

Navigating Inflation And Tariffs: Strategic Lessons From 150 Years Of Data

Over the past 150 years periods of high inflation proved challenging for equity investors.

Equities disappointed especially in periods of hard economic landing, rates rise, or tariffs increases.

Factors strategies were resilient and helped in improving returns across inflationary episodes.

How should investors think about the impact of inflation? This question remains one of the most frequently asked and debated across the investment industry. Despite some relief in parts of 2024, inflation in 2025 continues to challenge markets, resisting moderation even in the face of aggressive central bank rate hikes. OECD estimates inflation between 4.3% and 4.7%, fueled by structural issues like disrupted supply chains and rising protectionism.

These concerns emerge alongside broader macroeconomic uncertainty. Central banks have diverged in their responses—some tightening further, others pausing in anticipation of self-correction. Meanwhile, the U.S., under the Trump administration, has reintroduced trade tariffs, potentially amplifying inflationary pressures by raising import costs. What do these developments mean for asset returns? And how should investors interpret deflationary signals, especially from economies like China?

We explore these questions using a data-driven lens, leveraging the longest dataset on inflation and asset returns to date—150 years of global inflationary episodes since 1875. This extensive historical coverage includes over 45 years of high inflation (defined as global inflation above 4%) and numerous sub-episodes. Expanding on our previous research (Baltussen, van Vliet and Vidojevic (2024))¹, we incorporate key investor concerns: the influence of trade openness, interest rate shifts, and deflation. We present key insights on the performance of traditional asset classes and factor-based investment strategies, with the aim of providing robust empirical guidance to inform strategic asset allocation across varying inflationary environments.

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¹ See: <https://www.northerntrust.com/content/dam/northerntrust/pws/nt/documents/investment-management/navigation-inflation-analysis-of-equity-factor-performance.pdf>.

Our key findings? Traditional assets such as passive equities, bonds, and gold have shown inconsistent and often vulnerable performance during inflationary shocks. High inflation erodes real returns and

exposes the limitations of conventional strategies. Conversely, factor investing offers a more systematic and resilient approach. Over the past 150 years, factor strategies have consistently generated

positive alpha during high-inflation periods—regardless of economic cycles, interest rate trends, earnings growth, or global trade shifts.

The Historical And Current Inflationary Landscape – 1875 to 2024

Inflationary pressures, after peaking in 2022, have shown signs of resurgence. Despite aggressive rate hikes, geopolitical tension and trade restrictions continue to sustain inflation. According to OECD estimates, inflation persists between 4.3% and 4.7%. Hence, an important question is what is the impact of high inflation on asset returns?

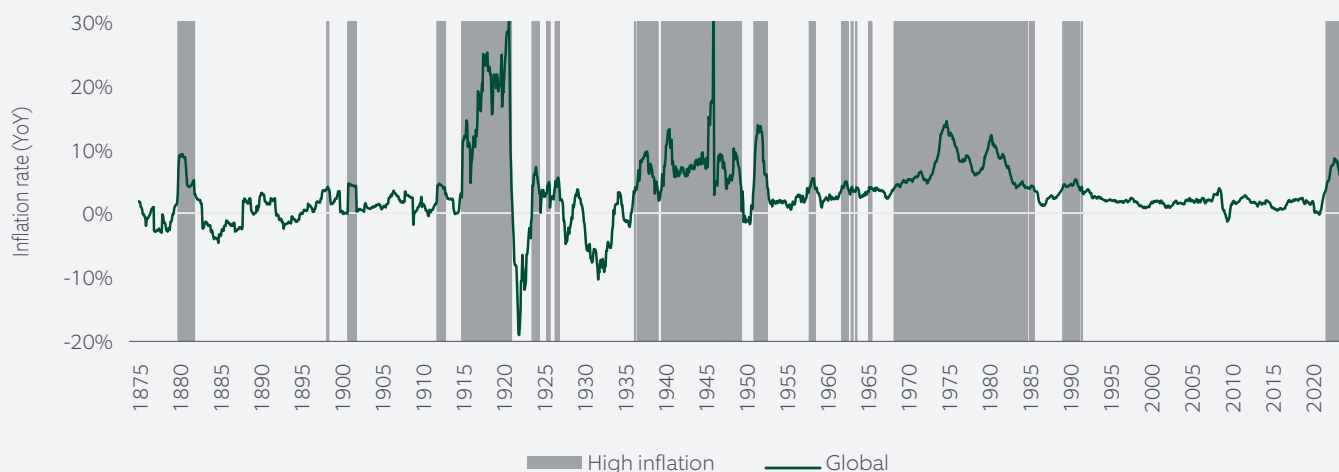
A challenge in analyzing episodes of high inflation is that over the past 50 years we have seen limited periods of elevated inflation rates, with inflation never exceeding levels of 4% between 1990 and 2020. It is only since October 2021 that inflation surpassed 4%, deviating from the accustomed stability over the previous decades. This implies that relying solely on data from the past

