



AI in Commodity Trading: From Competitive Edge to Commercial Reality

Whitepaper
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In collaboration with



AI in Commodity Trading: From Competitive Edge to Commercial Reality

In partnership with FT Longitude, HC Talent Intelligence surveyed senior executives across the global commodity industry, exploring where AI is having the greatest impact on operations today, and what will determine competitive advantage tomorrow.

Key Findings

- **AI is already delivering commercial value** - 67% of respondents report AI deployed or fully scaled in their trading function, with risk management and price forecasting delivering the greatest impact today.
- **Trading, risk and analytics are the most mature areas of AI deployment** - these areas are deployed or fully scaled in approximately two thirds of organisations surveyed
- **Data quality is the single biggest barrier to scaling** - ranked the top obstacle by 39% of respondents and cited by 59% overall, ahead of systems integration, governance, and talent.
- **Barriers evolve with maturity** - firms still in testing cite capability and cultural gaps; more advanced firms shift to integration and governance as their primary constraints.

Methodology

131

C-suite and C-1 executives surveyed

CEOs, CFOs, CROs, Heads of Trading, Strategy, Risk & Finance

10

Countries across four regions

Europe, US, GCC and Asia

7

Business functions

Trading, Analytics, Risk, Compliance, Operations, Finance, HR

3

Company Types

Trading Houses, Asset-backed Multinationals, Financial Institutions/Hedge Funds

3

Core sectors

Energy & utilities (44%), Financial services (42%), Mining & metals (11%)

Where Commercial Value is Found Today

AI is already delivering measurable commercial value across the commodity trading industry, but that value remains highly concentrated in a narrow set of functions. Survey respondents consistently point to risk management as an area where AI is having the greatest impact today, followed by price forecasting and market analytics, and a cluster of trade operations and post-trade activities. Very few respondents report seeing no measurable value at all (4%), underscoring that AI has moved beyond experimentation and into real economic contribution.

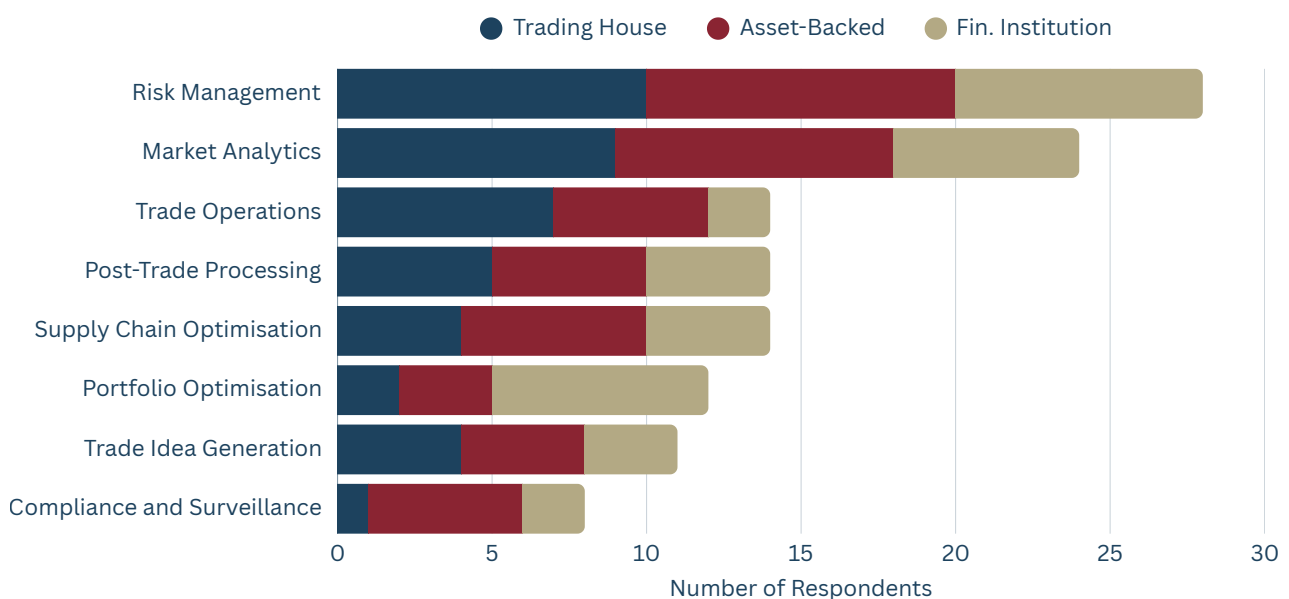
However, the pattern of value creation is instructive. Rather than transforming trading outcomes end-to-end, AI impact today is centred on analytically intensive, decision-support functions. These are areas where structured data is already abundant, performance feedback loops are clear and AI can augment human judgement without assuming full decision authority. In practice, this means improving the speed, consistency and precision of decisions, particularly around risk, rather than fully automating them.

