

December 2023

Diversifying income in a new era

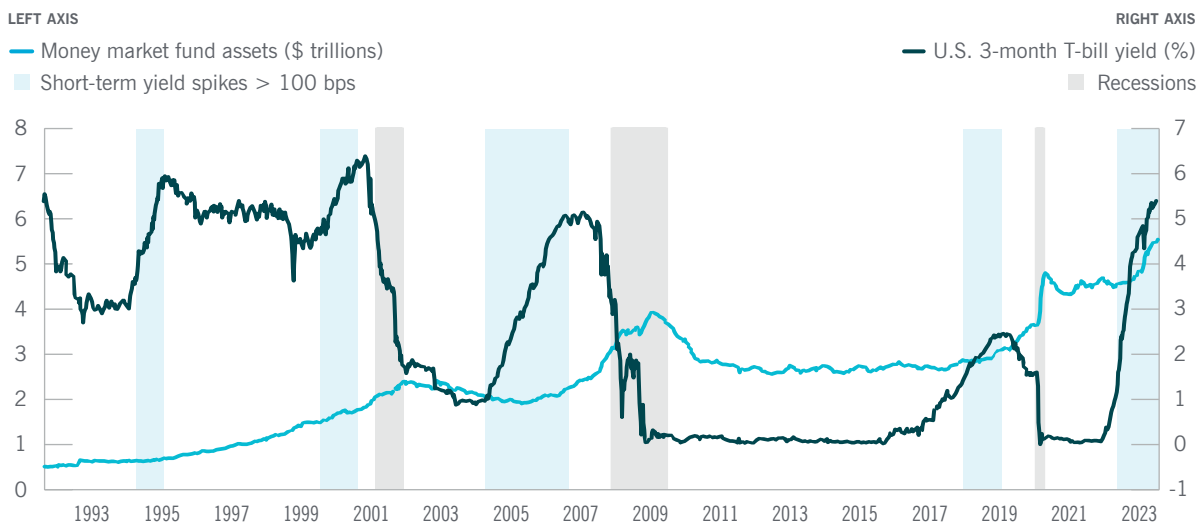
With investors facing an uncertain economic and interest rate environment, many are tempted to over-allocate to cash and wait for further clarity. But we believe investors should continue seeking opportunities for portfolio growth and income generation, even if that means looking in unexpected areas. We offer three themes to consider, along with ideas for portfolio positioning.

1. INVESTORS ARE ACCUMULATING CASH ALTERNATIVES AT THE WRONG TIME

Historically, investors have moved to cash at precisely the wrong times — when rising short-term interest rates were near their peaks. Elevated short-term bond yields may look enticing during economic uncertainty. But each time short yields have surged by 100 basis points over the past 30 years, a recession has followed. This means investors should consider being longer, not shorter, on the duration curve.

Figure 1: Stay in front of past cycles by extending duration to capture yield, rather than holding money market assets after rates start declining

Money market assets under management (\$ trillions) vs. short-term yields (%)



Data sources: Nuveen Portfolio Strategy Group, Bloomberg, L.P., ICI Investment Company Institute, 01 Sep 1991 – 31 Jul 2023. Performance data shown represents past performance and does not predict or guarantee future results. Teal shaded areas represent short-term yield spikes when the U.S. 3-month T-bill yield has increased by 100 basis points (bps) or more in a 12-month period; Gray shaded areas indicate U.S. recessions.

For financial professional use only. Not for public distribution and not for use by retail investors.

NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE

2. AFTER DRAMATIC RATE INCREASES, LONGER-DURATION SECTORS HAVE OFFERED MORE FAVORABLE RISK/RETURN CHARACTERISTICS

When short-term yields spiked in the past — like we’ve seen the last couple of years — fixed income risk/reward tended to be more favorable than cash alternatives.

But consider where the world may be heading. In the 12 months after the yield spikes, average fixed income returns improved significantly. An elevated rate environment means investors may collect higher coupons, as well as benefit from price returns as rates decline. These advantages are compounded for investments with longer durations. Sitting in cash, in contrast, tended to be a worse strategy due to its lower starting yield and shorter duration.