few decades, as many prior studies do, offers limited insight into the full spectrum of inflationary dynamics. To address this gap, we extend our analysis back to 1875, allowing us to incorporate over 150 years of inflation data, including more than 45 years of high-inflation regimes. This historical depth enables a more comprehensive evaluation of how inflation—and associated forces such as trade tariffs and monetary shifts—affect asset performance over time. Our dataset (see Baltussen et al. (2023)² and Baltussen, van Vliet and Vidojevic (2024)) constructing maps global inflation regimes and asset returns across a wide range of macroeconomic conditions. Through this lens, we are able to generate robust insights on the

impact of inflation on traditional assets and factor strategies.

Exhibit 1 illustrates long-term inflationary trends over the past 150 years, highlighting several key observations. Recurring inflationary cycles are evident, with pronounced spikes occurring during the 1880s, post-World War I, post-World War II, the 1970s, and the post-pandemic period beginning in 2021. These were often followed by deflationary phases, as seen before WWI and post-1980s. Notably, inflation volatility was higher pre-1970s, when currencies were often tied to precious metals. Post-1970s stability was largely policy-driven, but recent volatility mirrors the volatility in previous episodes, justifying a broader historical perspective.

EXHIBIT 1: 150 years of inflation regimes



Source: Baltussen et al. (2023), Baltussen, van Vliet and Vidojevic (2024), and Northern Trust Asset Management – Quantitative Strategies. The figure shows the historical timeseries behavior of Global YoY inflation (based on Consumer Price Inflation (CPI)), the bars highlighted in high inflation (above 4%). The sample period is 1875-2024.

² Baltussen, G., Swinkels, L., van Vliet, B., & van Vliet, P. (2023). Investing in Deflation, Inflation, and Stagflation Regimes. Financial Analysts Journal, 1-28.

As economic conditions continue to evolve, assessing the potential trajectory of inflation remains critical for investors. While some analysts draw comparisons to the inflationary surge of the 1970s, others argue that structural differences—such as advances in technology and globalization—differentiate the present environment from historical precedents. Although inflation has moderated following its peak between October 2021 and October 2023, core goods inflation remains a persistent concern. This sustained pressure is largely driven by commodity price

fluctuations and rising import costs, exacerbated by recently imposed tariffs and discussions of additional trade restrictions. Consequently, inflation remains vulnerable to a renewed acceleration, increasing the likelihood of a transition back to a high-inflation regime. Given these risks, we believe it is important for investors to study its potential consequences.

Following our earlier work, we classify global inflation into four distinct regimes: (1) deflation (below 0%), (2) low inflation (0%–2%), (3) moderate inflation (2%–4%), and (4) high

inflation (above 4%).^{3,4} Within this framework, we introduce a range of macroeconomic conditioning variables to analyze the performance of both traditional asset classes and factor premiums. Specifically, we examine the influence of business cycle fluctuations (recessions vs. expansions), corporate earnings growth, bond yields, and inflation trends during high inflationary periods. Furthermore, we analyze another pertinent scenario, namely high inflation accompanied by a decline in trade openness – particularly relevant amid renewed protectionism.

Traditional Assets In Different Inflationary Regimes

Exhibit 2 summarizes the differentiated responses of traditional asset classes to both inflationary and deflationary pressures. While equities have generated the highest real (inflation-adjusted) returns since 1875, they have remained vulnerable to inflation shocks. Bonds have exhibited weak performance during inflationary periods, as rising price levels erode the real value of their fixed payments.

Conversely, gold—often perceived as a safe-haven asset—has tended to outperform when inflation expectations rise sharply, yet its performance has lagged other asset classes during periods of moderate or low inflation.

Deflationary environments, on the other hand, have historically favored fixed-income instruments, as declining

price levels enhance the real value of bond payments. Equity returns, however, have typically been lower in such periods, reflecting the broader economic stagnation often associated with deflation. Notably, gold has exhibited above-average real returns during deflationary periods, although lagging well behind equities and bonds.

EXHIBIT 2:

Real returns of asset classes during high inflation regimes

Deflation <0%	Moderate 0-2%	Mild Overshoot 2-4%	High >4%
Bonds 8.4%	Equities 9.8%	Equities 8.5%	Gold -1.1%
Equities 5.5%	Bonds 3.4%	Bonds 1.6%	Equities -1.8%
Gold 3.7%	Gold 1.9%	Gold 1.0%	Bonds -4.9%
23.1 yrs.	42.9 yrs.	36.1 yrs.	47.9 yrs.

