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Global Asset Managers

Re-Charting the Course

A new macro regime calls for a recalibration of growth priorities. Growth zones – Private Markets, EM/China and Solutions – are nuanced, requiring a more selective approach, and ESG/Thematic opportunities require flexibility to navigate regulatory uncertainty/factor risks. Profit margin squeeze linked to growing complexity, and inflationary costs against a less supportive cyclical and secular top-line outlook are reinforcing pressures for scale and the need for M&A to improve access to growth/efficiency.

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Re-Charting the Course

A changed macro outlook requires a recalibration of growth priorities. Industry net new money growth ground almost to a halt in 2022 (<0.5% for Traditional managers) after the outsized >5% 2021 as we entered a new macro era. Sticky inflation has forced central banks to aggressively tighten monetary policies, raising risk of recession amidst ongoing geopolitical uncertainty. Growth themes are being tested – private market allocations due to recent investment vintage concerns and improved returns available from fixed income; EM/China due to Covid/post-Covid policy and geopolitical uncertainty; ESG due to regulatory uncertainty and growing politicisation (especially US); and Thematics due to mixed performance linked to growth factors. Meanwhile, profit margins are feeling the weight of inflationary cost pressures and growing business complexity (regulatory, technology and data driven). Charting a course to navigate the more nuanced growth opportunities will be key. We continue to see a less favourable outlook for traditional asset managers (revenue CAGR slowing from +11% in 2019-21 to 5% in 2020-22 and 2% 2022-24e) and further pressure on operating margins (-200bps in 2023 after -500bps in 2022) as management teams seek to balance investments for ongoing growth initiatives against expense flexibility to address top-line challenges. Near term, we see potential opportunities in fixed income, cash management and private credit, given the higher interest rate environment that increases appeal of fixed income in the context of aging demographics with a thirst for income.

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A flexible approach in Sustainable/Thematic investing is key to success for active managers. Whilst supportive beta tailwinds of QE have moderated for passive, we expect underwhelming performance to constrain potential for an active resurgence (<50% US and European active equity funds outperforming benchmark on a 1- or 3-year view). Leveraging opportunities in Sustainable/ESG and Thematics is likely to remain key in active. Despite significant moderation in 2022 flows to ESG and Thematic product (single-digit NNM growth), these areas continued to take share. In Sustainable, we see a growing focus on improver/rate-of-change stocks vs screening/exclusion strategies, though an increased recognition of trade-offs and interconnected impacts of climate change with energy and food security. Navigating growing regulatory and political complexity will be key. In Thematic, performance challenges are linked to growth factors, which we expect to drive a more constructive outlook for Security vs Tech/Disruption themes.

Revisiting our Growth zones, we see more nuanced opportunities and some moderation in near-term growth, though still powerful longer-term potential:

- **EM/China onshore** – we see a more gradual growth path given the impacts of Covid-related investment performance challenges (especially fixed income) and linked to a post-Covid policy focus shift towards industrial sectors, which is likely to slow the transition from household bank deposits to investment products. However, despite the setback in the asset/wealth management industry in the past year, we still believe China's onshore market remains an attractive opportunity for foreign managers, given the resilient growth in household financial assets, and we still see the domestic asset management market as suitable for foreign managers, increasing at an ~11.5% 5-year AuM CAGR (from ~15% previously) leading to a potential revenue opportunity of ~$48bn.
- **Private market assets** – near-term hurdles include fund-raising challenges linked to LP liquidity and denominator effects due to declines in public markets. Tough financing markets are also likely to constrain deal activity in the near term. We see growth normalising following an exceptional 2019-21 period, although the potential linked to (i) under-allocated retail/wealth, (ii) private credit benefitting from further bank retrenchment, (iii) infrastructure, (iv) impact and (v) liquidity solutions should support double-digit AuM CAGR and high-single-digit revenue CAGR over 2021-26.
- **Solutions** – we continue to expect low-to-mid single-digit revenue CAGRs, supported by structural and demographic shifts in pension markets. Customisation (e.g., tax efficiency, overlay capabilities) and technology integration capabilities will be key in the retail channel. Tough equity and fixed income markets should play in favour of multi-asset solution specialists (e.g. quant/systematic) able to deliver attractive outcomes around income and downside protection.

Defensive M&A/consolidation to increase? The significant challenges to profitability and growth outlook, combined with growing scale pressures linked to business complexity, could see an increased level of sector engagement. However, as we have often argued, successful deals should offer more than scale: they should expand product capabilities (expect continued interest in Private Markets, Solutions and ESG/Sustainability), enhance distribution access (new customer sets, expanded vehicle choice) and enable new technology capabilities.

Key areas for differentiation to drive market share gain remain. (1) innovating with ESG/thematics to further client engagement; (2) enhancing distribution; (3) embracing strategic M&A to access new customers, improve scale and expand product offerings; (4) addressing the cost base to compete on price and free up resources for growth; and (5) evolving the investment process to embrace quant/alt/systematic processes.

Globally across our coverage, we stay selective on traditional managers given the challenges. **Man Group, BlackRock, Blackstone and GQG stand out to us as best positioned** to navigate more nuanced growth opportunities – based on their diversified and global franchises, broad product sets, distribution prowess and positioning in key growth zones including alts. **Our least preferred stocks, Abrdn, Magellan and Virtus, face challenges** in core underlying businesses that are likely to persist.

Recent Asset Management Trends

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SECTION 1

Executive Summary

Executive Summary

- **A changed macro outlook requires a recalibration of growth priorities.** Industry net new money growth ground almost to a halt in 2022 (<0.5% for Traditional managers) after the outsized >5% 2021 as we entered a new macro era. Sticky inflation has forced central banks to aggressively tighten monetary policies, raising risk of recession amidst ongoing geopolitical uncertainty. Growth themes are being tested – private market allocations due to recent investment vintage concerns and improved returns available from fixed income; EM/China due to Covid/post-Covid policy and geopolitical uncertainty; ESG due to regulatory uncertainty and growing politicisation (especially US); and Thematics due to mixed performance linked to growth factors. Meanwhile, profit margins are feeling the weight of inflationary cost pressures and growing business complexity (regulatory, technology and data driven). Charting a course to navigate the more nuanced growth opportunities will be key. We continue to see a less favourable outlook for traditional asset managers (revenue CAGR slowing from +11% in 2019-21 to 5% in 2020-22 and 2% 2022-24e) and further pressure on operating margins (-200bps in 2023 after -500bps in 2022) as management teams seek to balance investments for ongoing growth initiatives against expense flexibility to address top-line challenges. Near term, we see potential opportunities in fixed income, cash management and private credit, given the higher interest rate environment that increases appeal of fixed income in the context of aging demographics with a thirst for income.

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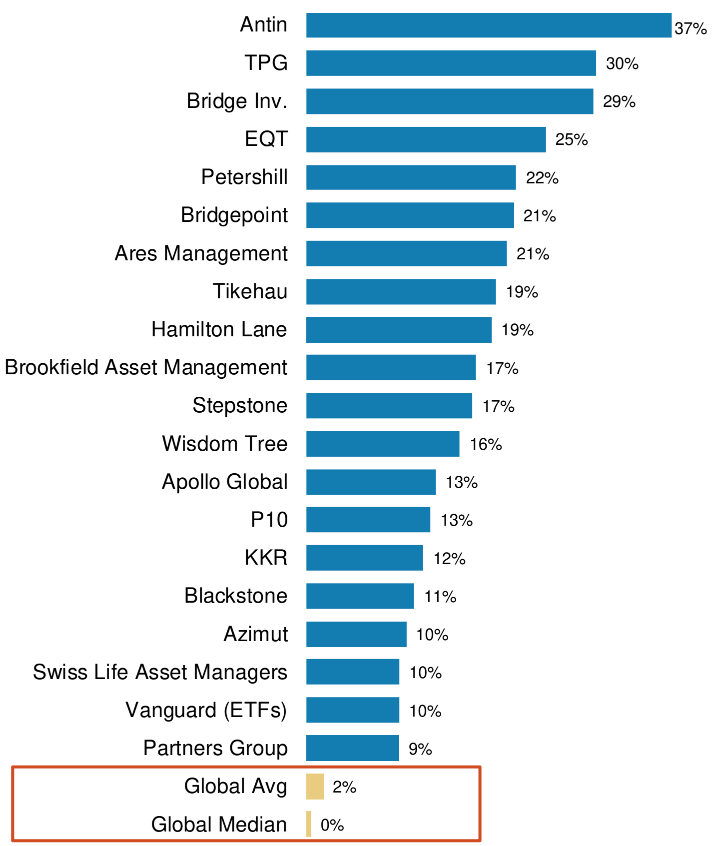
Alternative AMs continued to dominate throughout 2022 as private markets demand remained high, though 2023 outlook is more challenging

Global Top 20: FY 2022 Net New Money (% annualised)

Global Asset Managers FY 2022 NNM growth – top 20



- We assess net flows across global asset managers – traditional and alternative players, listed, captive and non-listed managing ~$47 trillion of AuM. Overall, industry flows saw a sharp decline in 2022, with average net inflows of ~2% (vs 5.3% in 2021) and <0.5% excluding alternative asset mangers.

- Private market players even more dominant, representing 16 of the top 20 positions (vs 13 of the top 20 in 2021) – **Antin, TPG, Bridge Investment, EQT, Petershill, Bridgepoint, Ares, Tikehau, Hamilton Lane, Brookfield, StepStone, Apollo Global, P10, KKR, Blackstone, and Partners Group** – showing the enduring demand for private markets asset strategies as institutions and private client investors search for returns. 2023 outlook is clearly tougher as denominator destruction and liquidity challenges impact LPs, though 1Q23 prints suggest CAGR still around double-digit % in AuM for top players.

- In Europe, Private Market asset demand also supported NNM across **Azimut and Swiss Life AM.**

- Demand for low-cost beta also evident in the growth for ETF/Passive specialists such as **Vanguard.** Model Portfolio momentum and demand for floating rate products supported **NNM at WisdomTree.**

Global avg: +1.7% (Trads: +0.4%, Alts +13.1%); median: +0.5%

US avg: +1.6% (Trads: +0.7%, Alts: +13.1%); median: ~0%

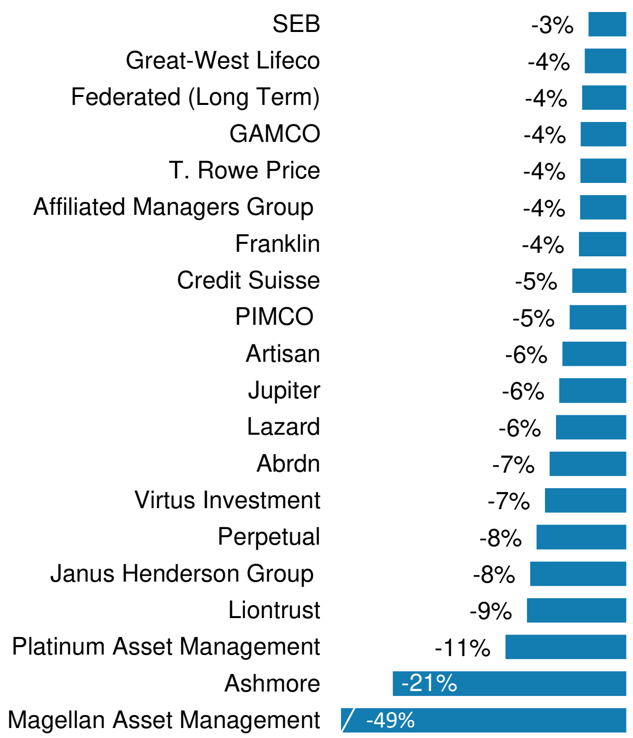
EU avg: +0.4% (Trads: -0.03%, Alts: +13.1%); median: +0.5%

Source: Company Data, Morgan Stanley Research. Data as of Dec 31, 2022.
Note: analysis covers ~90 asset managers globally with ~$47tn of AuM including listed, unlisted and captive names. Represents the annualised net new money growth rate. These averages were calculated using an AuM-weighted average.

Global outflows in 2022 were linked to passive pressure, performance challenges, asset mix and/or a lack of diversification

Global Bottom 20: FY 2022 Net New Money (% annualised)

Global Asset Managers FY 2022 NNM growth – bottom 20



Drivers of outflows:

Weaker flows for those with performance challenges, higher exposure to fixed income and/or lack of diversification:

- Magellan: Soft performance, changes in strategy and a lack of diversification
- Ashmore: subdued appetite for EM, performance challenges and more volatile overlay solutions outflows
- Platinum AM: Soft performance, slow product launches
- Liontrust: Outflows in UK Retail Funds, Institutional accounts
- Janus Henderson: Equities outflows followed by Fixed Income (intermediary division), Multi-asset and Alternatives contributing, with Institutional channel flows taking longer to turn around
- Perpetual: Positive ESG flows more than offset by structural challenges in domestic Equities product (US and Australian Equities)
- Virtus: Mutual Fund outflows driven by performance challenges across EM Equities, small-cap growth and international small-cap funds
- Abrdn: Institutional and wholesale outflows driven by EM/Asian Equities, DM Fixed Income, Multi-asset (absolute return) and UK RE
- Jupiter: UK Equities and European growth outflows given challenged performance, Large outflows in unconstraint fixed income in 1H.
- Artisan: Outflows across a range of strategies

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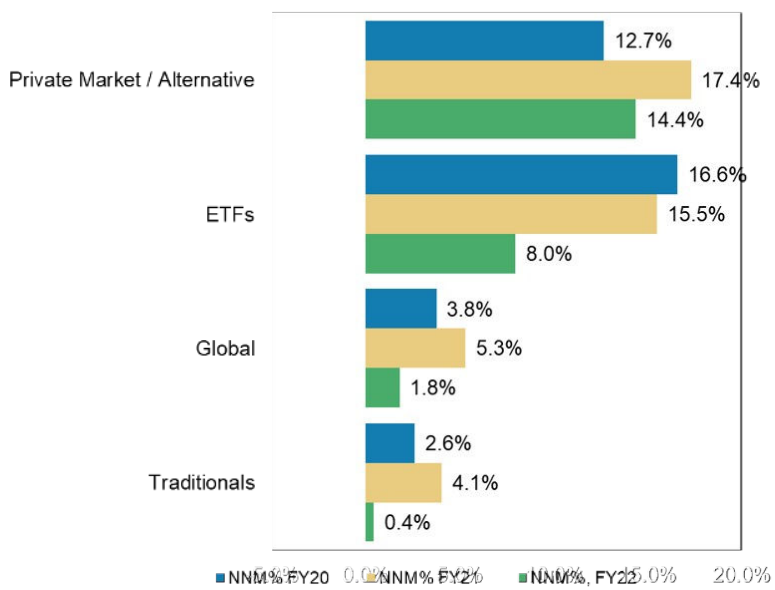
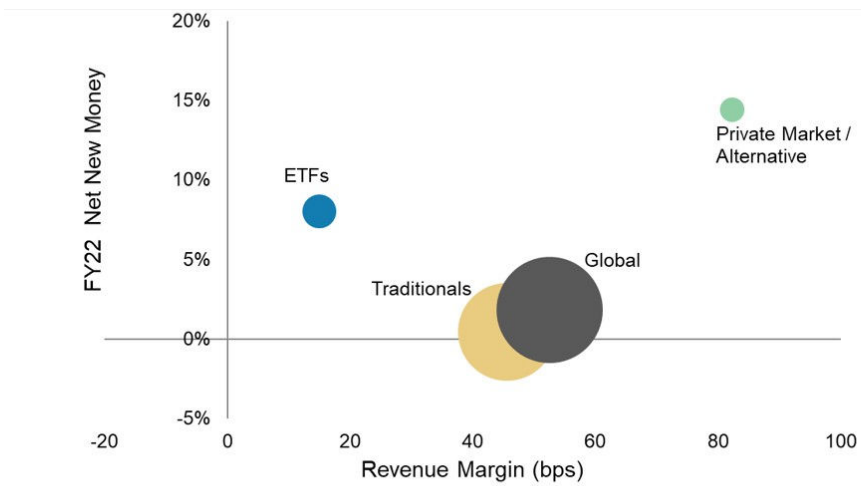
The barbell lives on: growth in Private Markets and ETFs continues to outpace Traditional managers, meaningful decline in Traditional flows in FY 2022

Alternatives flows decelerated in 2022 vs 2021 peak but remain mid-teen %, while ETF flows declined to high single digits vs the mid-teens % of the past few years, though still decent growth compared to the challenges facing traditional players, which saw growth decline to ~0.5% NNM

FY 2022 Net New Money growth (%)



Net New Money growth vs revenue margin



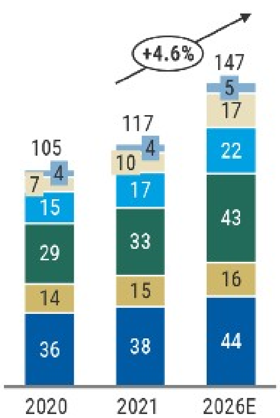
Source: Company Data, Morgan Stanley Research. Data as of December 31, 2022.
Note: analysis covers ~90 asset managers globally with ~$50tn of AuM including listed, unlisted and captive names. Represents the annualised net new money growth rate. Note these averages were calculated using an AuM-weighted average.

Overall industry AuM set to grow at 5% CAGR, while revenues slower at 2% CAGR to 2026e, Alternatives and Solutions offer most compelling growth

Our 5-year view sees asset management industry AuM growing at a modest ~5% CAGR while revenues growing at a more sluggish 2% through 2026. However, we expect better growth from **Alternatives** (9% CAGR) and **Solutions** (3% CAGR), which are set to comprise >55% of total industry revenues by 2026, on our estimates, up from 49% today.

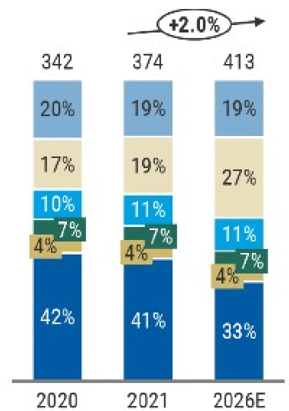
We see core Active players under pressure, though a path to growth for those able to leverage ESG/Thematics and compelling performance.

Global AuM composition, 2020-2026E ($tn)



Product	CAGR 21–26E
Hedge Funds	4%
Private Markets	12%
Solutions	6%
Passive	6%
Money Markets	2%
Core Active	3%

Global revenue composition, 2020-2026E ($bn)



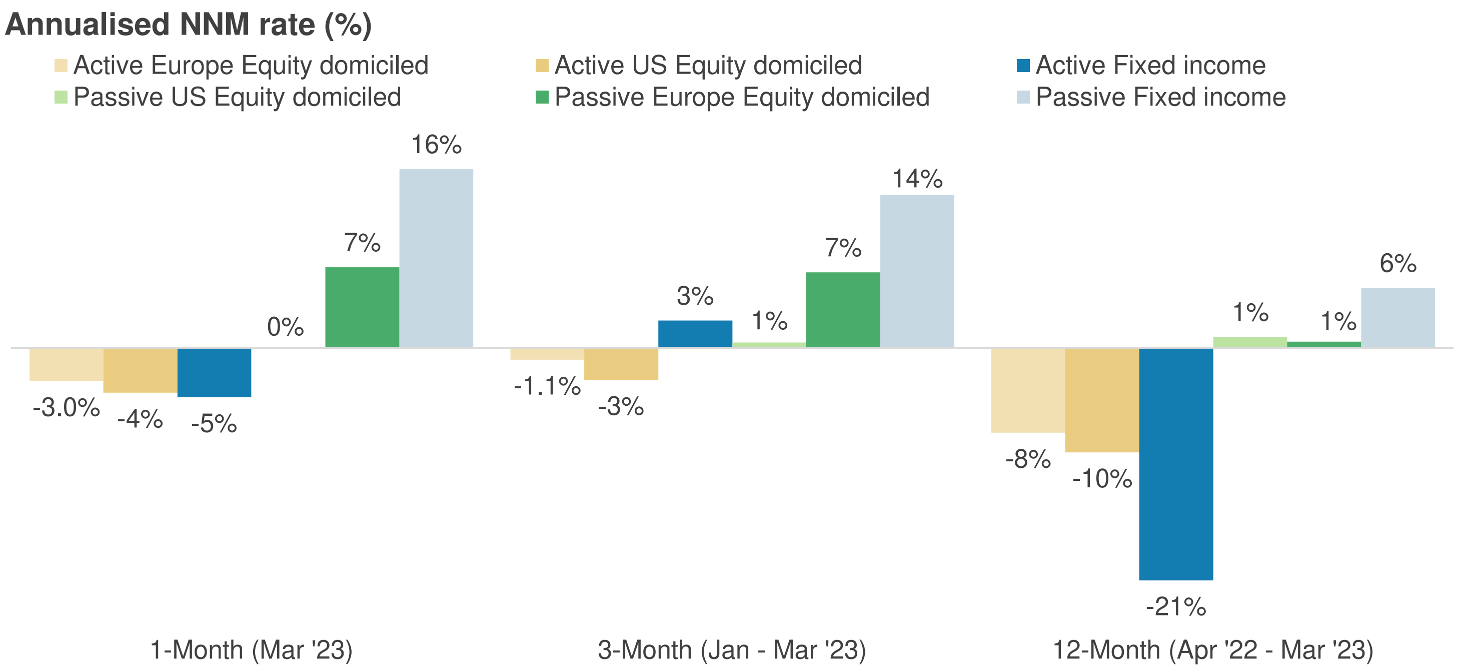
Product	CAGR 21–26E
Hedge Funds	2%
Private Markets	9%
Solutions	3%
Passive	2%
Money Markets	2%
Core Active	-2%

Source: Oliver Wyman, Morgan Stanley Research estimates (E)

Recovery in Fixed Income demand led by passive in the past quarter following a challenging 2022, active Equities remain pressured despite passive improvement

Subdued activity though a modest improvement in the last 3 months, with improving inflows in passive and active Fixed Income and meaningful inflows into passive European Equity strategies. Continued outflows across active equity strategies, although US active Equity remains the most challenged. Recent macro volatility is likely, if anything, to delay top-line improvement, we believe, highlighting the importance of accessing key growth zones.

Annualised Net New Money growth (%) – 1-year growth rates highlight passive > active pressure, but last 3-months growth showed improvement in active Fixed Income, better dynamics in European flows vs US

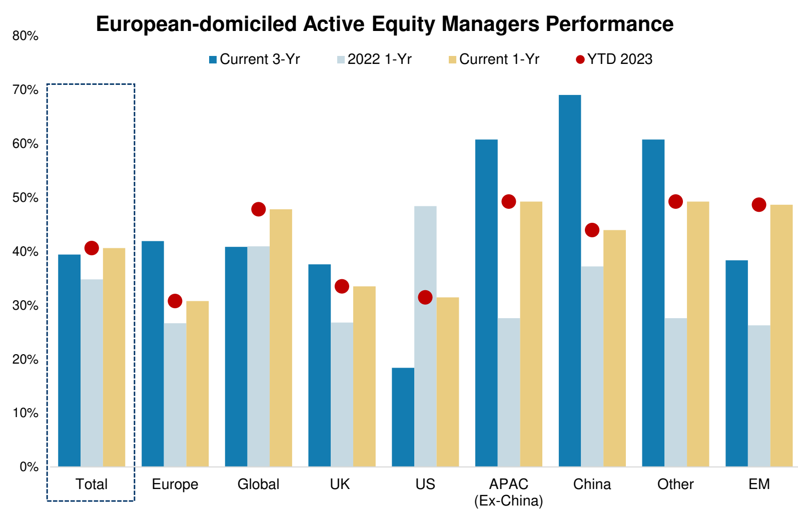


Source: Morningstar. Data as of March 2023.
Note: AuM Tracked: Europe Active Equity ~$3.7tn; Europe Passive Equity ~$1.9tn; US Active Equity ~$7.3tn; US Passive Equity ~$9.1tn; Global Active Fixed Income ~$7.4tn; Global Passive Fixed Income ~$2.97tn.

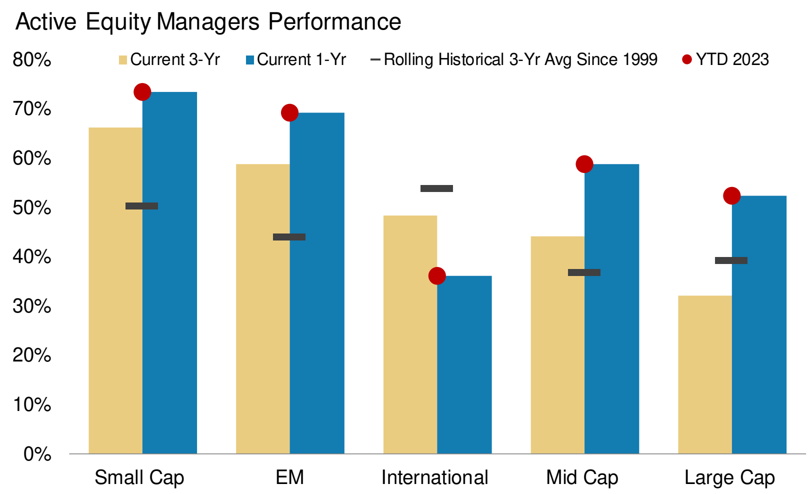
Active/passive debate – despite nearer-term performance improvement in active, consistent outperformance vs benchmark remains elusive for the majority

Active managers performance took a meaningful toll in 2022, with 1Y outperformance dropping to just ~35% for European domiciled (vs ~50% at end 2021) and ~49% for US domiciled funds at December 2022. Data to March 2023 show modest improvements on a 1-year basis, though still <50%, highlighting continued challenges for active players against the established secular shift to passive. Given recent market volatility, we also see risks tilted to the downside, leading to further pressure for active players.

Improving European active equity performance YTD through March, with ~41% above benchmark on 1Y, vs 35% at Dec-22 and ~39% over last 3 years



US active equity manager performance improving YTD through March, with 56% of funds above their benchmarks on 1Y, vs 49% at Dec-22 and 46% over last 3 years

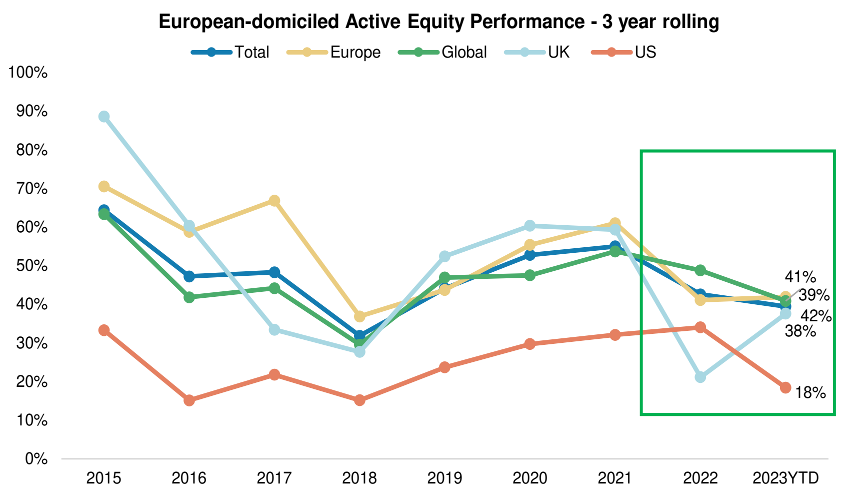


Source; Morningstar, Morgan Stanley Research.
Note: 1) data as of Mar 31, 2023 for US and Europe; 2) Benchmarks used to evaluate performance are S&P 500 (large cap), Russell 2000 (small cap), MSCI EM (diversified), MSCI ACWI (global/world), MSCI EAFE (international), 3) chart reflects ~2,500 US domiciled funds that comprise ~$8tn of assets, 4) Europe outperformance refers to % of AuM beating benchmarks 5) Benchmarks used to evaluate Europe performance – Morningstar Category benchmarks 6) Europe performance chart reflects – ~11,905 European domiciled funds that comprise ~€3.4tn of AuM.

