2025 EDITION

LONG-TERM OUTLOOK

SMArtX Investment Solutions

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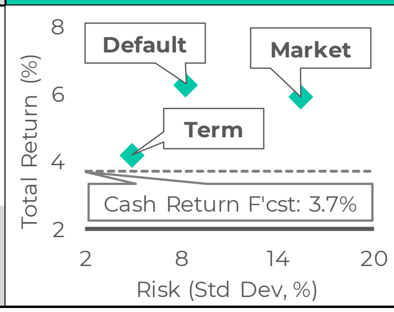
Portfolio optimization (greatest return per unit of risk) is a key step in the portfolio construction process. But the asset allocation output is only as good as the capital market assumption inputs. We seek to increase our accuracy by applying a forward-looking (thematic), historically aware (quant) approach to a 10-year investment horizon.

Quantitative analysis, in particular, can be very powerful over longer investment horizons. For instance, while equity market valuations offer little insight into expected returns over the next year (explaining just 6% of return variability), they are much more predictive when forecasting returns over the next 10 years (with predictive power jumping to 64%). To our quantitative foundation, we add a forward-looking component in the form of our annual capital market assumption themes – recognizing that: 1.) quantitative analysis is inherently backward looking; and 2.) while history can rhyme, it rarely repeats.

We focus our forecasts on the key risk factors that serve as benchmarks for our goal-based portfolios – Term (interest rate risk), Default (credit risk) and Market (equity risk) – from which we can formulate capital market assumptions across a wide array of asset classes. Our return forecasts – alongside risk and correlation assumptions – are found in the table below. Our capital market assumption themes are detailed on pages 2-5 with discussion on each risk factor/portfolio on pages 6-8.

SMARTX RISK FACTOR FORECASTS

We expect default risk to be well-compensated over the next decade – outpacing even market risk returns.

Risk Factor (Portfolio)	Benchmark (Proxy)	Return (%)	Risk (%)	Correlation			Risk/Return Visualization
				Market	Default	Term	
Market (Growth)	Russell 3000	5.9	15.5	1.00	0.64	0.01	
Default (Income)	Bloomberg US High Yield	6.3	8.3	0.64	1.00	0.10	
Term (Protection)	Bloomberg US Treasury	4.2	4.9	0.01	0.10	1.00	

Source: SMArtX Investment Solutions, Bloomberg. Return forecasts are forward looking; risk and correlation assumptions are based on historical data (using a common inception period of 8/31/1983 – 8/31/2024).

THEME 1: CONFLICTED GROWTH

Widespread opportunities will clash with outsized risks in a world of technological disruption and geopolitical pressures set against a debt-constrained backdrop. We expect the resulting growth trajectory will be constructive overall, but uneven and with a wider-than-normal range of realistic scenarios – from AI revolution to economic world war (but most likely some of both).

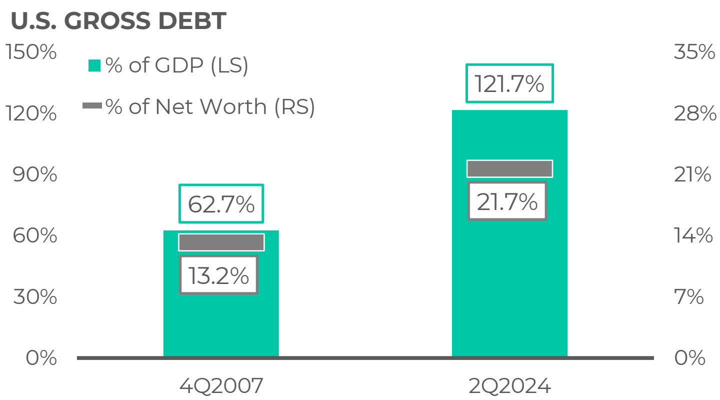
Rarely has there been so much reason for both economic optimism and pessimism. AI shows much promise and could drive a decade-plus of productivity gains and new industry formation – but also comes with societal and economic risks requiring a careful transition (so as not to displace too many workers) and right-sized regulation (to ensure a safe and level playing field). Meanwhile, current geopolitical tensions (mostly economic but with notable militaristic overtones) risk major supply shocks – from rerouted supply chains to geopolitically vulnerable oil fields – while also driving notable domestic demand as the US onshores production and rebuilds its industrial base.

