What are the next milestones?

Dr. Alexis Eisenhofer: Our biggest risk with MyMarkets is marketing. We have no experience in this area. We hope to enter the market through white labeling, enabling growth from our own cash flow.

Our platform is being developed entirely with the customer in mind. We have a crowdsourced backlog, and we receive direct customer inquiries via the AI chatbox. If we continuously implement user feedback, the platform should improve a little every day.



THOMAS FÜRLING
CEO at e3 AG

The Next Dimension in AI Security

AI is transforming how organizations work. But every usage also bares the risk of uncontrolled exposure of sensitive data.

The Invisible Data Leak

Unlike traditional applications, AI systems aren't just tools – they are processing environments. Every prompt becomes part of a workflow that organizations do not fully control:

- Data is transmitted to external systems
- Inputs may be logged, stored, and reused
- Outputs can indirectly reveal sensitive information
- Information might be used for foreign purposes

In any cases, if it happens, it will happen without your consent. Employees use AI to increase productivity, convenience, and even laziness (not necessarily in this order). Teams integrate AI into business processes, but few organizations truly understand what data is being exposed, where it ends up, and what can be done with it.

Why Traditional Security Falls Short

Most security strategies were not designed for this type of interaction. They focus on Zero Trust via:

- Securing networks
- Protecting endpoints
- Controlling system access

But AI introduces a different challenge: The risk lies in the content itself and the fact that there is not benefit without the content. Even in a fully secured, “zero-trusted” environment, a single prompt can unintentionally disclose:

- Personal data
- Intellectual property
- Confidential business logic

Once entered, this data leaves the organization's direct control.

The AI Dilemma

This creates a fundamental tension:

AI promises huge gains in efficiency	 vs. 	AI usage introduces new forms of data exposure
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While blocking AI is not a realistic option anymore, uncontrolled usage isn't acceptable either. Organizations are caught in between.

A Shift Toward Data Level Protection

To resolve this dilemma, the focus must shift from “How do we secure systems against AI?” to “How do we protect the data inside AI?” In technical terms, data loss prevention can ensure that sensitive data is blocked from AI, but cannot protect this data while using AI. This requires a new approach – one that operates directly on the content being processed. Sensitive information must be:

- Identified before it is sent
- Protected during processing
- Controlled upon output

Only then can organizations ensure that data remains secure, even when interacting with external AI systems.

Protecting What the AI Shouldn't See

Protecting sensitive elements within prompts – without breaking the functionality of AI – is now emerging as a new and promising solution. Rather than restricting its use and undermining the benefits of AI, this approach enables companies to:

- Continue leveraging AI capabilities
- Maintain context and usability
- Prevent exposure of critical information

The idea is simple but changes the equation entirely: AI can process the request without accessing the sensitive data itself.

From Uncontrolled Risk to Controlled Usage

When sensitive data is no longer directly exposed in prompts:

- The risk of data leakage is significantly reduced
- Compliance requirements become easier to meet
- AI continues to be integrated into business processes
- Misuse of data by third parties is largely prevented

Security is no longer an obstacle. It's becoming a driving force behind the introduction of one of the most significant technologies of recent years.

Conclusion

The real challenge of AI adoption isn't the technology itself. It's how organizations handle the data they provide to it. It's whether organizations can make use of AI or risk falling behind.

Every prompt carries potential risk. Every interaction can expose more than intended. Every usage can create a business risk.

Organizations that recognize this shift – and protect data at the point of interaction – will be able to use AI securely and at scale with reduced risk.

Those that fail to do so may gain in efficiency in the short term but will risk losing control in the long run. Since AI is here to stay, we must find a way to cope with it in the long run.



See how sensitive data in AI prompts can be protected: Scan the QR code for insights and example videos.
www.e3ag.ch/en/centraya-ai/



MAXIM PERTL
Partner Strategic
Business
Development
DACH

Why Architecture Now Defines Investment Operations and AI-Readiness

The investment industry offers capable point solutions, smart dashboards, and promising AI pilots. Yet for many operations leaders, daily work still looks familiar: Teams reconcile data in spreadsheets, connect processes manually, and resolve exceptions after the fact.



