Allianz Global Artificial Intelligence: Annual review and 2023 outlook

- The Fund aims at long-term capital growth by investing in the global equity markets with a focus on the evolution of artificial intelligence.
- The Fund is exposed to significant risks of investment/general market, concentration, company-specific, emerging market, currency (such as exchange controls, in particular RMB), and the adverse impact on RMB share classes due to currency depreciation.
- The Fund may invest in financial derivative instruments ("FDI") which may expose to higher leverage, counterparty, liquidity, valuation, volatility, market and over the counter transaction risks. The Fund's net derivative exposure may be up to 50% of the Fund's net asset value.
- This investment may involve risks that could result in loss of part or entire amount of investors' investment.
- In making investment decisions, investors should not rely solely on this material.

Note: Dividend payments may, at the sole discretion of the Investment Manager, be made out of the Fund's capital or effectively out of the Fund's capital which represents a return or withdrawal of part of the amount investors originally invested and/or capital gains attributable to the original investment. This may result in an immediate decrease in the NAV per share and the capital of the Fund available for investment in the future and capital growth may be reduced, in particular for hedged share classes for which the distribution amount and NAV of any hedged share classes (HSC) may be adversely affected by differences in the interests rates of the reference currency of the HSC and the base currency of the Fund.

A note from the Global Artificial Intelligence Team*

From an investment perspective, we are glad to see 2022 come to a close, and we head into 2023 with cautious optimism. The Allianz Global Artificial Intelligence fund's performance suffered from a combination of macroeconomic and monetary headwinds, significant growth equity valuation re-ratings, missed execution by portfolio management teams and stock-selection difficulties.

For 2023, we expect to see continued market volatility until we get clarity on rates and growth, but opportunities can be found. AI's adoption continues to grow and groundbreaking advancements are regularly being made. The wide scale incorporation of AI by companies across sectors — coupled with major technology milestones such as generative AI and ChatGPT — further reaffirm our core investment thesis that we are in the early stages of AI-driven transformation. We believe this will be a long-term tailwind for companies that successfully execute a comprehensive approach to AI.

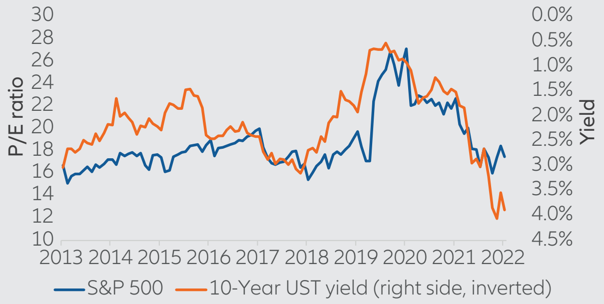
Market review and outlook

Summary

The financial markets went through a great deal of upheaval in 2022 — much of it driven by how central banks reacted to high levels of inflation. The US Federal Reserve (Fed) embarked on its most aggressive monetary tightening phase in three decades, with other central banks following suit. Equities and bonds sold off drastically at the beginning of the tightening cycle before recovering some of their losses, yet the entire year was marked by up-and-down swings as the markets tried to anticipate the next move by central banks (see **Exhibits 1** & **2**). The growth outlook is murky, as many economists and investors see the threat of recession on the horizon. As we start 2023, we expect to see a period of market volatility until we get clarity on rates and growth, but opportunities can be found.

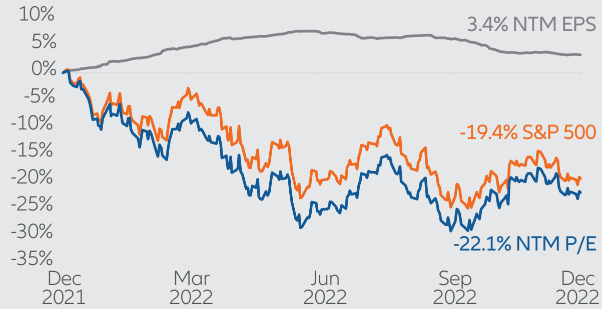
Allianz Global Investors

Exhibit 1: US equity valuations have historically followed interest rates



As of 12/31/22. Source: Bloomberg. NTM = next 12 months. Past performance or any prediction, projection or forecast, is not indicative of future performance.

Exhibit 2: Multiples have contracted sharply, but EPS growth has only started to turn down



As of 12/31/22. Source: Bloomberg. NTM = next 12 months. Past performance or any prediction, projection or forecast, is not indicative of future performance.