Source: Baltussen et al. (2023), Baltussen, van Vliet and Vidojevic (2024), and Northern Trust Asset Management – Quantitative Strategies. Data from January 1875 until December 2024. Returns are inflation-adjusted, in annual terms, in USD and averaged across inflationary scenarios.

³ The results we present are robust across definitions of inflationary regimes.

⁴ Definitions for the inflation data can be found in Baltussen et al. (2023).

High Inflation: Recessions, Earnings Declines, Rate Cuts, And More

Exhibit 3 explores high inflation sub-scenarios. We consider several key scenarios: high inflation with expansions or recession (i.e. stagflationary episodes), increasing or decreasing corporate earnings, increasing or decreasing yields, or changes in inflation. For all these scenarios our sample offers sufficient depth to identify at least 15 years of comparable historical episodes.

Stagflation—high inflation with recession—has been particularly damaging for equities, bonds, and even gold. Similarly, periods of declining corporate earnings delivered negative real returns across equities, bonds, and gold, whereas periods of earnings growth provided modest

improvements in equity performance, occasionally pushing returns into positive real territory.

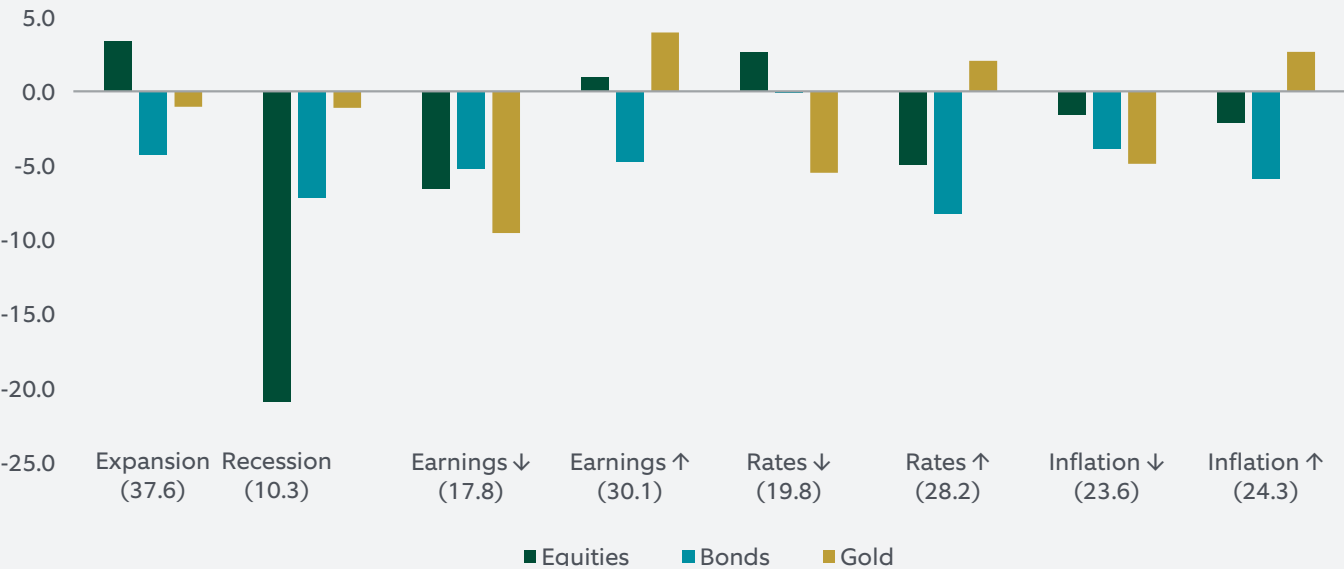
Next, we consider the impact of rates decreases or rises. A widely held assumption is that interest rate cuts are inherently bullish for financial markets. However, while they may offer short-term relief to equities by reducing borrowing costs, they also carry the risk of reigniting inflationary pressures, potentially undermining long-term market stability. Our findings show that on average, over the past 150 years, decreasing rates were favorable for real equity returns, while bonds and gold returns were negative in real terms. So high inflation accompanied by a lowering of interest rates is a

favorable environment for equities, but not for other traditional assets. In contrast, rising interest rates were generally correlated with weak equity performance and particularly adverse outcomes for bonds. In such environments, gold served as a relative safe haven, mitigating losses observed in other asset classes.

Lastly, periods of high and increasing inflation tended to favor gold while exerting downward pressure on both equities and bonds. Conversely, phases of inflation decline were generally unfavorable for gold, underscoring the complexity of asset class behavior in different inflationary environments.