But what if rates keep rising? To illustrate a less favorable return outcome for each asset class, we included the 10th percentile lowest 12-month return outcome during each sample period (performance was lower than 90% of all other 12-month periods). For example, in all rolling 12-month periods, high yield corporates returned 6.9% on average versus core bonds at 4.4%. However, in 10% of those periods, high yield corporates returned -3.7% or worse versus core bonds at -0.8%.

This is a stark reminder that risk of drawdowns typically accompanies higher return potential. And the return skew (average return compared to the 10th percentile) is generally less favorable during short-term yield spikes and more favorable after those yield spikes.

Figure 2: Consider how asset classes have performed during and after a short-term yield spike

Average 12-month rolling returns (01 Oct 1995 – 31 July 2023)



Data sources: Nuveen Portfolio Strategy Group, Bloomberg L.P., 01 Oct 1995 – 31 Jul 2023; longest common inception of indexes. Performance data shown represents past performance and does not predict or guarantee future results. Looking across the period since 1995, historical periods of short-term yield spikes include when the U.S. 3-month T-bill yield has increased by 100 bps or more in a 12-month period. 10th percentile worst outcome is lower than 90% of all other 12-month rolling returns. Representative indexes: core bonds: Bloomberg U.S. Aggregate Bond Index; high yield corporates: Bloomberg U.S. Corporate High Yield Index; high yield municipals: Bloomberg Municipal High Yield Index; investment grade municipals: Bloomberg Municipal Bond Index; senior loans: Morningstar LSTA U.S. Leveraged Loan Index; preferreds: S&P Preferred Stock Index; T-bills: U.S. Generic Government 3-Month Index. Different benchmarks, economic periods, methodologies and market conditions will produce different results. There is no assurance that any asset class or index will provide positive performance over time.

3. PREPARE PORTFOLIOS FOR THE ROAD AHEAD

To be clear, we are not advocating market timing. And we think considering only the likely direction of interest rates is missing the forest for the trees. A better solution? Build an income portfolio that diversifies across risk factors.

Drivers of risk and return are embedded in every investment, and different risk factors will out- and underperform over time. Since we will never know when each risk factor may perform better or worse, diversifying across these factors should be a more solid approach.

Income portfolios have different sensitivities to risk factors, depending on the underlying asset classes. An investor can choose an allocation based on risk

tolerance, return goals and liquidity needs, as well as which factors they think will be rewarded in the near-term. Risk factors that we model include:

Rates: The risk of rising interest rates due to monetary policy and/or investor willingness to part ways with their capital for longer periods of time (i.e., duration risk).

Credit: The risk of credit spreads widening due to uncertainty around borrower defaults.

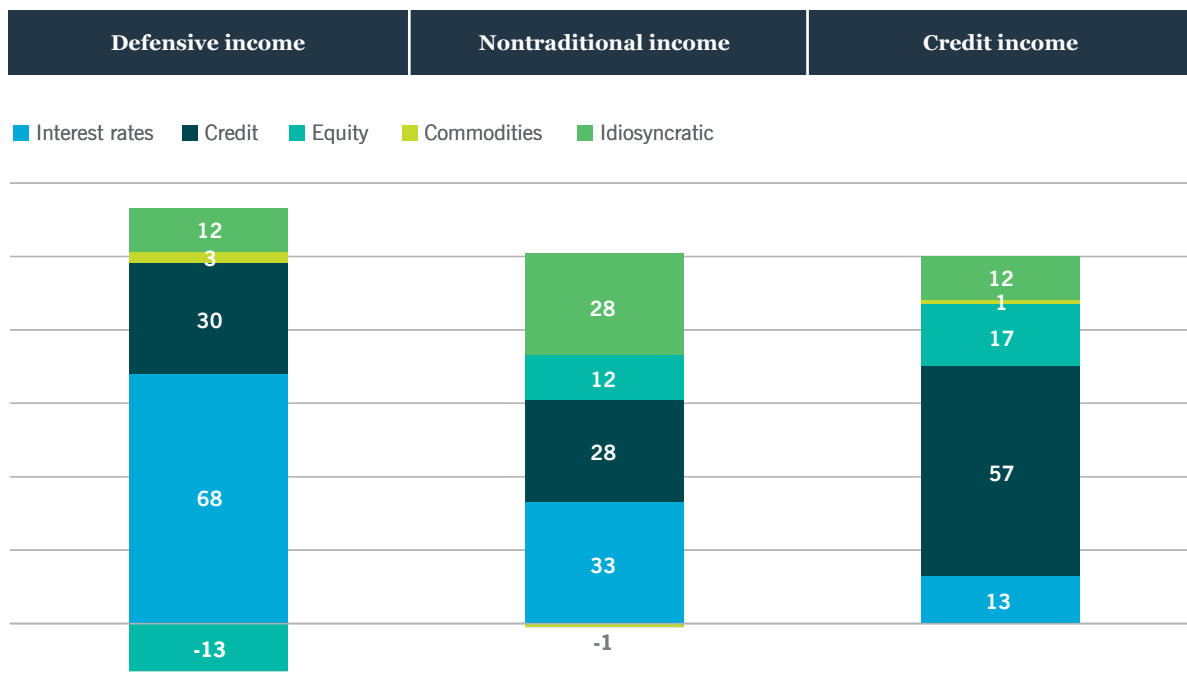
Equity: The risk of an equity market selloff due an unforeseen economic shock.

