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GLOBAL INSIGHT

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Thematics

Uncovering Alpha in AI's Rate of Change

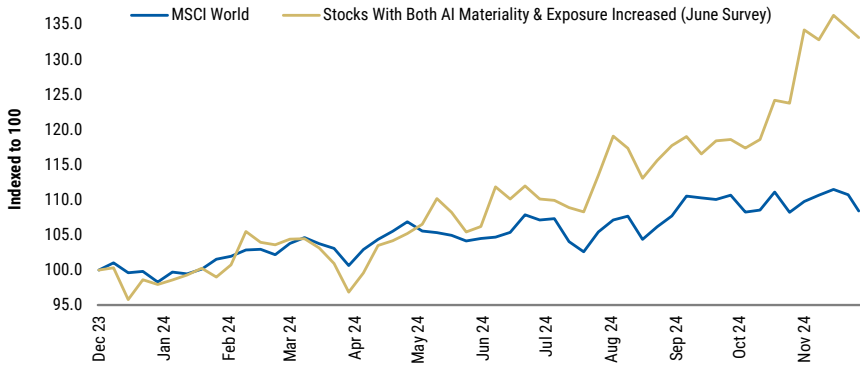
More than two years since ChatGPT's launch, we remain in the early innings of AI's diffusion. This is the third iteration of the most comprehensive AI stock mapping exercise in the market. Rate of change continues to drive outperformance, and we believe 2025 will be the year of Agentic AI.

AI's Rate of Change Continues to Surprise: Our first AI Adopter survey was published in January 2024, our second in June 2024. This is our third such analysis. We have been surprised by the continued extent of changes made by our analysts across >3,700 global stocks under coverage. 585 stocks had their AI exposure or materiality changed ($13trn of market cap). AI model capabilities and costs continue to evolve rapidly and corporate adoption is still low. AI's diffusion is accelerating but decidedly remains in its early innings.

AI's Rate of Change Has Driven Outperformance: Exhibit 1 shows the 2H24 outperformance of stocks which previously saw their exposure *and* materiality increased. Looking forward, overweight rated stocks matching these criteria in this latest survey have 29% upside to price targets. We explain how to access and use our database and sees three opportunities ahead: (1) Enablers with rising materiality; (2) Adopters with pricing power; (3) Financials with AI 'Rate of Change' tailwinds.

2025 - Agentic AI Adopters: As in previous tech cycles, the equity markets are poised for Semiconductor leadership to give way to the Software Layer. That process is underway. Simply put, AI Agents give "agency" to software programs. In other words AI Adopter companies can move from the *reactive* "chatbot phase" to the *proactive* "task-fulfillment phase" of AI; entailing broad productivity gains. We believe 2025 will be a year of Agentic AI, robust enterprise adoption, outperformance of favoured Agentic plays, positive surprises in model capabilities, greater breadth of monetisation and thus diminishing focus on ROI debates.

Exhibit 1: Stock returns where both materiality and exposure were increased



Source: Eikon, MS Research. Past performance is no guarantee of future results. Results shown do not include transaction costs.

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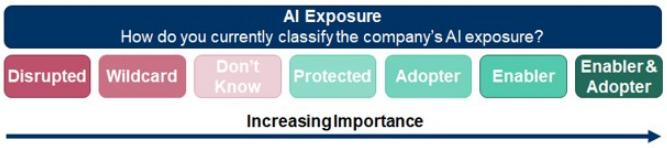
Please click here ***for the full excel database of >3,700 stocks mapped by AI exposure and materiality.***

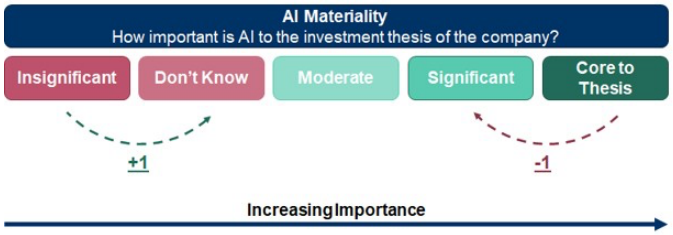
Mapping AI's Rate of Change in Charts

Exhibit 2: Morgan Stanley classification for how AI Rate of Change "Exposure" is scored