EXHIBIT 3:

Real returns of asset classes during high inflation regimes



Source: Baltussen et al. (2023), Baltussen, van Vliet and Vidojevic (2024), and Northern Trust Asset Management – Quantitative Strategies. Data from January 1875 until December 2024. Returns are inflation-adjusted, in annual terms, in USD and averaged across inflationary scenarios. Numbers in parentheses indicate the average number of years per scenario.

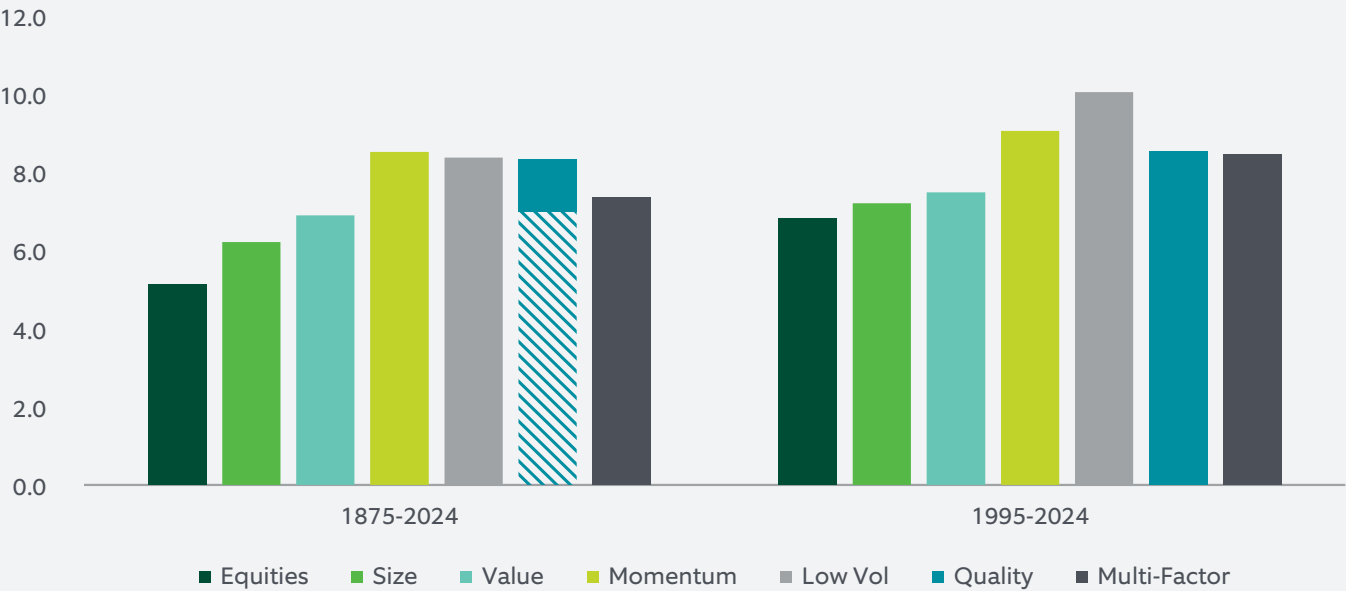
Factor Performances In Different Inflationary Regimes

Extensive academic research has established that factor-based strategies—specifically value, momentum, quality, and low volatility—have consistently delivered excess returns relative to the broader equity market. Before we further dive into the impact of inflation, we first consider the long-run evidence on equity factor returns.

Exhibit 4 presents average returns on equities and factors across the long-run sample from 1875 to 2024, as well as a more recent subsample encompassing the last 30 years (1995-2024). Factors have generated positive alphas over the equity market over our 150-year sample, with real returns on long-focused equity factor portfolios ranging from 6.2% for the size factor to

8.5% for momentum. This compares to 5.0% for the market. Additionally, a multi-factor strategy that integrates value, momentum, quality, size, and low volatility averaged 7.4% real returns, reinforcing their consistency. The past 30 years confirm this picture.

EXHIBIT 4:
Evidence on equity and factor returns



Source: Baltussen et al. (2023), Baltussen, van Vliet and Vidojevic (2024), and Northern Trust Asset Management – Quantitative Strategies. Factors are simulated. Data from January 1875 until December 2024, except for Quality which starts in 1940, given earlier data is not available for this factor. The multi-factor series includes all factors available at each point in time. The shaded part for quality represents the market return over the same period. Factors are constructed by overlaying long-short portfolios on the market portfolio. Returns are in annual terms, in USD.

Next, we analyze the real factor performances across inflationary regimes. Exhibit 5 presents the results.