Commodities: The risk of higher commodity prices driving a sudden inflation shock.

Idiosyncratic: Volatility unexplained by equity, credit and rates.

Figure 3: Portfolio investments have different inherent risk characteristics

Risk factor contribution to portfolio variance (%)



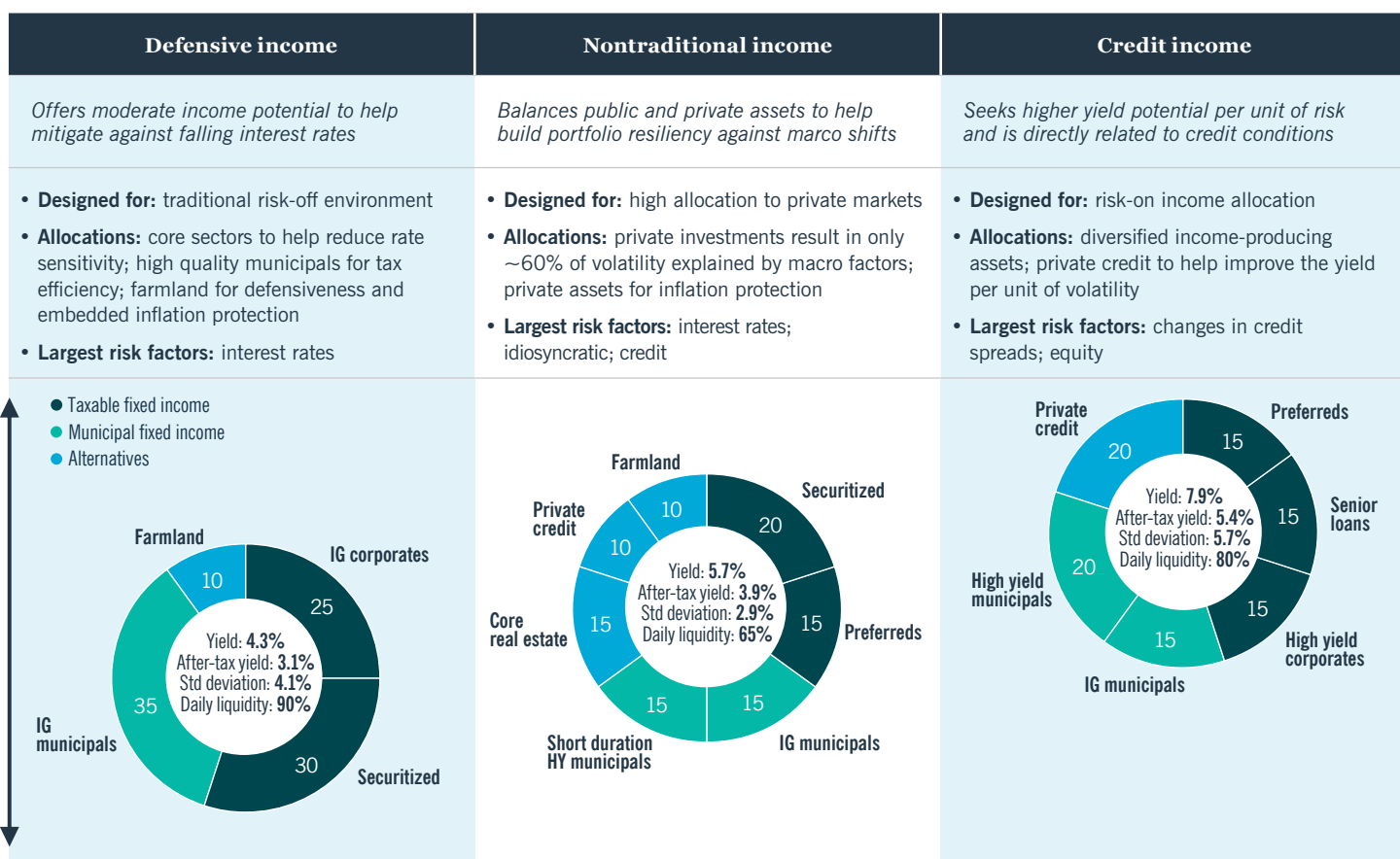
Data sources: Nuveen Portfolio Strategy Group, Bloomberg, L.P., 30 Sep 2015 – 30 Jun 2023. Performance data shown represents past performance and does not predict or guarantee future results. Representative indexes: commodity beta: Bloomberg Commodity Index; credit beta: U.S. Corp BBB/Baa -Treasury 10-Year Spread Index; equity beta: S&P 500 Index; interest rate beta: U.S. Generic Government 10-Year Index; unexplained beta: 100% minus the other factors shown.