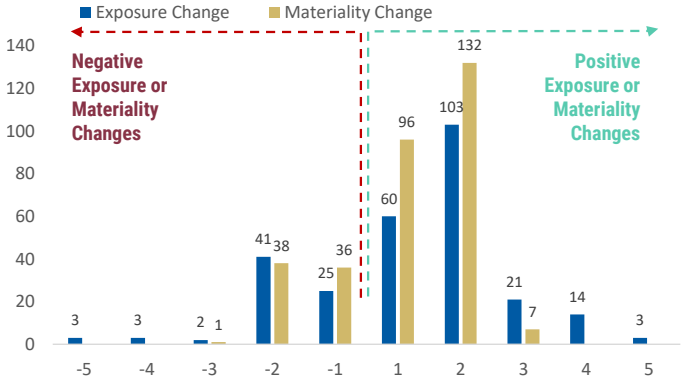
Source: Morgan Stanley Research

Exhibit 3: Morgan Stanley classification for how AI Rate of Change "Materiality" is scored



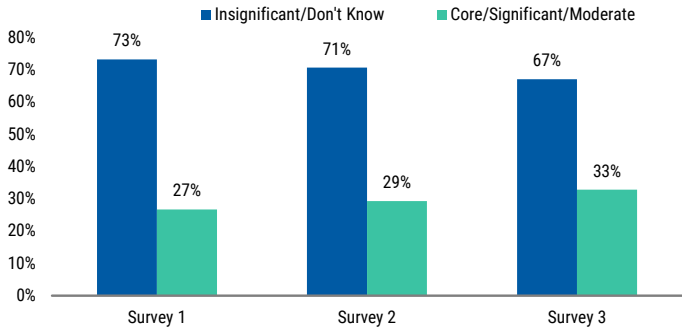
Source: Morgan Stanley Research

Exhibit 4: Most analyst reclassifications are by multiple increments to the upside and downside



Source: Morgan Stanley Research; Please click here ***for the full excel database of >3,700 stocks mapped by AI exposure and materiality***

Exhibit 5: Steady progress is being made by companies in conveying their investment and equity story as it relates to AI



Source: Morgan Stanley Research; Please click here ***for the full excel database of >3,700 stocks mapped by AI exposure and materiality***

Exhibit 6:

AI Agent Infrastructure and Vendor plays within the Software layer - stocks in bold represent our favoured equities within the Agentic AI theme

AI Agent Infrastructure

- **MongoDB** (Vector Database) – Enabler/Adopter, Significant
- **Confluent** (Real Time Data Transport) Enabler, Moderate
- Elastic NV (RAG/LLM Orchestration) – Enabler, Moderate
- UI Path (Agent Builder) – Wildcard, Significant
- Appian (AI Skills) – Wildcard, Significant

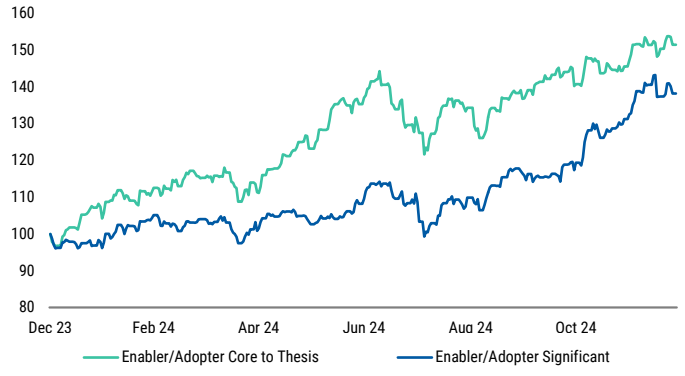
AI Agent Vendors

- **Salesforce** (Agentforce) – Enabler/Adopter, **Core to Thesis**
- **Microsoft** (Copilot) – Enabler/Adopter, **Core to Thesis**
- **Atlassian** (Intelligence/Rovo) – Enabler/Adopter, Significant
- **Workday** (Illuminate AI) – Enabler/Adopter, Moderate
- **ServiceNow** (NowAssist) – Enabler/Adopter, **Core to Thesis**
- **SAP** (Joule AI) – Enabler/Adopter, Significant
- **RELX** (Protégé) – Enabler/Adopter, **Core to Thesis**
- **Hubspot** (Breeze AI) – Enabler/Adopter, Significant
- **Gitlab** (Gitlab Duo) – Enabler/Adopter, Significant
- Freshworks (FreddyAI) – Enabler/Adopter, **Core to Thesis**
- Asana (AI Studio) – Enabler/Adopter, Significant
- Box (Box Studio) – Enabler/Adopter, Significant