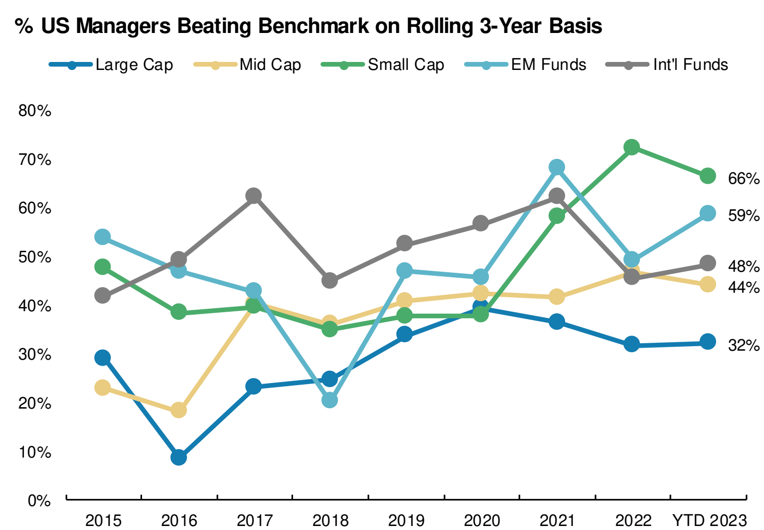
On the more important 3-year statistics, performance across US and Europe managers has deteriorated since 2021, but still above 2018 lows

Although 3-year active equity performance is still above the lows seen at end 2018, slippage over recent months has seen outperformance of benchmark decline to ~39% for European domiciled active equity funds and ~46% for US funds. For Europe, performance has deteriorated for US (18% vs 34% at Dec-22) and Global strategies (41% beating), though improved for UK funds (~38% from 21% at Dec-22). For US managers, performance has been stable for large-cap funds (32% beating) and mid-cap funds (44% beating), but better at small-cap funds (66% beating) on a 3Y basis. While active market share opportunities exist, performance differentiation and an ability to tap the demand for thematic strategy diversification will be key for longer-term growth, in our view.

European active equity performance deterioration most prominent in Global and UK strategies – only ~43% above benchmark on 3Y at end 2022 (vs ~55% in Dec-21), deteriorating to ~39% YTD



US active equity performance still challenged for large-cap managers (only 32% beating), but better at small-cap and EM managers (over 60% beating) on a rolling 3Y basis



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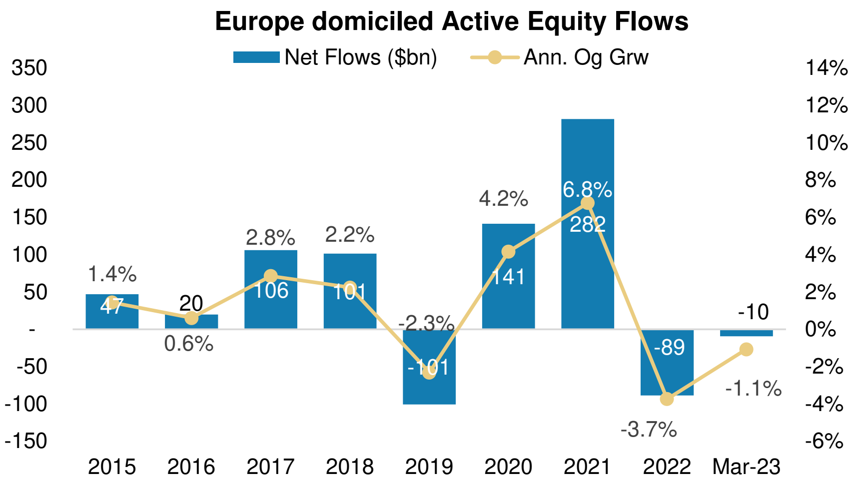
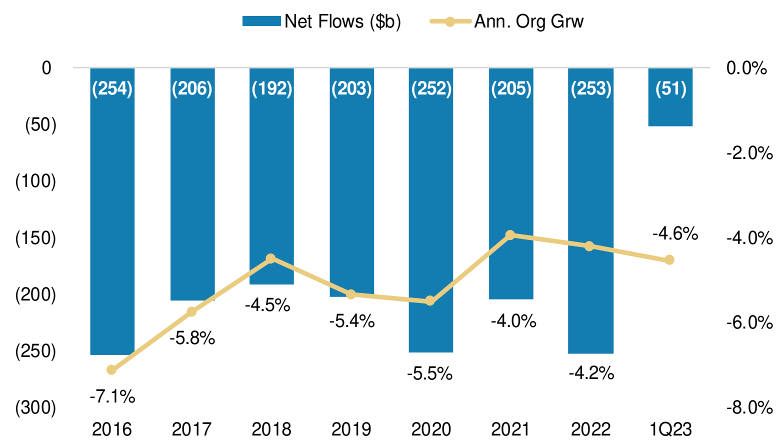
Some moderation in active Equities outflows YTD, after sharp deterioration in 2022

Active Equities returned to outflows in Europe in 2022, with a ~(3.7)% net outflow rate, a sharp deterioration from strong NNM growth of ~7% in 2021. After the challenging year, YTD data suggest that outflows have moderated, though recent market volatility may delay the recovery, with outflows accelerating in March. Meanwhile, overall US active Equities saw deteriorating flows through the month of March and $50bn outflows YTD – that is pacing at a decay rate of -4.6% vs average of ~4.8% over the prior 4 years.

In Europe, 1Q23 saw continued active equity outflows, though moderating at ~(1.1)% annualised NNM growth rate, following largest outflows for over >5 years with ~(3.7)% NNM in 2022



Outflows from US active equity MFs accelerated through March, with $50bn outflows in 1Q – pacing for -4.6% annualised, worse than the ~4% organic decay we saw in 2021/22.



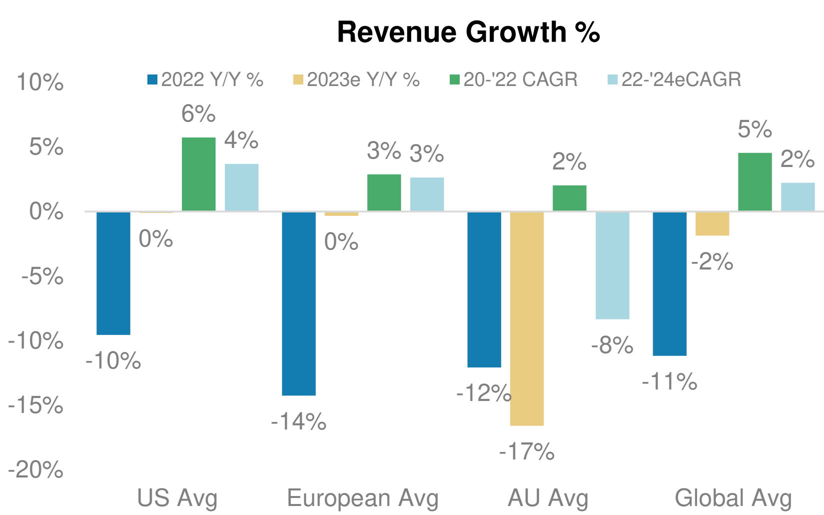
Source: Morningstar, Morgan Stanley Research.
Note: Data as of March 31, 2023 for US and for Europe and captures ~$3.7tn European domiciled equity AuM and $6tn of US domiciled active equity MFs AuM.

We expect top-line headwinds to lead to ~200bps operating margin compression for FY23 as cost flexibility remains a key area of focus for traditional AMs

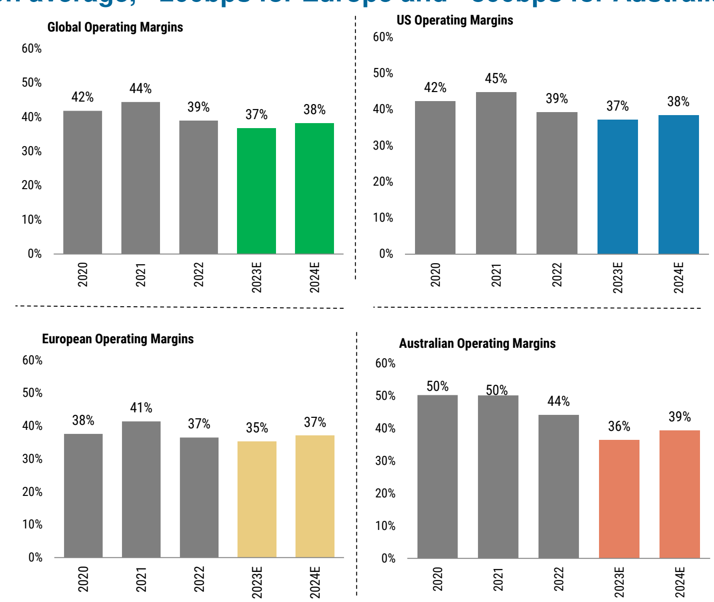
Following weak revenue growth and operating margin contraction in 2022, we expect flat to negative revenue growth in 2023 given the lower starting AuM base, subdued near-term outlook for net flows and ongoing secular pressures on fee margins. A decade of rising markets and cheap leverage has given way to a more challenging cyclical outlook. Our forecasts assume a subdued **+2% CAGR in top line in 2022-24 vs +5% in 2020-22 and +11% in 2019-21** on average for global players.

This difficult top-line environment is combining inflationary cost pressures linked to growing business complexity (e.g. regulatory, tech/data) to intensify operating headwinds. While there are some areas of cost flex, **we expect 2023 operating margins to compress by ~200bps globally** (~200bps in the US, ~200bps in Europe, ~800bps in Australia), following a meaningful drop in 2022 – though recovering slightly in 2024 across the board with global operating margin at 38%.

We see revenue growth contracting 2% in 2023 vs -11% growth in 2022; CAGR in 2022-24 of +2% vs +5% in 2020-22



Operating margin compression of ~200bps for US coverage on average, ~200bps for Europe and ~800bps for Australia



Source: Company Data, Morgan Stanley Research estimates (E).
Note: Operating margin charts based and revenue growth % based on aggregate revenues and operating profits.

SECTION 2

Outlook for Growth Zones

Growth Zones: 1. China

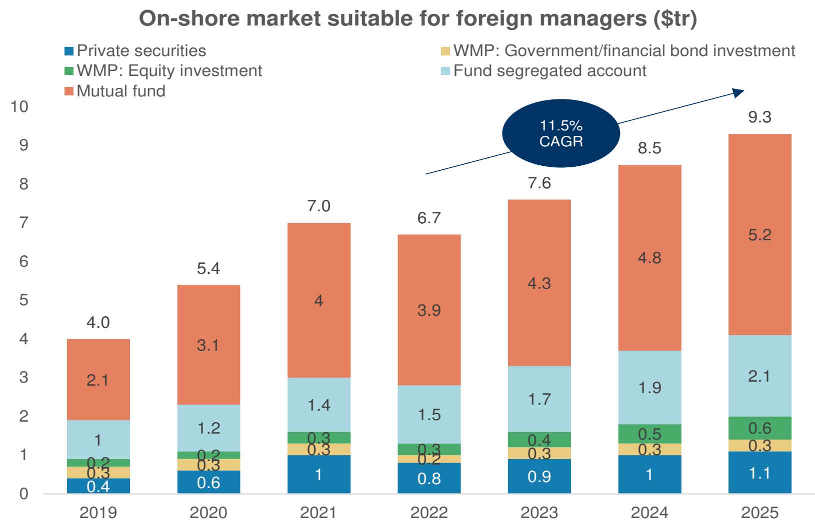
1) Onshore EM/China – a more gradual growth path, though still sizeable opportunity over time. Market growth ~11.5% CAGR to $9.3tn by 2025e (from $6.7tn in 2022)

Despite the setback in the asset/wealth management industry in 2022, we believe China's onshore fund management market remains an attractive opportunity for global firms, given the resilient growth in household financial assets. We expect a more gradual path for growth and think the size of the domestic asset management market more suitable for foreign managers could still reach US$9.3tn by 2025, representing an ~11.5% CAGR from 2022. This will lead to a **potential revenue opportunity of around US$48bn for global players**, we estimate, although down from our previous estimate in the Blue Paper of Onshore market growth of ~15% CAGR or $11tn and revenues of $56bn by 2025.

Importantly, we think the rising unique features of the A-share market – such as lower leverage, more cyclical industrial firms and still-high savings rate – could create more opportunities for global long-only asset managers. This has led global players to expand their footprint in China's mutual fund industry at an accelerated pace: as of the end of 2022, 18 of the top 30 fund management companies by AuM have JV partners there, making up ~38% of market share in AuM. In addition, wholly foreign-owned mutual fund firms are also being approved by local regulators, such as Schroders, Neuberger Berman, BlackRock, etc., since China lifted foreign shareholding limits on fund management firms on April 1, 2020.

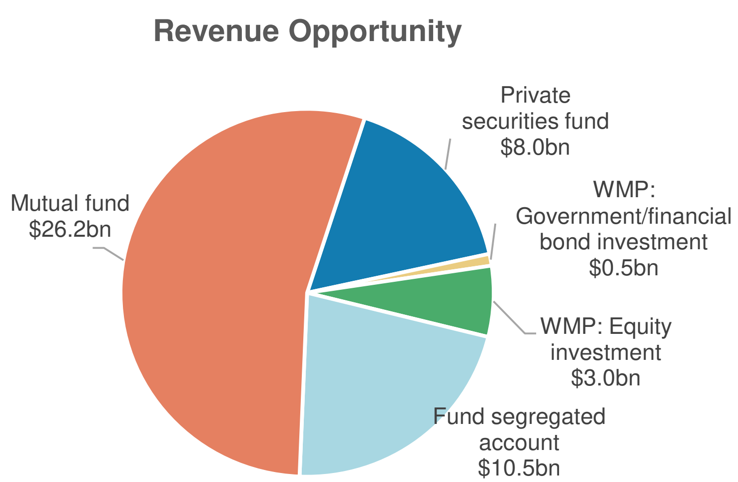
For more, see our recent outlook piece: Reviewing the structural outlook for China's asset and wealth management industry.

We expect the onshore asset management market suitable for foreign players to reach $9.3tn by 2025...



Source: CEIC, WIND, PBOC, China Banking Association, AMAC, CBIRC, company data, Federal Reserve, Morgan Stanley Research

...leading to a revenue pool of around $48bn by 2025 for foreign asset managers



Growth Zones: 1. China

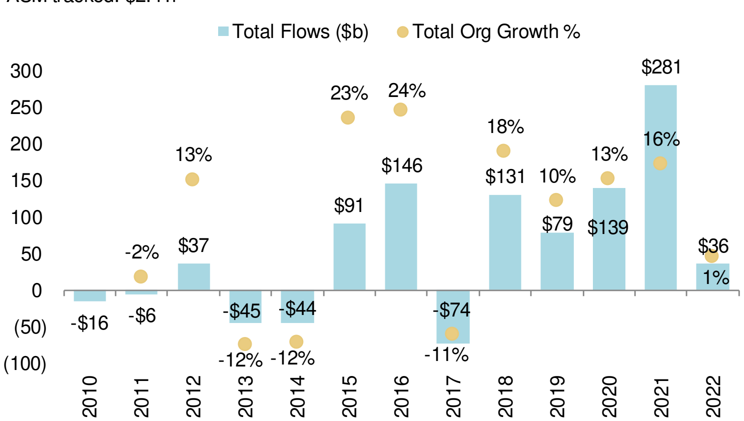
BlackRock, Invesco, Amundi and Schroders amongst those well positioned to capture the growth in China Asset Management

Flows headwinds in 2022 were driven principally by sharp decline in Fixed Income inflows, with only ~1% organic NNM growth in 2022 (vs 16% in 2021). Market challenges have also been reflected with outflows from Chinese JVs for Global players (e.g. Amundi, Invesco). We assume some continued pressure into 2023, but continue to see an attractive longer-term opportunity, though it may be more gradual and subject to cyclical volatility and could also be split more evenly between the onshore and offshore opportunities. However, given the scale of the market, we believe it will be meaningful for firms able to position and execute effectively. We believe those offering (1) comprehensive product knowledge; (2) expertise in developing and retaining local talent to drive sustainable investment performance, (3) breadth of global reach and investment platform, and (4) strong local distribution channel and brand will be those best placed to capture growth.

We see a number of Western firms taking a multi-pronged approach to tackle the opportunity in China. **BlackRock and Schroders** are doing so via a combination of (1) wholly foreign-owned mutual fund business and (2) majority-owned JVs, alongside (3) previous minority-owned JVs (e.g. **Invesco** manages 20 products in China that are >$100bn AuM in a JV partnership and is focused on growing its distribution capabilities and penetrating private pension expansion). **Amundi**'s offering now includes 1) an onshore JV Amundi Bank of China (>€60bn target by 2025) and 2) an asset management JV with the Agricultural Bank of China. While Western firms' share in China has remained steady over the past year, based on current market share levels, the firms well positioned for growth in the region also include: **Eurizon/Intesa, BMO, DWS, Principal Financial and AXA.**

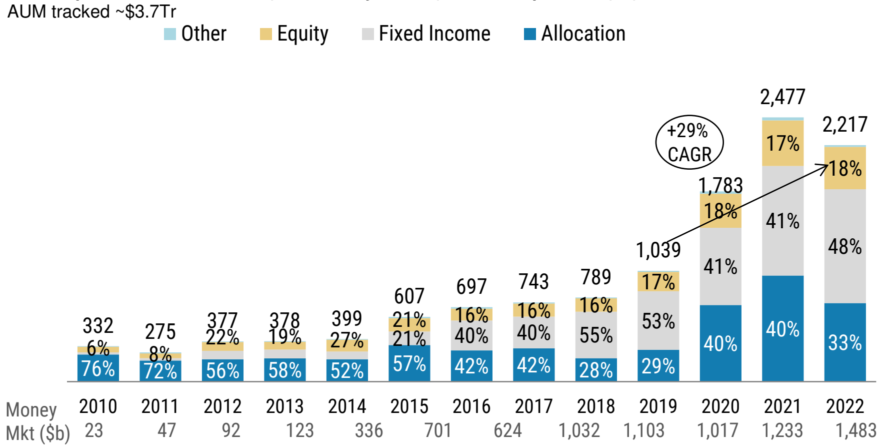
Sharp decline in China MFs flows in 2022, with ~1% NNM organic growth vs ~15% average NNM in 2018-21

China Open-End Funds - Total (excl. Money Market) Flows ($b)
AUM tracked: $2.4Tr



China open-end funds growing at ~24% CAGR since 2017: Fixed Income should still account for majority of AuM (c.50%) long term

China Open-End Funds - Total (excl. Money Market) AUM Composition ($b)
AUM tracked ~$3.7Tr



Source: Morningstar, Morgan Stanley Research. Note: Data as of December, 31, 2022

Growth Zones: 2. Private Markets

2) Private Markets – a more nuanced outlook: near-term headwinds to industry fund raising, plus subdued deal activity, but growth opportunities support around double-digit % AuM CAGR to 2026

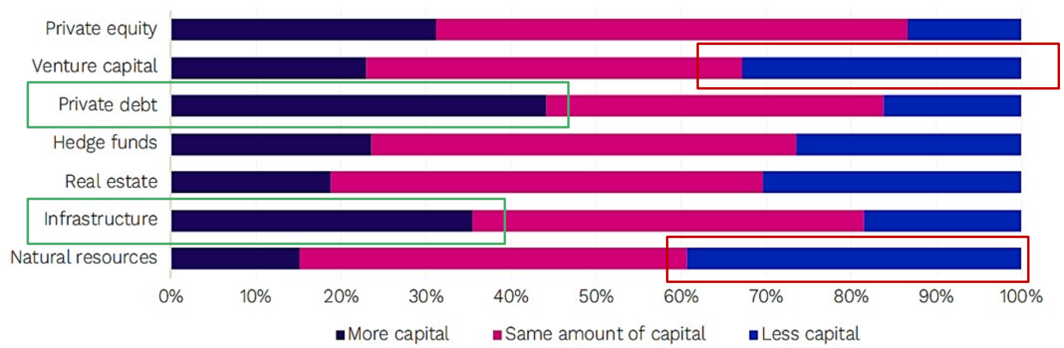
We remain convinced of our long-term secular thesis and see the ~$9tn private markets industry growing at a 12% CAGR to ~$16tn AuM over the next 5 years, despite moderating near-term growth, given fundraising congestion, denominator destruction effect and concerns around portfolio health. Private markets represent just ~9% of global third-party AuM today, despite an addressable market that extends far beyond traditional private equity and advanced capabilities that enable penetration of large TAMs.

We expect currently 'under-allocated' segments (e.g. retail, insurance) to increase their allocations to private markets from 3-5% to 8-10% and drive the majority of private market AuM growth over the next 5 years. We see additional retail allocation adding $3tn of assets and driving ~40% of the growth; supported by strong historical outperformance vs public markets, with a smoother ride and expectations for lower public market returns and facilitated by new product innovation and distribution innovation.

Growth drivers

- **Outperformance** vs public markets; lower expected returns from traditional asset classes
- **Smoother ride**, with lack of mark-to-market accounting risk compared to public market investing, which results in less volatility
- **Lowish long-term interest rates, relative to history**, incentivising the trade-off of less liquidity, greater complexity and higher fees to achieve higher returns with less volatility
- **Diversification**, with lower correlation to public markets
- **Access** to small enterprise value companies

Investors' expected capital commitments to alternatives in the next 12 months compared with the previous 12 months: notably higher in Private Debt (>40%) and Infra (~35%), lower in Venture Capital and Natural Resources



Source: Preqin Investor Survey, November 2022.

Growth Zones: 2. Private Markets

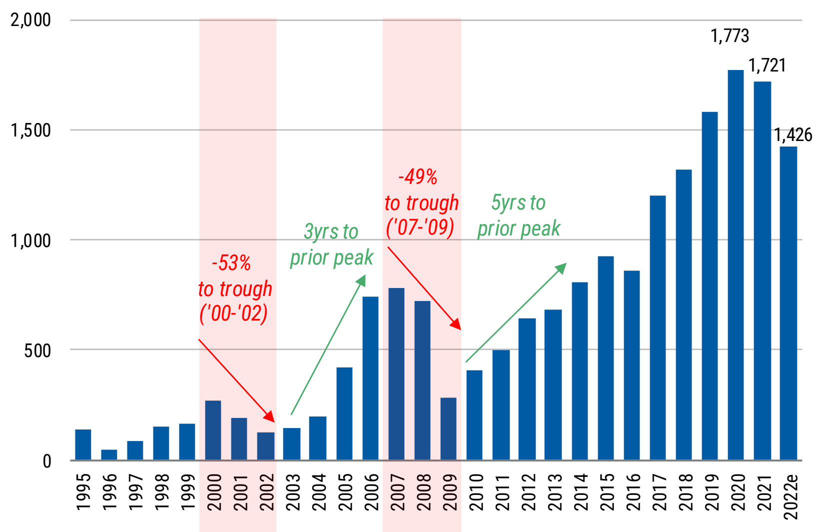
We expect secular growth to persist, though $9tn Private Markets AuM is down 8% from the end-2021 peak and 2023 fund raising looks set to be challenging

Declining NAV values (-7% from their December 2021 peak) and lower dry-powder levels (fundraising down ~20%, we estimate) contributed to shrinking AuM in 2022.

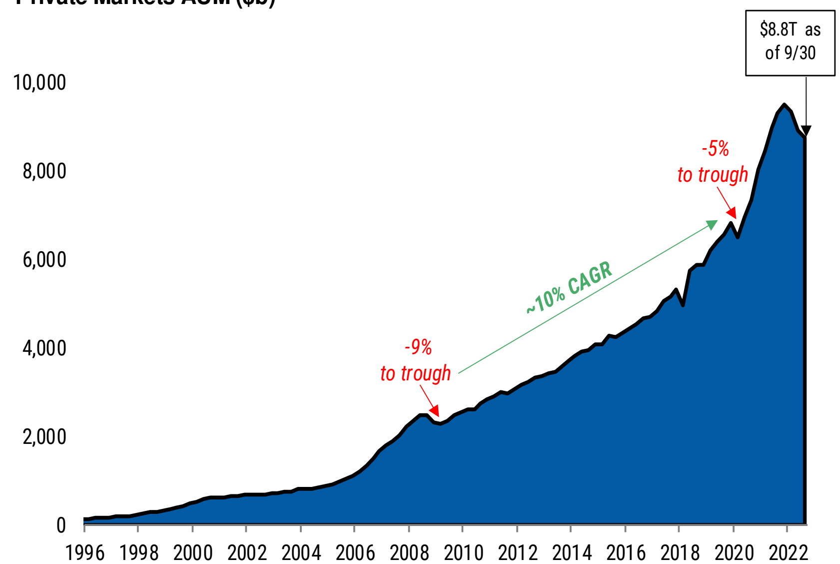
During prior drawdowns, fundraising declined ~50% from peak to trough, followed by a recovery to prior peak within 3-5 years. Post GFC peaks are >5x and it took 5 years for annual fundraising to surpass the $800bn high that was set in 2007.

During prior recessionary periods, Private Markets AuM declined by 5-10% but subsequently rebounded strongly. For example, a -9% drawdown in 2008-09 was followed by over a decade of 10% annual growth.

Private Markets Fundraising ($b)



Private Markets AUM ($b)



Source: Cobalt LP data as of 9/30/2022, PitchBook data, Morgan Stanley Research estimates;
Note: Fundraising and AuM data exclude fund of funds, secondaries and coinvest capital. Fundraising data for all periods are sourced from Cobalt, except for 2022 where we have estimated full-year fundraising using PitchBook, due to incomplete Cobalt data.