Variations by Type

The concentration of value varies by business model. Trading houses report stronger impact in trade operations, where marginal gains in speed and efficiency translate quickly into P&L. Asset-backed organisations see proportionally more value in logistics and supply chain optimisation, reflecting the physical nature of their assets and constraints. By contrast, financial institutions emphasise portfolio optimisation and capital allocation, where modelling depth and analytical scale are primary levers.

Taken together, the findings suggest that AI's current contribution is incremental rather than transformational. Value is emerging first where data is cleanest, decisions are repeatable and organisational risk tolerance is highest. This helps explain why risk and analytics lead today, while more autonomous or execution-heavy activities remain limited. The implication is clear: AI value is real but unevenly distributed, and the next phase of impact will depend on whether firms can scale AI beyond a handful of high-value functions

Commercial Advantage Bar Chart by Company Type



From Experimentation to Scale: Current Levels of AI Adoption

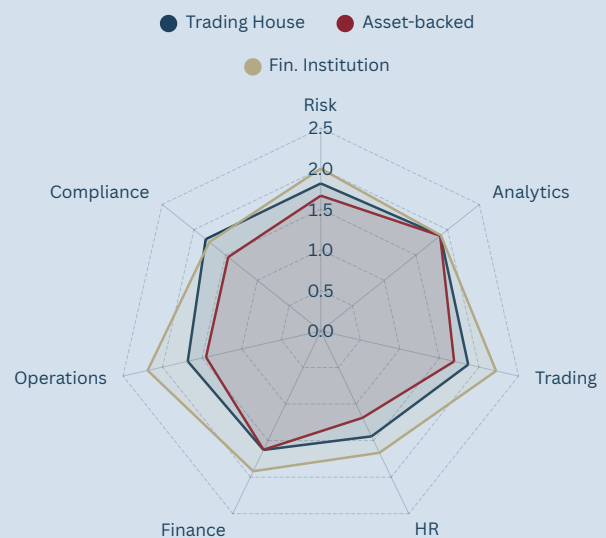
Survey results show that AI adoption across the commodity trading industry is now widespread, but depth of integration varies materially by company type. When asked to assess how far AI is deployed across core functions, financial institutions are consistently further along the curve. Respondents from these firms describe broader and more balanced integration across front, middle and back-office functions. Their adoption profiles are broader and more balanced, reflecting earlier investment in analytics, stronger governance structures and greater operational readiness to integrate AI into core workflows.

Trading houses exhibit a more uneven adoption profile. While respondents from trading houses report relatively advanced AI deployment in trading, analytics and risk, this remains more uneven across support functions. This reflects a deliberate focus on areas where AI has the most direct impact on trading performance, with integration elsewhere lagging behind. Asset-backed organisations show similarly broad experimentation, particularly in analytics, but lower overall maturity - pointing to ongoing challenges integrating AI across complex physical and operational environments.

Across all company types, adoption is strongest where AI aligns closely with quantitative decision-making and near-term commercial outcomes. Functions such as analytics, risk and trading sit furthest along the maturity scale, while finance, compliance and operational workflows remain more fragmented. HR is a clear outlier, consistently lagging other functions, highlighting the limits of current AI deployment beyond revenue- and risk-adjacent activities.