Source: Morgan Stanley Research; Last Price - MDB - $246, CFLT - $29, ESTC - $101, PATH - $13, APPN - $33, CRM - $332, MSFT - $423, TEAM - $250, WDAY - $252, NOW - $1073, SAP - 235, REL - £37, HUBS - $702, GTLB - $59, FRSH - $16, ASAN - $20, BOX - $31

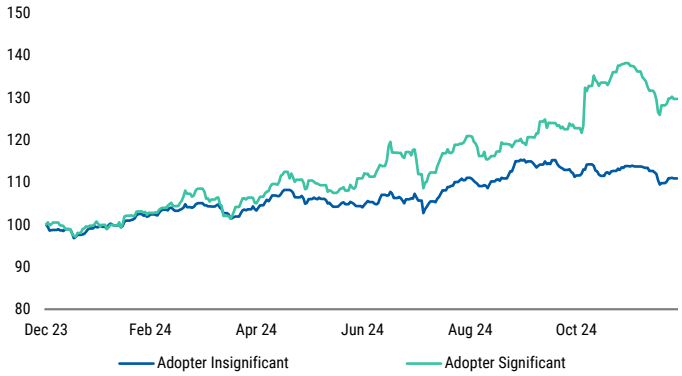
AI's Rate of Return in Charts

Exhibit 7: Enabler/Adopters Core vs Significant



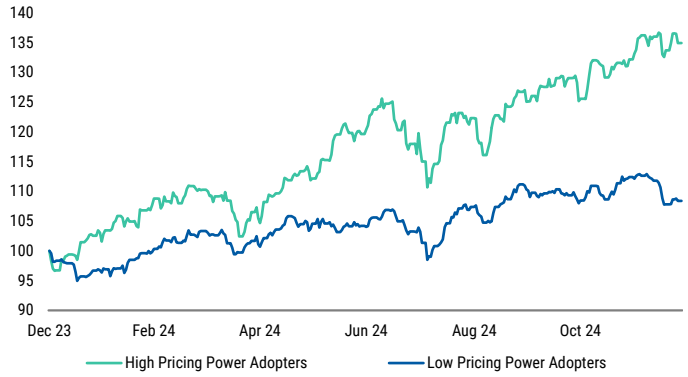
Source: FactSet, Morgan Stanley Research

Exhibit 8: Adopters Significant vs Insignificant



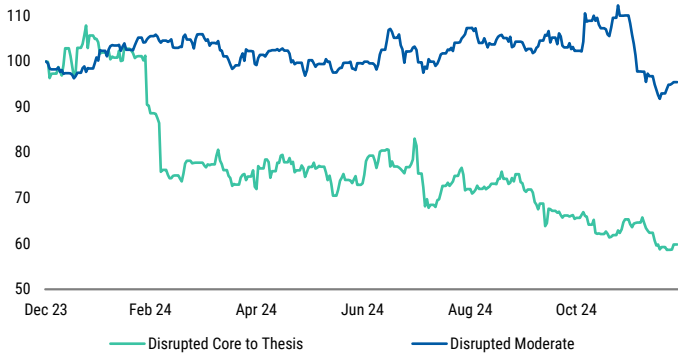
Source: FactSet, Morgan Stanley Research

Exhibit 9: Adopters High vs Low Pricing Power



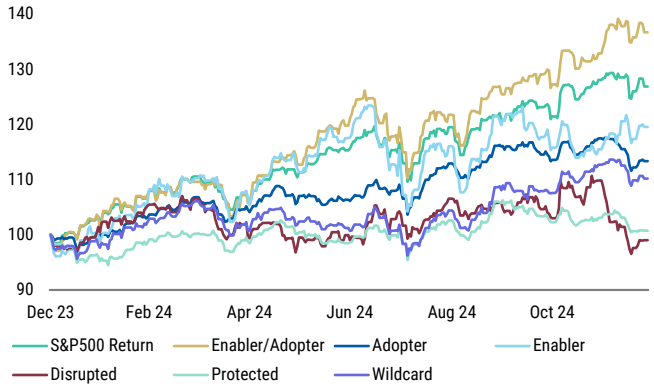
Source: FactSet, Morgan Stanley Research