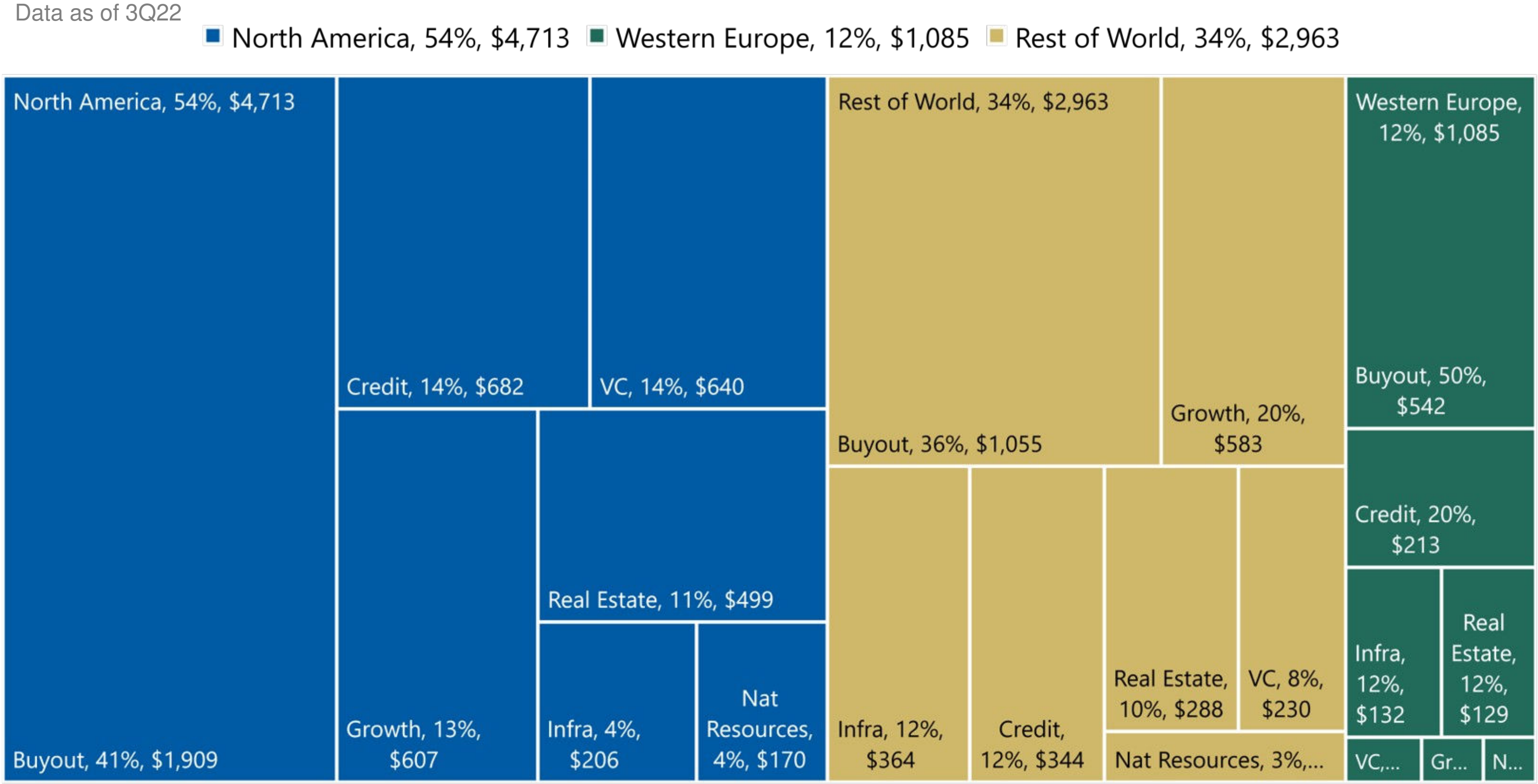
Growth Zones: 2. Private Markets

~$9tn Private Markets: composition by geography & strategy

North American portfolio investments represent over 50% of Private Markets AuM. VC represents a larger portion of investments in the US than outside (15% vs ~5% in Europe and RoW), while Infrastructure represents a larger portion of investments in Europe and RoW than in the US (12% vs 4% in the US).

AuM by geography and strategy ($bn)

Data as of 3Q22



Note: Excludes Secondary Funds, co-invest and Fund of Funds.
Source: Cobalt data as of 9/30/2022, Morgan Stanley Research

Growth Zones: 2. Private Markets

Current portfolio health a key focus given tough financing markets, though front-book opportunities are significant across private credit and elsewhere

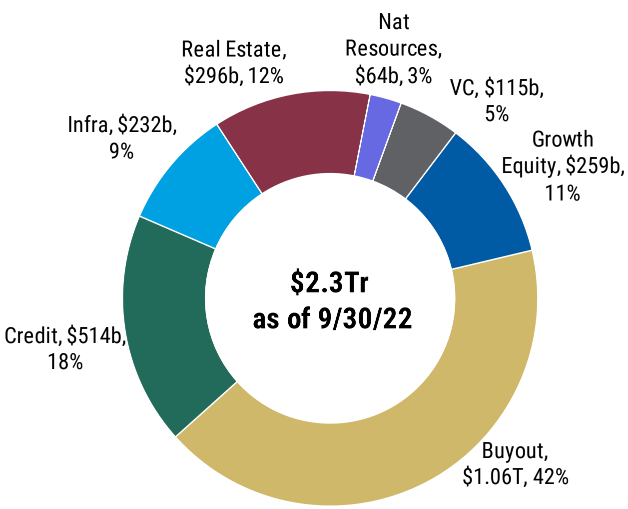
CRE refinancing maturities represent the biggest challenge. Challenged financing market conditions are driving a focus on existing portfolio health and risks linked to refinancing. Refinancing risks look most acute in commercial real estate (CRE), with nearly one-third of the outstanding US CRE debt or ~$1.5tn of $4.5tn outstanding coming due before the end of 2025 and dependence on regional banks high.

Refinancing of high-yield and leveraged loans picking up from 2025. We estimate ~$4.5tn across high yield, leveraged loan and private credit markets in US/Europe, with HY held in mutual funds at ~$0.7tn. In terms of maturities across US/European HY and leveraged loans, ~$600bn or 20% is due between now and end of 2025.

Deal activity requires normalisation in financing markets, which our credit colleagues regard as a late 2023/early 2024 event. We see significant industry dry powder of ~$2.3tn, though the deployment rate is challenged by availability of financing markets, even as bid-ask expectations begin to converge. Policy path on rates will be critical to improving debt availability, which we expect more likely in late 2023 or early 2024.

Attractive front book opportunities for those with dry powder

Industry Dry Powder Composition



Maturities over 2023-25 are most material in CRE, though high yield and leverage loan pick up in 2025+

	$USD, billions					
	Market Size	2023 / 2024 Maturities	2025 Maturities	% of Total Due 2023-25	Index YTW - Avg Coupon of Maturing Debt	Sectors in Focus
Real Estate Debt						
US Core CRE	2,571	615	339	37%		• Office and retail are the property types most in focus. They constitute 25% and 20% of the CRE stock, respectively
US Multifamily	1,961	321	183	26%		
Leveraged Credit						
US HY	1,410	78	143	16%	2.3	• BB-heavy. Rating mix on par with the overall index • Fin. Services, Real Estate and Autos have more front-load maturities and higher incremental funding cost
US Lev Loans	1,341	78	182	19%	2.5	• B3 or lower accounts for a higher portion vs index • Staples, Technology and Healthcare have higher refi needs and weaker refi economics
Europe HY	365	58	70	35%	4.2	• Maturities 66% BB rated • Real estate, media, retail and fin services have higher shares of both <2026 maturities and <90 cash price bonds
EM Sovereign HY	533	35	38	15%	3.7	• Single Bs • Turkey, Egypt highest. Tunisia, Pakistan and Kenya smaller but in focus
Asia HY	163	58	37	59%	7.8	• China HY property sector
Investment Grade Credit						
US IG	8,950	1,231	889	24%	2.1	• Lower BBB3 weight vs index • Auto, leisure and cap goods drive near-term maturities in ICE index
Europe IG	2,556	357	258	24%	2.6	• Autos <2026 bonds have 2nd highest exposure to BBB- • Autos, retail and cap goods have largest share of <2026 maturities
Asia IG	808	203	137	42%	2.3	• China SOEs account for nearly half near-term maturities

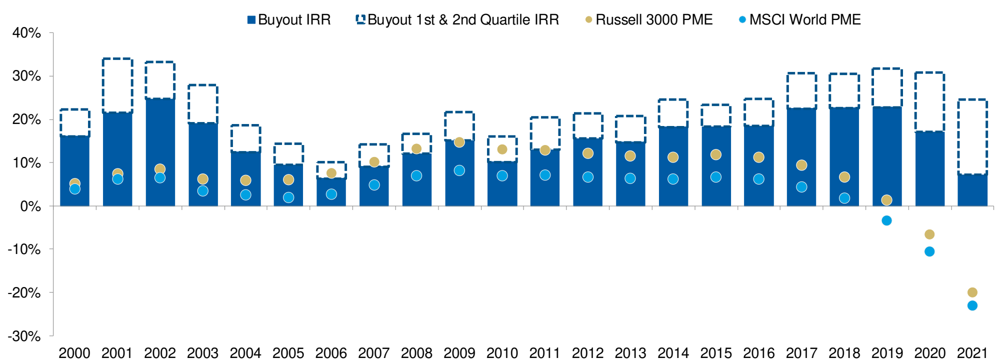
Source: Cobalt, Morningstar data, Morgan Stanley Research estimates.
Note: Fundraising and AuM data exclude fund of funds, secondaries and coinvest capital. Fundraising data for all periods are sourced from Cobalt, except for 2022, where we have estimated full-year fundraising using PitchBook, due to incomplete Cobalt data.

Growth Zones: 2. Private Markets

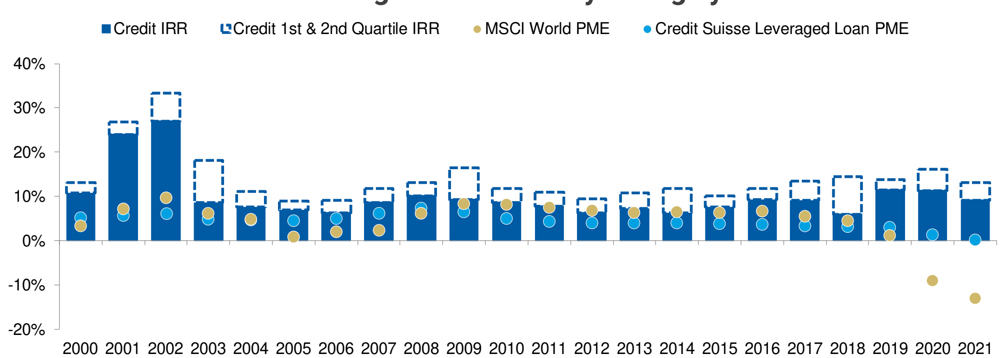
Significant customer demand driven by outperformance vs public markets … and resilient performance in tough periods

With good manager selection, investors could significantly outperform average private market returns. Buyout vintages average +1,290bps outperformance vs public markets (2000-2021), with top managers +2,045 bps; Credit +560 bps with top managers +972 bps. The worst vintage in buyout (2006) generated 6% net IRR and the worst vintage in private credit (2018) generated 6% net IRR

Buyout IRR vs PME by vintage year



Private Credit IRR vs Leveraged Loan PME by vintage year



Private equity and credit outperforms public counterparts (even after adjusting public equity for leverage)

3Q 2022 10-Year			
Index	**Description**	**annualised Return**	**annualised Volatility (de-smoothed)**
Hamilton Lane All Equities Strategies Index	All Private Equity Strategies, Net Returns	16.5%	9.2% (16.7%)
	Best Performing Buyout Vintage, Net Returns	24.7%	N/A
	Worst Performing Buyout Vintage, Net Returns	6.3%	N/A
MSCI World Index	Public Market Benchmark	8.1%	15.3% (N/A)
All Private Credit	All Private Credit Strategies, Net Returns	8.1%	5.5% (7.4%)
	Best Performing Credit Vintage, Net Returns	27.0%	N/A
	Worst Performing Credit Vintage, Net Returns	6.0%	N/A
Credit Suisse High Yield Index II	Public Market Benchmark	3.8%	8.6% (N/A)

Source: Hamilton Lane performance data thru 9/30/2022, Bloomberg data as of 9/30/2022.

Note: The public market equivalent (PME) measure provides a more meaningful comparison of public and private markets performance by adjusting public market returns to account for the timing of private fund cash flows. More recent vintages beyond 2021 are not shown as performance is not yet meaningful. 'De-smoothing' refers to a mathematical process to remove serial autocorrelation in the return stream of assets that experience infrequent appraisal pricing, such as private equity. annualised returns for best and worst performing vintages are identified by comparing annualised returns across vintages years between 2000-2021 as of 9/30/2022. N/A = not applicable.

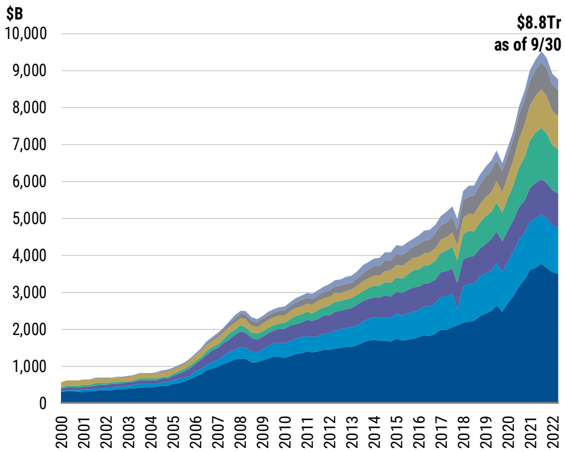
Growth Zones: 2. Private Markets

Future growth fuelled by expansion of the asset class beyond buyout … to infrastructure, real estate and private credit, in search of yield and inflation protection

Private Markets at $8.8tn are ~64% buyout, growth and VC strategies, but we expect meaningful share growth from infrastructure, real estate and private credit as investors search for fixed income replacement and inflation protection. Notably, deployment by infrastructure funds has grown the fastest at 16% CAGR since 2019 through 2022.

Private Markets AuM at $8.8tn as of Sep 2022

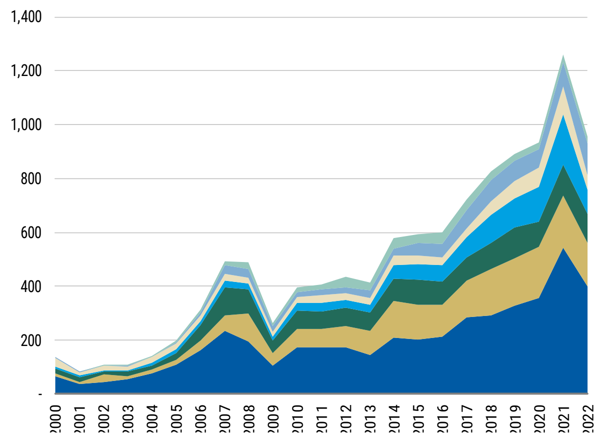
Private Markets AUM ($B)



	AUM ($T)	'12-'22 CAGR	'19-'22 CAGR
Total AUM	$8.8	10%	10%
Nat Resources	$0.3	5%	5%
Infrastructure	$0.7	14%	7%
VC	$0.9	14%	18%
Growth	$1.2	16%	18%
Real Estate	$0.9	6%	3%
Credit	$1.2	10%	4%
Buyout	$3.5	9%	12%

Expansion of private market to strategies beyond buyout is fuelling growth in infrastructure (16% CAGR 2019-22)

Private Markets Deployment ($B)



	'12-'22 CAGR	'19-'22 CAGR
Total Deployed	8%	2%
Nat Resources	-4%	3%
Infrastructure	18%	16%
VC	8%	-6%
Growth	12%	-6%
Real Estate	5%	-3%
Credit	8%	-3%
Buyout	9%	7%

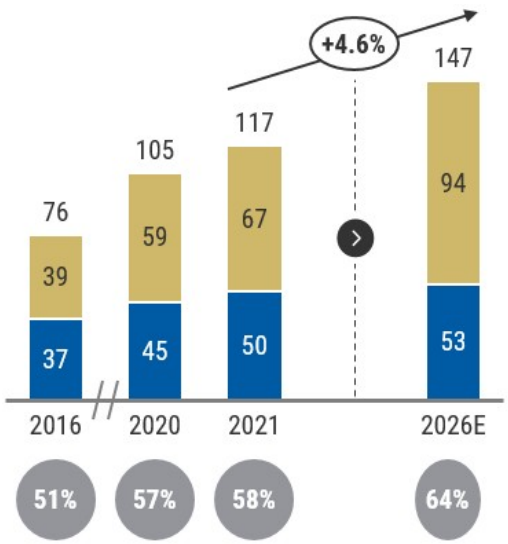
Note: Private Markets AuM excludes fund of funds, co-invest and secondary funds. 10y CAGR is calculated between 9/30/2012 and 9/30/2022 for AuM and between 12/31/2012 and 12/31/2022 for deployment. 3y CAGR is calculated between 9/30/2019 and 9/30/2022 for AuM and 12/31/2019 and 12/31/2022 for deployment.
Source: Cobalt data as of 9/30/2022 for AuM and Cobalt data as of 12/31/2022 for deployment, Morgan Stanley Research

Growth Zones: 2. Private Markets

Five themes to drive the next wave of growth: #1 Retail/Wealth

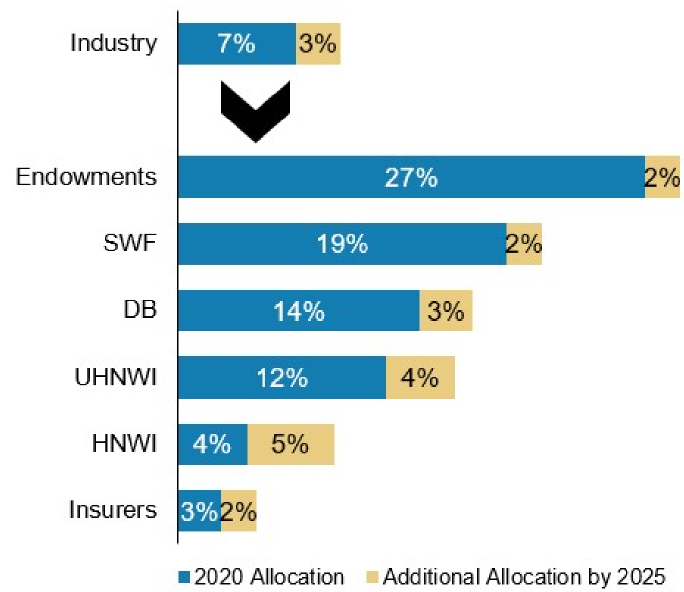
Democratisation of Private Markets to spur retail growth. There is a large ~$70tn untapped retail market growing faster than the institutional market, with rising allocations in pursuit of income and/or capital appreciation, supported by growth of the retail investor class and other secular trends (e.g. ageing population) and Private Market's strong performance track record. We see Alternative managers seeking to capitalise on the retail TAM via new product innovation, leveraging distribution platforms and wealth partners.

Retail's share of Private Market industry AuM ($tn)



Group	CAGR 21–26E
Retail/wealth clients[2]	7.3%
Institutional	1.5%

Private Market % share of asset allocation by investor type



Note: AuM defined as the sum of externally managed institutional assets (including insurance, pensions funds and SWF) and externally managed retail assets (including assets in open-end, close-end and money market funds, alternatives and ETFs).
Source: Oliver Wyman, Morgan Stanley Research

Growth Zones: 2. Private Markets

Private Markets’ key barriers to entry and democratisation enablers

What could democratise private markets to drive continued growth? We look to (1) distribution, (2) product innovation, (3) regulation and (4) blockchain as tailwinds. We see these four factors working together to overcome historical hurdles to further growth in Private Markets by making private investment opportunities more accessible to individuals, including the high-net-worth segment ($1-50m in investable wealth) that historically have faced high entry barriers due to liquidity constraints such as fund lock-ups.

Key barriers

- Illiquidity of investments
- Limited diversification
- Lack of access to products
- High minimum thresholds
- Regulatory and operational complexity
- Lack of client education

Democratisation enablers

1 Distribution
- Technology-driven platforms lowering barriers to entry
- Platform business models evolving to now complement wealth and asset manager offerings

2 Product innovation
- New products providing increased liquidity and diversification
- Large number of product providers, e.g. ICs, FoFs, alts managers

3 Regulation
- Regulators easing investor eligibility requirements
- Regulators creating new retail investment structures

4 Blockchain
- Blockchain technology making investment and operational process more efficient
- Blockchain opening new types of product opportunities, e.g., Security Token Offering

Source: Oliver Wyman analysis

Growth Zones: 2. Private Markets

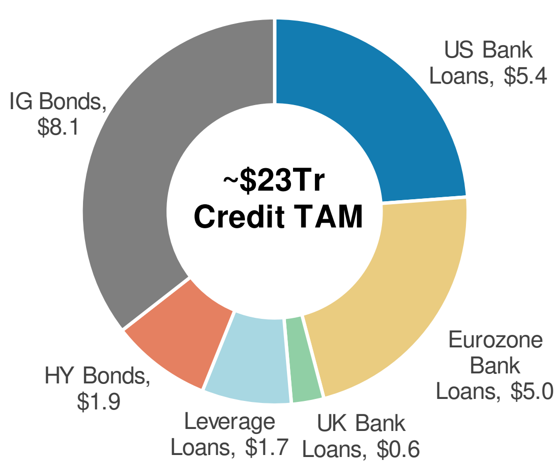
Five themes to drive the next wave of growth: #2 Private Credit

Private Credit poised to penetrate large $23tn TAM

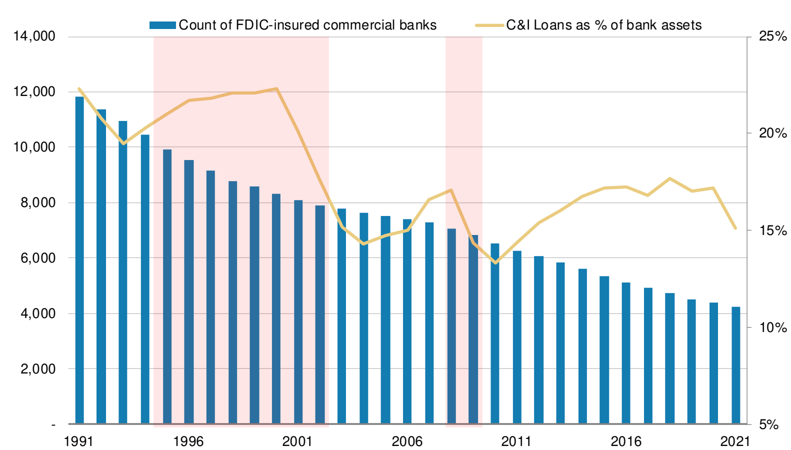
- US banks have reduced their balance sheet exposure to corporate lending by ~700bps over the past 30 years, with dealer inventories in credit assets down ~80% in the past 15 years. As banks retrench further, we see attractive opportunities for Private Credit managers with ~$500bn of dry powder to put to work.
- We size a global private credit TAM of ~$23tn, of which only ~6% penetrated today, indicating a long runway for growth.
- Demand is underpinned by (i) higher yield/income offered by private credit, (ii) favourable returns across the spectrum from fixed income replacement to enhanced equity-like returns, (iii) the flexibility that private credit offers issuers and (iv) diversification as LPs seek returns across asset classes outside PE and to gain exposure to the large non-listed credit space.

We size a $23tn global TAM for private credit …

Private Credit TAM ($Tr)



… with private credit posed to take share as banks retrench



Source: Cobalt, LCD, Bloomberg, FRED and FDIC data, European Central Bank Warehouse, Morgan Stanley Research estimates. Note: Data as of June 30, 2022.

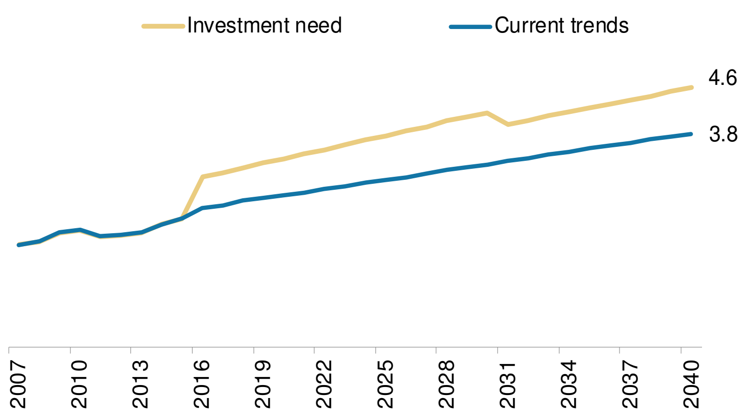
Growth Zones: 2. Private Markets

Five themes to drive the next wave of growth: #3 Infrastructure

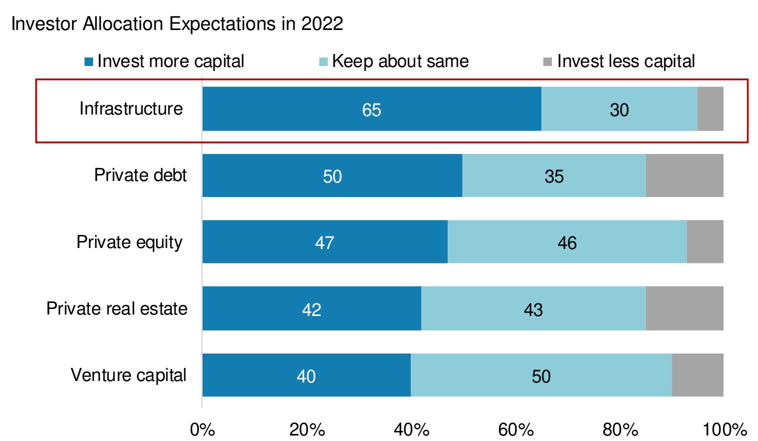
Infrastructure investing to solve decades-long under-investment

- Digitalisation, decarbonisation and deglobalisation underpin the structural tailwinds supporting infrastructure investing.
- A ~$15tn infrastructure funding gap presents a significant addressable market for infrastructure to solve decades-long under-investment.
- Investors expect to increase allocations to infrastructure attracted by the lower risk, downside protection, inflation protection, consistent yield and counter-cyclical nature of the asset class.
- Private infrastructure strategies have outperformed public markets by >60bps on average, top quartile by ~450bps.