CHRISTINE BERTHOLD-POJE
Partner Strategic
Business
Development
DACH

Whenever we speak with operations teams, the AI discussion rarely begins with AI itself. It begins with a simpler question: Which data and which processes will your AI actually rely on? Once that question is asked honestly, the limits of a tools-only approach become clear.

The Hidden Constraint: Operational Reality, Not AI Potential

Asset managers and asset owners are faced with the same persistent issues. These include incomplete data alignment, weak front-to-back connectivity, and too much reconciling and checking data. All of this takes time away from analyzing portfolios, challenging risk, and steering the business.

Many firms have tried to build a single repository for investment data, but few have fully achieved it. Data remains fragmented across silos, reconciled differently by different teams, and rarely governed as a single source of truth.

The challenge is no longer to talk about a core data foundation, but to build one: clean, standardized, reconciled data that operations, analytics, and AI can use safely every day. That challenge is intensifying, as portfolios become more complex, private markets grow, regulatory demands rise, and clients expect greater transparency.

AI Today: Useful, Visible, and Often Peripheral

AI is already proving useful. Firms use it to summarize documents, extract information, support drafting, and answer questions on internal knowledge. These

use cases are valuable, but in many organizations, they remain peripheral. They sit at the edge of the operating model, not at its core, and do not fundamentally change how data moves, how exceptions are managed, or how risk is controlled.

Real transformation starts when AI is embedded in operations, meaning agents that detect reconciliation anomalies across:

- Prices and cash flows
- Workflows that trigger automatically when patterns or events emerge
- Dashboards that surface genuine exceptions instead of overwhelming teams with noise

To operate at that level, AI needs more than good models. It needs a different operational backbone. The non-negotiables are clear:

- Clean, standardized, and unified data
- Strong controls
- An architecture that supports continuous change without operational disruption

How Clearwater's Architecture Changes the Equation

Clearwater Analytics was built from the ground up as a single-instance, multi-tenant cloud platform. This isn't just a technical design choice; it's a strategic differentiator. Instead of supporting bespoke installations, Clearwater runs one global platform. Clients are logically isolated, but benefit from the same core data model, calculation engines, and control framework. Improvements to data modeling, reconciliation, and reporting strengthen the platform for every client.

Clearwater operates from a single golden-source data model. This means that market data, positions, cash flows, and reference data are aggregated consistently, reconciled using proven rules, and enriched with daily quality checks and controls, supported by managed services. Operations teams start from a robust, audit-ready foundation, instead of rebuilding consistency project-by-project.

This architecture also changes how firms adapt. In traditional on-premise or fragmented SaaS environments, new rules, controls, or reports often require heavy IT projects, parallel environments, and complex migrations. In Clearwater's model, improvements can be delivered continuously. Control frameworks can evolve while stability is preserved, and reporting can expand without forcing each client into its own upgrade program.

Clearwater does more than reconcile data. It helps automate investment operations across multi-asset portfolios; from liquid securities to more complex instruments. It delivers daily, production-grade reconciliations across positions, transactions, and cash flows against custodian and market sources. Human users and future AI agents therefore work from a reconciled daily data foundation, not from data cleaned only in the run-up to period-end.

Because the platform sits at the operational core, it supports daily and intraday controls, standardized workflows for accounting, performance, and risk as well as configurable reporting for management and external stakeholders. For operations teams, that means fewer manual tasks, less dependence on Excel, and more capacity to analyze, challenge, and steer.

The same architectural principles also prepare firms for an AI-enabled future. Clearwater provides golden-source data that's ready for AI consumption.

A Future-Ready Target Operating Model

In an ideal scenario, you'd have a single data hub feeding business applications. Front-to-back workflows that are orchestrated centrally. And an analytics and AI layer to process volumes, exceptions, and scenarios, in near real-time without compromising quality or governance.