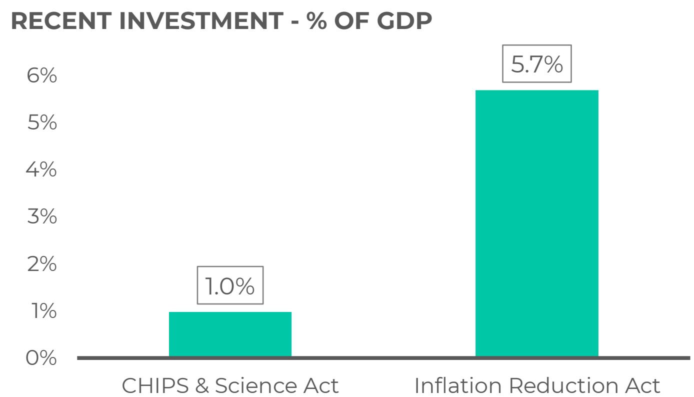
Aging demographics and elevated debt levels add interesting wrinkles to the current economic situation. Drawing on the Japanese experience, an aging society is associated with both falling demand (less household formation, more frugality) and falling supply (less workers). But today's retirees (the baby boomer generation) are healthier (and, thus, more active – and spending more money) and working longer (thanks to "new economy" jobs for which aging is less debilitating). As such, demand is better supported and supply challenges are ameliorated, especially with new AI applications to fill labor supply gaps (for example, call centers). More concerning are today's elevated debt levels – not because of any looming debt crisis (we are confident the US can pay what it owes, see left chart); but because yesterday's debt reduces today's consumer spending and investment.

The deployment of precious investment dollars will be key to the economic outlook. AI/broader technology proliferation will create plentiful investment *opportunities* that can pay for themselves in the form of increased productivity and, ultimately, greater output. However, there are also a couple (at least perceived) large investment *requirements* related to geopolicy and climate change that are simply replacing already-productive assets (for example, Taiwanese semiconductor fabrication plants and coal power stations). All said, current conflicts – both literal (geopolitical tensions) and figurative (the battle for investment dollars) – create a moderately high risk/reward backdrop.

COULD BE WORSE… COULD BE BETTER…

The nation's wealth puts its debt in perspective, but "required" investments are crowding out opportunities.





Source: SMArtX Investment Solutions, Bloomberg. Data as of 2Q2024.

THEME 2: GEOPOLICY TRILEMMA

US policymakers cannot support globalization, maintain the US-led world order and preserve the US dollar's global role all at once. Of the three, globalization will take a backseat to geo-policy autonomy, while the dollar will slowly lose reserve currency market share. We expect this new geopolitical regime will be accompanied by an empathetic Fed, pressuring inflation.

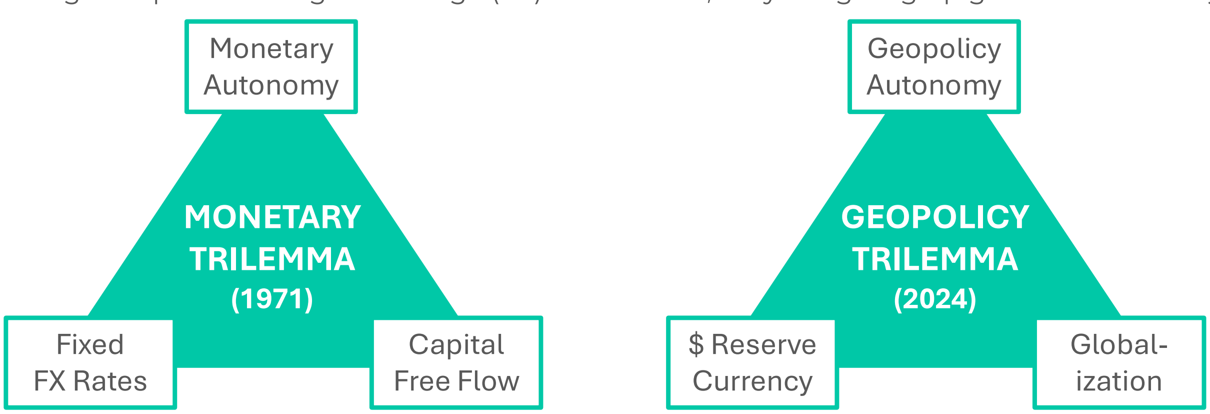
The 1944 Bretton Woods Agreement – signed by 44 allied nations – ushered in a new global financial system, with global currencies pegged to the US dollar, which in turn was pegged to gold. But by the 1960s, cracks were forming as a "Monetary Trilemma" became clear: Monetary policymakers could not simultaneously achieve: 1.) capital free flow (effectively globalization); 2.) monetary autonomy; and, 3.) fixed exchange rates. Ultimately, President Nixon jettisoned #3, ending the gold standard in 1971 and, along with it, the Bretton Woods era. The subsequent decade was marked by bouts of stagflation and two severe recessions (notably raising the Federal Reserve's profile) before ultimately moving into a three-decade period of relative world peace and economic coordination.