Long runway for growth from ~$15tn infrastructure funding gap …



… and investors are under-allocated and planning to invest more



Note: Investment needs includes additional investment needed for countries that have not yet met the SGDs (Sustainable Development Goals).
Source: GI Hub, Casey Quirk, Morningstar, KKR Real Assets Overview, Infrastructure Investors LP Perspectives 2022 Study February 2022, Cobalt Data as of 31/3/22, Morgan Stanley Research

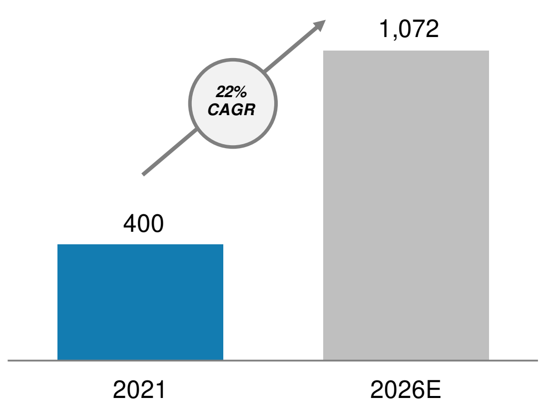
Growth Zones: 2. Private Markets

Five themes to drive the next wave of growth: #4 Liquidity solutions

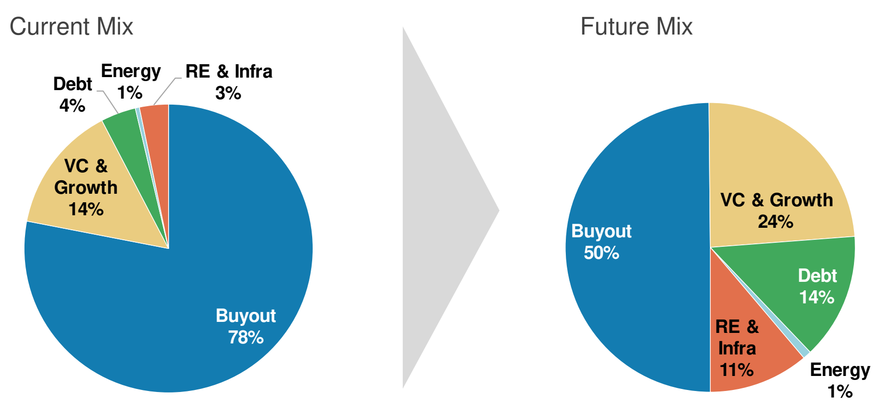
Liquidity solutions help address both General Partner/Limited Partner (GPs/LPs) liquidity needs, increasingly relevant given the macro backdrop

- We see several liquidity solutions: (i) NAV lending (offers liquidity solutions for a fund via collateralising the equity value or NAV of the portfolio for financing, e.g. to support portfolio companies or meet distributions); (ii) GP stakes (minority investments in GPs to help fund growth ambitions); (iii) LP-led secondaries (providing liquidity for investors who wish to sell out of existing fund positions and exit early); and (iv) GP-led secondaries (the most common form of which is rolling to a continuation fund).
- The secondaries market has seen significant growth (13% 10-year CAGR, 16% 3-year CAGR), with GP-led secondaries seeing increased adoption, alongside overall maturation of the industry.
- We see the secondaries market growing at a 22% CAGR through 2026.

Secondaries market growth at 22% CAGR to 2026 …



… and we expect increased diversification away from private equity



Note: Current and future secondaries mix estimated based on transaction volumes from Setter Capital Volume Report.
Source: Cobalt data as of 31.12/2021, Setter Capital "Volume Report FY2021", Morgan Stanley Research estimates

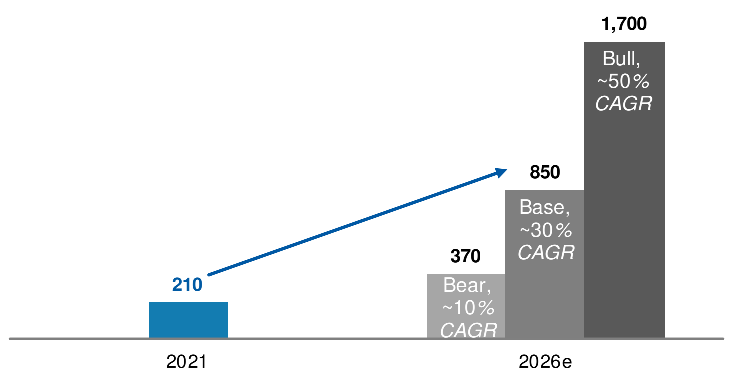
Growth Zones: 2. Private Markets

Five themes to drive the next wave of growth: #5 Impact

Impact investing

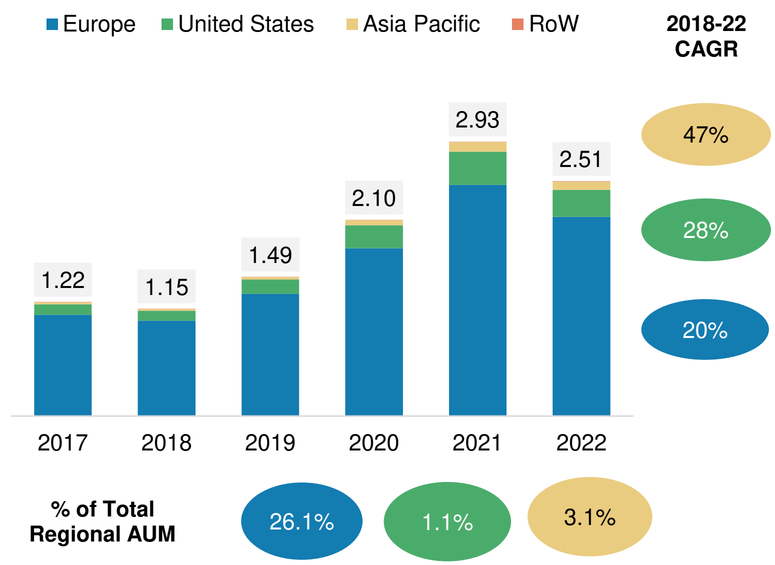
- GPs and their clients are increasingly focused on risk-adjusted returns, while also having a positive impact on society.
- Alts firms are in the early stages of launching dedicated impact offerings, standardisation of impact metrics necessary to facilitate transparent comparison across products along with greater investor participation.
- Growth in public market ESG strategies is an indication of what's to come in privates, we believe.
- We expect private market Impact AuM to grow at a ~30% CAGR to $850bn by 2026, with penetration doubling to ~5% from ~2.5% today.

We expect private market Impact AuM to grow at a 30% CAGR to ~$850bn by 2026 …



Note: 2021 Impact AuM is a Morgan Stanley estimate based on 202 Impact Aum as reported by Prequin. Base case assumes Impact Penetration of private markets AuM doubles to 5% over next 5 years, bull case assumes penetration rises x4, bear case assumes penetration unchanged from current ~2.2% level.
Source: Prequin Impact Report 2020, Morgan Stanley Research estimates

… following in the footsteps of public markets



Source: Morningstar, data as of December 2022.
Note: Recent regulation changes resulted in historical revisions of what constitutes an 'ESG fund' which will result in differences with historically reported metrics to be in line with these regulatory changes.

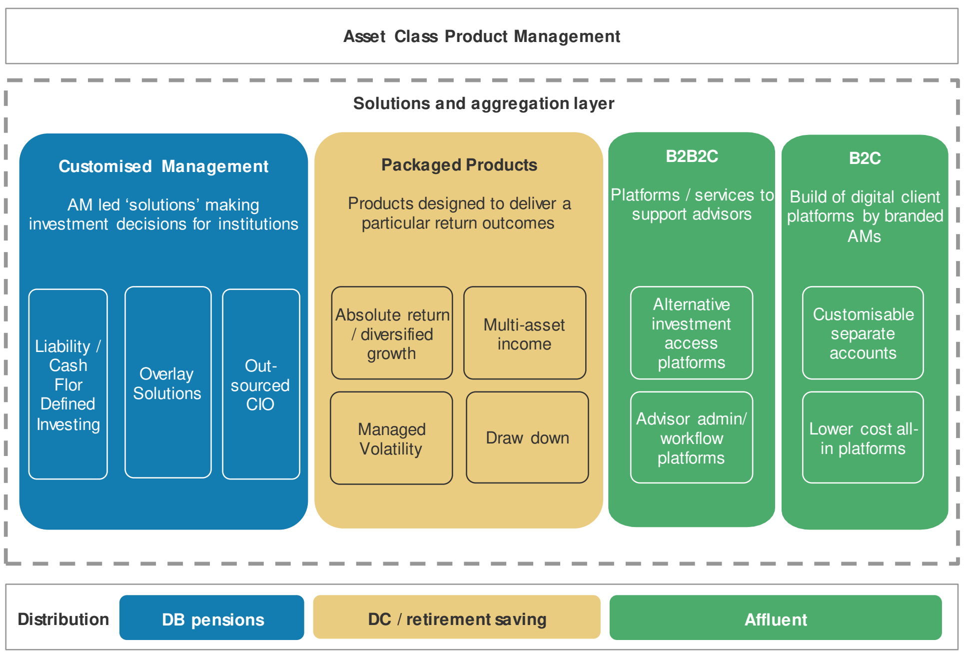
Growth Zones: 3. Customisation

3) We expect Solutions to grow by a mid-single-digit CAGR in the coming years, supported by structural and demographic shifts in pension markets

A challenging capital markets return outlook is supporting demand for a broader range of risk premiums and solutions that facilitate access to them. To capitalise on the solutions opportunity, investment in technology and data will be key. We see customised, bespoke solutions as an extension of the trend towards solutions offerings – from institutional customised offerings, through packaged products to individual customised accounts for affluent clients.

A fought-over 'aggregation' layer has emerged, blurring the line between manufacturing and distribution, offering new areas for managers to compete

Example of services in the emerging solutions layer



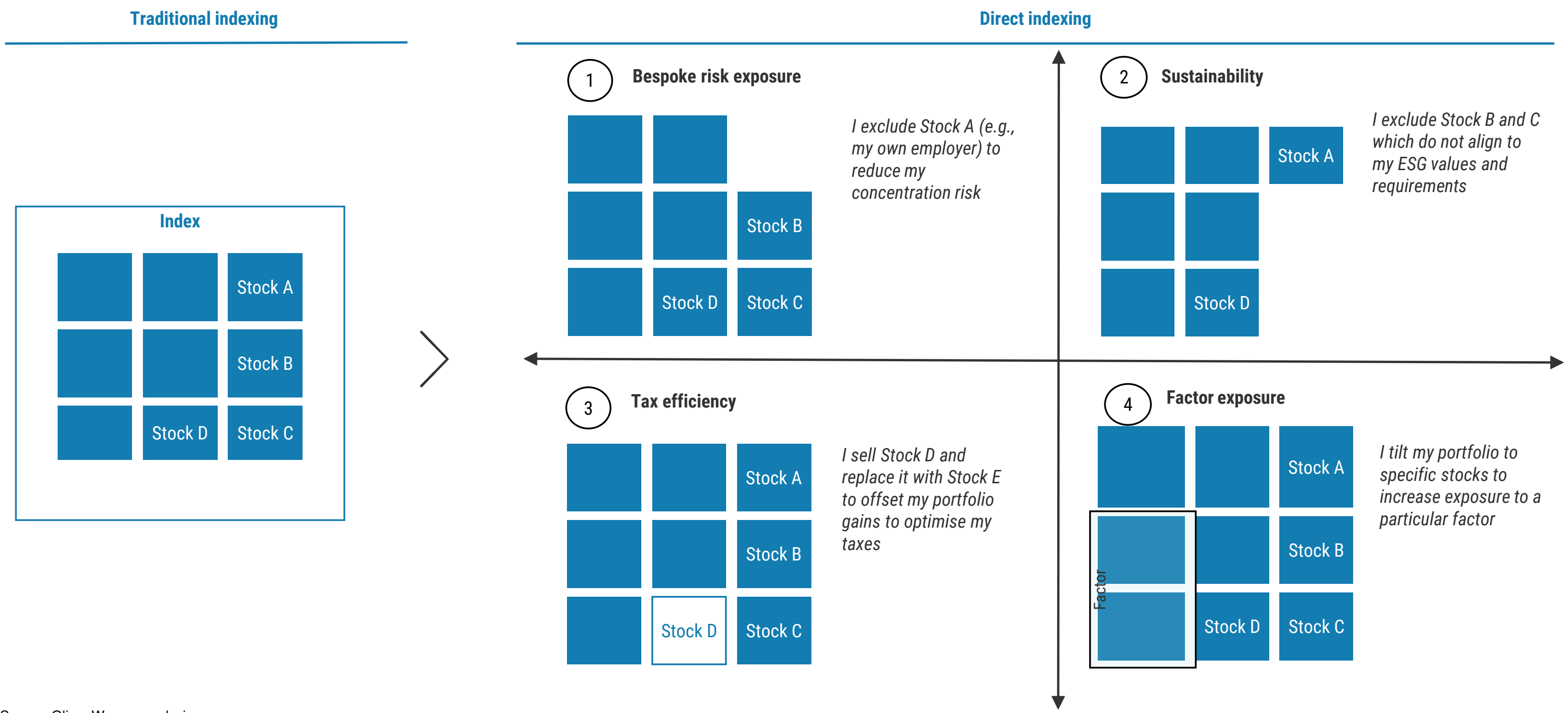
Source: Oliver Wyman analysis

Growth Zones: 3. Customisation

Bridging the gap between bespoke and standard

While customisation has been limited historically to institutional and UHNW investors only, we now see all factors in place to extend it to a broader range of investors, including: **underlying vehicles** allowing direct security holdings (e.g. separately managed accounts, or SMAs, in the US); **new technology** enabling direct holdings at lower investment amounts (e.g. fractional shares); and an **evolution of indexing** accommodating more customised exposures (e.g. direct indexing).

Rising customisation enabled by direct indexing and driven by client demand; uses cases include ESG and tax efficiency



Source: Oliver Wyman analysis

Growth Zones: 3. Customisation

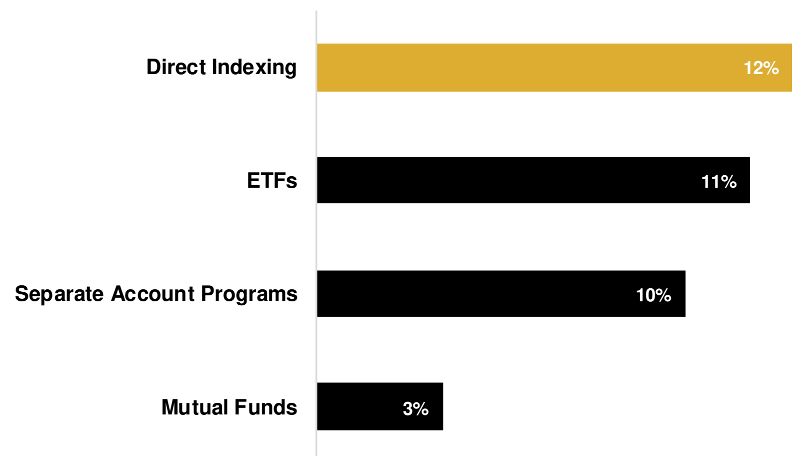
Customisation – direct indexing AuM poised to grow at a meaningful 12% CAGR over the next 5 years

Investor Benefit	Passive Mutual Funds	ETFs	Direct Indexing
Seeks to track index performance?	Yes	Yes	Yes
Full index constituent replication?	Yes	Yes	Yes
Low relative fees?	Yes	Yes	Yes
Tax efficiency?	No - subject to capital gains tax	Yes - typically do not pay out capital gains	Yes - opportunity to implement tax mgmt
Tax look pass through?	No - cannot pay out realized losses to investors	No - cannot pay out realized losses to investors	Yes - can create tax alpha through tax lost harvesting
Ability to tax loss harvest?	No	only in down market	Potential in all markets
Ability to customize the individual portfolio?	No	No	Yes - can have sector / ESG factor tilts, make exclusions

Top direct index SMA providers ($mn)

Firm	AUM ($b)
Morgan Stanley Investment Management	159.1
Goldman Sachs Asset Management	117.6
Northern Trust Asset Management	68.1
BlackRock	55.0
Fidelity Investments	33.3
Columbia Threadneedle	7.3
Natixis Investment Managers	7.3
Envestnet	4.5
O'Shaughnessy Asset Management	2.4
UBS Global Asset Management	2.3
Advisor Partners	1.9
J.P. Morgan Asset Management (55ip & OpenInvest)	1.6
Vanguard (JustInvest)	0.9
Ethic	0.8
Russell Investment Group	0.1
Other Industry Assets	*165*
Total	**627**

Projected 5-year growth rates by product



Sources: Russell FTSE (Top Left Table); Cerulli Associates (Bottom Figures) as of Dec 31, 2021.

Growth Zones: 3. Customisation

Software-driven disruptors (Robo Advisors) threatening incumbents' fees

- **Robo Advisors deliver mass customisation,** essentially a separately managed account that historically was only available to HNW clients with tax loss harvesting and direct index replication strategies
- **Opportunity:** Robo Advisors expand the universe of consumers that can be served by the industry
- **Risks:** Robo Advisors disintermediate active managers and provides new distribution channel for ETFs

Name:	Type, Account Minimum, and Typical Fees		
Vanguard	Access to Team of FAs	$50,000 I 30bps	
		Dedicated FA	$500,000 I 20bps
Schwab	Digital	$5,000 I 0bps	
		+ Human FA	$25,000 I $300 + $30/mo
Betterment	Digital	$0 - $2M I 25bps	
		+ Human FA	$100,000 I 40bps
Personal Capital	Digital	$0 I 0bps	
		+ Human FA	$100,000 I 79bps

Leading Robo Advisors have a long runway for growth

Largest Robo Advisors Name	AuM ($B)	Mkt Share	Typical Fee (bps)	Account Minimum	Human Advisor
Vanguard	298.0	12%	30	$50,000	$50,000
Charles Schwab	70.5	3%	0	$5,000	$25,000
Wealthfront	34.0	1%	25	$500	$100,000
Betterment	33.8	1%	25	$0	
Personal Capital	23.5	1%	49-89	$100,000	Included
Wealthsimple	17.5	1%	40-50	$0	
Core Portfolio (ETFC)	9.7	0%	30	$500	Included
Acorns	6.0	0%	$1/mo+	$0	Included
M1 Finance	5.5	0%	0	$100	$10/mo tier
Blooom	5.0	0%	$3.75/mo	$0	
Zacks Advantage	3.0	0%	35-70	$25,000	
Stash Invest	2.6	0%	$3/mo+	$5	
SigFig	2.3	0%	25	$2,000	Included
Future Advisor (Ritholtz Wealth	1.8	0%	0-50	$10,000	
Ellevest	1.4	0%	$1/mo+	$0	
Rebalance IRA	1.2	0%	50	$100,000	Dsct member:
Ally Invest	1.0	0%	0-30	$100	Included
Sageview (formerly Capital One	0.9	0%	59-99	$100,000	
Asset Builder	0.8	0%	20-50	$50,000	Included
T Rowe ActivePlus	0.7	0%	52-78	$50,000	Included
SoFi Invest	0.7	0%	0	$0	
Validea Legends Advisor	0.5	0%	25-50	$25,000	
Top 22 Subtotal	**520.3**	**21.2%**			
Industry Total	**2,450.0**	**LIK**			
EU Robo Advisors					
Nutmeg	£4.5bn		45-75	£500	
Scalable Capital	€10bn		75	£10,000	
Moneyfarm	£2.2b		70	£500	
CPN Investent Management (M	£500m		NA	£1,000	
Wealth Horizon (closed April 20	NA		NA	NA	

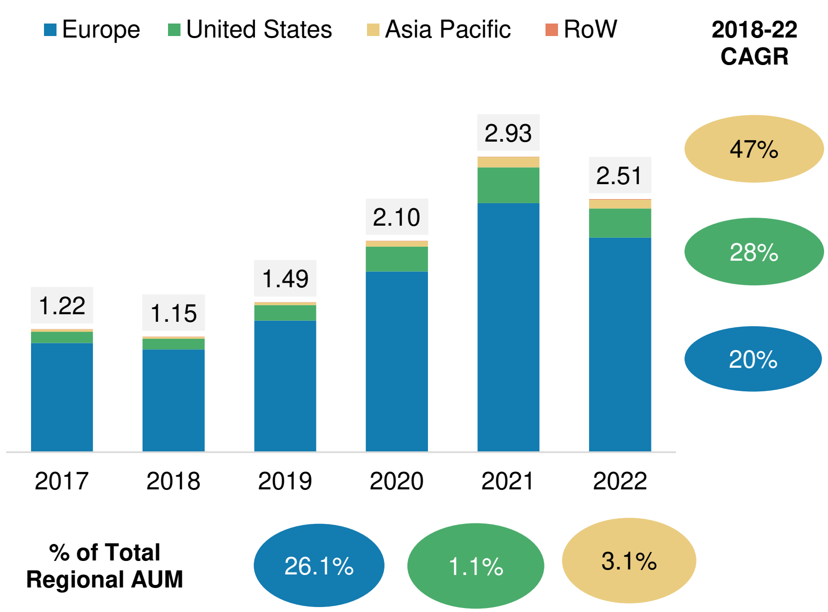
Source: Multiple sources, Morgan Stanley Research.
Note: Data as of Dec 2022 or latest available; US industry total sourced from https://www.roboadvisorpros.com/robo-advisors-with-most-aum-assets-under-management. NA = not applicable

Growth Zones: 4. ESG

ESG – Growing focus on improvement vs screening, plus increased recognition of trade-offs and interconnected impacts of climate change with energy and food security

We see 6 key trends driving growth across ESG – (i) rate of change investing will grow in popularity; (ii) continued growth in adoption and integration of ESG criteria, but a clear need to marry ESG capabilities with strong sector expertise to generate alpha; (iii) an increased focus on interconnected impacts of climate change related to physical risk, water availability, food pricing/scarcity and biodiversity; (iv) diverging regulatory approaches with US/APAC focused on transition / rate of change, the UK's newly proposed Sustainable Disclosure Regulation (SDR) following a similar path vs a more prescriptive European approach; (v) growing focus on social themes linked to the global supply chain and labour, and (vi) more scrutiny of governance.

ESG AuM remains heavily skewed toward Europe, runway for growth in US/Asia linked to rate of change investing ($tn)



Note: Charts inclusive of global Open-End Funds and ETFs that have been categorised as Sustainable Investments by Morningstar.
'Other' category includes Alternatives, Convertibles, Property and Commodities

Source: Morningstar, data as of December 2022
Note: Recent regulation changes resulted in historical revisions of what constitutes an 'ESG fund' which will result in differences with historically reported metrics to be in line with these regulatory changes..

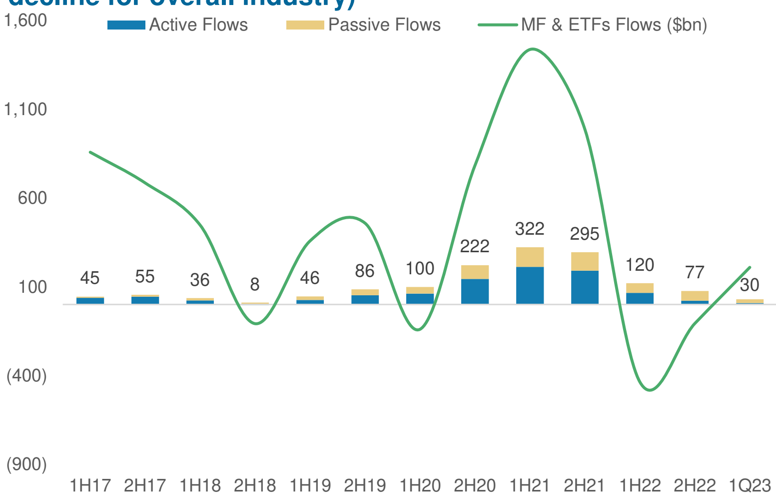
Growth Zones: 4. ESG

ESG – a key frontier in competition; we expect it to drive a race for data – meaningful market share shifts among active managers already seen, which we think will persist

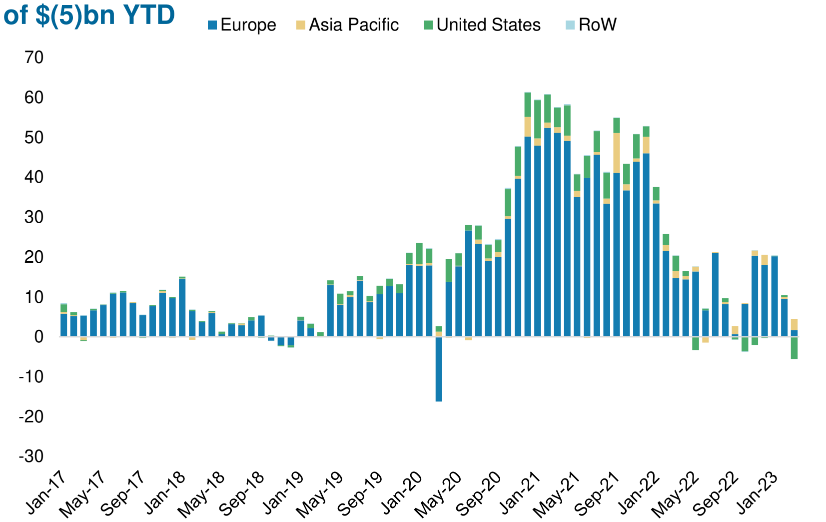
Across Mutual Funds and ETFs, there were **+$196bn of net inflows into ESG in 2022, which represents** a decent ~**7% NNM** growth for the space. The inflows were split between +$86bn in active inflows and +$110bn in passive inflows. By region, **Europe accounted for the lion's share of ESG inflows at +$182bn** (~7% annualised NNM growth), followed by Asia (+$12bn) and the US (+$2bn).

While the 7% NNM growth for ESG in FY22 represents a meaningful slowdown vs 29% for FY21, **market share gains continued vs broader 1.3% redemptions rate across global mutual funds in 2022. We also note the $86bn of active equity ESG inflows or ~4% NNM growth compares to industry-wide active equity outflows of -$(181)bn or a ~2.5% redemption rate. YTD data show continued flow pressures, with the US seeing outflows in March (attributable to outflows from a single ESG ETF* due to MSCI re-ratings), while Europe remains most resilient.** We see best positioned players as those able to combine full integration of ESG in investment processes with a range of thematic product and solutions to meet varying client requirements. We expect there to be a continued focus on more accurate and standardised reporting of Sustainability/ ESG metrics moving forward, which could impact demand in the short term.

ESG MFs + ETFs saw $196bn of inflows or +7% NNM growth in 2022 and ~$30bn or +5% annualised NNM YTD (vs -1.3% organic decline for overall industry)



Monthly ESG flows by region: Europe continues to lead, with +$40bn of inflows, Asia improving, whereas US has seen outflows of $(5)bn YTD



Source: Morningstar, Morgan Stanley Research. Data as of March 2023. Note: Data include Open-ended and ETFs Global AuM and flows (including money markets) .
Note: Recent regulation changes resulted in historical revisions of what constitutes an 'ESG fund' which will result in differences with historically reported metrics to be in line with these regulatory changes. * iShares ESG Aware MSCI USA ETF.