Clearwater's single-instance, multi-tenant cloud architecture makes this ideal a reality, and is a practical expression of that model. It helps firms industrialize operations today, while opening the door to deeper AI integration. For organizations facing rising complexity in asset classes, regulations, and stakeholder demands, the question is no longer whether to move in this direction. It's how to do so without disrupting the business.

From Tools to Architecture-Led Transformation

This is why the conversation must shift from tools to architecture-led transformation. Firms no longer have to layer new tools onto fragile processes. Instead, they can build on a shared, continuously improving data and control platform, reduce operational risk through standardized reconciliations and workflows, and prepare for a world in which AI helps run – not just document – the investment function.

Good tools are now table stakes. What separates leaders from followers is the architecture beneath them. Firms that choose a single-instance, multi-tenant operational backbone like Clearwater's are not simply buying software; they're future-proofing their operating model.

About Clearwater Analytics (CWAN)

Clearwater Analytics (NYSE: CWAN) is transforming investment management with the industry's most comprehensive cloud-native platform for institutional investors across global public and private markets. While legacy systems create risk, inefficiency, and data fragmentation, CWAN's single-instance, multi-tenant architecture delivers real-time data and AI-driven insights throughout the investment lifecycle. The platform eliminates information silos by integrating portfolio management, trading, investment accounting, reconciliation, regulatory reporting, performance, compliance, and risk analytics in one unified system. Learn more at www.cwan.com.

Voices from the Market III

From new financing structures for the energy transition to AI-driven vendor economics and the growing complexity of data licensing. Industry leaders share where the market data landscape is heading next. Their perspectives span securitization models, integrated data platforms, and the operational realities of embedding AI responsibly. One theme runs through all of them: The infrastructure decisions being made today will determine who leads tomorrow.



JORN VOS

Director Business Development EMEA
Gresham

Financial institutions face growing complexity from a variety of factors, ranging from private markets to advanced analytics. At the same time, cloud adoption and AI have exposed both opportunities and limits of current data platforms. A one-size-fits-all approach no longer delivers the required scale, flexibility, or trust.

At DKF, we explore how these shifts are reshaping enterprise data management into a strategic capability, enabling Data Management as a Service (DMaaS). Strong data foundations unlock intelligence, reduce costs, and make AI practical. By moving beyond monolithic platforms to business-led solutions, firms can turn data into a truly competitive advantage.



JOHN LATHOUWERS

Managing Director | TCAM

Financial institutions are using AI to extract more value from market data, but they face significant challenges. Data quality, licensing and usage restrictions, model transparency, and unlicensed use and distribution all demand strict governance. The rapid growth of alternative and real-time data also requires robust infrastructure and clear vendor agreements.

As these pressures increase, organizations benefit from an independent guide who can interpret rules and translate complex requirements into practical governance.



CHAJA DE HAAN

Principal Consultant
Bridge The Market Consultancy

For vendors, AI is the next revenue cycle. For end users, compliant AI-ready data ingestion is key. They prefer clean, governed, lineage-tracked data. Both are reallocating capital towards AI. Multi-provider strategies (for example, Anthropic and OpenAI) are becoming standard, which is flexible but costly.

AI spend in market data should be treated as its own line item, mirroring the ESG transparency dynamic. AI doesn't scale like legacy models because more usage means higher cost. Pay-per-use is unpredictable, while multi-year contracts risk may become obsolete. Embedding AI in existing contracts now can resurface as a hidden premium later. Vendors who maintain open dialogue and actively support clients in navigating this transition will find the most durable commercial ground.



LUC OLINGER

CEO | Greenium Service GmbH

The energy transition is not failing due to a lack of technology; it is failing due to the financing structure. Expanding battery storage, charging infrastructure and decentralized energy systems require hundreds of billions of euros. However, financing remains dominated by equity, and is project-specific, and difficult to scale. What is needed is a debt instrument suitable for the capital markets. Securitization provides this. It bundles similar cash flows, such as those from leasing and installment purchase agreements with public and commercial customers, and transforms them into standardized, investable securities. This transforms individual project risk into a diversified portfolio and illiquid infrastructure into a scalable asset class. This paradigm shift from project-based to portfolio-based logic makes the energy transition accessible to institutional capital.