AI Maturity Radar by Company Type

(0 = Not Deployed, 3 = Fully Integrated & Scaled)



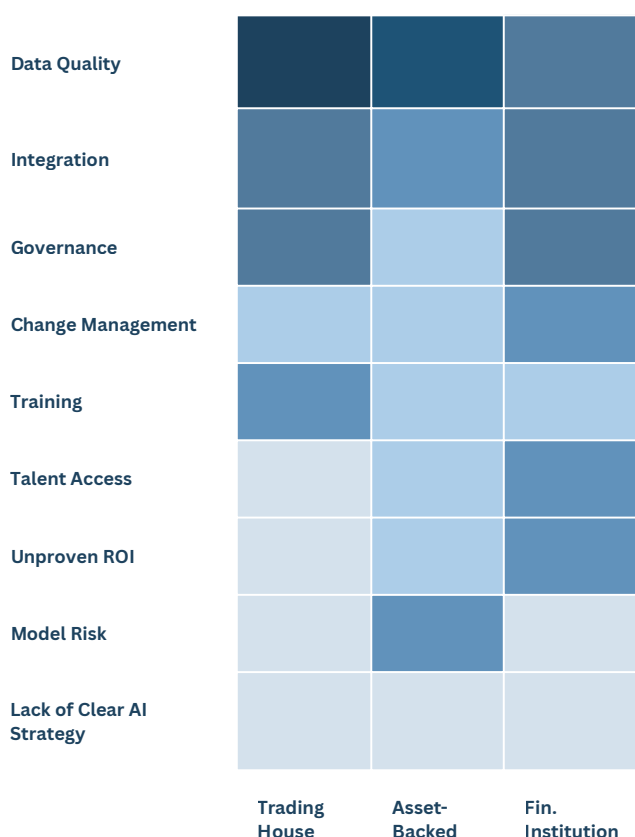
What ultimately distinguishes more advanced firms is not adoption in individual functions, but consistency across them. Among organisations with higher overall maturity, AI deployment scales simultaneously across trading, analytics and risk, creating reinforcing gains. Less mature firms, by contrast, do not lag in one area alone — they lag across the board. This suggests that AI maturity is less about isolated success stories and more about an organisation's underlying ability to integrate, govern and trust AI at scale.

Barriers to Scaling AI

Survey respondents make clear that barriers to scaling AI are neither uniform nor static. Instead, they evolve as organisations progress along the AI maturity journey. The distinction matters, because barriers that constrain early experimentation are fundamentally different from those that limit enterprise-wide deployment. What firms cite as obstacles is therefore often as revealing of their stage of development as it is of their absolute capability.

Across the survey, data quality stands out as the single most significant barrier to scaling AI, cited by nearly four in ten respondents and ranked well ahead of any other constraint.

Heatmap of Barriers by Company Type



^Darker shading indicates higher-ranked barriers

Its prominence is consistent across company types, suggesting that data readiness is not merely a technical challenge but a foundational one.

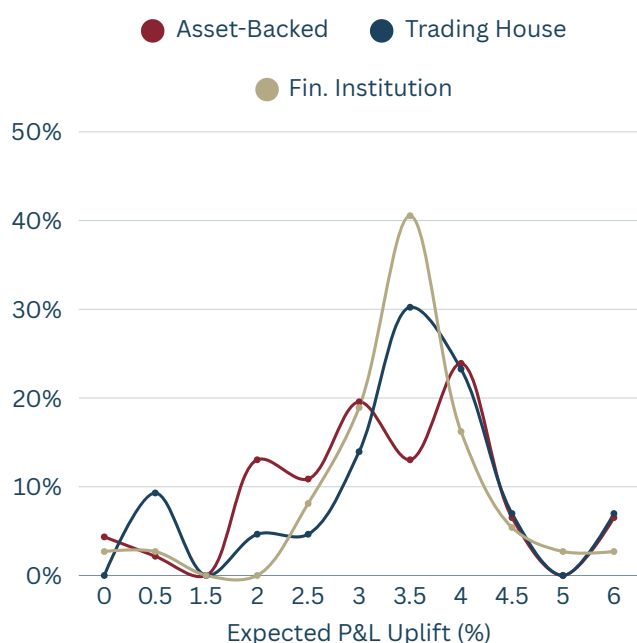
Beyond data quality, reported barriers to scaling AI vary systematically by company type, reflecting differences in operating model, risk ownership and organisational design. Trading houses most frequently frame AI as an enablement challenge, citing difficulties embedding tools into fast-moving, judgement-led workflows without slowing decision-making. Asset-backed organisations, by contrast, are more likely to characterise the barrier as one of cultural trust, particularly around model explainability, governance and accountability across physical assets. Financial institutions most often point to a talent constraint, highlighting competition for specialist capability and the challenge of assembling teams that combine quantitative depth with domain and risk awareness. In this context, barriers to scaling AI are less about access to technology and more about where different types of firms struggle to align people, processes and decision rights around AI-driven insight.