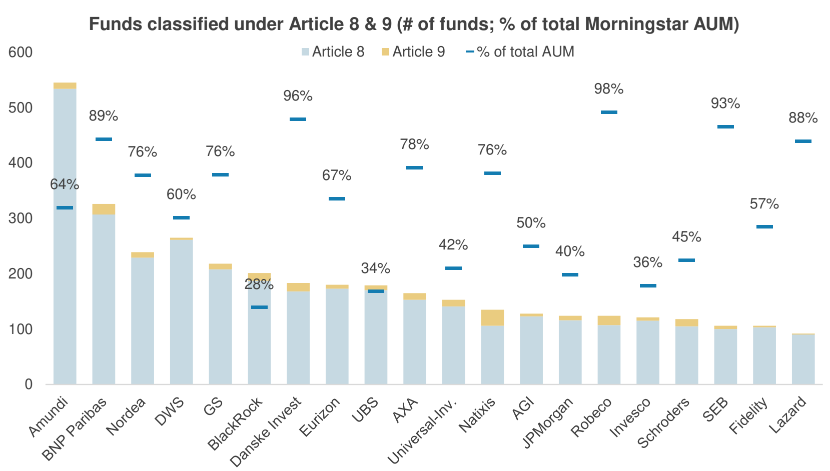
Growth Zones: 4. ESG

Europe the engine of growth in Global ESG AuM, but challenges include recent performance and evolving EU regulations, which could constrain improver strategies

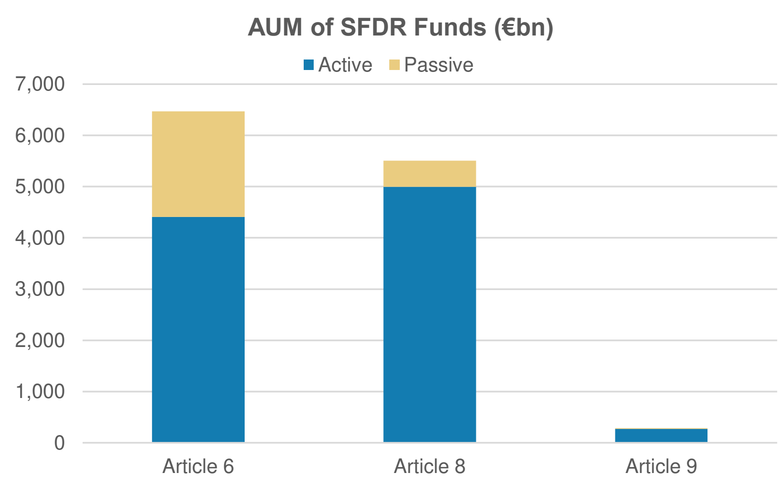
More prescriptive regulations in Europe pose challenges despite continued end-client demand, particularly for investments in ESG rate-of-change stocks as the definitive of "Sustainable Investments". Article 9 re-classifications to Article 8 (307 in 4Q22 per Morningstar) have followed the SFDR requirements that these funds should make 100% sustainable investments. Current debate in the industry is focused on the definition of "Sustainable Investments" and what the minimum thresholds can be for its three aspects – "contribution", "significant harm" and "good governance". The latest comments from the European Commission emphasise that SFDR is a disclosure-based regime and leaves the onus on investors to "carry out their own assessment for each investment and disclose their underlying assumptions". The market has welcomed this broad and flexible approach to disclosures and we think there may be some reversals of Article 9 downgrades in the near term.

Implications for asset managers include: (1) increased disclosure requirements driving cost and data needs; (2) potential impact on fund flows as they reclassify funds given the above; and (3) some constraints in adopting a more flexible improver/transition strategies.

Amundi leads the number of funds classified under Articles 8 & 9, Nordic/Netherlands lead in % of AuM (Danske, SEB, Robeco)



SFDR Articles 8 & 9 AuM represent more than €5tn or ~45% of European mutual fund AuM, ~44% and ~2%



Source: Morningstar SFDR data as of February 28, 2023. SFDR = Sustainable Finance Disclosure Regulation. Note: Data based on Europe OE & MM & ETFs ex FoF ex Feeder (domiciled, most compr.), Article 6 refers to products are all other EU-domiciled or marketed products. Article 8 to products are funds that promote environmental or social characteristics and meet minimum good governance standards. Article 9 refers to products are funds that have sustainability as an objective. These funds must also meet minimum good governance standards and have an additional "do no significant harm" requirement.

Growth Zones: 4. ESG

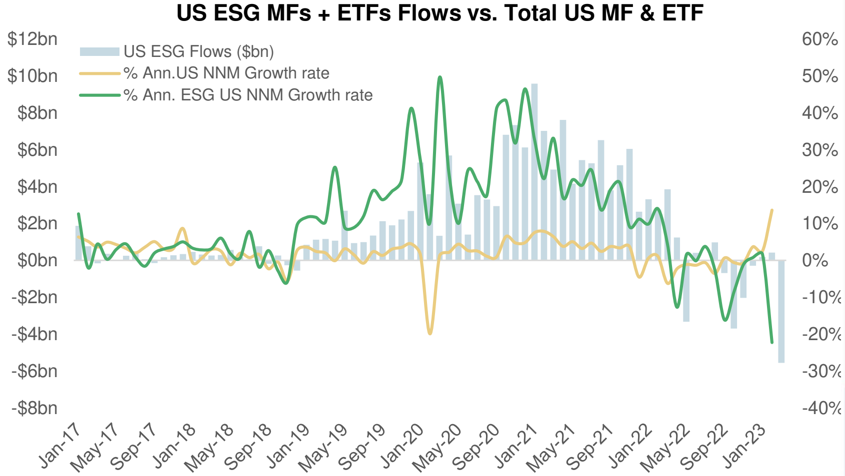
Regulatory framework taking shape in the US, though ESG topic highly politicised and flow moderation reflecting performance issues

Beyond the increased regulation on climate-related disclosure for corporates, the SEC has introduced a much less prescriptive and intensive regulation for ESG funds compared to Europe. The proposal includes definitions for three types of ESG fund: (1) **Integration**: ESG factors are integrated alongside non-ESG factors; (2**) ESG-focused**: ESG factors are the main consideration, with standardised ESG strategy; and (3) **Impact**: specific ESG-focused funds that seek to achieve a particular ESG impact. We expect more clarity on SEC climate regulation by mid-year for corporates and by year-end for asset managers.

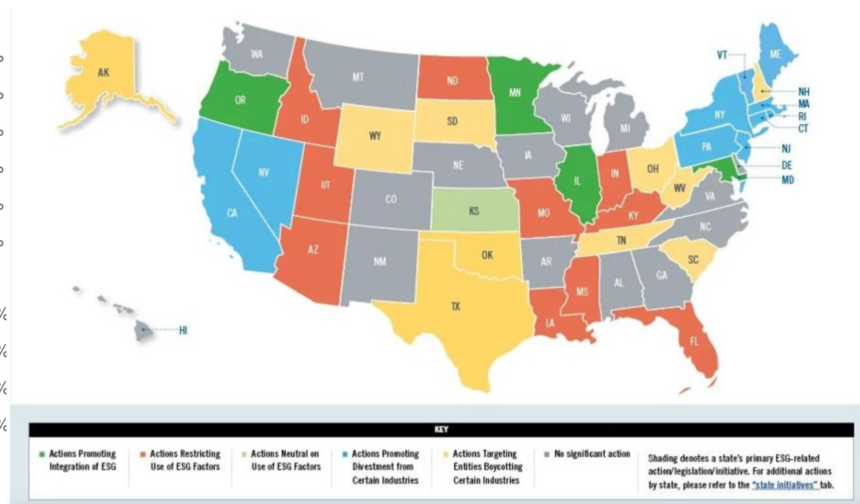
Risks include (1) fund definition may be too broad and could be misleading for investors; (2) ESG requirements may be modified in favour of a clearer division between strategies with greater refinement of the Impact Funds to be similar to Article 9 under EU regulation; and (3) divergent policies across different US states.
While disclosure rules for asset managers could require additional resources, we expect to see some developments on ESG disclosures, helping to remove uncertainty – a key headwind for adoption of ESG. Disclosure also provides more transparency for asset owners and, as players compete for capital, could intensify ESG efforts across the industry.

Sharp decline in US ESG flows in 2022 to 1% NNM vs 28% in 2021, though still more resilient than ~1.5% industry outflows rate. $5bn US ESG outflows in March 2023, linked to a single fund that saw outflows of $6.5bn

US ESG MFs + ETFs Flows vs. Total US MF & ETF



State government opposition to inclusion of ESG criteria in the investment decision-making process with 10 states restricting the use of ESG factors



Source: Morningstar, Morgan Stanley Research. Data as of March 2023.
Note: Recent regulation changes resulted in historical revisions of what constitutes an 'ESG fund' which will result in differences with historically reported metrics to be in line with these regulatory changes.

SECTION 3

Five Keys to Expanding Market Share

Focus on taking market share as competition intensifies

Key focus areas for market share expansion:

- Innovate with **ESG/Thematics – Redefine** the active manager's value proposition
- Enhance **Distribution** via **Customised** solutions
- Embrace **Strategic M&A** – to access new customers/channels and expand the product toolkit and improve scale
- Address the **Cost Base** to unlock resources for growth
- Evolve the investment process using **Quant** / **Alternative Data**

Source: Morgan Stanley Research

ESG / Thematics

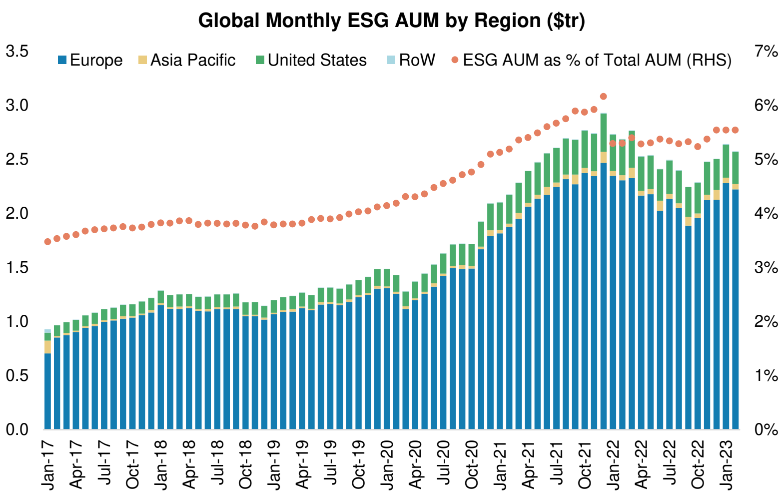
1) Innovate with ESG – Redefining the active manager's value proposition

Greater focus on stewardship could prove a winning strategy to combat enduring pressure from ETFs/Passives – an opportunity for active managers to redefine their value proposition. There is clear evidence of a **market share shift in favour of ESG, which now accounts for 5-6% of global mutual fund AuM**, with relatively small penetration in the US and Asia driven by Institutional demand. Performance credentials are generally supportive based on MSCI SRI vs mainstream indices over 5 years even if, on a shorter-term horizon (1 year), MSCI SRI has underperformed across all regions.

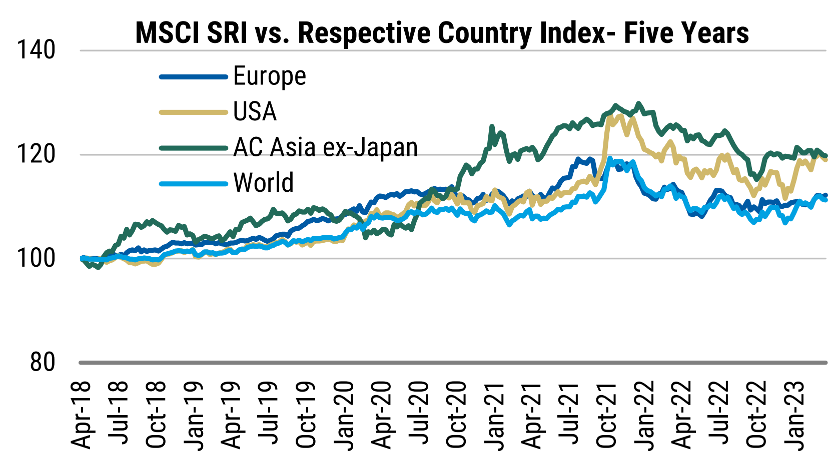
We see active managers **pursuing the stewardship role** more effectively and energetically by embracing ESG/SRI. **ESG/SRI is a way to target retail clients, particularly millennials**, communicating the importance of stewardship and governance, including the positive impact this has on society.

Trend in favour of full ESG integration. Screening and exclusion approaches are falling out of favour vs more comprehensive integration into investment process as a way to consider as many risk factors as possible, although asset managers would need a spectrum of approaches/products to accommodate the different preferences of the client base.

Sustainability AuM accounts for just over ~6% of global AuM, with still limited penetration in US and Asia



MSCI SRI has generally outperformed mainstream indices over the past 5 years, despite the underperformance on a 1-year view



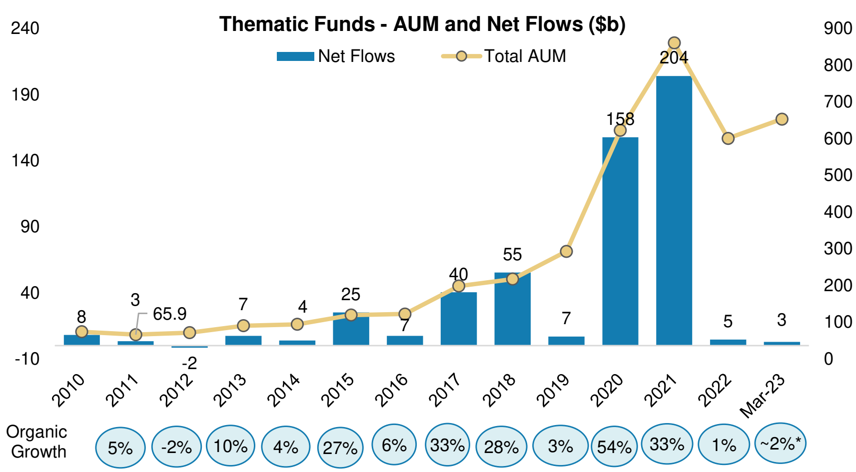
Source: (for left chart) Morningstar, Morgan Stanley Research. Data as of March 2023; (for right chart) MSCI, Datastream, Morgan Stanley Research. Note performance relative to MSCI Europe, USA, Japan, World respectively. Prices as of 27 Jan 2023.

ESG / Thematics

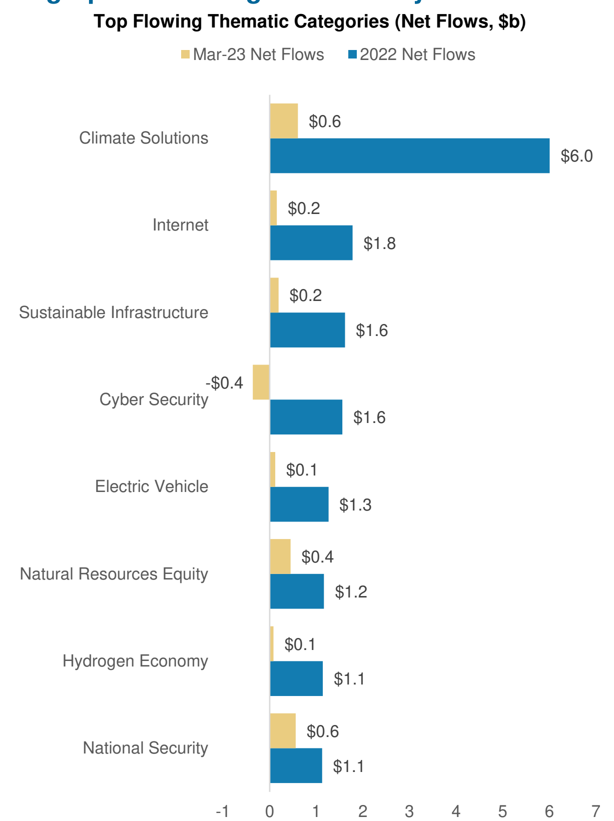
Thematic opportunity – we see thematic product demand, often overlapping with client interest in sustainable products, as an opportunity area for active managers

Client demand for thematic products is evident in magnitude of inflows in 2020-21. Though still small in the context of overall active equities **(>$800bn AuM in 2021, up from ~$293bn at end of 2019**, representing ~4% market share of equity funds), the thematic category saw >**$100bn of inflows in each of 2020 and 2021.** We have seen a sharp decline since then, with only $5bn or 1% NNM growth in 2022 compared to (3)% outflows from active equity funds. We anticipate interest from clients at the intersection of thematic and sustainable categories, with the largest inflows YTD seen in Energy Transition (Climate Solutions, Solar, Electric Vehicles).

Thematic funds saw +$200bn net flows in 2021, but 2022 saw a sharp decline in demand, though recovering in 1Q23 with ~2% annualised NNM growth, which compares favourably to industry-wide outflows



In terms of 2022 net flows, the leading thematic category by far was Climate Solutions (vs Technology in 2021). We are seeing this trend continue in 2023, with largest inflows YTD in Climate Solutions, Solar/Energy, Demographics and Digital Economy



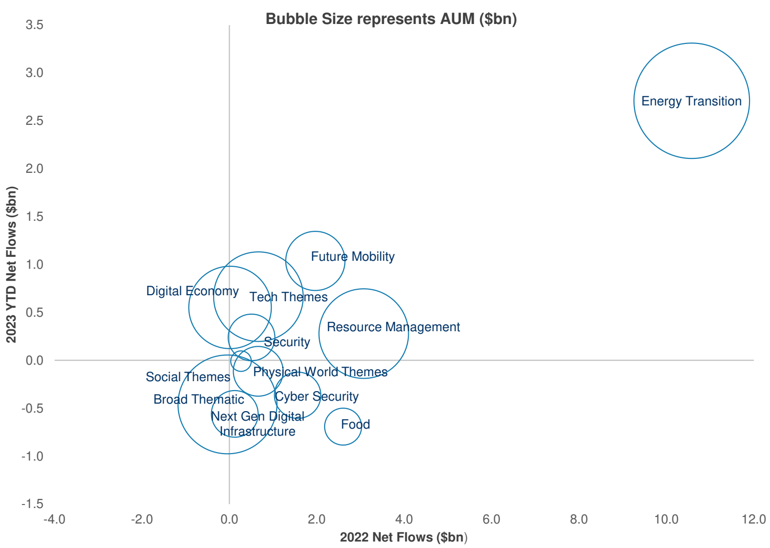
Source: Morningstar, Morgan Stanley Research. Note: 1) data represents Morningstar defined universe of thematic funds and tracks $653bn AuM across ~2,426 funds globally. Data as of March 31, 2023. 2) Right chart shows flows ranked by largest Flows in 2022 and by Morningstar Sub-themes categories.

ESG / Thematics

Thematic opportunity – Energy Transition continues to garner majority of flows in 2022 and 2023 YTD

Energy Transition saw the majority of flow in 2022, with **Digital Economy** also seeing traction, whereas largest outflows were seen in Consumer and Life Sciences. 2023 has seen a continuation of inflows to Energy Transition and Digital Economy, with traction also in **Security** and **Future Mobility. China-focused funds are seeing momentum**, despite challenges in the region. Top 15 firms accounted for ~10% of total Thematic AuM. YTD across our coverage, **Schroders had seen $0.8bn of inflows and BlackRock $0.8bn as of March 2023.**

Market share of flows by theme



Top flowing thematic funds globally – 2022 & 2023 YTD

Firm	Fund	Theme	Sub-Theme	AUM ($b)	Net Flows Dec-22
BlackRock	ACS Climate Transition World Equity Fund	Energy Transition	Climate Solutions	11.0	5.3
Kraneshares	KraneShares CSI China Internet ETF	Digital Economy	Internet	6.5	1.7
Amundi	KBI Global Sustainable Infrastructure	Physical World Themes	Sustainable Infra	1.6	1.6
China AMC	China AMC Hang Seng Int&InfoTech ETF	Digital Economy	Internet	3.5	1.5
E Fund Mgnt	E Fund CSI China Ovsea Net 50 QDII-ETF	Digital Economy	Internet	5.2	1.4
ARK	ARK Innovation ETF	Multiple Tech Themes	Innovative Technology	6.0	1.3
Candriam	Equities Robotics & Innovative Technology	Robotics + Automation	Robotics	1.3	1.0
Cathay	Cathay Taiwan 5G Plus ETF	Next Gen Digital Infra	5G	1.5	0.8
BlackRock	iShares Global Clean Energy ETF	Energy Transition	Alternative Energy	5.9	0.8
CPR	CPR Invest Hydrogen	Energy Transition	Hydrogen Economy	0.9	0.8
Mirae Asset	TIGER China Electric Vehicle Solactive	Future Mobility	Electric Vehicle	2.3	0.6
Mirae Asset	Global X Uranium ETF	Resource Management	Uranium	1.5	0.6
Deka	Deka-Industrie 4.0 CF	Multiple Tech Themes	4th Industrial Revolution	3.8	0.6
Mediolanum	BB Innovative Thematic Opportunities	Broad Thematic	Broad Thematic	1.5	0.6
Schroders	Schroder ISF Global Sustainable Growth	Demographics	Demographics	3.4	0.6
			Top 5 % of total	5%	253%
			Top 10 % of total	7%	358%
			Top 15 % of total	9%	424%

Firm	Fund	Theme	Sub-Theme	AUM ($b)	Net Flows March-23
China AM	China AMC Int&InfoTech ETF	Digital Economy	Internet	4.3	0.7
Schroders	Schroder Int. Global Sustainable Growth	Demographics	Demographics	4.2	0.6
BlackRock	ACS Climate Transition World Equity Fund	Digital Economy	Internet	1.0	0.5
CSOP AM	Huatai-PB CSI Photovoltaic Industry ETF	Energy Transition	Solar	2.4	0.5
JPMorgan	JPM Carb Transition Global Equity ETF	Energy Transition	Carbon Transition	0.7	0.4
Yingda	YingDa State-owned Reform Theme Eq	Political	Structural Reform	0.5	0.4
China AM	China AMC CSI New En Car Ind ETF	Future Mobility	New Car Industry	1.7	0.4
Zhong Ou	Zhong Ou China Elect & Info SHS Eq A	Digital Economy	Digital Economy	0.7	0.3
BlackRock	ACS Climate Transition World Equity	Energy Transition	Climate Solutions	11.9	0.3
BNP Paribas	BNP Paribas Climate Impact Privilege	Energy Transition	Climate Solutions	3.3	0.3
Global X	Global X US Infrastructure Dev. ETF	Political	Infrastructure	4.0	0.3
GF Fund	GF New Energy Vehicles Battery ETF	Future Mobility	New Energy Vehicles	0.6	0.2
Schroders	Schroder ISF Global Energy Transition	Energy Transition	Alternative Energy	2.1	0.2
Tianhong Asset	TianHong CSI Photovoltaic Industry Idx A	Energy Transition	Solar	1.9	0.2
BNP Paribas	BNPP ECPI Circular Economy Leaders	Resource Management	Circular Economy	1.0	0.2
			Top 5 % of total	2%	
			Top 10 % of total	4%	
			Top 15 % of total	6%	

Source: Morningstar, Morgan Stanley Research. Note: 1) data represents Morningstar defined universe of thematic funds and tracks $653bn AuM across ~2,426 funds globally, data as of March 31, 2023.

ESG / Thematics

Thematics – often at the intersection with Sustainability, we see active players looking to evolve their offerings as they seek to redefine the value proposition

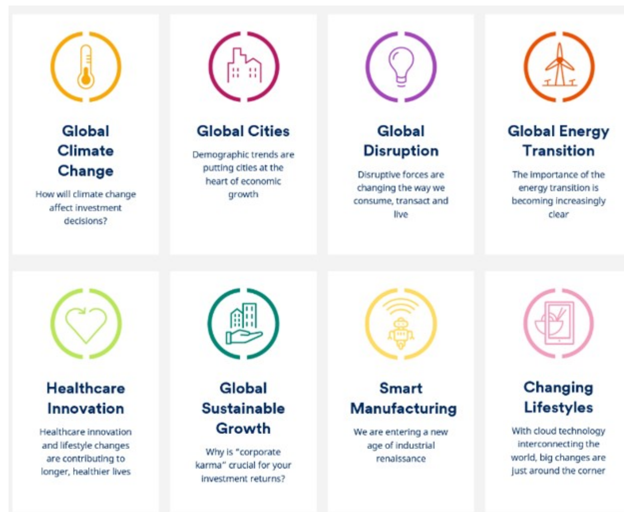
We see scope for active managers to benefit from a growing client focus on investing to access a range of themes vs legacy product wedded more to geographical/regional delineation. In many cases at the intersection of the thematic and sustainable strategies, we expect to see continuing product development focus in this area.

Of the top inflowing European active equity funds in FY 2022, more than half, or $20bn, were into ESG/Thematic and Alternatives/Private Markets

Top flowing European active equity funds

Branding name	Fund name	Global category	AUM (€B)	FY22 Net flows (€B)	Org Grw
BlackRock	ACS Climate Transition World Equity Fund	Global Equity Large Cap	10.3	4.8	72%
BlackRock	ACS World ESG Insights Equity Fund	Global Equity Large Cap	5.6	4.0	194%
CaixaBank	Caixabank Master RV USA Advised BY FI	US Equity Large Cap Blend	6.3	2.3	46%
BlackRock	Blackrock ACS NA ESG Insgts Eq	US Equity Large Cap Blend	1.8	2.0	n.a.
Sjunde AP	AP7 Aktiefond	Global Equity Large Cap	73.2	2.0	2%
M&G	M&G (Lux) Global Listed Infras Fd	Infrastructure Sector Equity	2.9	1.7	121%
JPMorgan	JPM Global Dividend Fund	Global Equity Large Cap	2.2	1.6	156%
Fidelity International	FF- Global Dividend Fund	Global Equity Large Cap	10.6	1.5	n.a.
Guinness	Guinness Global Equity Income	Global Equity Large Cap	3.5	1.5	70%
Northern Trust	NT UCITS FGR EM Custom ESG Eq Idx	Global Emerging Markets Equity	1.3	1.5	n.a.
Candriam	Candriam Sustainable Eq Em Mkts	Global Emerging Markets Equity	2.9	1.5	66%
Morgan Stanley	MS INVF Global Brands Fund	Global Equity Large Cap	19.2	1.4	7%
DWS	DWS Invest Global Infrastructure	Infrastructure Sector Equity	3.3	1.4	66%
Partners Group	Partners Group Global Value SICAV	Equity Miscellaneous	6.3	1.4	21%
Union Investment	UniGlobal Vorsorge	Global Equity Large Cap	15.1	1.4	8%
Deka	Deka-DividendenStrategie	Global Equity Large Cap	12.3	1.3	11%
Fidelity International	Fidelity America Fund	US Equity Large Cap Value	3.6	1.2	46%
BlackRock	BGF Systematic Glb Eq High Inc Fd	Global Equity Large Cap	3.9	1.1	31%
JPMorgan	JPM Global Select Equity Fund	Global Equity Large Cap	2.5	1.1	72%
DWS	DWS Top Dividende	Global Equity Large Cap	19.9	1.1	6%
		Top 10% of total	3%	€22.8B	
		Top 20 % of total	6%	€35.6B	
		Industry	3,365	-€102.3B	

How a leading European firm is evolving its offering to provide a strong array of thematics



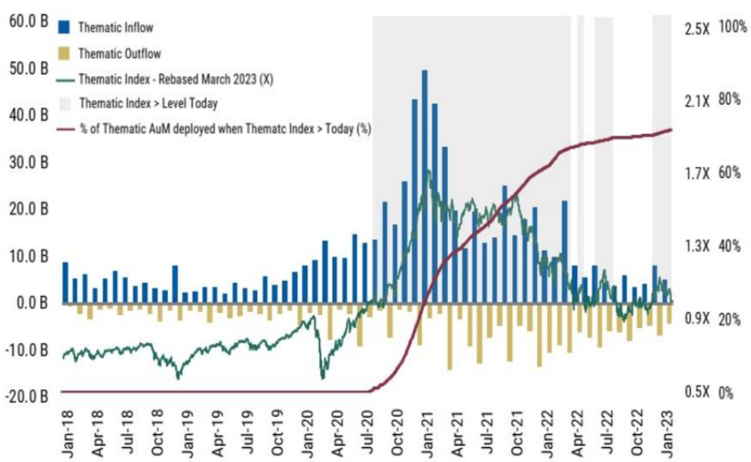
Source: (for left chart) Morningstar, Morgan Stanley Research. Note: Data captures €3.4tn assets (Europe OE & MM ex FoF ex Feeder) as of March 23; (for right chart) Schroders company data.