Our market view for 2023

We believe the equity market correction is in the process of finding a bottom given the sharp correction in equity valuations, normalization of interest rates, and a relatively resilient economic backdrop. Although the Fed's campaign to inflation is necessary to ensure long-term economic stability, the near-term impact is painful for financial assets.

With equity valuations now pricing in higher interest rates, the next step is working through slower business conditions and its impact on corporate earnings in 2023. The good news is that investors have been expecting earnings growth to slow since mid-2022. This negative earnings revision cycle will likely result in more short-term volatility over the coming months, but it is a necessary step to build the foundation for sustained recovery and growth.

Reasons for investor optimism

- Investor pessimism tends to reach its lows during a recession. Then investors may start to climb "the wall of worry" — the point at which they overcome their concerns about negative issues and push securities higher.
- There are longer-term shifts underway — including major geopolitical, supply chain and demographic changes — that may raise costs in the near term, but also offer new growth opportunities and investment potential.
- The current rising market volatility could be an ideal environment for active investors to position for the long term in high-conviction themes as the market finds its bottom.

Review of Allianz Global Artificial Intelligence in 2022

2022 proved to be a challenging year for Allianz Global Artificial Intelligence ("the Fund"). The uncertain geopolitical and macroeconomic environment drove a more risk-off sentiment, with defensive and value sectors leading the market. The Fund focuses more on identifying future leaders in AI-driven transformation, which tend to be companies earlier in their growth trajectories and market opportunities. Rapidly rising interest rates compressed valuations for many of these stocks, given their longer-duration profile. The normalization period after the acceleration of demand during the pandemic is also making it difficult for companies to issue accurate forecasts.

For the year, the Fund significantly underperformed the custom benchmark (50% MSCI All Country World Index/50% MSCI World Information Technology Index). The high exposure to the communication services and information technology sectors were the biggest relative detractors to performance. Going a level deeper by industry group, our stock selection in media & entertainment and software & services significantly detracted from performance.

We made some mistakes in the portfolio by holding on to some positions too long as post pandemic growth normalized, or by underestimating the speed of the negative effects from the macroeconomic environment. Many of our portfolio companies in digital media and software had to reorient investors' expectations toward more moderate growth trajectories. Valuation multiples relative to recent history contracted much faster than our expectations given the aggressive Fed policy, which was only clear in hindsight.

Example of what worked: Renewable energy equipment manufacturer

A renewable energy equipment manufacturer which we have invested offers commercial and residential solar and storage solutions. The company extensively uses AI in its integrated energy system and digital platform offerings. We believe the company is well positioned at the crossroads between AI innovation and an increase in global renewable energy spending.

Example of what did not work: Tesla

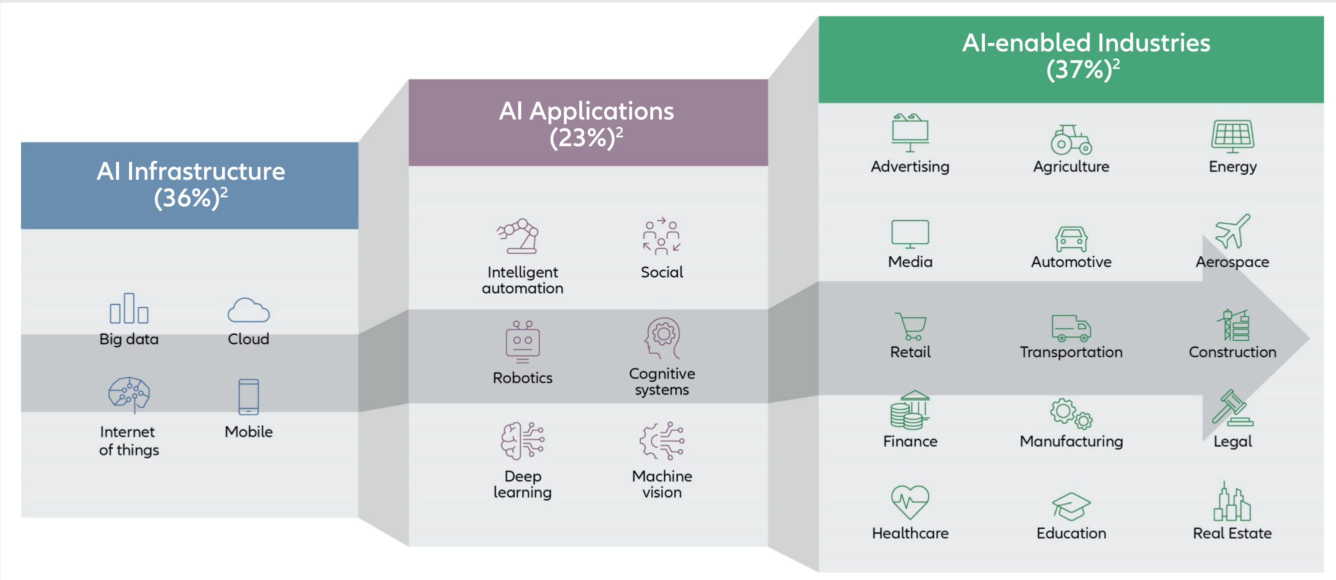
Tesla's shares have been under pressure as investors worry that CEO Elon Musk's purchase and involvement in a social media platform continues to be an unwelcome distraction. While Tesla is facing more electric vehicle (EV) competition and a slowing economy, we believe the company can continue to grow and show profitability improvements — particularly as new models are launched, factories ramp up production, input costs decline and software revenues increase. Tesla remains the global leader in the EV market with an industry-leading profitability profile. (Top 10 holding of the Fund as of 31 Dec 2022.)