ALISTAIR BROOKER

VP General Manager, Market Data
Calero

It's interesting to hear that AI removes the need for system integration. We see it differently. Rather than having AI log into multiple systems to retrieve data, a fully integrated environment allows questions to be answered in one place, reducing effort, risk, and concerns around AI login access and data usage.

Centralized integration across lifecycle processes still delivers major benefits in a complex market data industry. At Calero, we integrate with trusted partners to bring in key datasets, while installing AI to enhance and support our market data inventory processes, improving accuracy and efficiency across the lifecycle.

We're not replacing established processes. Market data requires informed human decision-making. Our AI innovation is designed to enrich and support this complexity, not rewrite it.



CARL-JOHAN CORNELIUSSON

Head of Product Information
SEB Asset Management

At SEB Asset Management, AI is becoming a natural part of our day-to-day work. We're shifting our focus from what the technology can do to how we apply it to create long-term value.

A key priority for us is to embed AI into our work methods and selected systems in a controlled way, aligned with business needs and regulatory expectations. This requires close collaboration with internal and external partners, with clear roles, priorities and governance.

As AI outputs can be unpredictable, we rely on clear frameworks and human oversight. Our ambition is to use AI responsibly to strengthen our processes, support our colleagues, and deliver consistent value to our customers.



BABKEN HAKOBYAN

Head of Market Data License & Invoice
Management | DekaBank

Market data licensing has moved far beyond a procurement topic and is now a strategic management challenge. Data is consumed across trading platforms, cloud environments, analytics tools, and business applications, making entitlements increasingly difficult to oversee. At the same time, vendor models are becoming more granular, while audits and compliance requirements continue to rise. Without strong governance, firms face duplicate spend, contractual breaches and unexpected true-up costs. Organizations that create transparency, clear ownership and central control can reduce risk, optimize spend and turn licensing into a competitive advantage.

Understanding Market Liquidity

Financial markets operate through various structures, all designed to accommodate different types of participants and execution methods. Some markets prioritize full transparency, while others emphasize liquidity and anonymity.

The Markets in Financial Instruments Directive II (MiFID II), implemented by the European Union, plays a crucial role in enhancing market transparency and efficiency. By mandating detailed reporting and stricter trade execution requirements, MiFID II aims to improve data quality and provide better visibility into different market structures. These reforms are designed to enable market participants to better evaluate price discovery and make more informed trading decisions.

This article explores lit limit order book closing auctions as a key liquidity category for institutional investors. It will identify their participants and evaluate the empirical liquidity data for German DAX stocks.

Exchanges are highly competitive businesses, usually with dominant players for a particular market. It's not surprising that the electronic trading venue of Deutsche Börse AG, XETRA, is the leading on exchange venue in trading volume for stocks of German DAX companies.