ESG / Thematics

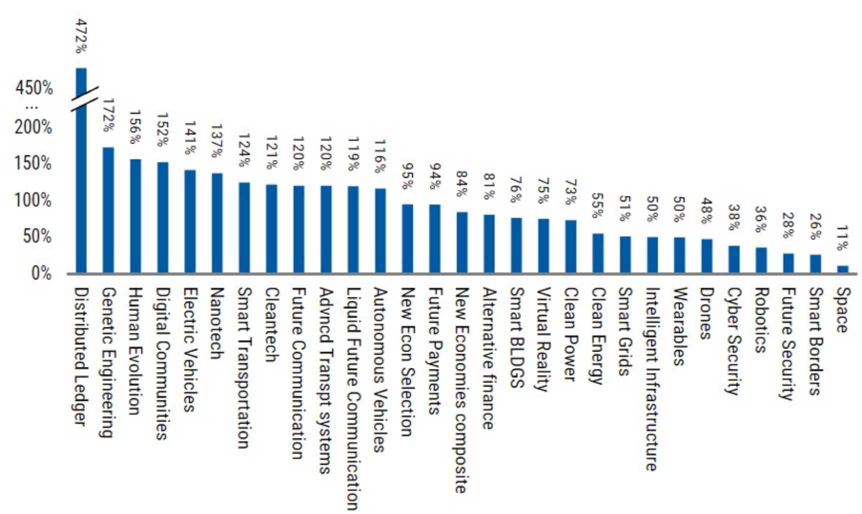
Thematics – performance challenges linked to growth factor; we expect this to drive a more constructive outlook for ‘security’ vs tech/disruption themes

Are Thematic strategies simply a derivative of growth investing? Whilst clearly there is an overlap with growth factors given the long-duration nature of a number of themes, we remain constructive on the longer-term outlook. That said, recent performance drives some tactical risk near term, given the amount of capital raised since 2019, which we estimate is now below the level at which it was invested. Tech/disruption themes look more challenged in light of this, whilst we think geopolitical themes or ‘security’ – as we discuss over the page – are likely to be the relative winners in terms of flows over the coming 1-3 years (e.g. resource, food, water, health, energy, cyber).

Since 2018, 68% of capital inflow into thematic funds has been received at a time where index > index today



Increase in index required for performance to recover fully



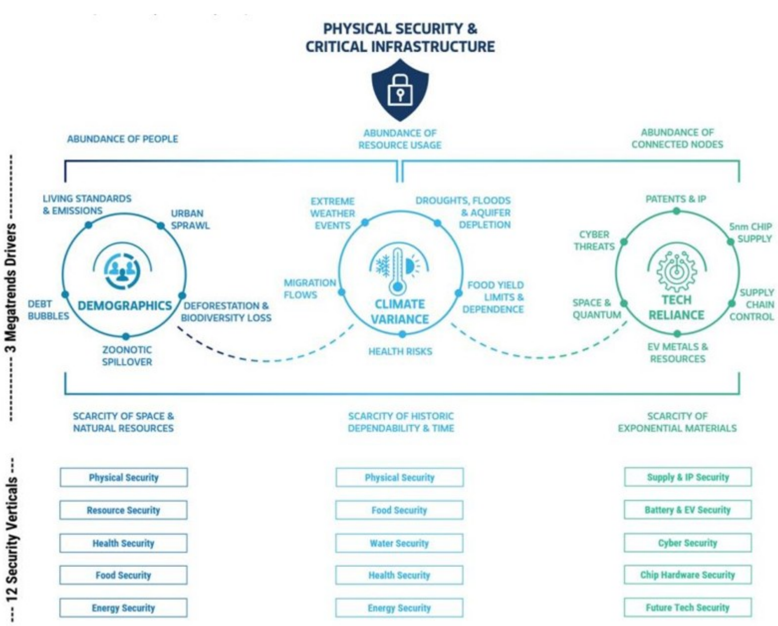
Source: (for left chart) Kensho, Morningstar, Morgan Stanley Research. Note: Since 2018, thematic funds have seen ~$700bn inflows of fresh capital, of which ~$475bn or 68% has been received while the index was higher than today; (for right chart) Kensho, Morningstar, Morgan Stanley Research

ESG / Thematics

Thematics – we see growing investment in physical security and critical infrastructure across 12 key 'security' verticals in a multipolar world

The Multipolar world envisioned by Morgan Stanley strategists 3 years ago is now a reality, resulting in a meaningful but orderly de-risking of critical supply chains. The transition to a Multipolar world has increased concerns over scarce physical resources, intensified competition over innovation and emerging industries, and placed a premium on security-over-efficiency and sovereignty-over-multilateralism. It has complicated the response to global trends and challenges, in particular 3 mega-trends – Technology Diffusion, Demographics and Climate Change. Our colleagues' collaborative work identifies areas where critical infrastructure investments will be needed to ensure multipolar security and independence – they see 12 verticals, outlined below.

Morgan Stanley's security mega-trends



Investing in security: 80 critical infrastructure stocks

Security Vertical	Ranking Measures	Abundance & Scarcity Pressure Points	Structural Accelerant	Latest Protectionist Policy Examples	Spread Rank (1= greatest security risk)	Reshoring Urgency	Regional Leaders	Regional Laggards	Key Critical Infrastructure Enablers	Private Enablers
Traditional & Unipolar Security										
Military & Physical Security	Military hardware, spending, troops and nuclear capabilities	The US spends >3.5% of GDP on military and defence, to Europe's 1.2% and China's c2%	Demographics	Switzerland restricts re-export of arms and munitions from country of original purchase	11	11	US	Latam	Motorola, HIKVision, Lockheed, Assa Abloy, General Dynamics	SpaceX, Anduril, Sierra, Relativity
Resource Security	Oil, base & rare earth material reserves and surplus/deficits	China, India, Vietnam, Brazil and Russia control 91.1% of all rare earth materials	Demographics	Saudi Arabia, the largest crude exporter, open to trade settlement in FX other than USD	12	8	RoW	Japan	Norsk Hydro, Aurubis, Glencore, Antofagasta, Boliden	Gravithy, Vital Thin Film, Lilac Solugen
Food Security	Basic necessity production vs consumption	50% more food, whilst cutting ~13Gt of GHG by 2050	Climate	Since Russia invaded Ukraine, 135 food and fertilizer export restrictions have been enacted	10	10	US	Japan	Yara, OCI, DSM, Deere, Ginkgo Bioworks, Incitec Pivot, Adecoagro	Pivot Bio, Aleph Farms, Calysta
Water Security	Ground and surface water supply vs use & water conflicts	Demand is set to rise by ~30% by 2050; 21 of 37 major global aquifers past tipping point	Climate	The UAE and Saudi Arabia have been raising export hurdles on water and ice since 2010	4	12	Latam	Asia	Xylem, Badger Meter, Idex Corp, Itron, ERII	Gradiant, Trevi, Adionics
Health Security	Diagnostics, medical supply chains & vaccinations	Population density and warming increase zoonotic spillover risks >2x	Demographics	In 2021, the EU along with many other nations approved export restrictions on vaccines	7	9	Japan	Africa	Roche, BioNTech, Oxford Nanopore, GSK	AbogenBio, RVAC, Touchlight
Supply & IP Security	Automation, patents, trade flows & ISO standards	In Energy Transition hardware, >40% of supply comes from 3 largest nations	Technology	IP lawsuits against foreign busineses in China has increased 4x since 2016	9	7	Japan	Africa	Fanuc, Ashtead, Intertek, SGS, Bureau Veritas	Forto, GreyOrange, Bizongo
Future & Multipolar Security										
EV & Battery Security	Battery production, critical material supply & processing	China has 558GWh of EV battery production capacity to the US' 44GWh and EU's 67GWh	Technology	$7,500 IRA incentives for US extracted and assembled EV batteries	6	3	China	Africa	Freyer, Tesla, QS, CATL, LiCycle, Mobileye, Aspen Aerogels	Northvolt, GAC Aion, Hozon
Energy Security	Wind, solar, storage and fusion capacity and rate of change	In solar, China controls 79% of polysilicon, 97% of wafers, 85% of cells and 75% of modules	Technology	China is planning to ban exports of key solar inputs (wafers and ingots)	8	2	RoW	Africa	Prysmian, ENGIE, Wacker, Enphase, Maxeon, Siemens Energy, JA, LONGi	Form Energy, Terrapower, Malta, Form Energy
Cyber Security	Cyber attacks, data centre capacity & supercomputers	By 2025, connected devices will increase from 14.4bn to 27bn	Technology	UK, US, Australia replace Chinese made cameras to minimise cyber risks	5	6	US	Africa	Palo Alto Networks, Fortinet, Tenable, Exclusive Networks, Darktrace	Claroty, Armis, Dragos, SCADAfence
Space Security	Launch facilities & satellites	In 2021 and 2022, more satellites were launched than in the 60 years prior	Technology	Taiwan is looking to build a regional satellite champion for communication sovereignty	1	5	US	Africa	Northrup Grumman, L3Harris, Rocket Labs, Rolls Royce	SpaceX, HawkEye360, Albedo
Chips & Tech Security	R&D, wafers, manufactured inputs, <10nm chips	92% of <10nm chip capacity resides in Taiwan	Technology	US bans AI chips, tools, software exports to China hampering semi fab capacity	3	1	Asia	Africa	ASML, TSMC, NVIDIA, Wolfspeed, Samsung Electronics	GTA, SambaNova, Vestai, SiFive
Future Tech Security	Quantum, AGI, Synbio, Genomics, Ag & Water funding	>$100m has now been invested in AGI start-ups, over 90% of which has been in the US	Technology	US considering expanding China bans to quantum and AI. EU to consider restricting GenAI	2	4	China	Latam	Alphabet, Microsoft, Rigetti, IBM, Samsung Electronics	IonQ, Keen Technologies, SandboxAQ, ColdQuanta

Source: Morgan Stanley Research, Icons courtesy of flaticon.com creators; Good Ware, Freepik, Pixelmeetup, Ifanicon, Kalshnyk, Uniconlabs, Peerapak Takpho, Smashicons & Photo3idea_studio.
See our Global Insight report Thematics: Seeking Security in the Multipolar World, published on 23 April 2023.

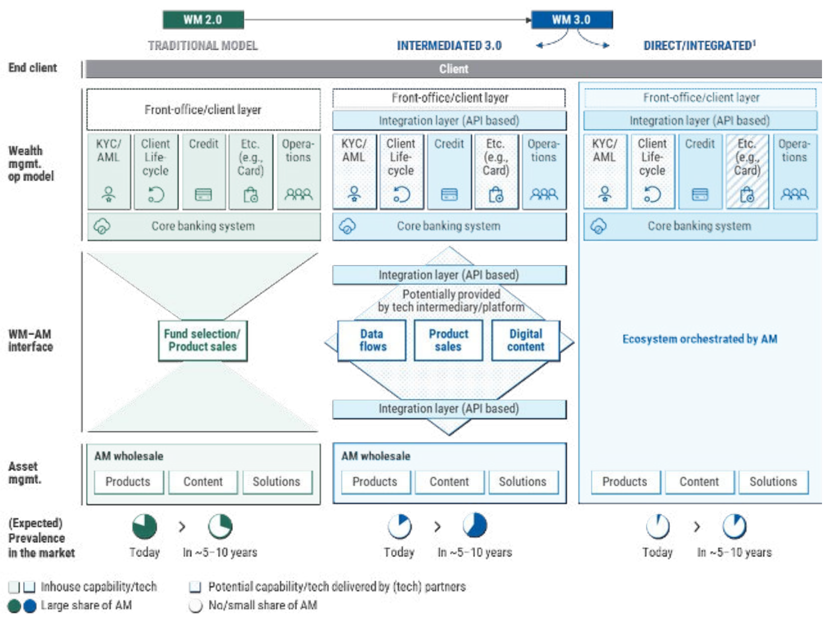
Distribution & Customisation

2) Evolve distribution approach to Wealth Management – a channel that is an increasingly important growth driver

In a Wealth Management 3.0 world, we believe **success will become a function of how effectively asset managers can forge partnerships with wealth managers through building more integrated operating models.** This will require more direct technical integration to deliver greater levels of customisation and improve data flow. (See also [Wealth and Asset Management: Time to Evolve](), 9 June 2022.)

We see two models emerging in a Wealth 3.0 world: **1) Intermediated 3.0 model**, in which current human-led, ad hoc analogue interactions between sales and investment units shift to broader technical integration and continuous-digital led interaction across several units supported by API adoption; and **2) Direct model**, where asset managers build their own end-to-end digital-led offering.

Evolution of the distribution model under Wealth Management 3.0



Charts Source: Oliver Wyman, Morgan Stanley Research
1. Fully-digital, but can also be with human interaction

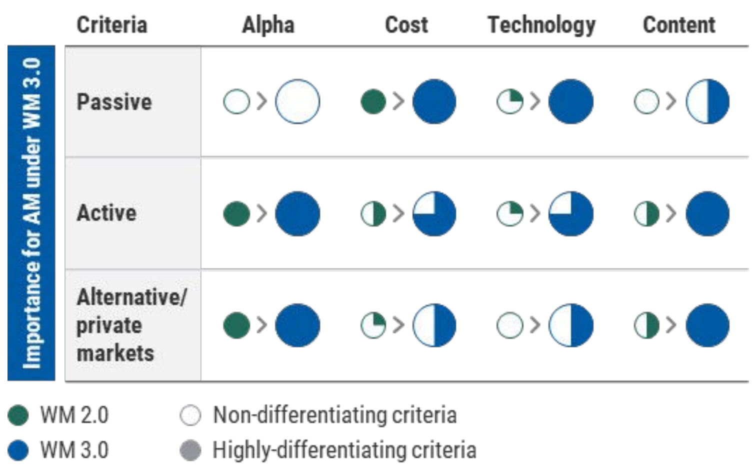
Distribution & Customisation

Wealth managers' selection criteria to evolve; see growing importance of content alpha

As wealth managers shift to a Wealth Management 3.0 world, their evaluation criteria of asset managers will evolve to include a wider range of criteria, including technology capabilities and ability to deliver personalised products. Asset managers will need to be proficient in technical capabilities that meet the demands of robust connectivity and data exchange protocols, while also having the ability to support the delivery of personalised products and investment experience. All-in cost of delivering products and advice will become an even more important consideration.

Asset managers will be expected to provide pointed research and targeted insights driven by data informed analysis. Educational content, basic informational pieces and investment 'stories' around funds to foster a sense of personalisation and client focus.

Key selection criteria of AMs for wealth managers



Charts Source: Morgan Stanley Data, Oliver Wyman analysis

Distribution & Customisation

Critical to supercharge wealth advisors with customised content through data-driven approach and micro segmentation

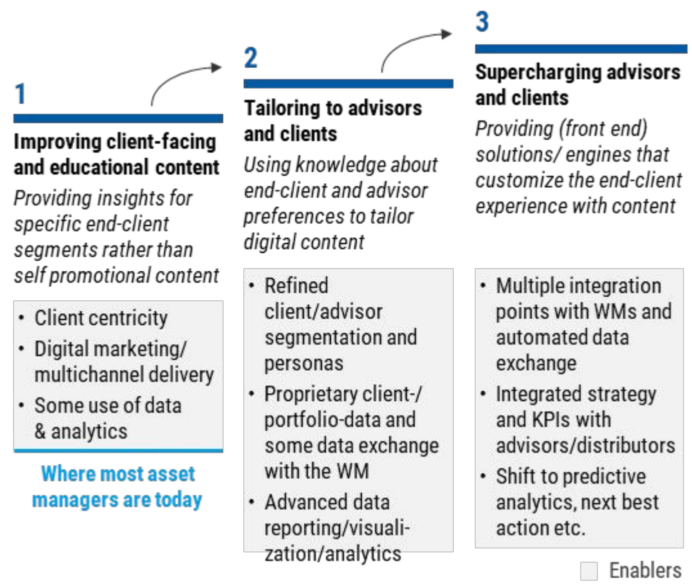
In a Wealth Management 3.0 world, wealth managers are likely to consolidate asset management relationships into a smaller number of strategic partners, leaving asset managers fewer opportunities to win new business.

As a result, **asset managers will need to evolve their distribution strategies and client service models to supercharge wealth advisors** and end clients with market insights, data and analytics to improve sales effectiveness, provide best in breed models to support portfolio construction and advanced portfolio analysis.

Data-driven approach to designing products and solutions for partners **will be key** through micro segmentation to optimise marketing strategies.

Asset managers will need to develop content delivery capabilities to elevate relationships. We observe three development stages in asset managers' content delivery to wealth managers and their end clients: 1) improving client-facing and educational content, 2) tailoring to advisor and client and 3) supercharging the advisor and client.

3 stages of supercharging advisors and clients



Charts Source: Oliver Wyman, Morgan Stanley Research

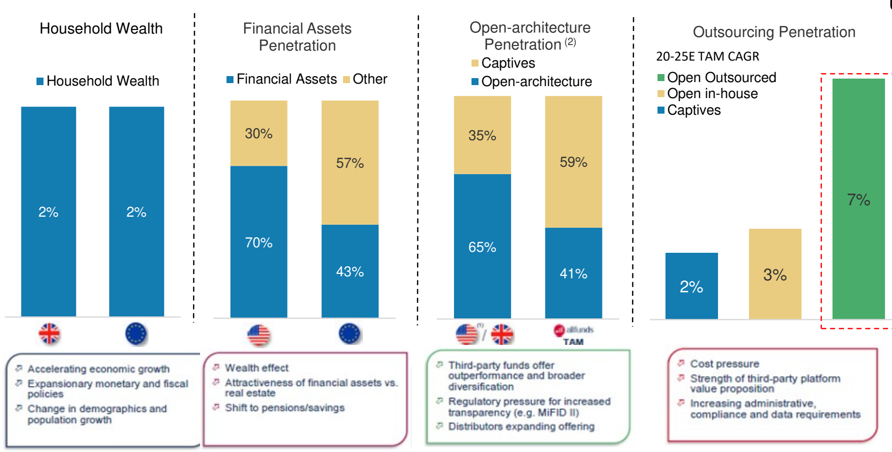
Distribution & Customisation

From distribution to client acquisition

Focus more on lifetime client relationship and solutions vs products, given that churn rates imply low lifetime value.

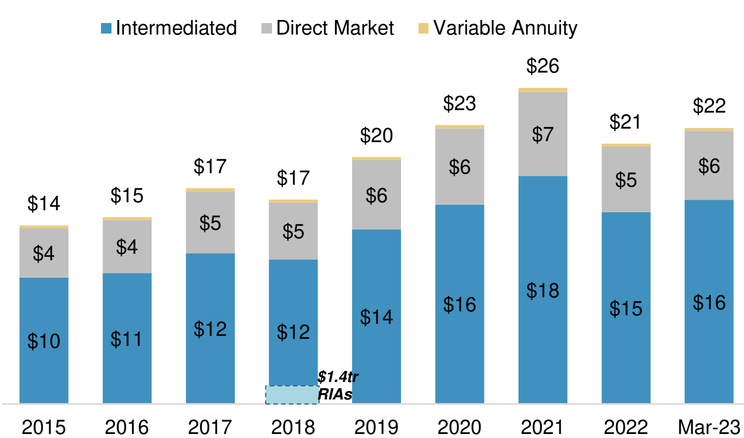
Changing nature of distribution: Retail is becoming more institutional, with gate-keepers raising the bar; the European market is seeing a gradual shift from traditional captive sales to open architecture. Large B2B fund distribution platforms such as Allfunds offer Global fund houses access to a growing range of distributors. We see an opportunity for global asset managers to benefit from this shift.

Captive channels dominate sales in Europe, though we see a gradual shift in favour of open architecture more common in Anglo Saxon markets



In the US, ~25% of retail mutual fund assets are held in direct market, while 74% are intermediated

US Mutual Fund Retail AUM by distribution channel ($Tr)



Source:: (for left chart) Note: (1) US figures as of 2014 (2) Excludes D2C. Source: Company Data, Morgan Stanley Research estimates. Management sizing of the market based on third-party market data. Notes: Penetration figures as of 2019 except for outsourcing penetration which shows 2020 data for mutualised securities excluding B2C. Outsourcing penetration includes Europe, LatAm, US offshore and APAC countries where Allfunds has presence (HK, Singapore, Thailand, Philippines) (for right chart) Morningstar, Morgan Stanley Research. Data as of March 31, 2023.

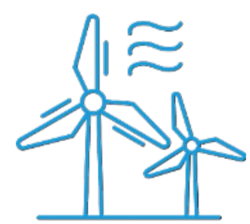
Strategic M&A

3) Embracing strategic M&A to access new customers/channels, expanding the product toolkit and improve scale

Post-GFC, deals have typically been struck in the 8-14x EV/EBITDA range, though as low as 4x for growth impaired and >20x for strong growth.

Drivers of consolidation

1. **Extending skill set in private markets, ESG/impact investing**
    - **PE** (Schroders-Adveq, ARES-Landmark Partners, EQT-Baring Private Equity Asia, Franklin-Lexington)
    - **VC/Growth Equity** (StepStone-Greenspring, P10-TrueBridge)
    - **Private credit** (T. Rowe-Oak Hill, Franklin-Alcentra, Franklin-Benefit Street, Brookfield-Oaktree, AllianceBernstein-Carval, BlackRock-Tennenbaum)
    - **Infrastructure** (Ares-AMP Capital's Infra Debt platform, Victory-New Energy Capital, Schroders-Greencoat, BlackRock-First Reserve Energy Infrastructure)
    - **Real estate** (Schroders-Alonquin, Schroders-Blue Asset Management, SLA-Tritax, EQT-Exeter, Ares-Black Creek, Blue Owl-Oak Street)
    - **ESG/Impact** (Schroders-BlueOrchard, Federated Investors-Hermes, Victory-THB, AMG-Boston Common)
2. **Scaling**
    - **Traditional** (Franklin Resources – Legg Mason, Virtus-AGI US Retail, Macquarie-Waddell & Reed, Janus-Henderson, Standard Life-Aberdeen, Invesco-Oppenheimer, Jupiter-Merian, Natixis-La Banque Postale)
    - **Passives/ETF** (Victory-WestEnd, Invesco-Guggenheim, WisdomTree-ETF Securities, Amundi-Lyxor)
    - **Solutions** (Schroders-River & Mercantile UK Solutions)
3. **Technology-driven deals to improve distribution or tune up investment engine**
    - **Customisation/SMAs** (BlackRock-Aperio, JPM-55ip, Franklin-O'Shaughnessy)
    - **Roboadvice/Distribution** (Franklin-Advisor Engine, BlackRock-FutureAdvisor, BlackRock-Cachematrix)
    - **Machine learning** (Victory Capital-Cerebellum learning)
    - **Alternative solutions** (BlackRock-eFront)
4. **Enhancing distribution capabilities**
    - **Privates accessing retail** (ARES-BlackCreek, Apollo-Griffin Capital and Hamilton Lane-360 Capital)
    - **Geographical scope** (Amundi-Pioneer, BlackRock-Banamex, Virtus-Stone Harbor, Amundi-Sabadell)
    - **Direct to consumer** (Victory-USAA)



Source: Company Data, Morgan Stanley Research. Note: Data as of March 31, 2022.

Strategic M&A

Precedent M&A transactions generally struck in the 8-14x EBITDA range and ~11.8x median; higher for higher-growth assets (e.g., private markets): select deals listed

Year	Date Announced	Buyer Name	Target Name	Purchase Price ($MM)	AUM ($Bn)	Deal Value/ AUM	EV/EBITDA Multiple Paid
2023	Feb-23	Bridge Investment Group	Newbury Partners	320	4	7.44%	11.6x
2022	Aug-22	P10	Westech Investment Advisors	147	1	10.50%	11.8x
2022	Oct-22	Virtus	AlphaSimplex	130	11	1.19%	N/A
2022	May-22	Franklin Resources	Alcentra Group Holdings	700	38	1.84%	11.5x
2022	Mar-22	AllianceBernstein	CarVal Investors	750	14	4.87%	N/A
2022	Mar-22	EQT AB	Baring Private Equity Asia	7,480	19	38.42%	33.0x
2022	Mar-22	Carlyle Group	CBAM Partners	800	15	5.33%	11.4x
2021	Dec-21	Ares Management	AMP's Infrastructure Debt Platform	308	8	3.85%	13.0x
2021	Dec-21	Schroders	Greencoat Capital	636	9	7.12%	23.9x
2021	Dec-21	Apollo	Griffin Capital	210	5	4.20%	N/A
2021	Nov-21	EQT AB	Life Sciences Partners	509	2	20.45%	18.8x
2021	Nov-21	Victory	WestEnd Advisors	800	18	4.57%	15.8x
2021	Nov-21	Franklin Resources	Lexington Partners	1,750	34	5.15%	18.5x
2021	Oct-21	T. Rowe Price	Oak Hill Advisors	4,200	53	7.92%	15.6x
2021	Oct-21	Schroders	River and Mercantile Group	317	58	0.55%	13.4x
2021	Sep-21	Victory	New Energy Capital Partners	97	1	9.70%	8.8x
2021	Aug-21	Goldman Sachs	NN Investment Partners	1,880	355	0.53%	N/A
2021	Jul-21	U.S. Bank	Greenspring Associates	800	9	8.89%	25.9x
2021	May-21	Pendal	TS&W	196	25	0.79%	7.6x
2021	Apr-21	Amundi SA	Lyxor	981	147	0.67%	15.0x
2021	Mar-21	Ares Management	Landmark Partners	1,008	18	5.48%	12.0x
2021	Feb-21	Virtus	Westchester Capital Management	220	4	5.12%	7.4x
2021	Jan-21	Hamilton Lane	361 Capital	13	N/A	N/A	N/A
2021	Jan-21	EQT AB	Exeter Property Group	1,870	10	18.33%	23.4x
2020	Dec-20	Macquarie	Waddell & Reed	1,700	66	2.12%	6.5x
2020	Jul-20	Perpetual	Barrow Hanley	320	44	0.73%	8.0x
2020	Feb-20	Franklin Resources	Legg Mason	4,500	800	0.71%	9.0x
2019	Mar-19	Brookfield Asset Management	Oaktree Capital Management	4,800	120	6.45%	9.7x
2018	Nov-18	Victory	USAA Asset Management	1,000	69	1.23%	8.1x
2018	Oct-18	Franklin Resources	Benefit Street Partners	683	26	2.63%	11.8x
2018	Oct-18	Invesco	OppenheimerFunds	5,714	250	2.32%	10.2x
2018	Apr-18	Federated Investors Inc.	Hermes Investment Management	350	47	1.24%	12.8x
2018	Feb-18	Virtus	Sustainable Global Advisors	130	12	1.59%	10.6x
					Average:	**6.00%**	**13.7x**
					Median:	**4.39%**	**11.8x**

TROW / OHA acquisition: Mse inclusive of $900m earn out payment.