Outlook for Allianz Global Artificial Intelligence in 2023

In the current uncertain macroeconomic backdrop, we have focused in recent months on upgrading the quality of the portfolio and consolidating positions into our highest-conviction ideas. We have reduced exposure to companies that may not be able to grow profitability in the face of tighter financial conditions. While market volatility is likely to persist in the near term, we do believe the portfolio is more balanced and well positioned to recover as the market begins to reach its bottom in the coming months.

The AI universe continues to expand, and adoption of AI looks poised to hit another inflection point — thanks to cost reductions, automation, customer engagement and product development. Investment in AI remains a top priority for companies across many industries and sectors as they look for ways to enhance their competitive positioning and growth prospects.

AI has the potential to disrupt every industry



[1] Allianz Global investors, as of 31 December 2022.
Source: Allianz Global Investors. Portfolio weightings as of 12/31/22. Customized sub-sector weightings are shown as supplemental information only. There is no guarantee that these investment strategies and processes will be effective under all market conditions and investors should evaluate their ability to invest for a long-term based on their individual risk profile especially during periods of downturn in the market.

AI infrastructure

We continue to see the ongoing build-out of AI infrastructure to be a necessity as AI progresses from the pilot stage to mass deployment over the coming years. The re-opening of China from COVID lockdowns, growing complexity of new AI workloads, and increased policy support for reshoring of critical supply chains should provide tailwinds over the next few years. Secular growth drivers such as 5G/6G, internet of things, edge computing, electric & autonomous vehicles, and leading-edge manufacturing remain longer term priorities in the industry.

Stock example: **Alibaba** is a leading e-commerce platform and cloud infrastructure company. The company makes extensive use of AI across its various product offerings in areas such as ad targeting, personalization, logistics optimization, etc. We believe Alibaba is well positioned to benefit from China's reopening and easing regulatory pressures after a tough few years. (Top 10 holding of the Fund as of 31 Dec 2022.)