Regional interpretations further reinforce how barriers to scaling AI are shaped by local context. Respondents in the United States place greater emphasis on data quality than their peers elsewhere, ranking it notably higher than in Europe. In contrast, respondents in the GCC cite talent access as their primary barrier, reflecting infrastructure and skills gaps accompanying rapid AI adoption in emerging markets.

The Future Gap: Expected P&L Uplift vs Current Capability

Survey results show strong optimism about the potential financial impact of AI over the next three years. The mean expected P&L uplift stands at 3.3%, with nearly half of respondents projecting gains of 3.5% or more by 2027. Expectations are clearly skewed upward, signalling a broad belief that AI will become a material contributor to trading performance in the near term.

Expected P&L Uplift by Company Type



However, deeper analysis shows divergence, particularly when looking at company type. Trading houses and financial institutions show tighter clustering around mid-range uplift expectations, reflecting more established views on how AI supports decision-making, execution and risk management. Asset-backed organisations display greater dispersion, consistent with differences in physical asset complexity, execution constraints and generally lower AI maturity.

Regionally, respondents in the United States tend to align ambition more closely with existing capability,

while European respondents appear more cautious. By contrast, respondents in the GCC report the highest expected uplift, with ambition often running ahead of current deployment patterns.

A further perspective emerges when expectations are analysed by role. Respondents closest to day-to-day delivery, including Heads of Trading, CROs and CTOs, report the lowest mean expected uplift, typically between 2.7% and 3.0%. Senior leaders further removed from operational constraints express materially higher expectations. The pattern suggests that proximity to execution tempers optimism, while distance from it amplifies projected returns.

Expected P&L Uplift By Role



Taken together, the findings highlight a growing tension between ambition and execution. Confidence in AI's long-term value is high, but expectations often assume a level of integration, governance and operational readiness that many organisations are still working towards. The challenge ahead is not belief in AI's potential, but ensuring that projected returns are grounded in the practical realities of deployment and scale.

Where Competitive Advantage Will be Won

Survey respondents are clear that future competitive advantage will not come from AI alone, but from how effectively it is embedded into existing business models and decision-making processes. The areas most frequently cited as sources of differentiation (superior proprietary data, faster decision cycles and more accurate risk pricing) point to AI acting as an amplifier of existing strengths rather than a force for wholesale reinvention.