Exhibit 10: Disrupted Core vs Moderate



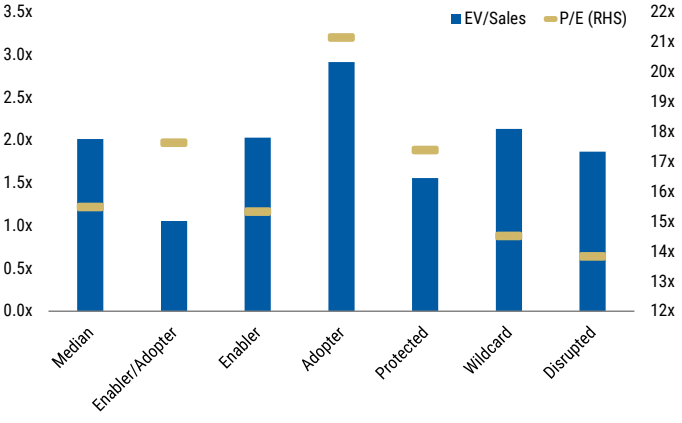
Source: FactSet, Morgan Stanley Research

Exhibit 11: Market cap weighted performance by AI Exposure categorisation during 2024



Source: FactSet, Morgan Stanley Research

Exhibit 12: Valuation (at year end 2024)



Source: FactSet, Morgan Stanley Research

Executive Summary

Please click here ***for the full excel database of >3,700 stocks mapped by AI exposure and materiality.***

This is the third mapping (see here and here) of our global coverage as it pertains to the speed of AI adoption. We have again asked Morgan Stanley Research analysts across the firm's global stock coverage three questions:

- **How do you currently classify the company's AI exposure?** 7 categories from Enabler down to Disrupted (see Exhibit 2)
- **How material do you believe AI will be to the investment thesis in the next 12-24 months?** 5 categories from Core to Thesis down to Insignificant (Exhibit 3)
- **How do you perceive this company's pricing power** (i.e. ability to retain cost savings vs passing through to customers)? 3 categories of High, Neutral, Low.

What's New in this analysis - 5 key changes and findings

1. **275 stocks ($5.7trn of value) have changed exposure and 310 stocks ($7.8trn of value) have changed materiality. 115 stocks ($2.2trn of value) have changed both exposure and materiality. 76 have moved up in both, 16 have moved down in both.** Stocks that have changed categories represent ~$14tr in market cap, $9tr in revenues .
2. **24 stocks (net) moved from Adopters to Enabler/Adopter**; 7 stocks to Disrupted.
3. **AI is now more material for 17% of Financials coverage**; Financials had the highest net AI Materiality increase across our global coverage. Consumer Staples was at the other end of the spectrum, with net 3% lower importance.
4. **139 Adopters have been designated as having "High Pricing Power"** and have outperformed "Low Pricing Power" Adopters by 30% since ChatGPT was released. Since the last survey, our analysts have added 8 companies to the high pricing power & high AI Materiality Adopters category.
5. **3 upward materiality ratings changes made for every stock that declined in materiality**. This ratio was 1.1 previously; in other words, in the last survey each upward materiality change was matched by a downward change.

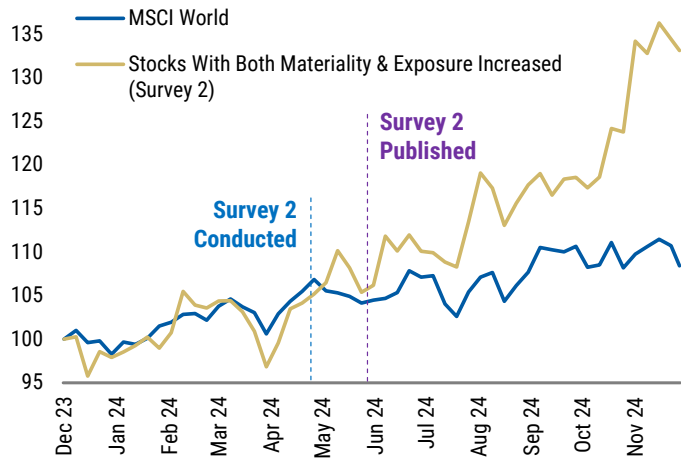
Rate of Change Has Driven Outperformance

We believe investors predominantly use our survey for three reasons: (1) to understand the rate of change in AI and its corporate adoption; (2) portfolio risk management and (3) stock-picking. We look at the performance of stocks for which our global analysts identified a change in materiality, exposure or both as part of the earlier re-mapping

exercise to assess the relevance of AI's rate of change.