Factor performance is largely independent of the prevailing inflationary environment, with all

factors consistently outperforming the broad equity market.⁵

EXHIBIT 5:

Real returns across inflationary regimes

Deflation <0%	Moderate 0-2%	Mild Overshoot 2-4%	High >4%
Low Vol 9.1%	Low Vol 13.6%	Momentum 12.2%	Quality* 3.3%
Momentum 8.5%	Quality* 13.2%	Low Vol 11.2%	Momentum 1.9%
Multi-Factor 8.0%	Momentum 12.9%	Quality* 10.6%	Low Vol 1.3%
Value 7.6%	Multi-Factor 12.1%	Multi-Factor 10.4%	Multi-Factor 0.6%
	Value 11.3%	Value 9.6%	Value 0.5%
Size 6.3%	Size 10.8%	Size 9.3%	Size -0.2%
Market 5.5%	Market 9.8%	Market 8.5%	Market -1.8%
23.1 yrs.	42.9 yrs.	36.1 yrs.	47.9 yrs.

Source: Baltussen et al. (2023), Baltussen, van Vliet and Vidojevic (2024), and Northern Trust Asset Management – Quantitative Strategies. Factors are simulated. Data from January 1875 until December 2024, * except for Quality which starts in 1940. Due to a lack of deflationary periods, we only have limited observations for Quality, as such it is left out. The multi-factor series includes all factors available at each point in time. Returns are inflation-adjusted, in annual terms, in USD, and averaged across inflationary scenarios.

⁵ Note we adjust the low-volatility factor to a beta of 1, ensuring comparability with other factors.

EXHIBIT 6a:
Real returns, high inflation, recession

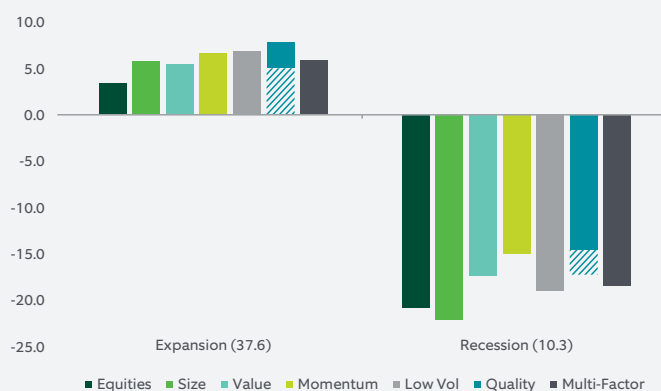


EXHIBIT 6b:
Real returns, high inflation, earnings



EXHIBIT 6c:
Real returns, high inflation, rates changes

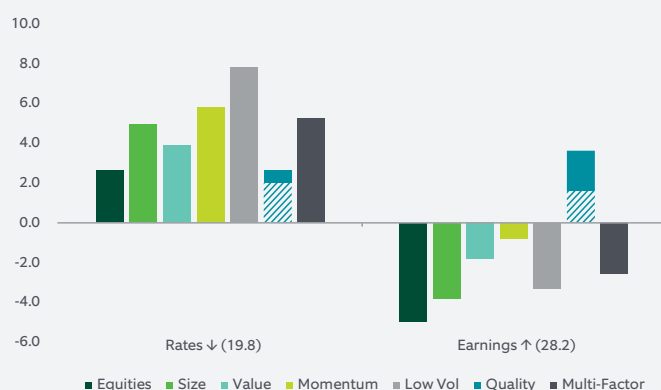


EXHIBIT 6d:
Real returns, high and changing inflation



Source: Baltussen et al. (2023), Baltussen, van Vliet and Vidojevic (2024), and Northern Trust Asset Management – Quantitative Strategies. Factors are simulated. Data from January 1875 until December 2024, except for Quality which starts in 1940, given earlier data is not available for this factor. The multi-factor series includes all factors available at each point in time. The shaded part for quality represents the market return over the same period. Factors are constructed by overlaying long-short portfolios on the market portfolio. Returns are in annual terms, in USD. Numbers in parentheses indicate the average number of years per scenario.

Exhibits 6a–6d dive deeper into high-inflation scenarios to examine how different macroeconomic conditions shape asset performance. During stagflation—when inflation coincides with recession—broad equity markets suffered significant losses, underscoring their vulnerability to such dual shocks. However, factor strategies provided meaningful downside protection. Even in environments marked by declining earnings – which

have historically posed significant challenges for equities, bonds, and gold – factors generally outperformed.

Exhibit 6c and 6d, paint a similar picture. The resilience of factors was equally evident during periods of rising interest rates and when inflation continued to climb. These scenarios often undermine investor confidence and compress risk premia, yet factor portfolios remained relatively stable.