A WELL-DIVERSIFIED INCOME PORTFOLIO IS DESIGNED TO WITHSTAND DIFFERENT MARKET CYCLES

We believe portfolios benefit from allocating to a wide array of asset classes that include both public and private. Individual plans vary based on investor needs and market conditions, but all plans begin with a strategic allocation.

How should investors move from cash into a more diversified portfolio? More conservative investors might dollar-cost-average into a portfolio over the next 9 to 12 months. Others may consider shortening that time frame. What’s important is to have a plan to be well-positioned for potential market changes.

Figure 4: Find stable sources of income with allocations designed around portfolio objectives



Data sources: Nuveen Portfolio Strategy Group, Bloomberg, L.P., data as of 30 Jun 2023; standard deviation 30 Sep 2015 - 30 Jun 2023, since common inception of indexes. **Performance data shown represents past performance and does not predict or guarantee future results.** Nuveen has developed these as representative example portfolios, and there is no guarantee that actual allocations will achieve the expected results. **Yields include:** fixed income: yield-to-worst; private credit: yield-to-3yr-takeout; real estate: average cap rate of the Green Street Core Property Index; farmland: NCREIF Farmland Index compound income return over past four quarters. **After-tax yield:** based on the highest individual marginal federal tax rate of 37%, plus the 3.8% Medicare tax on investment income. Individual tax rates may vary. They do not take into account the effects of the federal alternative minimum tax (AMT) or capital gains taxes. **Daily liquidity** defined by Nuveen as the portion of the portfolio’s allocation comprised of daily priced indexes. **Representative indexes:** core real estate: NCREIF Fund Index Open End Diversified Core (NFI-ODCE) Index; farmland: NCREIF Farmland Index; investment grade corporates: Bloomberg U.S. Corporate Bond Index; investment grade municipals: Bloomberg Municipal Bond Index; high yield corporates: Bloomberg U.S. Corporate High Yield Index; high yield municipals: Bloomberg High Yield Municipal Bond Index; preferreds: S&P U.S. Preferred Stock Index; private credit/direct lending: Cliffwater Direct Lending Index; securitized: Bloomberg U.S. Securitized: MBS/ABS/CMBS and Covered Index; senior loans: Morningstar LSTA U.S. Leveraged Loan Index; short duration high yield municipals: Bloomberg Municipal High Yield Short Duration Index. Diversification does not insure against loss in a declining market. Different benchmarks, economic periods, methodologies and market conditions will produce different results. There is no assurance that any asset class or index will provide positive performance over time.