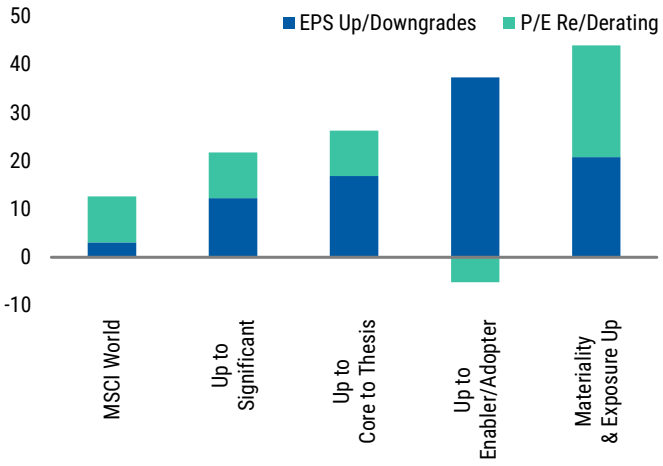
In our second survey, 326 stocks saw a change in AI exposure and 443 stocks saw a change in materiality, as judged by our global analysts. For simplicity, we group these changes into the most common types of re-mapping (i.e. both exposure and materiality up; only materiality increased to Core to Thesis; only exposure increased to Enabler/Adopter). Those stocks that had their exposure **and** materiality increased by our analysts in Survey 2 outperformed the MSCI World by 25% in 2024, with mostly over in 2H (Exhibit 13). Similar upgrades and re-ratings can be seen across other groupings of changes (Exhibit 14). While there are other factors at play, we believe that AI's rate of change in adoption will continue to be a differentiating factor for stocks over the course of 2025.

Exhibit 13: Performance of stocks upgraded both in exposure and materiality in Survey 2 vs MSCI World (Market cap weighted)



Source: Eikon, Morgan Stanley Research

Exhibit 14: Performance of stocks reclassified in various ways in Survey 2 vs MSCI World (%) - (2H24); average stock return by group



Source: Eikon, Morgan Stanley Research

Latest Rate of Change in Summary

The changes in our analysts' tagging of stocks has a similar pattern to the last survey. The largest number of stocks to change exposure category were 44 names moving from Adopter to Enabler/Adopters (24 net). This continued to be largely driven by Utilities and Energy stocks being considered to be enabling the build out of the AI infrastructure as well as being beneficiaries of its use. 42 names also moved from "Don't Know" classification to "Adopter" - so too did 33 stocks from the "Protected" category to "Adopter" - as companies continue to craft their message to the market around their involvement in this structural theme. Similar to the last survey, the largest market cap changes were between Adopter to Enabler/Adopter and from Protected to Adopter.

Within these category changes, there has been a far greater concentration in changes in materiality towards (1) Enabler stocks being upgraded in materiality to Core to Thesis and (2) Adopter stocks being upgraded to Moderate materiality by our analysts. In each case 9% of market cap of Enablers and Adopters was increased to Core to Thesis and Moderate, respectively. Collectively >$6trn of market cap was reclassified in these two ways. As we go on to elaborate, most of this evolution and upgrading of materiality – particularly for the Adopter category – has come from Banks and Financials. This is a vertical we believe will become increasingly important through 2025, just as Utilities was

through 2024.

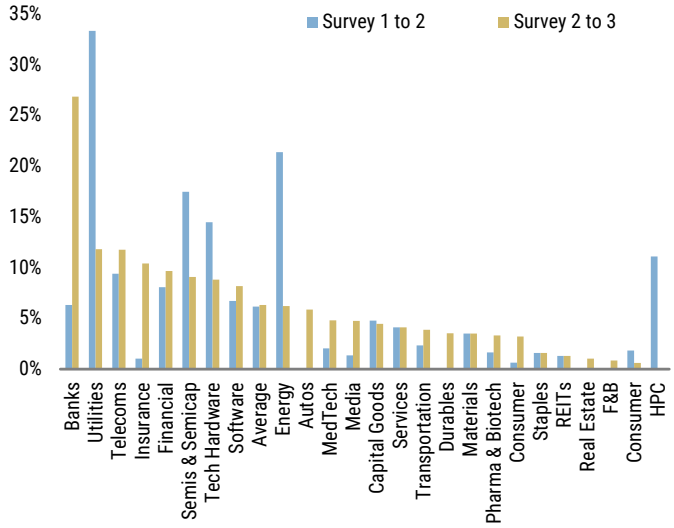
Exhibit 15: Global Coverage Rate of Change, Stocks (upper table) and market cap changed (lower table)