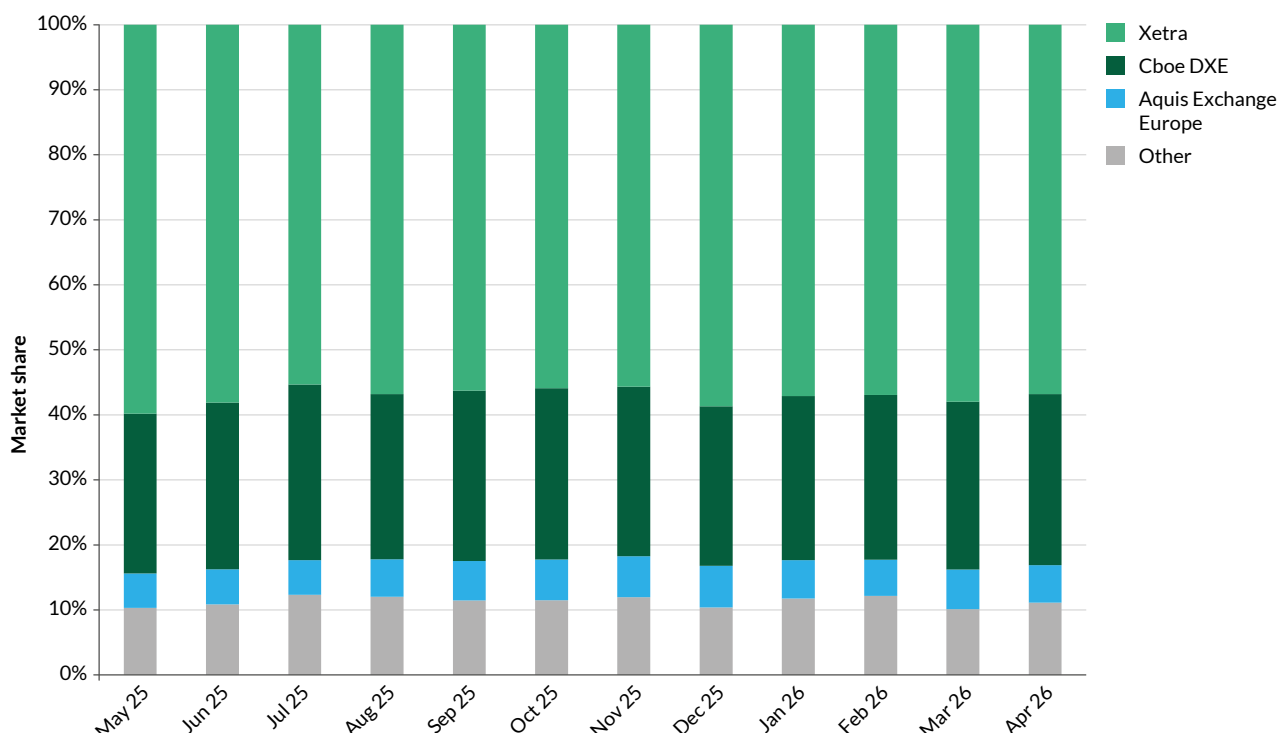
Lit Closing Auction

On lit exchanges, such as XETRA, the closing auction is a scheduled trading event, where the close asset prices of a trading day are determined by accumulated buy and sell interest. These auctions help establish fair market prices by choosing the price level that maximizes the traded volume in an auction.

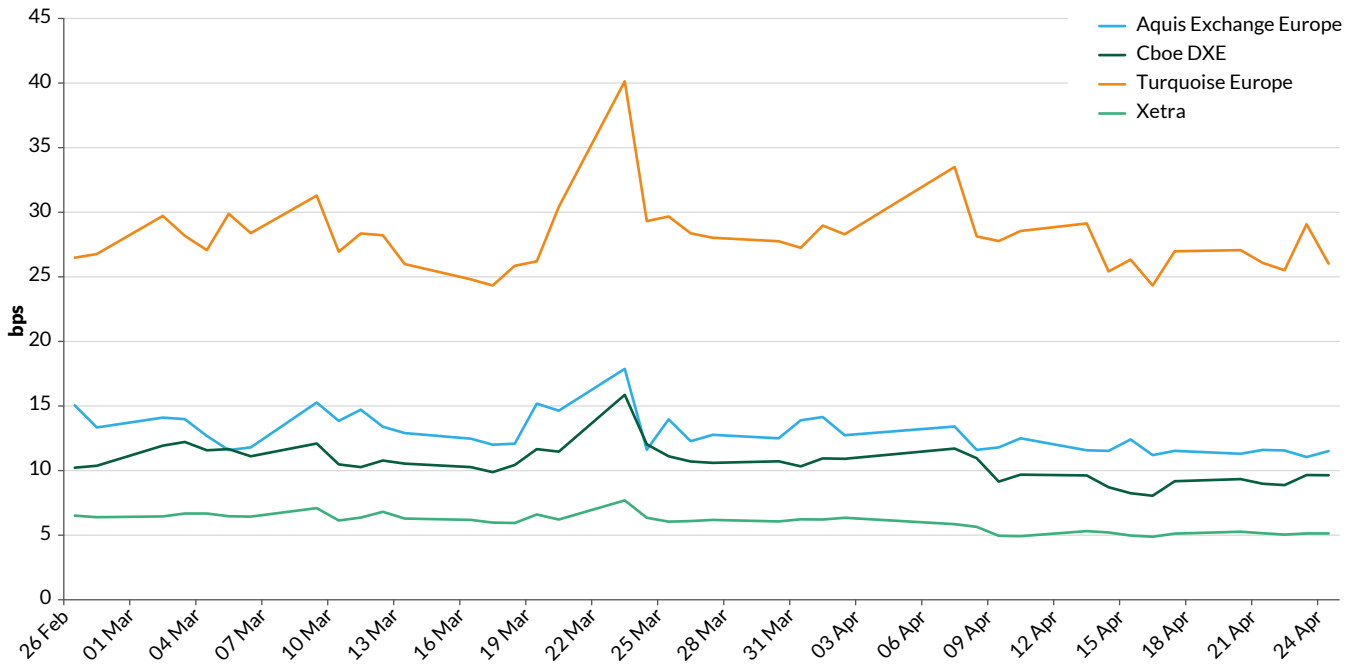
In the auction, the market participants are allowed to place orders, as in continuous trading, with the exception that the market orders aren't executed immediately. To avoid price manipulation, the end of the auction takes place at a random time within time bounds.