The robustness of factor premiums across divergent inflation paths suggests they are not merely a tactical solution but a structural enhancement to portfolio design. The evidence also challenges the belief that rising rates or stagflation make diversification impossible. In contrast, factor strategies appear uniquely positioned to offer consistent risk-adjusted returns, even when conventional allocations falter.

The Impact Of A New Tariff Era...

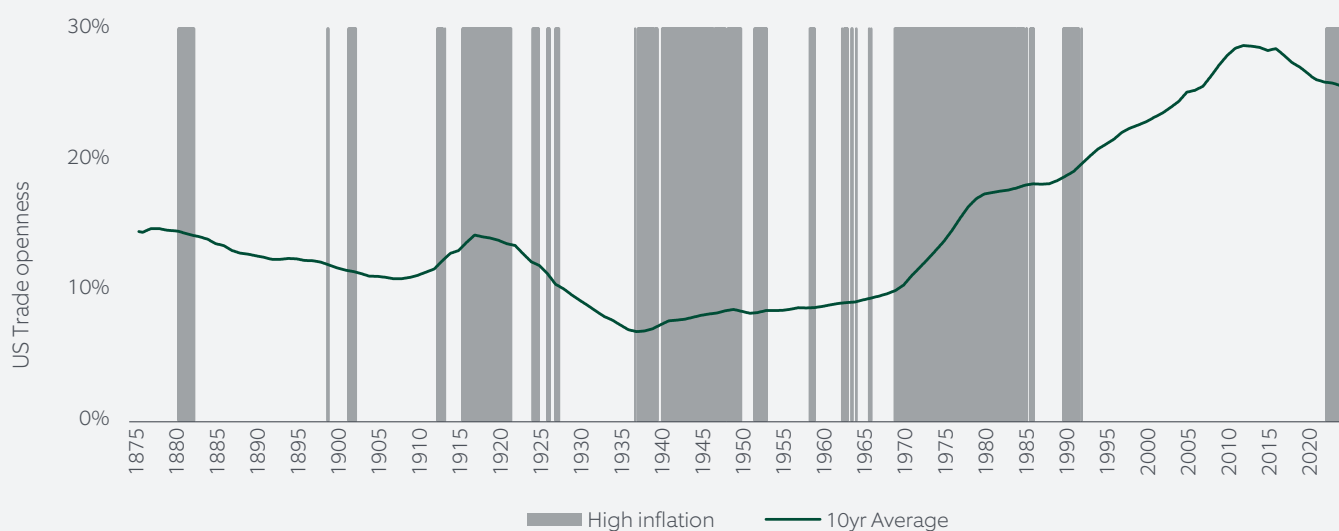
Trade restrictions and tariffs introduce an additional layer of complexity to the inflationary landscape. The recent U.S. tariffs on imported goods have imposed upward cost pressures that may sustain inflation despite the presence of other disinflationary forces. Hence, investors must carefully

assess the implications of reduced trade openness on inflation expectations and equity market performance. Our deep sample allows us to analyze such episodes robustly, as we have about 18.3 years of high-inflation periods coinciding with declining trade openness in our

dataset.⁶ High tariffs can restrict the flow of goods and services, thereby reducing trade openness. Exhibit 7 shows the historical behavior of trade openness together with high inflationary episodes.

EXHIBIT 7:

Historical trade openness



Source: Northern Trust Asset Management – Quantitative Strategies. The figure shows the historical timeseries behavior of the 10-year centered moving average of U.S. Trade Openness (based on the sum of U.S. Imports and Exports as a percentage of GDP). The bars highlighted periods of high inflation (above 4%). The sample period is 1875-2024.

⁶ Trade openness is defined by annual changes in the ratio of U.S. imports and exports to total GDP.

EXHIBIT 8:
Real returns of asset classes during high inflationary – changing trade openness periods

Decreasing	Increasing
Equities -2.9%	Gold 4.3%
Bonds -3.9%	Equities -1.2%
Gold -9.6%	Bonds -5.5%
18.3 yrs	29.6 yrs

Source: Northern Trust Asset Management – Quantitative Strategies. Data from January 1875 until December 2024. Returns are inflation-adjusted, in annual terms, in USD, and averaged across inflationary scenarios.