AI Exposure Changes		New AI Exposure							
		Enabler/ Adopter	Enabler	Adopter	Protected	Don't Know	Wildcard	Disrupted	Grand Total
Previous AI Exposure	Enabler/Adopter	311	3	20	0	1	3	0	338
	Enabler	4	173	0	1	1	0	0	179
	Adopter	44	13	1169	10	16	1	2	1255
	Protected	2	16	33	786	1	1	0	839
	Don't Know	8	9	42	4	522	5	3	593
	Wildcard	3	5	10	1	3	251	6	279
	Disrupted	0	0	1	0	0	3	34	38
	New Entry	21	16	71	47	33	9	5	202
	Grand Total	393	235	1346	849	577	273	50	3723

AI Exposure Changes ($bn)		New AI Exposure							
		Enabler/ Adopter	Enabler	Adopter	Protected	Don't Know	Wildcard	Disrupted	Grand Total
Previous AI Exposure	Enabler/Adopter	29,199	36	426	0	0	10	0	29,672
	Enabler	58	6,799	0	2	3	0	0	6,862
	Adopter	1,475	322	31,912	297	73	9	21	34,109
	Protected	25	158	902	10,875	5	4	0	11,968
	Don't Know	137	174	928	27	5,596	30	0	6,893
	Wildcard	55	31	448	21	15	3,332	15	3,917
	Disrupted	0	0	3	0	0	27	549	579
	New Entry	392	427	647	464	232	43	49	2,253
	Grand Total	31,342	7,945	35,266	11,686	5,925	3,455	634	96,253

Source: FactSet, Morgan Stanley Research

Exhibit 16: Materiality increases (% of sector's stocks upgraded) from one survey to the next



Source: Morgan Stanley Research

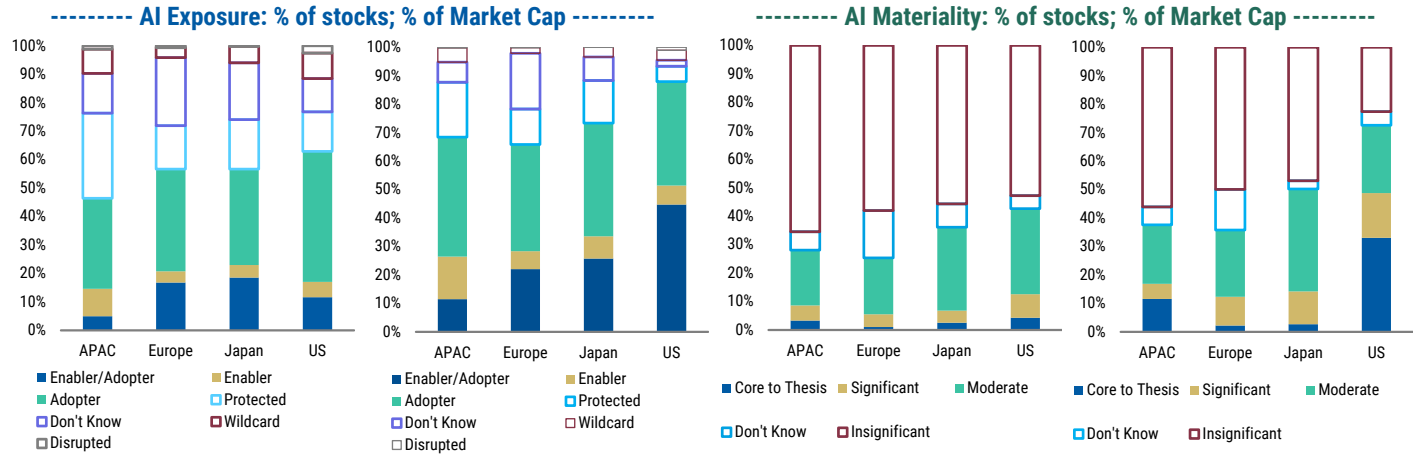
US Leadership Widens Further

The US has been the global leader in Generative AI from the outset - the transformer technology itself, the competition in foundational model building, the willingness to generate the power needed and the consumer and enterprise adoption needed to reach escape velocity.