Yesterday's Monetary Trilemma is today's Geopolicy Trilemma – with policymakers confronting their inability to simultaneously maintain: 1.) globalization; 2.) geopolicy autonomy; and, 3.) the dollar's global reserve currency status. Of the three, globalization – already on the ropes because of China's economic rise, fallout from the global financial crisis and supply chain disruptions from the Covid pandemic – is facing a potential knockout blow from ongoing geopolitical tensions. Europe has learned it cannot rely on Russian energy while much of the world now realizes it cannot rely on Chinese goods, especially in areas related to national security. Meanwhile, we believe the US dollar will continue its managed decline – losing some of its reserve currency luster as it takes a backseat to geopolitical ambition (freezing adversary-owned dollars is tactically effective but strategically ill-advised). All said, and for perspective, the Bretton Woods era lasted 27 years – and the current era has surpassed that mark. We are likely due for some tweaks in global structure in the decade ahead.

As geopolicy prioritizes national security over globalization, we expect inflationary pressures given new demand from the industrial rebuild and the move from "just-in-time" to "just-in-case" inventory. This brave new world will challenge the Fed, which we believe will err on the side of maintaining growth over strictly adhering to its 2% inflation target amid high debt and investment requirements.

POLICYMAKERS CAN HAVE ANYTHING, BUT NOT EVERYTHING

Policymakers gave up fixed foreign exchange (FX) rates in 1971; they are giving up globalization today.



Source: SMArtX Investment Solutions.

THEME 3: INVESTMENT REDEPLOY

As tech stock prices catch up to underlying company fundamentals and cash returns come off two-decade highs, we expect some portfolio redeployment in the years ahead. We don't hate tech stocks at current prices – given their strong fundamentals – but we are more favorable on energy and real estate investing and think credit strategies deserve larger portfolio allocations.

With the Fed about to begin a rate-cutting campaign and the tech sector representing nearly one-third of the S&P 500, the markets are ripe for rotation. Cash returns were last this high March of 2001. The Fed was 1% into a rate-cutting cycle, which started at 6.5% that January and ended at 1% in June of 2003. Over that ~27-month period, the S&P 500 returned -13% (tech sector -26%) – this after already suffering a -22% (-62%) return over the prior year as the dot-com bubble burst. It was an awful start to a bad decade for the S&P 500, which ended the "aughts" with a cumulative -9% return; it was even worse for the tech sector, which returned -52%. Yes, you read that right – a tech sector buy-and-hold strategy implemented at the turn of the century was worth half that a decade later.

The above is a (somewhat chilling) reminder of market unpredictability (tech was up 30% annually in the decade prior). There are good reasons to expect a different result over the next decade – today's tech companies have impressive business models and sustainable competitive advantages. But we see more compelling sectors. Energy has been the worst performing sector over the past decade but looks attractive today given geopolitical tensions (with over half of the world's oil supplies in dangerous/vulnerable places) and a dearth of capital investment over the past few years (both bolstering company balance sheets and limiting future supply). Real estate is another potentially oversold sector. Investors have priced in weaker office/retail sector outlooks while more attractive properties (notably within the industrial sector) are a growing component of the asset class.