The primary participants include institutional investors, retail brokers, liquidity providers, and arbitrageurs. Since auctions aggregate demand and supply, they play a critical role in price formation, with most market participants considering closing auction prices to be the most reliable indicators of fair market value. It is a point in the day with significant, if not the most, liquidity.

Market share for DAX stocks (on exchange)



25K VWAS for DAX stocks



The rising popularity of ETFs has increased liquidity needs for institutional investors, particularly on rebalancing days. For performance reporting, institutional investors prefer participating in end-of-day auctions, as these prices are typically used for net asset value (NAV) reporting. Portfolio managers benchmarked against closing prices are effectively compelled to trade at the auction – doing so elsewhere would introduce tracking error relative to their benchmark. As a result, a significant portion of institutional trading volume is executed during closing auctions.

Liquidity Analysis for DAX Companies

Closing auctions currently make up around 20% of the daily traded volume. They bundle much liquidity in the final period of a trading day. It's almost redundant to stress their importance for institutional investors who face the challenge of large volumes daily. As closing auctions aim to match accumulated asks and bids, they tend to happen at a single venue (for German large caps, this is XETRA).

The following plot shows the 25k volume weighted average spread for multilateral trading facilities (MTFs) Aquis Exchange Europe (blue), Cboe DXE (dark green), Turquoise Europe (orange) and XETRA (green).

The best execution for DAX trades will most likely be via XETRA. However, brokers can have different strategies for best execution since additional at close liquidity can be found in Alternative Closing Mechanisms, Systemic Internalisation at Close or Over-the-Counter at Close.