Source: Company Data, Morgan Stanley Research estimates (Mse); Note: 1) Ares/Landmark reflects MS estimated forward EBITDA contribution from Landmark, 2) Macquarie/WDR multiples based on implied sale of asset management business, 3) Amundi/Lyxor deal converted to USD at 4/7/21, 4) transactions reflect company disclosed multiples where available, or MS estimates. N/A = not applicable or available.

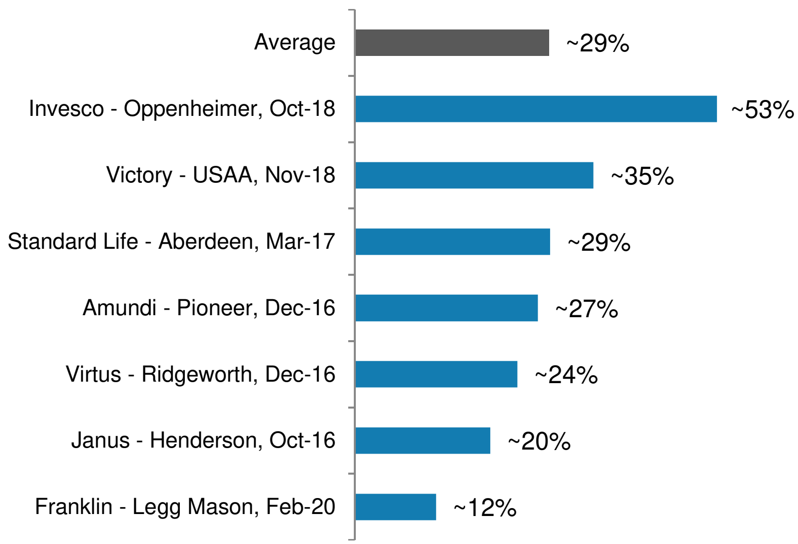
Strategic M&A

Scale deals can deliver substantial cost savings, but overlapping capabilities, weak performance and consultant responses can drive revenue attrition

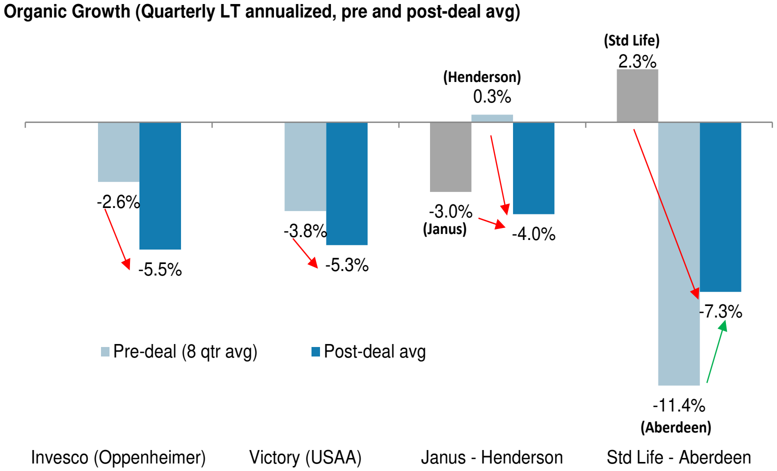
Attractive cost synergies: Nearly ~30% of acquired cost base taken out from prior deals on average

Revenue outcomes mixed: Comparison of NNM growth rates pre and post deal highlight the challenges

% of Acquired Costs Taken Out in Prior Deals



Organic Growth (Quarterly LT annualized, pre and post-deal avg)



Source: Company Data, Morgan Stanley Research.
Note: 1) based on targeted expense synergies announced before close. 2) reflects our estimates for acquired costs base and combined costs base for the year announced. 3) Standard Life Aberdeen expense synergies target of £200M converted to USD based on historical FX rate Mar 31, 2017. 4) Amundi expense synergies target €150m converted to USD based on historical FX rate Dec 31, 2016.

Strategic M&A

The best deals have expanded the product set and extend distribution

In our October 2020 note, The Case for Consolidation, we looked at the asset management ecosystem – identifying how companies stacked up at that time, who had excess capital to invest and which firms had niche products or unique offerings.

Asset Managers

1 Strong Excess Capital

TROW, SDR, AMUN

2 Niche Product Providers/ Differentiated Distribution

BSIG, VRTS, VCTR, WETF, ASHM, EMG, MFG
APAM, AMG, FHI, CNS, AZM, AZIHF

3 Private Market Managers

APO, ARES, CG, BX, KKR, HLNE, STEP, EQT, PGHN, MQG, AMP, BAM, ONEXF, ICP, TKO, GCMG

4 Diversified Money Managers

BLK, IVZ, BEN, DWS, JHG, MNG, AB

Banks/Brokers/Others

Banks With Excess Capital

STT, NTRS, UBS, HSBA

Retail Distribution/Tech

SCHW, LPLA, RYF, SJP, HGRV, SEIC, FOCS,
IBKR, AMK, ENV, AJB, QLT

Black Ticker = covered by Morgan Stanley; Purple Ticker = non-covered

Please see our report, The Case for Consolidation, published on October 25, 2020, for more information. In the note, we analyse regional differences, business models & merger history and assess hypothetical strategic deals that could potentially enhance growth profiles. Note: We are not aware of any deal discussions and to our knowledge none of these companies has commented on potential M&A. The analysis in the note is hypothetical and does not factor in any company's willingness to participate in M&A. Source: Company Data, Morgan Stanley Research

Address Costs Base

4) Address the cost base to compete on price and free up resources for growth … via ‘Build Back Stronger’, adopting lessons learned from remote working through the pandemic could release 10-15% in savings

The proven viability of operating in a remote working environment is likely to push managers to reimagine their operating model more structurally. Those who choose to permanently adopt operating models that have proven to work through the Covid pandemic will be able to realise 10-15% in costs savings over 3- to 4-year horizon, on Oliver Wyman’s analysis. This includes flexible work arrangements, smaller physical footprint, more virtual touchpoints in sales/marketing and review of support functions.

According to Oliver Wyman analysis, greater cost savings are possible with a ‘virtual’ asset manager model that could potentially unlock 40% of the cost base. This operating model would envision nearly all staff working remotely, greater use of outsourcing, smaller distribution force and a lighter human touch investment engine that relies on more automation.

Virtual Asset Manager and potential cost savings

~30% of cost base

Distribution
Sales, marketing/brand and product development

•API-based connectivity with distributors allowing for personalized managed accounts instead of expensive fund wrappers

•Travel and entertainment closed to zero, with brand/marketing loosing importance and allocated budget

•Innovation in products/solutions co-sourced through API-developer community

→ ~60% cost reduction

~35% of cost base

Investment Management
Research, Portfolio Construction, Trading & Execution

•Research co-owned with data scientists with wide adoption of deep NLP techniques (e.g. BERT) and machine learning

•Portfolio management informed by machines, but remains human

•Trading and execution outsourced and co-financed through sec lending and liquidity sponsoring / market making

→ ~30% cost reduction

~35% of cost base

Middle and Back Office
Administration, risk mgmt. and processing

•API-based connectivity with custodians /admins eliminating reconciliation efforts

•Operations widely outsourced with regulatory obligations (e.g. reporting) delivery by third party

•Performance and risk management through SaaS solutions

•Clients with 100% look-through on portfolio with self-service, minimizing client service and communication efforts

→ ~60% cost reduction

→ ~40% lower cost base of virtual AM vs. traditional operating model

Source: Oliver Wyman analysis

Embrace Quant/Data

5) Evolve the investment process using quant/alternative data

Harnessing data and analytics to generate alpha

1. **We see convergence of fundamental and quantitative processes over the next decade** – boosting returns with quantamental approach incorporating vast amounts of new data:
   - Around ⅔ of investors are evolving their investment process to incorporate factors and quantamental, according to our investor survey (link below).=
2. **Growing availability of data, including unstructured data, can yield insights for those able to process/harness.** Machine learning and AI can help identify reliable patterns:
   - >80% of investors identify positive impacts of AI, big data and automation in improving productivity (48%), reducing middle/back-office costs (25%), enhancing efficiency or boosting alpha
3. **Proprietary private market data can improve process and drive alpha** – e.g., by creating customised and real time tracking of macro data points, generating multi-dimensional insights across sectors, geographies, asset classes:
   - More than ⅔ of investors are focused on using big data, with clear intention to increase testing of new data sets, including alternative data
4. **Opportunity to better monetise proprietary data to clients.**

Build (develop/ integrate / invest)

- **BlackRock (Feb-18)** established a BLK **Lab for Artificial Intelligence** in Palo Alto to analyse big data for alpha generation
- **T Rowe (Apr-17)** opened a **Technology Development Centre**, where investment teams partner with data scientists to explore AI, machine learning in investment decision making
- **Man Group (May-16)** financed **centre for machine learning at Oxford University**, accessing quant research/talent pipeline
- **BlackRock integrates data & systematic methods** into fundamental investing under its unified Active Equities Platform
- **Hamilton Lane** initiative to build out a **data management team** and hiring next generation of talent to build start-up culture

Buy (acquire / partner / onboard)

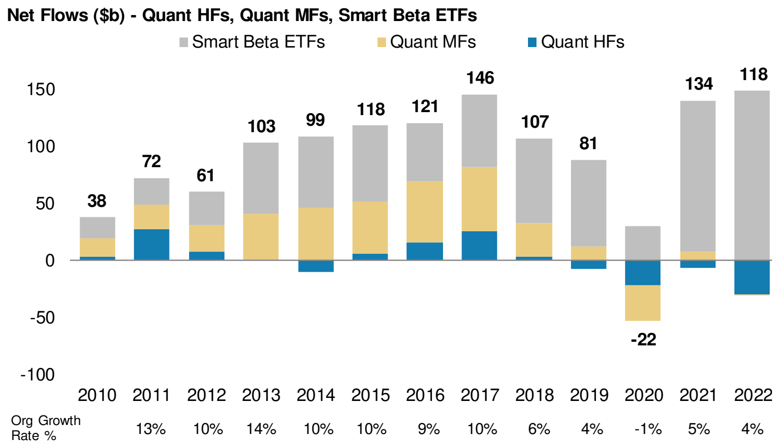
- **Alliance Bernstein (Jun-20)** acquired **AnchorPath**, adding proprietary, pro-active risk control strategies
- **Prudential PGIM (Nov-18)** quant arm QMA acquired **Wadhwani Asset Management** to build out existing quant
- **Neuberger-Berman (Mar-18)** onboarded **Bretton Hill Capital Team**, focuses on alternative risk premia and multi-factor solutions.
- **Franklin Templeton (Feb-17)** onboarded an **AlphaParity team to run risk premia strategies** for large institutional clients
- **Victory (Dec-16)** acquired **Cerebellum**, an investment management firm specialising in machine learning and AI
- **Alliance Bernstein (Aug-16)** acquired **Ramius Alternative Solutions** adding factor-based and alternative risk premia solutions
- **Man Group (June-14)** acquires **Numeric** adding a range of fundamentally based quantitative strategies

Source: Company Data, Morgan Stanley Research.
Note: investor survey results 1) Asset Managers & Brokers: 2018 MS Financials Conference Recap: Day 1 (13 Jun 2018) and 2) Quantitative Equity Research: What Are Quantitative Investors Thinking? (20 Nov 2018).

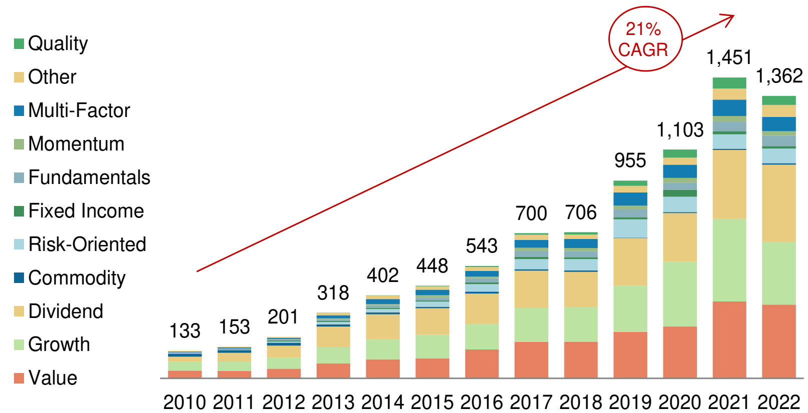
Embrace Quant/Data

Factor fund flows in 2022 led by smart beta ETFs, while Quant Hedge Funds and Mutual Funds saw outflows. Quant MF AuM declined -17% y/y, while Quant HF AuM nearly flat

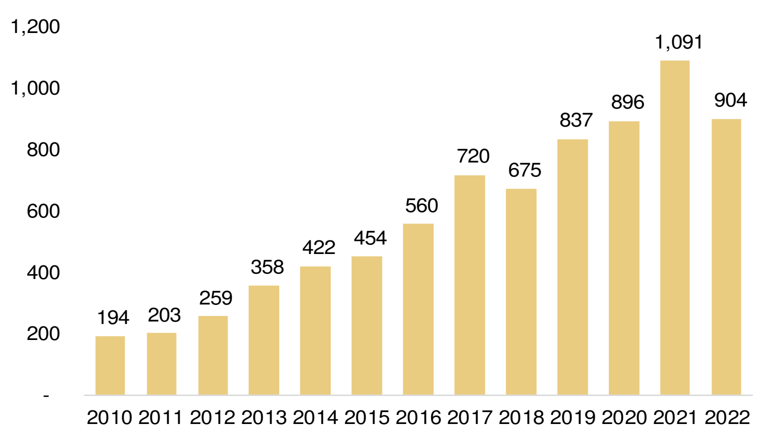
Factor fund inflows accelerated in 2022, led by ETFs



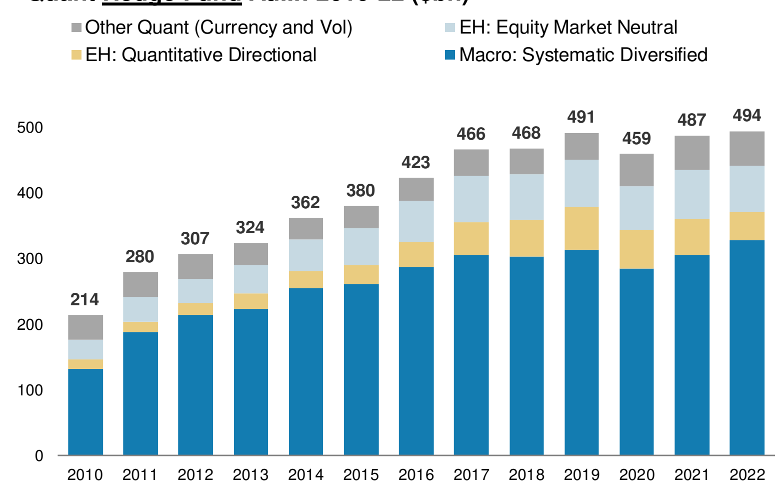
Smart Beta ETF AuM: 2010-22 ($bn)



Quant Mutual Fund AuM: 2010-22 ($bn)



Quant Hedge Fund AuM: 2010-22 ($bn)

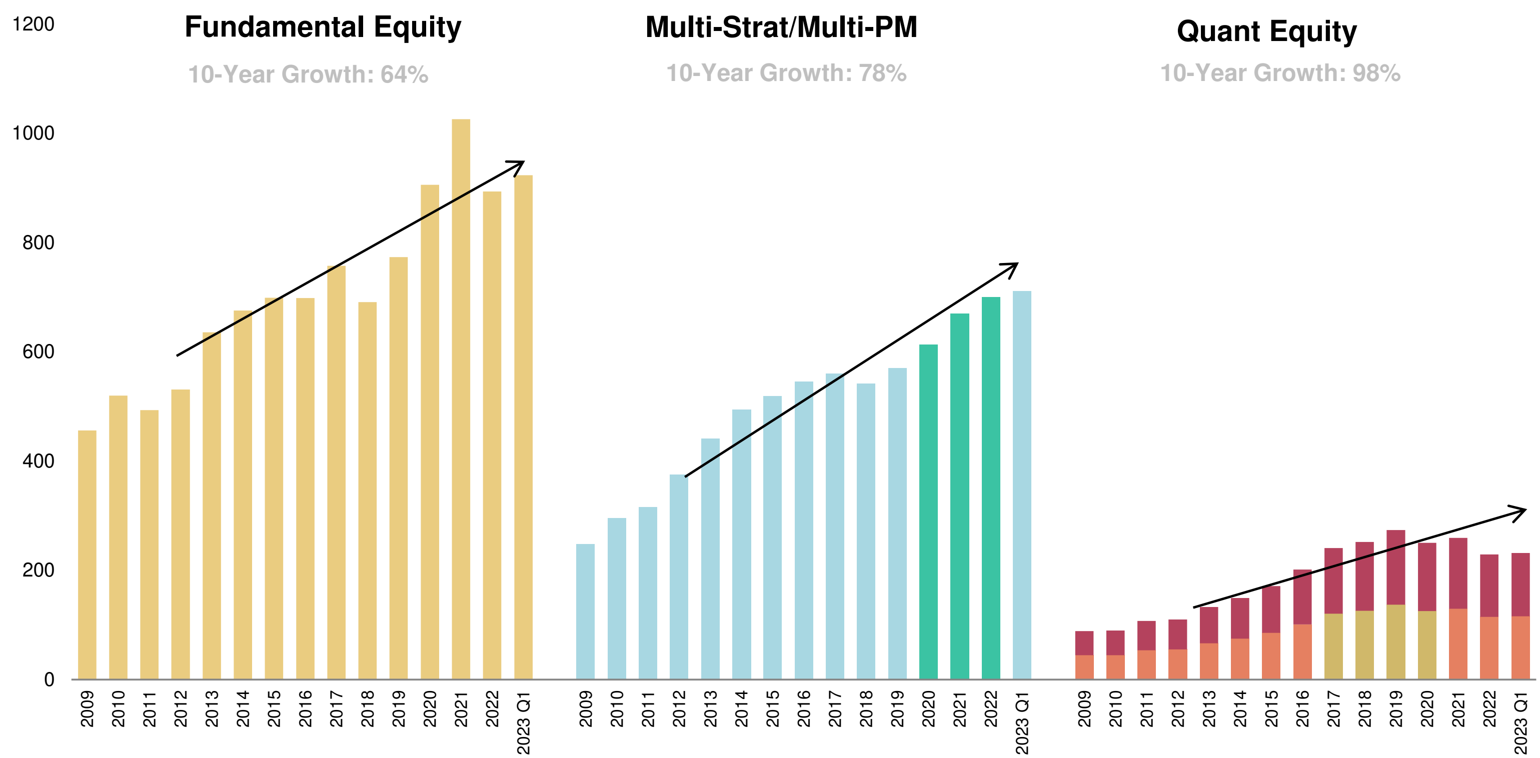


Source: HFR Industry Reports © HFR, Inc. Morgan Stanley Research, Morningstar data as of Dec 31, 2022.

Embrace Quant/Data

Hedge fund industry growth over time has skewed to multi-strategy and quant

Growth in assets over time by strategy
HF AuM by strategy + growth *(10 years from 1Q13 – 1Q23)*

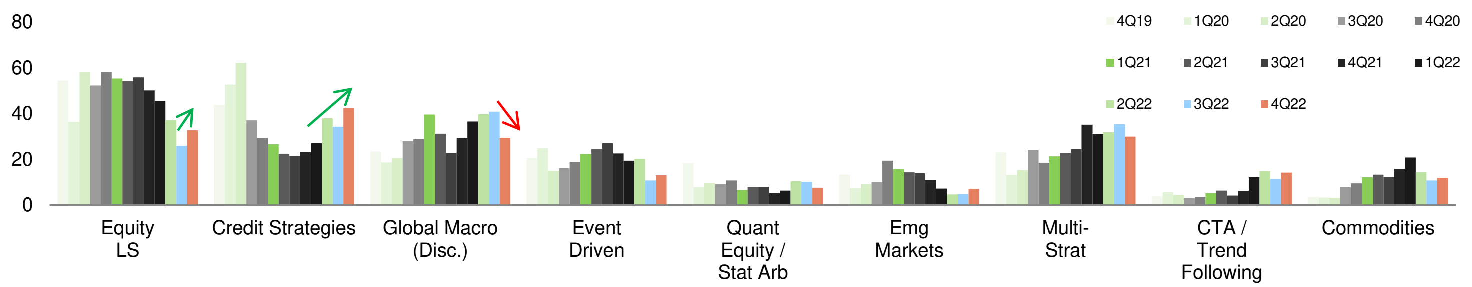


Source for All Charts: HFR Reports © HFR, Inc. 1Q23, www.hedgefundresearch.com
Note: The strategies shown above are various groupings 1 or more HFR sub-strategies. Fundamental Equity = Equity Hedge MINUS (Equity Market Neutral , Quantitative Directional, Multi Strategy). Multi-Strat / Multi-PM = EH Multi-Strat + RV Multi-Strat. Quant Equity = Quantitative Directional + Equity Market Neutral.
Note; HFR estimates Quant assets at ~$116Bn through 1Q23 (yellow bars). We feel this underestimates the size of the strategy, and believe assets to be roughly 2x this amount (red bars)

In which strategies are investors looking to change allocations? Credit strategies seeing large uptick, multi-strategy and CTA demand remains healthy

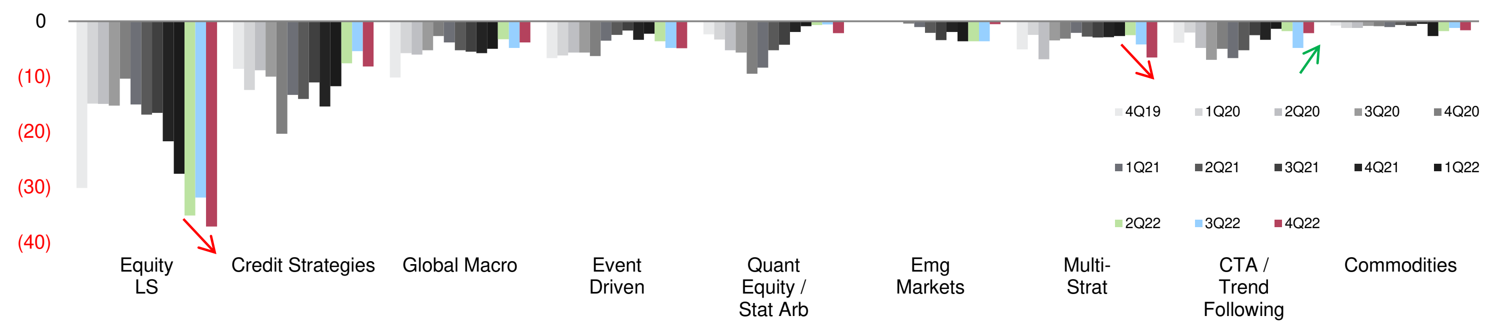
Investor interest for credit strategies reaches multi-year high; long/short interest rising from 10+ year lows seen in 3Q22

% of respondents looking to increase allocations in the coming quarter(1)



Investor redemptions from Equity long/short pick up, as do multi-strategy redemptions; CTA / trend-following redemptions slow QoQ

% of respondents who decreased allocations in prior quarter(2)



Source for all charts: Morgan Stanley Prime Brokerage Investor Surveys

1. Each investor could choose up to three strategies to which they planned to increase allocations (forward-looking).
2. Investors chose the strategy that has experienced the largest % decrease in allocation (as a % of total $ dedicated to that strategy); in 1Q20 survey, investors could select up to 3

SECTION 4

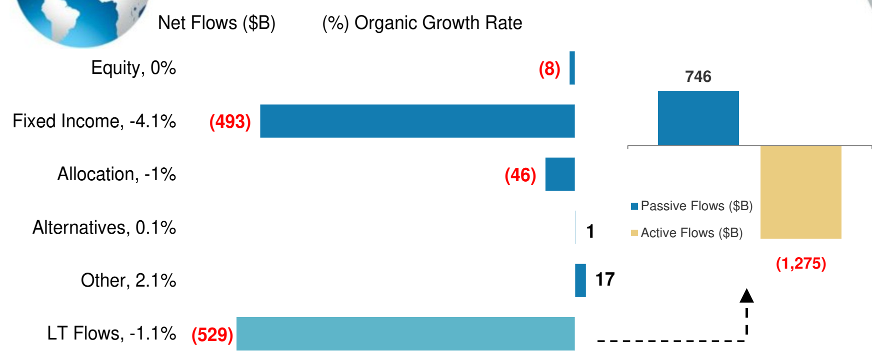
Review of FY 2022 Trends

FY 2022: MF + ETF outflows driven by US and Europe Fixed Income Funds

Global Retail MF & ETF funds saw long-term net outflows for the first time since 2008

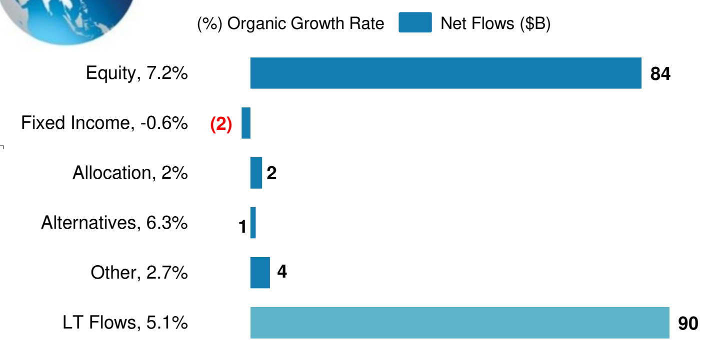
Global Mutual Fund & ETF flows: FY 2022

- $38.9tn of LT AuM as of December 31, 2022
- LT net outflows driven by Fixed Income funds, allocation