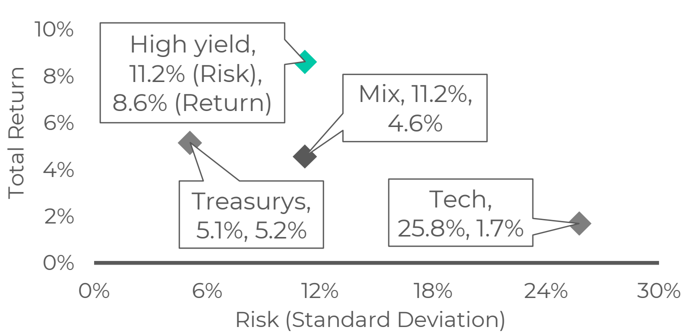
Cash returns will fall as the Fed starts cutting, but a flat yield curve dissuades us from adding interest rate risk. We see greater value in adding credit risk, which can be done without adding overall portfolio risk by pairing the cash reduction with other profit taking. Per the below exhibit (drawing on the March 2001 example above), moving cash and a side of tech into high yield offers a risk-neutral alternative to simply putting cash into Treasurys. Today's lower starting-point yields (vs. 2001) mean high yield returns will be lower, but still look compelling compared to other options.

GIVING THE PORTFOLIO CREDIT

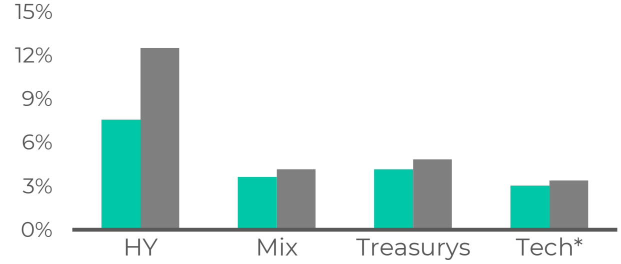
Credit risk was rewarded the last time the Fed was at current levels – albeit starting at better valuations.

SELECT STRATEGY RISK & RETURN

10-year period starting March 2001



SELECT STRATEGY YIELDS



	HY	Mix	Treasurys	Tech*
Jul-24	7.6%	3.6%	4.2%	3.0%
Mar-01	12.5%	4.2%	4.9%	3.4%

Source: SMArtX Investment Solutions, Bloomberg.
"Mix" = 53.5% US Treasury Index/46.5% S&P 500 Tech Index. HY = High yield. *Earnings yield.

SMArtX Advisory Solutions

PROTECTION PORTFOLIO

We anticipate the Protection Portfolio will offer a baseline 4.3% annualized return – a 0.6% premium (vs. a historical 2.3%) to our forecasted 3.7% cash return and a 0.3% premium (vs. a historical 0.4%) to the starting-point yield. We recommend the inclusion of TIPS strategies to address elevated inflation risk and expect continued support for gold as a dollar alternative.

As noted, valuations are a solid quantitative starting point for long-term return forecasting. And this is especially true within the Bloomberg US Treasury Index (Term proxy and the Protection Portfolio benchmark), where starting-point yields explain 85% of the long-term return variability (r-squared). Digging deeper into the valuation-return relationship (using data since March 1995), 10-year annualized returns have outpaced starting-point yields by 0.4% on average – ranging from -0.9% (6/2007-6/2017) to 1.8% (9/2002-9/2012). In the most recent 10-year period (through 8/2024), the 1.5% starting-point yield translated to a 1.1% annualized return – the shortfall driven by the rate surge that began in August 2020 (until that point, the annualized return was running at 3.6%).

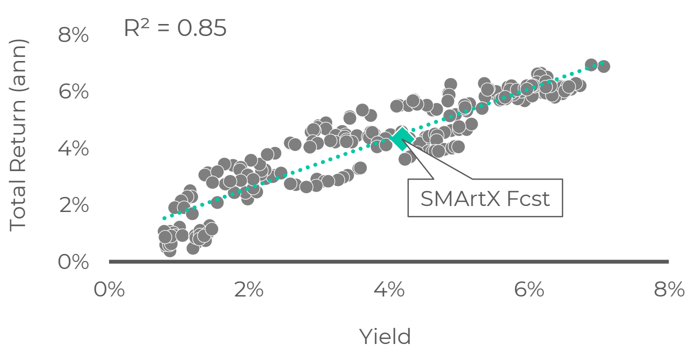
Looking ahead, we forecast a 4.3% return based on a 4.0% starting-point yield. This forecast represents a triangulation amongst the quantitative analysis above, market expectations for future interest rates (as indicated by forward curves) and our expectations for the Fed – recognizing that longer-term rates are simply a reflection of the Fed's longer-term trajectory plus a premium to compensate for interest rate volatility. We expect the latter to remain elevated as the Fed reaches an inflection point and investors confront a wide range of potential Fed policy trajectories given the different economic scenarios (per our **Conflicted Growth** theme). Within that range, our base case calls for a Fed trajectory just below market expectations (see **Geopolicy Trilemma**) – driving a 3.7% cash forecast (0.5% below the 4.2% expected by forward markets) and resulting in a 0.6% return premium for taking term risk (fairly unattractive compared to the 2.3% average going back to 1983).