For more information, please visit nuveen.com.

Endnotes

Sources

This material is not intended to be a recommendation or investment advice, does not constitute a solicitation to buy, sell or hold a security or an investment strategy, and is not provided in a fiduciary capacity. The information provided does not take into account the specific objectives or circumstances of any particular investor, or suggest any specific course of action. Investment decisions should be made based on an investor's objectives and circumstances and in consultation with his or her financial professionals.

The views and opinions expressed are for informational and educational purposes only as of the date of production/writing and may change without notice at any time based on numerous factors, such as market or other conditions, legal and regulatory developments, additional risks and uncertainties and may not come to pass. This material may contain "forward-looking" information that is not purely historical in nature.

Such information may include, among other things, projections, forecasts, estimates of market returns, and proposed or expected portfolio composition. Any changes to assumptions that may have been made in preparing this material could have a material impact on the information presented herein by way of example. **Performance data shown represents past performance and does not predict or guarantee future results.** Investing involves risk; principal loss is possible.

All information has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such. For term definitions and index descriptions, please access the glossary on nuveen.com. **Please note, it is not possible to invest directly in an index.**

Important information on risk

Investing involves risk; principal loss is possible. There can be no assurance that any investment will provide positive performance over any period of time. Debt or fixed income are subject to market risk, credit risk, interest rate risk, call risk, derivatives risk and income risk. As interest rates rise, bond prices fall. Below investment grade or high yield debt securities are subject to liquidity risk and heightened credit risk. Asset-backed and mortgage-backed securities are subject to additional risks such as prepayment risk, liquidity risk, default risk and adverse economic developments.

Foreign investments involve additional risks, including currency fluctuation, political and economic instability, lack of liquidity and differing legal and accounting standards. These risks are magnified in emerging markets. Senior loans may not be fully secured by collateral, generally do not trade on exchanges, and are typically issued by unrated or below-investment grade companies, and therefore are subject to greater liquidity and credit risk. Preferred securities are subordinated to bonds and other debt instruments in a company's capital structure and therefore are subject to greater credit risk. Certain types of preferred, hybrid or debt securities with special loss absorption provisions, such as contingent capital securities (CoCos), may be or become so subordinated that they present risks equivalent to, or in some cases even greater than, the same company's common stock.

Investing in municipal bonds and a municipal bond investment vehicle involves risks such as interest rate risk, credit risk and market risk, including the possible loss of principal. The value of the portfolio will fluctuate based on the value of the underlying securities. Income may be subject to state and local income taxes. Capital gains, if any, will be subject to capital gains tax.

Investors should contact a tax professional regarding the appropriateness of tax-exempt investments in their portfolio. If sold prior to maturity, municipal securities are subject to gain/losses based on the level of interest rates, market conditions and the credit quality of the issuer. Income may be subject to the alternative minimum tax (AMT) and/or state and local taxes, based on the state of residence. Nuveen is not a tax professional. Consult your financial professional before making any tax or investment decisions. This information should not replace a client's consultation with a tax professional regarding their tax situation.

As an asset class, agricultural investments are less developed, more illiquid, and less transparent compared to traditional asset classes. Agricultural investments will be subject to risks generally associated with the ownership of real estate-related assets, including changes in economic conditions, environmental risks, the cost of and ability to obtain insurance, and risks related to leasing of properties.

Common stocks and REITs involve market risk, concentration risk, sector risk and non-diversification risk. The real estate industry is greatly affected by economic downturns that may persist as well as changes in property values, taxes, and regulatory developments. Foreign investments involve additional risks including currency fluctuations, and economic or political instability. These risks are magnified in emerging markets. The use of derivatives involves substantial financial risks and transaction costs. Small cap and mid cap stocks may experience more volatility than large cap stocks.

Investments in middle market loans are subject to credit risk and potentially limited liquidity, as well as interest rate risk, currency risk, prepayment and extension risk, inflation risk, and risk of capital loss.

Diversification does not insure against loss in a declining market.

Nuveen, LLC provides investment solutions through its investment specialists.

NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE

nuveen

A TIAA Company