- **Exposure:** However, our latest survey of analysts does show a surprising dichotomy. In terms of the three exposures that matter most for stock performance (Enabler/Adopter, Enabler and Adopter), the US is largely on par with Europe and Japan in terms of proportion of stocks labelled as such. In fact, the US even lags behind Europe in the proportion of stocks considered Enabler/Adopters. Yet, in market cap terms, the US has double the weighting in Enabler/Adopters relative to Europe and quadruple that of APAC.
- **Materiality:** In terms of Materiality of AI to the investment case, the variances are starker still. Stocks where AI is considered at least moderately important to the investment case amount to c25% of European and APAC coverage but a meaningfully higher c40% of US coverage. In market cap terms, US stocks where AI is considered at least moderately important to the investment case represent >70% of the US market; double the level in Europe. And for the most important Core to Thesis categorisation, the US has c15x higher weighting than Europe or Japan, for example.

The Rest of World catch-up argument: If there is a compelling argument for the gap to close between the US and other regions, we believe it lies in the Moderate Adopter groupings where the weighting of stocks and market value is comparable across the regions. This is also the grouping for which the rate of change argument holds most upside potential, particularly for corporate margins in Europe and Asia.

Exhibit 17: Proportion of stocks and market cap in each exposure and materiality category regionally



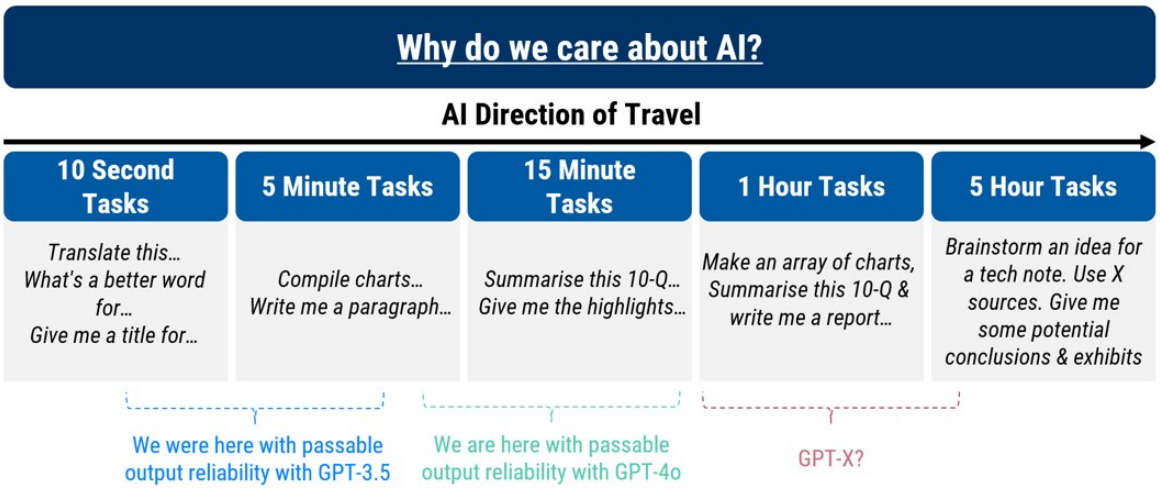
Source: FactSet, Morgan Stanley Research

Why AI's Rate of Change Will Continue to Matter

This report maps the evolution of companies' exposure to AI, how that evolution is perceived by analysts and how it is priced by the market. The reason we think this exercise is valuable to investors is because of: (1) the accelerating capabilities of foundational AI infrastructure, and (2) the fact that this technology is diffusing faster than any before it and into more industries than any before it (see here, here and here).

Over the past 24 months, the speed of change in underlying model capabilities has ratcheted up from reliable output that can displace or supplement 5 second or 5 minute tasks, to models that are providing reliable output (i.e. minimal hallucination) for 15 minute to 1 hour tasks. The latest models focussing on inference-time reasoning (i.e. greater "thought" rather than memory regurgitation) is more compute intensive but progresses us towards the potential for 5 hour and eventually 5 day tasks being automated or streamlined.

Exhibit 18: Our Conceptual Roadmap for AI Developments



Source: Morgan Stanley Research

After a year of accelerating global competition in models, the latest major breakthrough was announced by OpenAI in December. The o3 Series supercedes the o1 models released