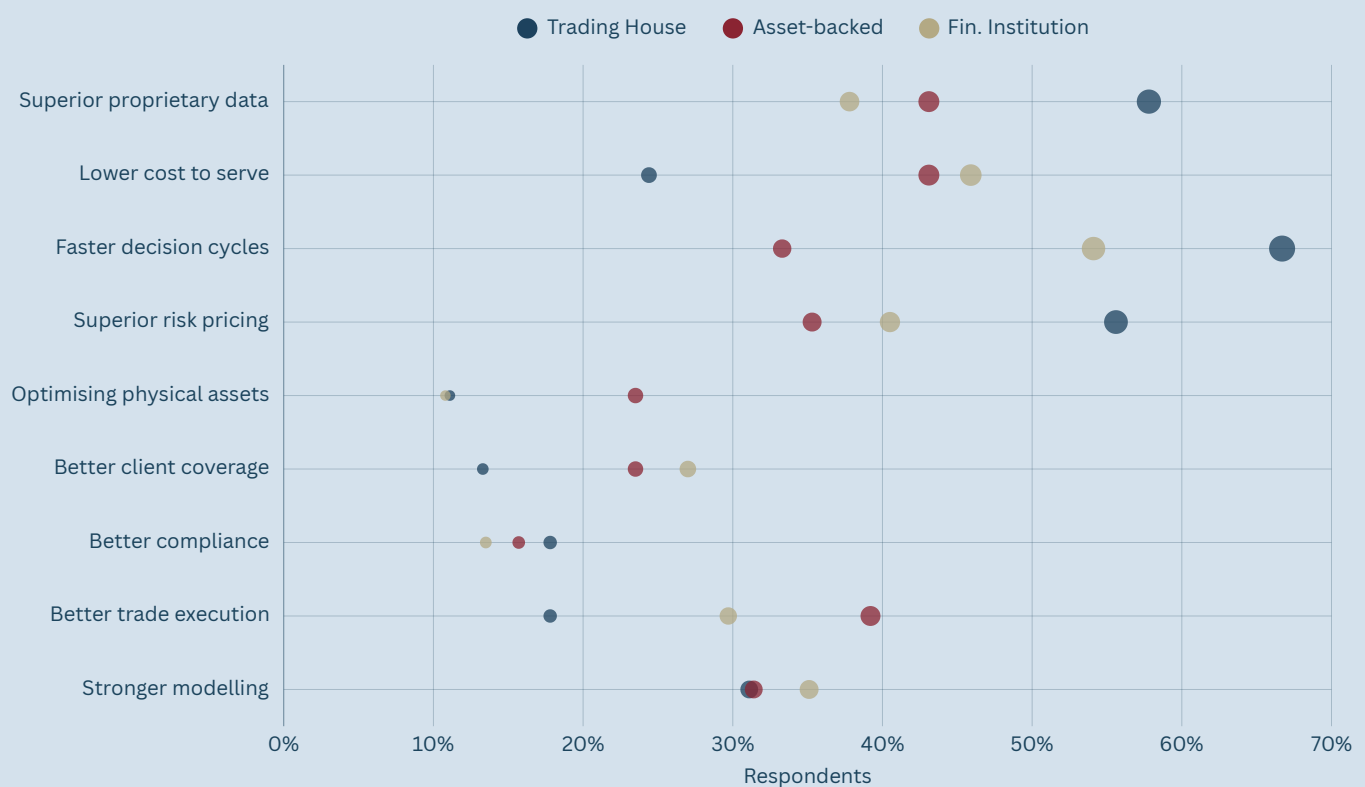
Notably, respondents place relatively less weight on areas such as fully automated trading, client acquisition or compliance automation as primary drivers of advantage. This suggests a growing recognition that many AI capabilities will become increasingly commoditised, while differentiation will rest on internal data assets, system integration and decision discipline.

Conclusion

Across every stage of analysis, one conclusion is clear: data is the defining constraint. While confidence in AI's potential is widespread, the ability to translate that potential into sustained performance depends on the quality, structure and accessibility of underlying data.

The organisations best positioned to win are those that treat data as a strategic asset, investing early in consolidation, governance and integration to support scale. In this context, AI advantage is not primarily a question of innovation, but of execution. Those who fix their data foundations will lead; those who do not will struggle to turn ambition into results.

Future Competitive Advantage Scattergraph by Company Type



About HC Talent Intelligence

Our dedicated Talent Intelligence function empowers organisations to make data-driven decisions, optimise talent resources, and drive strategic workforce planning for long-term success.

HC Group is a global executive search and talent intelligence consultancy with over 20 years of experience advising clients across the commodity and energy trading markets. Our Talent Intelligence division delivers highly customised research, compensation benchmarking, and organisational structuring advice to some of the most competitive firms in the industry.

Our expertise enables us to provide not only quantitative benchmarks (e.g., base, bonus, total compensation by role and region) but also qualitative insight into how firms are evolving incentive models in response to shifting performance expectations, risk appetite, and organisational design.

HC Group's deep connectivity across both physical and proprietary trading houses, combined with our specialisation in commodity-specific talent strategy, ensures this analysis reflects the most current, nuanced view of market practices.

All HC's talent intelligence products are bespoke to fit the needs of our clients, and no two projects are the same. Our product offering includes the following:

- Compensation Benchmarking & Analysis
- Compensation Design & Bonus Methodologies
- Competitor Analysis
- Skills & Competencies Framework
- Skills Shortage & Talent Gap Assessment

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