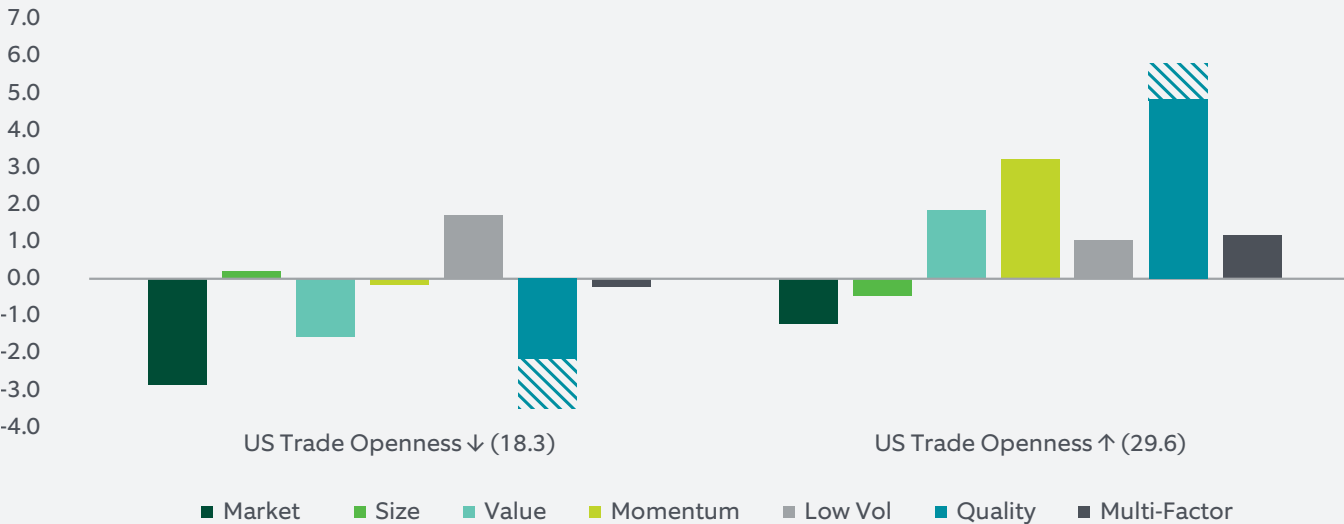
To analyze the impact of asset returns we follow the same approach as above and split period of high inflation into decreases or increases in trade openness. Exhibit 8 shows that especially declining trade openness correlates with weak equity, bond, but also gold returns. Hence, equity

markets have historically struggled in periods of declining trade openness, reflecting the adverse economic consequences of protectionist measures.

Exhibit 9 consider factor premiums, showing that factor-based investment

strategies have consistently demonstrated resilience across varying trade environments, (once again) underscoring their ability to enhance portfolio stability and generate excess returns even in the face of macroeconomic disruptions.

EXHIBIT 9:
Real returns of factors during high inflationary – changing trade openness periods



Source: Northern Trust Asset Management – Quantitative Strategies. Factors are simulated. Data from January 1875 until December 2024, except for Quality which starts in 1940, given earlier data is not available for this factor. The multi-factor series includes all factors available at each point in time. The shaded part for quality represents the market return over the same period. Factors are constructed by overlaying long-short portfolios on the market portfolio. Returns are in annual terms, in USD. Numbers in parentheses indicate the average number of years per scenario.

Deflationary Regimes: A Different Challenge

Although inflation has been the dominant macroeconomic focus of recent years, deflation remains a significant and often underestimated risk—particularly in markets such as China. Historically, deflationary episodes have frequently followed periods of high inflation, as shown in Exhibit 1. These shifts in regime can catch investors off guard, as portfolio strategies optimized for inflationary conditions may underperform when deflation sets in.

Japan provides a critical precedent, where decades of deflation led to prolonged economic stagnation, persistently low interest rates, and

distortion in asset valuations. The deflationary concerns now present in China echo many of these patterns, prompting investors to ask a crucial question: When should inflation concerns yield to the threat of deflation—and how should portfolios respond?

To answer this, Exhibit 10 analyzes real returns during deflation across a range of macroeconomic states. The evidence is striking. Equity markets performed best during deflationary expansions, fared modestly when interest rates rose, and struggled most during deflationary recessions. Rate hikes during deflation were especially

detrimental, compounding the drag on economic activity.

However, factor-based investment strategies continued to deliver positive and consistent real returns across these conditions. This stability underscores their utility as an all-weather approach, offering diversification and resilience when traditional asset classes falter. In environments where policy uncertainty is high and growth prospects are uneven, the ability of factors to persist through both inflationary and deflationary extremes makes them an interesting strategic cornerstone for robust portfolio design.