Driving much of the interest rate volatility will be the embedded inflation expectation volatility. While we don't expect the Fed to abandon its 2% target, we do believe the Fed will employ creative messaging (facilitated by its move to an "average inflation target" in August 2020) to justify levels that ultimately come in closer to 2.5% than 2.0%. Within the Protection Portfolio, TIPS can provide protection against unexpected inflation while gold offers an alternative to dollar-based investments.

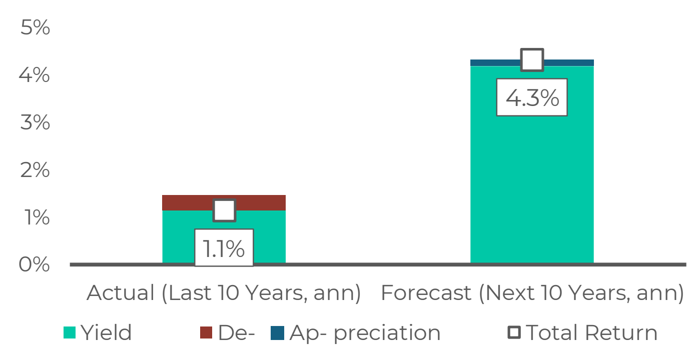
TERM RISK RETURN FORECAST

Higher starting-point yields provide cushion, but fixed income continues to face inflationary risks.

VALUATIONS VS TOTAL RETURNS



TOTAL RETURNS - ACTUAL VS FORECAST



Source: SMArtX Investment Solutions, Bloomberg. Regression based on data from 3/31/1995-8/31/2024.
R^2 = R-squared (valuation explanatory power), Ann = Annual. SMArtX Fcst = SMArtX 10-year total return forecast.

INCOME PORTFOLIO

We forecast a 6.3% baseline return for the Income Portfolio – representing a 2.6% return premium (vs. a historical 4.8%) to the expected cash return and a 1.3% haircut (vs. a historical 2.4% haircut) to the starting-point yield. Beyond the core high yield allocation, we see value in US real estate and balance out the Income Portfolio's overall risk with investment grade credit.

As compared to the valuation analysis on the previous page, the explanatory power of using yields to predict returns within the Bloomberg US High Yield Index (Default proxy and the Income Portfolio benchmark) is notably lower at just 35%. Bringing down the predictive power materially were the returns associated with the 10-year periods starting between September 1998 and June 1999 (circled on left chart) – a period that suffered from the beginning of the global financial crisis (GFC) while missing out on the higher yields/returns the GFC created (11.1% for the 10-year period starting December 2008). Absent that nine-month period, the predictive power jumps to 50%. On average, the starting-point yield suffers a 2.4% haircut over the subsequent 10-year period – with returns actually outpacing the starting-point yield for a brief ~two-year period from mid-2003 to mid-2005.