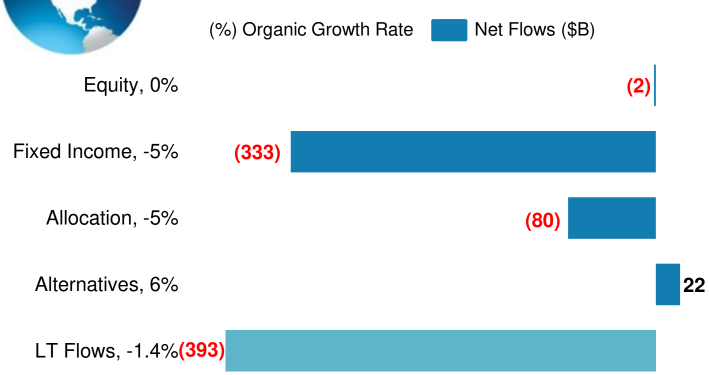
Asia Mutual Fund & ETF flows: FY 2022

- $1.5tn of LT AuM (4% of Global LT AuM)
- +$90bn of net inflows driven by Equities



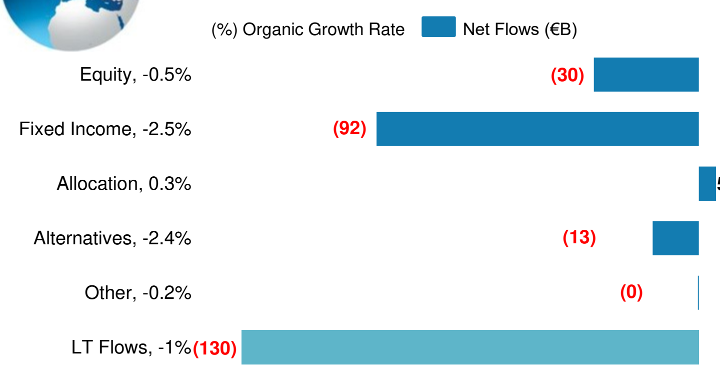
US Mutual Fund & ETF flows: FY 2022

- ~$23tn of LT AuM (59% of Global LT AuM)
- 68% of Global Fixed Income outflows



European Mutual Fund & ETF flows: FY 2022

- ~$11tn of LT AuM (28% of Global LT AuM)
- ~27% of Global LT outflows; 20% of Global FI outflows

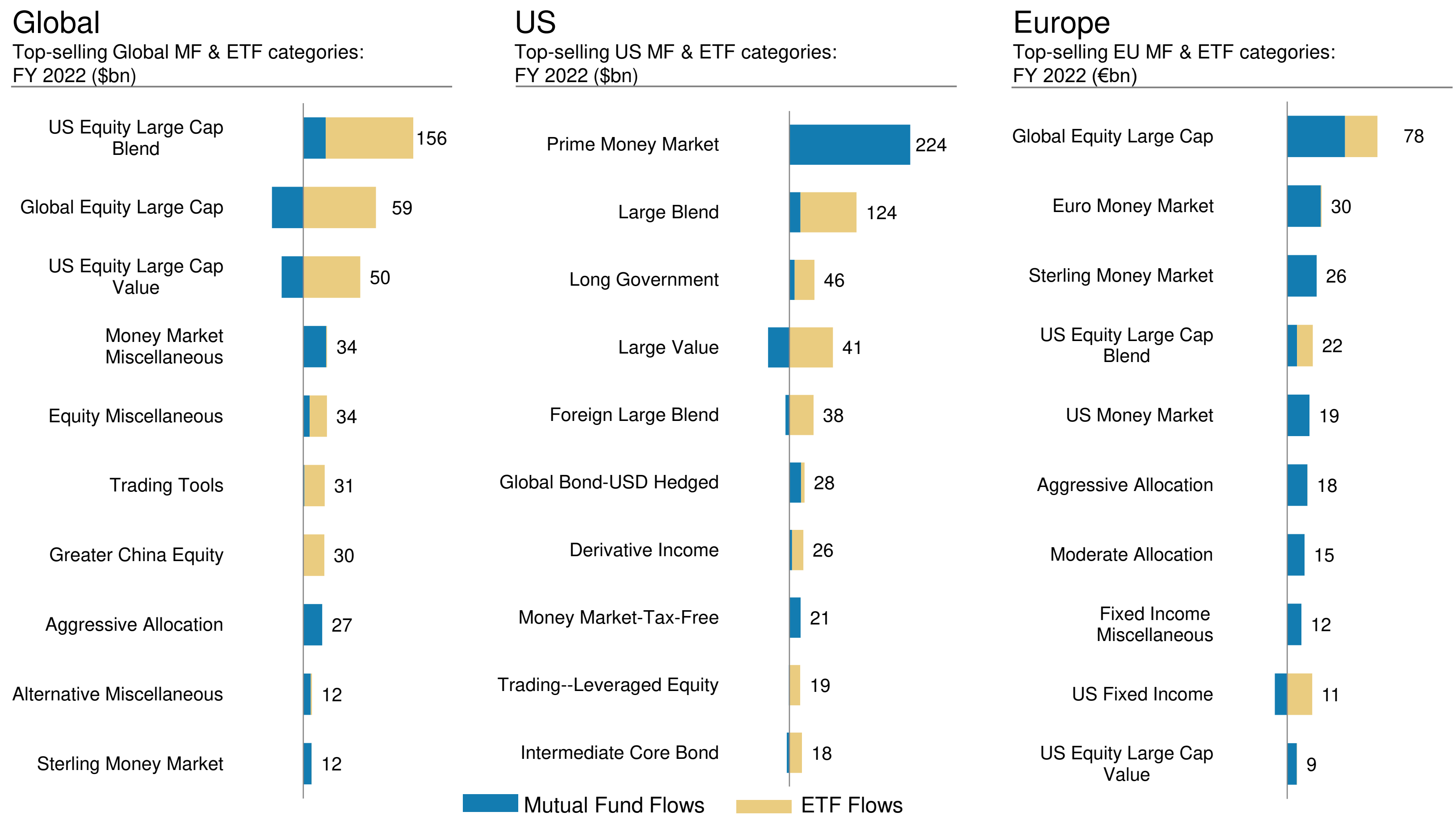


Source: Morningstar, Morgan Stanley Research. Note: Data through December 31, 2022. * EU figures in €, Asia and EU regions as defined by Morningstar's geographic region of domicile.

Top-selling MF & ETF categories: FY 2022

Resilient flows in Large-cap, Large Blend and Money Markets in FY 2022

Momentum in Global & US Large-cap, Blend and Money Markets flows

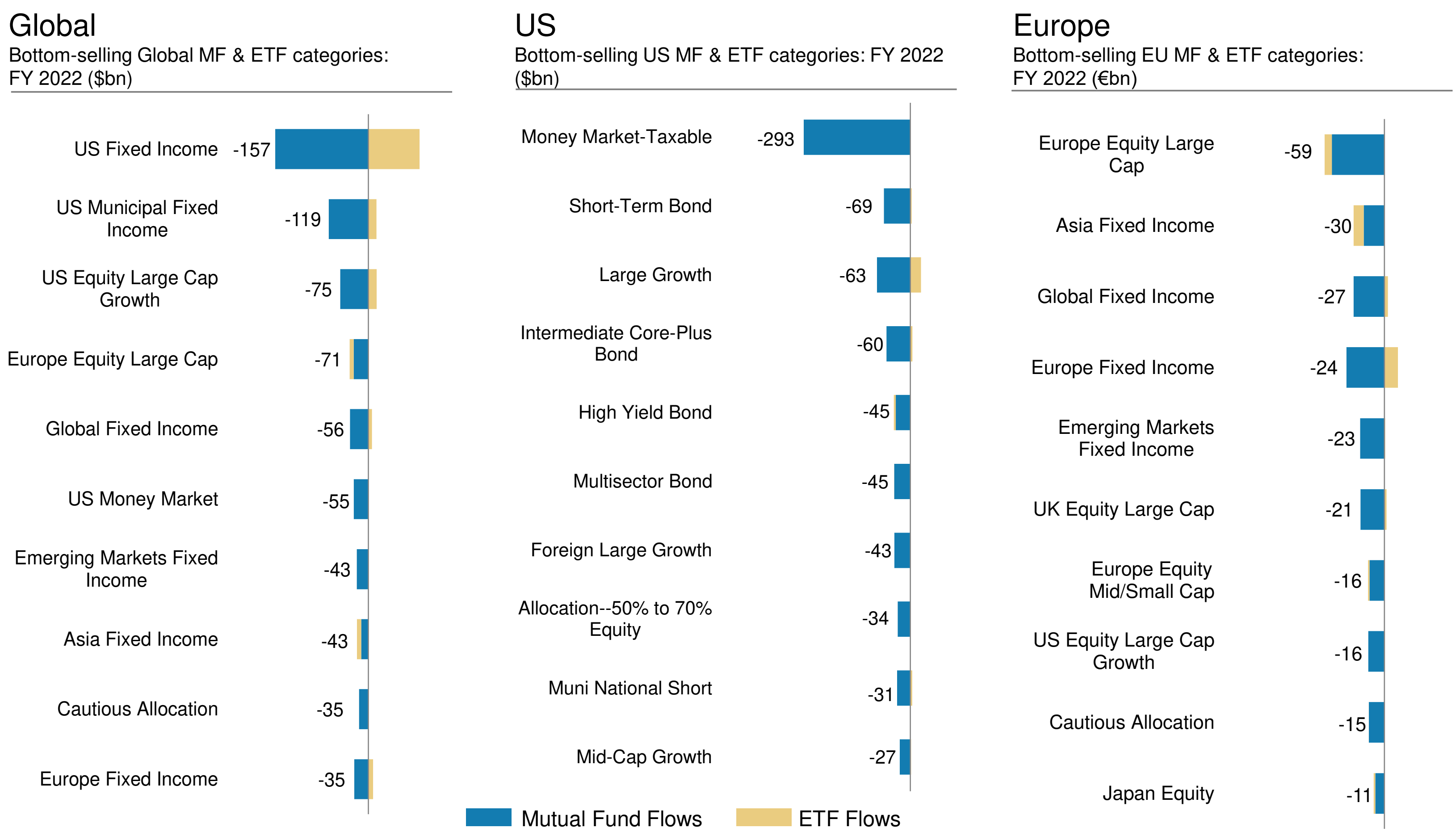


Source: Morningstar Direct, Morgan Stanley Research. Note: Est. flows and AuM as of December 31, 2022. Based on Morningstar fund's geographic region of domicile.

Bottom-selling MF & ETF categories: FY 2022

Fixed Income and Growth Mutual Funds lead outflows

Mutual fund outflows in Fixed Income and Growth funds

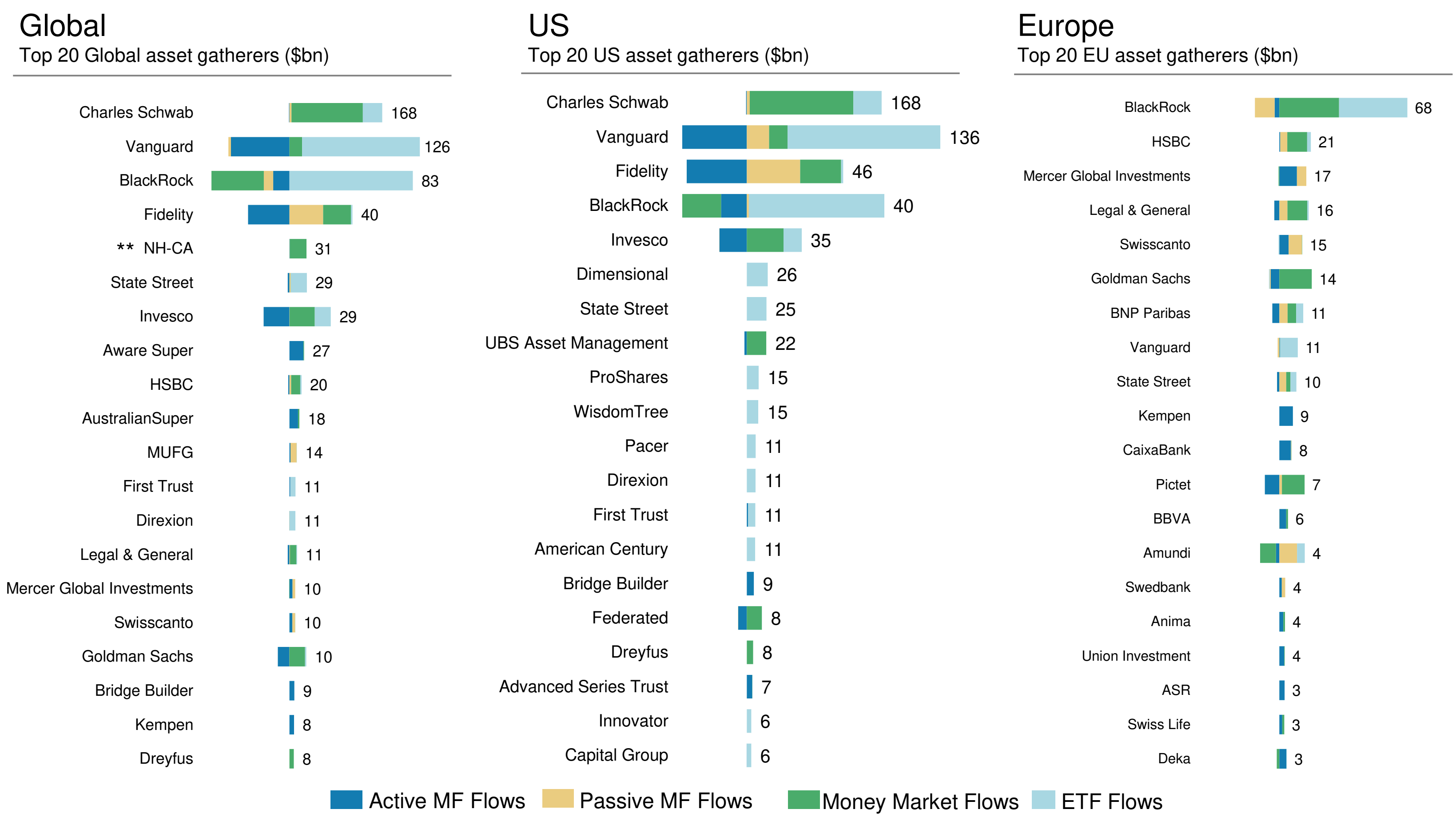


Source: Morningstar Direct, Morgan Stanley Research. Note: Est. flows and AuM as of December 31, 2022. Based on Morningstar fund's geographic region of domicile.

Top MF & ETF asset gatherers: FY 2022

Globally, ETFs & Money Markets dominate inflows

Top asset gatherers: Charles Schwab (Money Markets), Vanguard (ETFs, Passive MFs) and BlackRock (ETFs)



Source: Morningstar Direct, Morgan Stanley Research. Note: Est. flows and AuM as of December 31, 2022. Based on fund's geographic region of domicile.
** Note: NH-CA Asset Management is a joint venture between NH Financial Group of Korea and Amundi of France.

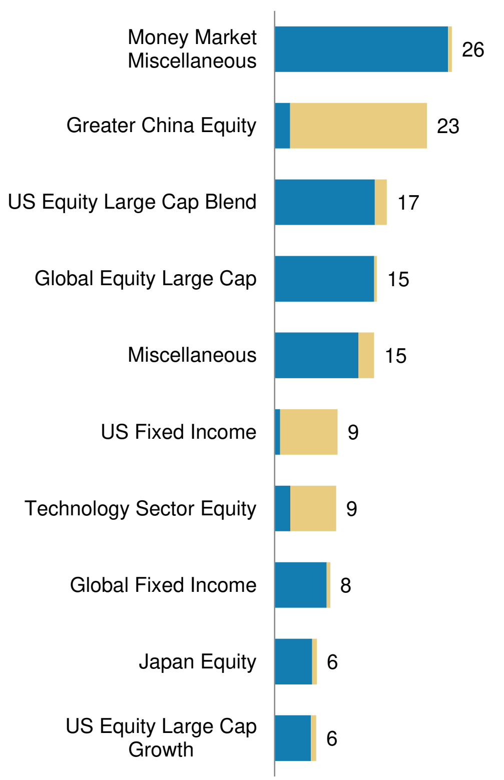
Asia: Top/bottom-selling MF & ETF categories: FY 2022

Money Markets, China Equity ETFs lead inflows; outflows driven by Asia Fixed Income and Money Markets

Top asset gatherers largely driven by ETFs; main exceptions NH-CA (Money Markets) and MUFG (Passive MFs)

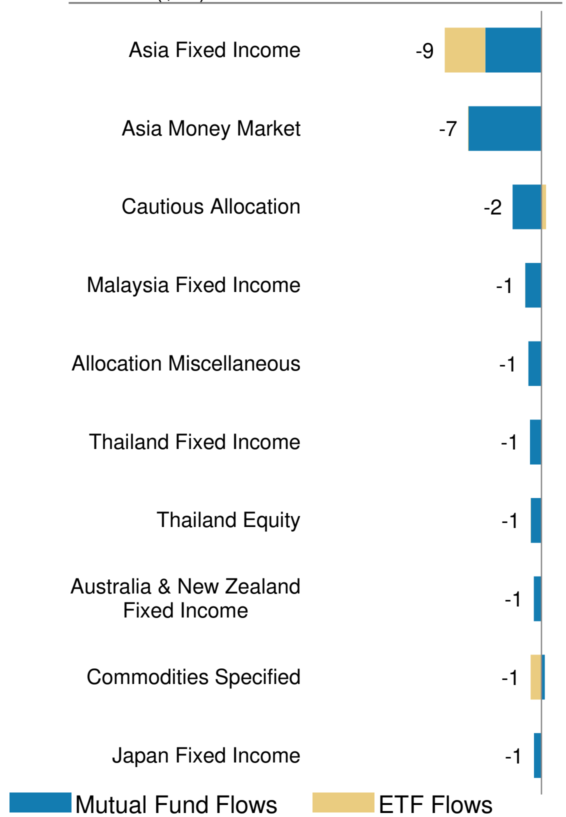
Asia

Top-selling Global MF & ETF categories: FY 2022 ($bn)



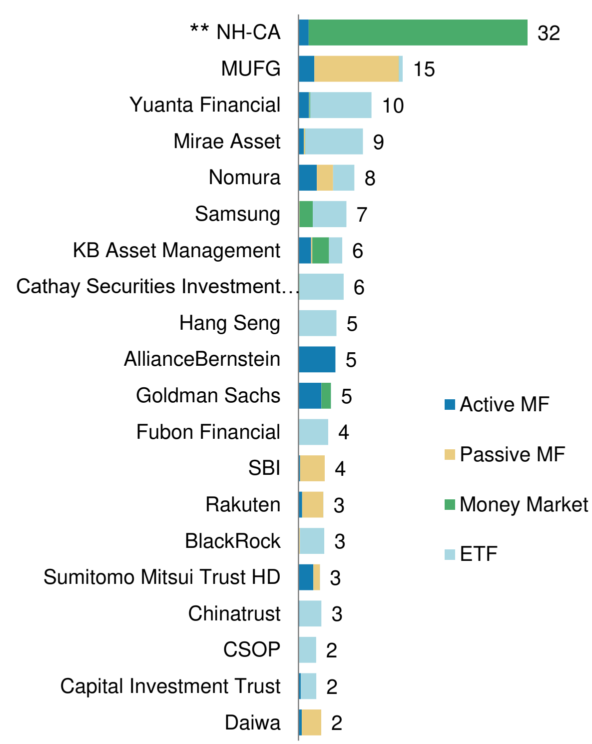
Asia

Bottom-selling US MF & ETF categories: FY 2022 ($bn)



Asia

Top 20 asset gatherers ($bn)



Source: Morningstar Direct, Morgan Stanley Research. Note: Est. flows and AuM as of Dec 31, 2022. Based on Morningstar fund's geographic region of domicile.
** NH-CA Asset Management is a joint venture between NH Financial Group of Korea and Amundi of France.

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(as of April 30, 2023)

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For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1357	37%	269	42%	20%	599	39%
Equal-weight/Hold	1660	45%	307	47%	18%	721	47%
Not-Rated/Hold	5	0%	1	0%	20%	1	0%
Underweight/Sell	639	17%	70	11%	11%	228	15%
Total	3,661		647			1549	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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Overweight (O or Over) - The stock's total return is expected to exceed the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis over the next 12-18 months.

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Not-Rated (NR) - Currently the analyst does not have adequate conviction about the stock's total return relative to the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
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Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

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INDUSTRY COVERAGE: Diversified Financials

COMPANY (TICKER)	RATING (AS OF)	PRICE* (05/02/2023)
Bruce Hamilton		
3i (III.L)	O (08/11/2020)	1,761p
Abrdn Plc (ABDN.L)	U (11/29/2021)	209p
Allfunds Group Plc (ALLFG.AS)	O (03/13/2023)	€5.89
AMUNDI SA (AMUN.PA)	E (11/29/2021)	€58.60
Antin Infrastructure Partners SA (ANTIN.PA)	E (11/03/2021)	€14.23
Ashmore Group PLC (ASHM.L)	E (04/01/2020)	244p
Bridgepoint Group plc (BPTB.L)	E (08/31/2021)	234p
Deutsche Boerse (DB1Gn.DE)	++	€171.90
DWS Group GmbH & Co KgaA (DWSG.DE)	E (04/30/2021)	€29.44
EQT AB (EQTAB.ST)	E (11/23/2022)	SKr 209.70
Euronext NV (ENX.PA)	E (04/20/2023)	€71.50
Hargreaves Lansdown (HRGV.L)	U (11/29/2021)	782p
Jupiter Fund Management PLC (JUP.L)	E (02/14/2023)	129p
London Stock Exchange (LSEG.L)	O (05/18/2021)	8,370p
Man Group (EMG.L)	O (04/01/2020)	211p
Partners Group (PGHN.S)	E (02/02/2021)	SFr 844.40
Schroders (SDR.L)	E (02/26/2021)	478p
Panos Ellinas		
Avanza Bank Holding AB (AVANZ.ST)	U (07/11/2022)	SKr 209.00
FinecoBank Banca Fineco SpA (FBK.MI)	O (03/27/2023)	€13.31
flatexDEGIRO AG (FTKn.DE)	E (12/15/2022)	€9.67
Nordnet AB (SAVE.ST)	O (07/11/2022)	SKr 153.30
Vishal Shah		
Julius Baer (BAER.S)	E (11/22/2021)	SFr 62.58

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* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Brokers, Asset Managers & Exchanges

COMPANY (TICKER)	RATING (AS OF)	PRICE* (05/01/2023)
Michael J. Cyprys, CFA, CPA		
Apollo Global Management Inc (APO.N)	E (07/19/2022)	US$63.72
Ares Management Corp (ARES.N)	E (09/10/2021)	US$85.57
BlackRock Inc. (BLK.N)	O (09/18/2015)	US$662.97
Blackstone Inc. (BX.N)	O (12/15/2014)	US$88.75
Bridge Investment Group (BRDG.N)	O (08/10/2021)	US$10.12
Brightsphere Investment Group Inc. (BSIG.N)	E (12/14/2021)	US$22.21
Carlyle Group Inc (CG.O)	E (11/14/2018)	US$30.46
CBOE Global Markets Inc. (CBOE.Z)	O (07/19/2022)	US$138.32
Charles Schwab Corp (SCHW.N)	E (03/30/2023)	US$51.81
CME Group Inc. (CME.O)	E (06/11/2021)	US$186.63
Franklin Resources Inc. (BEN.N)	U (09/03/2020)	US$26.13
Hamilton Lane Inc. (HLNE.O)	E (01/26/2021)	US$72.50
Intercontinental Exchange Inc (ICE.N)	E (06/11/2021)	US$108.62
Invesco (IVZ.N)	E (01/03/2018)	US$16.78
KKR & CO. Inc (KKR.N)	E (02/17/2016)	US$53.25
LPL Financial Holdings Inc. (LPLA.O)	E (11/30/2022)	US$211.43
MarketAxess Holdings Inc. (MKTX.O)	E (12/21/2020)	US$317.29
Nasdaq, Inc. (NDAQ.O)	E (04/11/2023)	US$55.05
P10, Inc. (PX.N)	O (11/15/2021)	US$10.44
Robinhood Markets, Inc. (HOOD.O)	E (03/30/2022)	US$8.82

StepStone Group (STEP.O)	E (07/19/2022)	US$22.43
T. Rowe Price Group, Inc. (TROW.O)	E (10/05/2017)	US$111.31
TPG, Inc. (TPG.O)	E (02/07/2022)	US$28.78
Tradeweb Markets Inc (TW.O)	O (03/02/2021)	US$71.88
Victory Capital Holdings Inc (VCTR.O)	U (04/08/2020)	US$30.42
Virtu Financial Inc (VIRT.O)	E (04/11/2023)	US$19.30
Virtus Investment Partners (VRTS.O)	U (04/08/2022)	US$176.09
WisdomTree Investments, Inc. (WT.N)	E (04/08/2021)	US$6.11

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* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Australia Financials

COMPANY (TICKER)	RATING (AS OF)	PRICE* (05/02/2023)
Andrei Stadnik, FIAA		
AMP Ltd (AMP.AX)	E (08/09/2022)	A$1.15
ASX Limited (ASX.AX)	E (07/14/2022)	A$68.10
Challenger Limited (CGF.AX)	E (01/31/2019)	A$6.11
Computershare Limited (CPU.AX)	E (01/26/2023)	A$21.45
GQG Partners Inc (GQG.AX)	O (10/18/2022)	A$1.46
Insignia Financial Ltd (IFL.AX)	O (08/24/2021)	A$3.00
Insurance Australia (IAG.AX)	E (01/19/2023)	A$5.00
Janus Henderson Group (JHG.AX)	E (10/21/2020)	A$38.65
Latitude Group Holdings Ltd (LFS.AX)	E (12/05/2022)	A$1.30
Link Administration Holdings Ltd (LNK.AX)	E (09/21/2022)	A$2.10
Macquarie Group Limited (MQG.AX)	O (06/19/2018)	A$181.22
Magellan Financial (MFG.AX)	U (06/27/2019)	A$8.06
Perpetual Ltd. (PPT.AX)	O (02/20/2020)	A$24.52
Platinum Asset Management (PTM.AX)	U (02/10/2023)	A$1.75
QBE Insurance Group (QBE.AX)	O (02/26/2015)	A$15.41
Suncorp Group Ltd (SUN.AX)	O (01/19/2023)	A$12.48
Richard E Wiles		
ANZ Group Holdings Limited (ANZ.AX)	E (10/27/2022)	A$24.42
Bank of Queensland (BOQ.AX)	U (04/21/2023)	A$5.84
Bendigo and Adelaide Bank Limited (BEN.AX)	O (10/18/2022)	A$8.62
Commonwealth Bk Aust (CBA.AX)	U (08/31/2016)	A$100.10
Judo Capital Holdings Ltd (JDO.AX)	O (02/02/2023)	A$1.34
Nat Aust Bank (NAB.AX)	E (01/21/2021)	A$29.09
Westpac Banking (WBC.AX)	O (05/10/2022)	A$22.55

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