EXHIBIT 10a:
Real returns, deflation and changing inflation



EXHIBIT 10b:
Real returns, deflation, recession



EXHIBIT 10c:
Real returns, deflation, earnings change

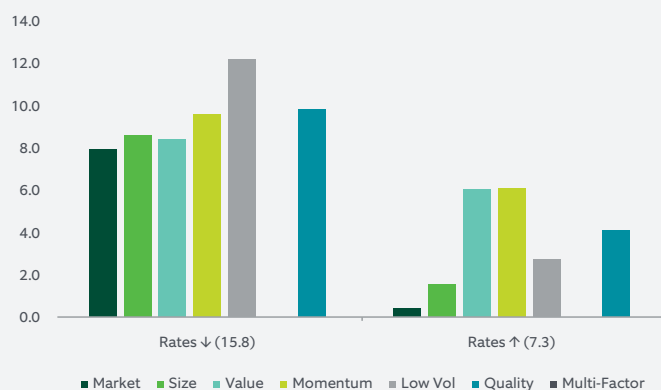


EXHIBIT 10d:
Real returns, deflation, rates changes

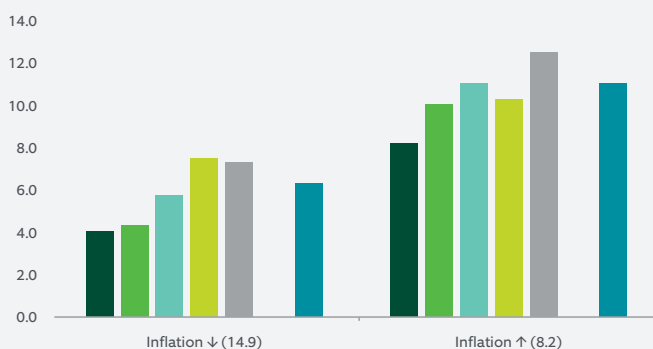
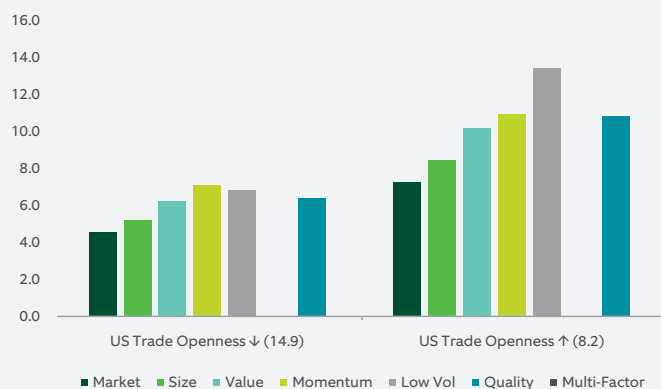


EXHIBIT 10e:**Real returns, deflation, trade openness**

Source: Baltussen et al. (2023), Baltussen, van Vliet and Vidojevic (2024), and Northern Trust Asset Management – Quantitative Strategies. Factors are simulated. Data from January 1875 until December 2024, except for Quality which starts in 1940, given earlier data is not available for this factor. Due to a lack of deflationary periods, we only have limited observations for Quality, as such it is left out. The multi-factor series includes all factors available at each point in time. Factors are constructed by overlaying long-short portfolios on the market portfolio. Returns are in annual terms, in USD. Numbers in parentheses indicate the average number of years per scenario.

Conclusion

In this research, we examine how inflation impacts asset returns using an extensive 150-year dataset—the most comprehensive of its kind. We believe robust investment insights require robust data, which is why we built and applied the deepest dataset to date, covering inflation, traditional assets, and factor returns across vastly different macroeconomic regimes. The data shows inflation, deflation, interest rates, trade policy, and business cycles

define the landscape investors must navigate.

Real returns for equities and bonds tend to be positive in deflationary and moderate inflation environments but decline substantially in high-inflation regimes. This is especially true in stagflation scenarios—when inflation and recession coincide—and during periods of earnings contraction or rising interest rates. High inflation

combined with reduced trade openness further erodes returns for traditional assets. In contrast, over the past 150 years, factor strategies have consistently generated positive value add during high-inflation periods—regardless of economic cycles, interest rate trends, earnings growth, or global trade shifts. In conclusion, factors help to mitigate the pain traditional assets experience across challenging inflationary periods.

References

- Baltussen, G., Swinkels, L., van Vliet, B., & van Vliet, P. (2023). Investing in Deflation, Inflation, and Stagflation Regimes. *Financial Analysts Journal*, 1-28.
- Baltussen, G., van Vliet, B., & Van Vliet, P. (2023). The cross-section of stock returns before CRSP, Working Paper.
- Baltussen, G., van Vliet, B., & Vidojevic, M. (2024). Navigating inflation – an analysis of equity factor performance over 150 years. Northern Trust Corporation.
- Wahal, S. (2019). The profitability and investment premium: Pre-1963 evidence. *Journal of Financial Economics*, 131(2), 362-377.

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