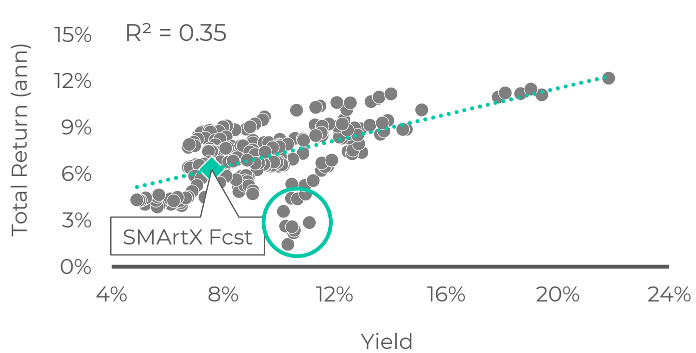
The haircut above roughly approximates the losses due to default found in the high yield asset class, offset by the notably higher yields as compared to US Treasurys – 5.3% on average historically and 3.4% currently. We believe today's notably below-average credit spread reflects the improved quality of the high yield index over time. At the beginning of our data series (March 1995), BB credits – the highest credit quality in the high yield index – were just 38% of the index; today, BBs represent a bit over 50%. Further, the energy sector – representing roughly 13% of the index – is benefiting from better business models and capital structures than in the past (as discussed in our **Investment Redeploy** theme). All said, our 1.3% haircut expectation leads to a 6.3% return forecast. From a macro perspective, modestly higher inflation is also supportive (with inflation making it easier to pay debt).

We view US real estate, given its notable credit exposure, as a nice complement to high yield in the Income Portfolio, and believe the asset class represents a compelling opportunity in the years ahead. Rounding out the brief investment pitch from our **Investment Redeploy** theme, US Real Estate is benefiting from reset valuations, a peaking Fed funds rate and a shift into a number of areas set to benefit from **Conflicted Growth** – including data and distribution centers.

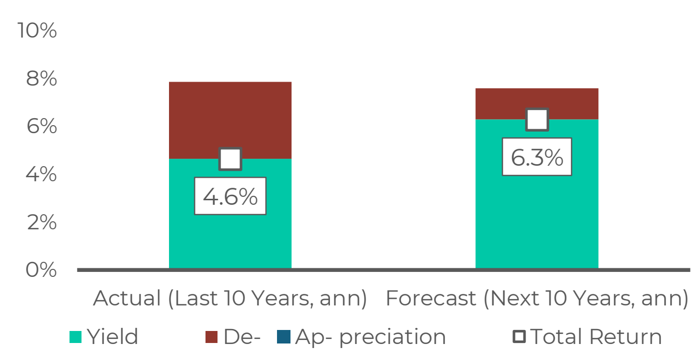
DEFAULT RISK RETURN FORECAST

Credit markets look attractive in the new regime of modestly higher inflation and greater economic risks.

VALUATIONS VS TOTAL RETURNS



TOTAL RETURNS - ACTUAL VS FORECAST



Source: SMArtX Investment Solutions, Bloomberg. Regression based on data from 3/31/1995-8/31/2024.
R^2 = R-squared (valuation explanatory power), Ann = Annual. SMArtX Fcst = SMArtX 10-year total return forecast.

GROWTH PORTFOLIO

Our 5.9% baseline return expectation for the Growth Portfolio equals a 2.2% return premium (vs. a historical 7.7%) to our cash forecast and is 2.1% above the current earnings yield of 3.8%. An allocation to natural resources is one potential way to boost the portfolio's modest expected return, while an international allocation and a low volatility strategy can moderate volatility.

When quantitatively assessing the Growth Portfolio, our valuation metric shifts to earnings yield (inverting the price-to-earnings ratio allows better comparison to our Protection and Income Portfolio valuation metrics) on the Russell 3000 (Market proxy and the Growth Portfolio benchmark). Earnings yield explains a solid 64% of Russell 3000 10-year return variability (as previously noted, a vast improvement over its mere 6% explanatory power on one-year returns). Our valuation model effectively assumes that revenues and margins stay constant and valuations will revert to mean over the investment horizon. Those assumptions proved faulty over the most recent decade, as margins and valuations both trended higher. As a result, the 5.3% earnings yield a decade ago produced an 11.3% 10-year annualized return – 2.9% better than the model's 8.4% prediction.