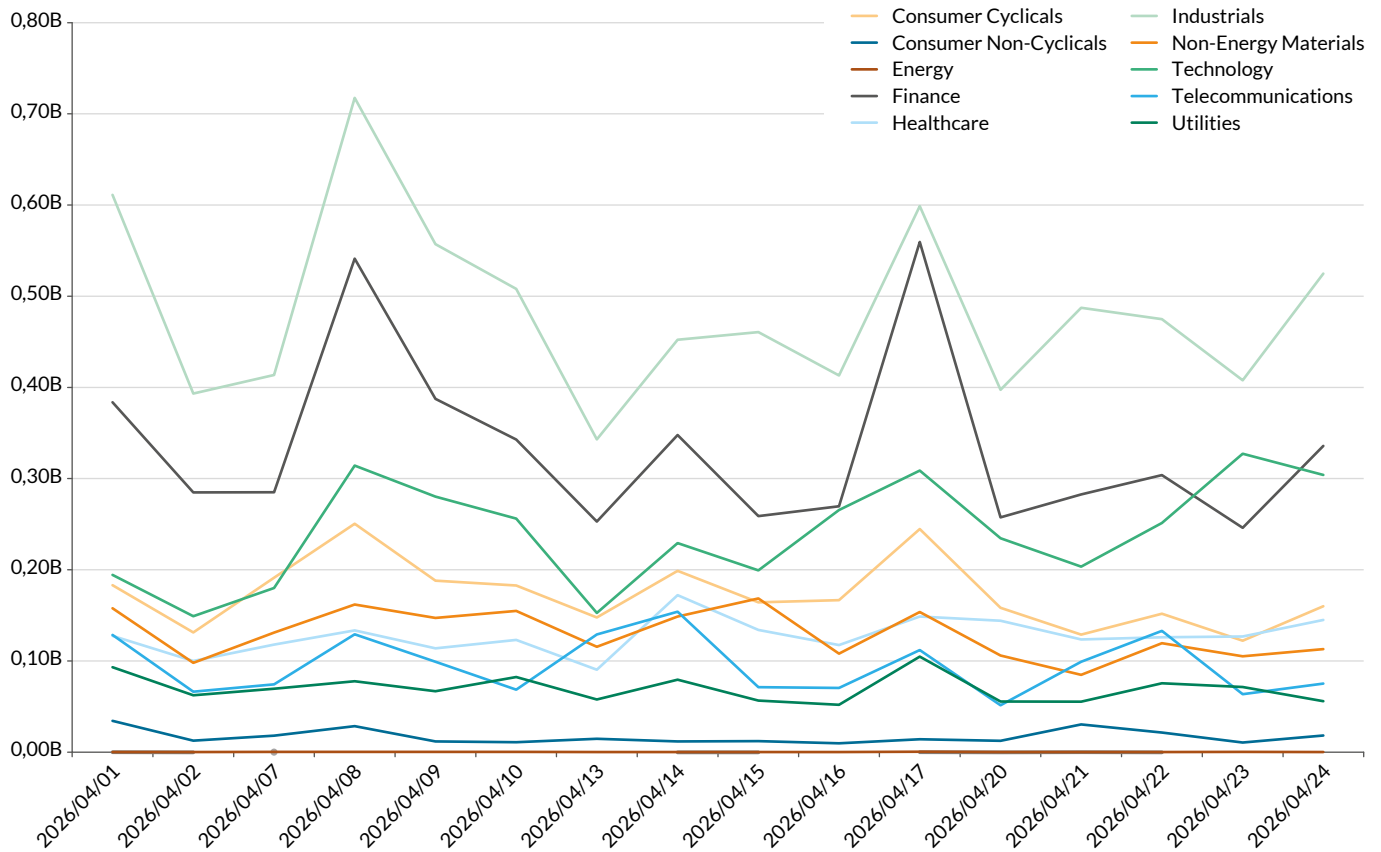
Institutional investors are active participants in closing auctions. Considering the traded industry sectors can reveal interesting information on how competitors adjust their portfolio weights. Investment strategists may use this to benchmark their strategy against market and competitor behavior.

The plot below shows the average daily traded volume for DAX sector indices in XETRA for the closing auction. The top three most traded sectors are industrials, finance, and technology. For those, one would expect increased rebalancing needs from investors, while energy and consumer non-cyclical portfolio weights should remain stable.

Conclusion

Lit closing auctions represent a critical liquidity category for institutional investors. For German DAX stocks, XETRA dominates closing auction volume, reflecting its structural role as the primary price formation venue for large-cap German equities. The concentration of institutional flow at the close, driven by benchmark tracking obligations, NAV reporting, and rebalancing needs, means that understanding auction dynamics is both an operational and strategic concern. A deep understanding of auction mechanics and granular liquidity data are therefore key inputs into best execution strategies, broker selection, and portfolio management decisions.

ADVT (€) for Sector Indices



Excuse: Simplified Example of Auction Mechanics

Consider the following orders which are present at the end of the auction:

- Market order "A" to buy 200 quantities at the market price
- Limit order "B" to buy 150 quantities at the limit price of 100.10 €
- Limit order "C" to buy 100 quantities at the limit price of 99.80 €
- Limit order "D" to sell 100 quantities at the limit price of 99.70 €
- Limit order "E" to sell 150 quantities at the limit price of 100.00 €
- Limit order "F" to sell 150 quantities at the limit price of 100.10 €

Naturally, a buy order would be eligible if the market price isn't greater than the preferred price, and a sell order if it's not smaller.