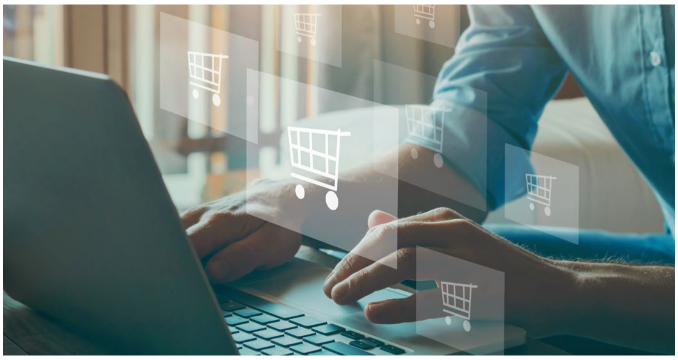
AI applications

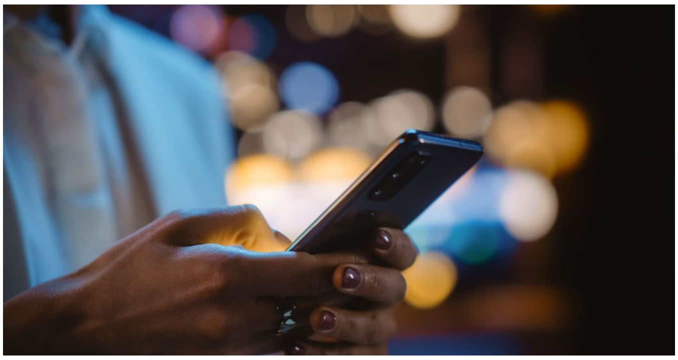
The recent showcase of generative AI and ChatGPT examples are important milestones that are just scratching the surface of AI's capabilities to make better recommendations and increase productivity. In the near term, how the macroeconomic situation unfolds and if further negative revisions will be needed will be the focus for investors. Longer term, we see AI becoming embedded in most software applications and systems to help drive more intelligent decisions and true automation.

AI-enabled industries

The continuing labor shortage, wage inflation, and demographic issues should be tailwinds for greater AI investment as companies need to enhance productivity and do more with less in a slower economy. Many of our portfolio holdings in the automotive, consumer, healthcare and finance sectors are already seeing the early benefits from AI. We expect to see more industries roll out AI initiatives across more of their operations to accelerate their digital evolution.

Stock example: Elevance Health operates as a comprehensive health benefits company with service areas spanning health, life, dental and vision. The company's strategy involves a shift from fee-for-service arrangements to emphasizing preventive medical care and outcome-based payments. They are maintaining competitive pricing relative to peers thanks to investments in areas such as virtual care, AI assistance and health monitoring devices. (Top 10 holding of the Fund as of 31 Dec 2022.)





Three key themes for AI in 2023

1. **2022 performance is not indicative of slowdown in AI transformation**

   Despite a difficult performance environment for the Fund, growth stocks, and equity markets broadly, investors should not view this as an indication that AI-driven transformation is slowing. Rather, in 2022, we witnessed a robust use of AI by a range of companies for cost reduction, revenue enhancement and improved customer engagement. And the number and variety of use cases continues to grow rapidly.

Extensive research done by the McKinsey & Company consulting company supports this view. In their 2022 Global Survey on AI, the number of organizations embedding AI into at least one business function has increased from 20% to 50% over the past five years. Moreover, in the PwC 2022 AI Business Survey, companies that are taking a holistic (firm-wide) approach to AI are seeing greater success than using AI to tackle singular workflows or issues. Remarkably, 96% of the respondents in the PwC survey plan to use AI simulations, such as digital twins or augmented reality, in the near term.

2. **Leaders should emerge**

The "rising tide" that lifted all boats thanks to unprecedented levels of stimulus following COVID (and the significant pull forward of consumer demand) is now receding. As the tide has shifted, investor focus has moved from "growth at all costs" to the protection of margins and earnings. Best-in-class companies in their respective industries should be able to exhibit better fundamentals and competitive moats. We believe AI investments will be a catalyst for top companies across many industries and sectors as they look to enhance their competitive positioning and growth prospects.

3. **Still at the beginning of the AI revolution**

It is important to remember that we are still in the early stages of AI-driven transformation — a phase when slow and steady wins the race. While AI-related advances such as AlphaGo, ChatGPT and generative AI are important milestones that capture people's imaginations, companies can only harness the full potential of AI innovation by dedicating human, financial and time resources over the long term. AI usage might have also received an acceleration in 2022 thanks to two specific headwinds that have been plaguing the world's major economies: labor shortages and re-shoring. Both headwinds translate to higher labor and capital costs for companies, and it is here that AI can shine. We believe AI will be a necessary tool for addressing higher costs through enhanced productivity and automation for years to come.

Overall, we continue to believe we are at the very early stages of massive disruptive change brought about by advances in — and the deployment of — artificial intelligence. We believe these changes will drive meaningful growth for companies that are able to take advantage and drive disruption within their respective industries. While we expect that markets may sometimes question the underpinnings of this growth, our view is that the compounding effect from AI disruption will create long-term shareholder value. We believe that stock picking will be essential to capturing the benefits of this opportunity, especially in an environment characterized by disruption and change.

*Allianz Global Investors and Voya Investment Management (Voya IM) have entered into a long-term strategic partnership, and as such, as of 25 July 2022, the investment team transferred to Voya IM and Voya IM became the delegated manager for Allianz Global Artificial Intelligence Fund. AllianzGI continues to provide information and services to Voya IM for this investment through a transitional service agreement.