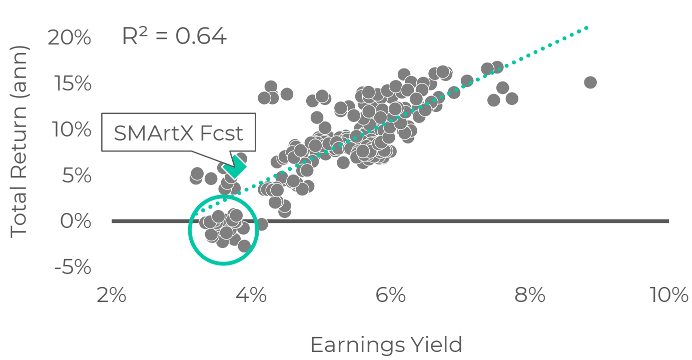
Today, US equities offer a 3.8% earnings yield – a lower level (higher valuation) than all but 12% of monthly observations since March 1995. The model predicts that a 3.8% earnings yield equals a 2.9% 10-year annualized return. We find that to be too pessimistic – overly influenced by the 10-year returns starting during 1999 and most of 2000 (circled on left chart), which suffered a double hit from the dot-com bust and the GFC. Today's "too big to fail" banks are much healthier than during the GFC era, while today's tech companies have a better outlook than during the dot-com days (see **Investment Redeploy**). We believe margins – currently near multi-decade highs – may see pressure, while we believe valuations will remain mostly steady, supported by **Conflicted Growth**, less capital-intensive companies and the market's shift toward growth sectors (e.g., tech). Our 2.1% return premium to the current 3.8% earnings yield is modestly below the 3.0% historical average.

Fleshing out the Growth Portfolio, we still see value in a modest allocation to international equities – recognizing that the US has outperformed for most of the past 15 years, while also appreciating the non-US outperformance in the prior decade. Low volatility strategies can add diversification during times of elevated risk, while natural resources are also attractive (see **Investment Redeploy**).

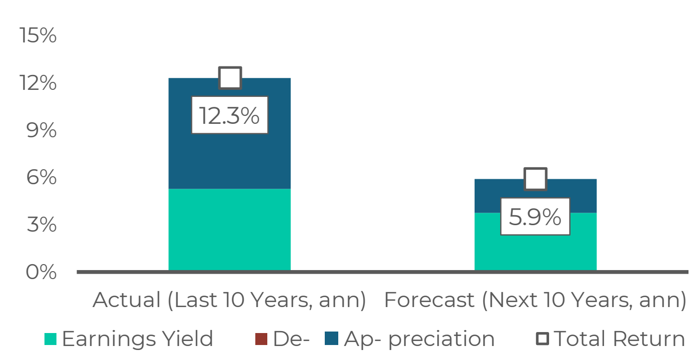
MARKET RISK RETURN FORECAST

Our lower equity market return forecast reflects reduced tailwinds from valuations and profit margins.

VALUATIONS VS TOTAL RETURNS



TOTAL RETURNS - ACTUAL VS FORECAST



Source: SMArtX Investment Solutions, Bloomberg. Regression based on data from 3/31/1995-8/31/2024.
R^2 = R-squared (valuation explanatory power), Ann = Annual. SMArtX Fcst = SMArtX 10-year total return forecast.

PROCESS SUMMARY

The SMArtX Capital Market Assumption process starts with a focus on what we believe to be the three primary compensated risk factors: Market (or equity risk – as proxied by the Russell 3000 Index); Default (or credit risk – as proxied by the Bloomberg High Yield Index); and Term (or interest rate risk – as proxied by Bloomberg US Treasury Index). All asset classes – with few exceptions (which are generally not worth investing in) – have exposure to one (or a combination of) these factors, allowing us to produce a robust set of asset class forecasts once our factor forecasts are established.

Our process takes a forward-looking, historically aware approach. "Historically aware" means understanding the historical relationships between asset classes and what drives the returns of those asset classes; here we pay close attention to valuations, which show strong efficacy in predicting longer-term returns. "Forward-looking" means appreciating these historical relationships can change; our forward-looking themes attempt to capture what is causing these changes and the resulting effects. Our accompanying risk and correlation assumptions are based on historical data going back to 1983 – the common inception of all three risk factor proxies and a 40-year period covering four economic cycles and various financial market environments (inflation, disinflation, growth, recession, bull markets, bear markets, asset class bubbles, etc.).

We set our strategic investment horizon at 10 years, which is designed to look through the cycle (leaving cyclical decisions to tactical asset allocation). The average post-WWII economic cycle has lasted 6.3 years – but the past three cycles have gone considerably longer, with the expansions starting in November 1982, March 1991, November 2001 and June 2009 lasting 8.3 years, 10.7 years, 7.6 years and 10.8 years, respectively – a 9.4-year average. By cutting out the cyclical noise, our historical analysis becomes more valuable and the forward-looking themes become more useful.