Let's consider the price levels of the limit orders for the market price:

- At 99.70 €, all the bids would go through, but from the asks, only "D" would count, which would result in a volume of 100 quantities
- The same volume would occur at the level of 99.80 €
- At 100.00 €, "A" and "B" would still be willing to buy, and "E" and "D" would still be willing to sell, resulting in a volume $\min(200+150, 150+100) = 250$ quantities that would be traded
- At 100.10 € all the asks would go through but only "A" and "B" would still be willing to buy, resulting in a volume $\min(200+150, 100+150+150) = 350$ quantities that would be traded

In the end, the trades will go through at the price of 100.10 €, with an ask surplus of 50 quantities, which could be transferred to the next session or discarded at the end of the day.



**KEES
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Co-founder

Market Data Challenges? It's All About Good People.

When I was asked to write an article about the market data industry we all know, like, or hate, I didn't overthink it. To be honest, I enjoy writing, and sometimes even "ranting," about an industry that I've been part of my entire career.

I won't bore you with the same topics that we've all heard and read about since the early 90s – cost, usage, compliance, governance, data quality, transparency, licensing, ownership, distribution, and more. In all honesty, I never imagined that the topics we write about today are so similar to the ones we faced when we started our company 35 years ago.

AI also deserves a mention. Although this topic is relatively new, rest assured that an army of experts is ready to tell you how AI can and will enhance industry efficiency and tackle most of our challenges. In reality, AI will likely raise the bar rather than fundamentally change the nature of the work.

When we sold our company (Screen Group) seven years ago, I promised myself to write a book about my time in the market data industry. Not to produce a bestseller, but to explain to family and friends that running a successful business starts with having good people.

Simultaneously, I wanted to explain what on earth I had been doing all these years. Many friends probably still think that we were selling computers to banks, or "installing complicated technical stuff in dealing rooms". This is not because they're not intelligent or because I can't explain what a market data consultant does. The truth is, the industry isn't very interesting unless you work in it. People hear it, can picture it, acknowledge it, then forget it. The good news is that my book is almost finished and soon I'll be able to show exactly what makes this industry.

So, I find myself thinking about the people in our industry – both those currently employed and those looking for new challenges. How will their futures evolve? Should we be concerned especially as AI becomes more dominant?

While expertise in market data technology, usage rights, or specific vendors is valuable, the best people carry a "survival kit" that isn't taught in any FISD course or any other program. In an industry where

the dos and don'ts are often written in a language only lawyers and the top technologists understand, three key characteristics set the "good people" from the rest apart:

- **Translator:** You must speak "trader" (90% urgency and 10% abbreviations), "IT" (100% logic and "no time"), "finance" (meaning everything is too expensive), and "legal" (risk-averse to the point of making no change). The best people act as translators, able to explain to a portfolio manager why their "simple request" for a new data set actually requires internal IT support, a long-term commitment to a vendor in another time zone, and the looming risk of a three-month audit.
- **Strategic Thinking:** You need a specific mindset when a vendor announces a "small adjustment" to their licensing model that effectively doubles your costs. "Good people" don't panic. They listen, assess, and think ahead. They know their alternatives and can navigate negotiations with a mix of charm and firm boundaries. In this industry, information is power and a cool head is essential.
- **Relentless Curiosity:** You stay curious. When a system stops working, the best in the business don't just look at the broken API; they ask why systems were built that way, who actually uses them, and for what purpose. They are the "detectives" in an industry that often takes pride of its own complexity.

Ultimately, these people are the "human API" of the market data industry, providing the connections that software alone cannot manage. They understand that while the data is digital, many hurdles – and their solutions – are deeply human. Whatever happens, I'm sure that there will always be a bright future for those who have a learning attitude, have the ambition to become the best, and are able to bridge business and technology. These are the people who stay curious in an industry where nothing is ever truly "finished".

Problem Focused – Solution Driven

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