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Fixed income perspective: preferred securities



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Preferred securities can offer higher income potential compared to other fixed income sectors. Primarily investment grade securities, their low correlation to other fixed income sectors and equities may also strengthen portfolio construction in an uncertain environment. We find the fundamentals of preferred securities especially attractive today. Market inefficiencies may also provide opportunities to add alpha in actively managed strategies, and certain structures may have tax advantages.

With high relative yields, preferreds have become even more attractive following the increase in interest rates over the past year. They also may help diversify a fixed income portfolio due to their historically low correlation to other bond and stock asset classes. We believe preferred securities offer many additional benefits, including:

- Tax-advantaged income potential, since many preferred security structures pay qualified dividend income (QDI)
- Reduced interest rate sensitivity through fixed-to-floating rate coupon structures
- Predominantly investment grade securities to help manage credit risk
- Inherent market structure inefficiencies that may create alpha opportunities for active managers
- Strong fundamentals of the banking sector, the largest segment of the preferred universe



A preferred security can be classified as either debt or equity on the balance sheet.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE

WHAT IS A PREFERRED SECURITY?

Preferred securities don't fit neatly into an asset allocation category, as they contain features of both stocks and bonds. A preferred security can be classified as either debt or equity on the balance sheet, depending on its features. The easiest way to identify preferred securities is by their placement within the corporate capital structure.

Figure 1 illustrates how preferreds typically reside on the boundary between debt and equity. In a bankruptcy or liquidation, preferred security owners have a higher priority than common stock owners, but a lower priority than senior debt holders. They will be paid only if there is money left after senior creditors have been made whole.

Figure 1: Preferred securities straddle debt and equity

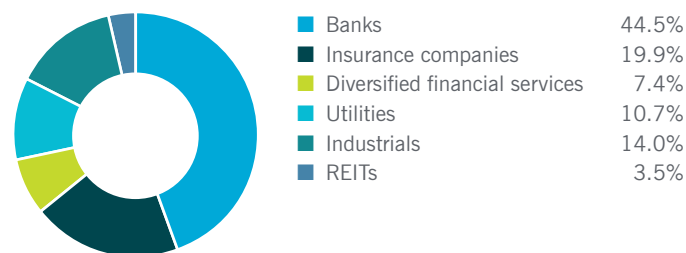
	Class	Seniority
Debt	Secured debt	↓
	Unsecured debt	
	Unsecured subordinate debt	
Hybrid securities & tier 2 securities		
Equity	Preferred stocks & additional tier 1 securities	
	Common stocks	

Source: Standard & Poor's.

Preferred securities trace back to the 16th century in England and the 1850s in the United States. However, in the 1980s they evolved from a financing tool for highly regulated utilities to an important financing vehicle and capital instrument for financial institutions.¹ Since then, the preferred securities market has experienced significant growth and a change in issuer composition.

Financial institutions now make up most of the preferred universe (Figure 2). Since 2008, banks and brokerage firms (U.S. and international) have issued preferreds en masse to replenish capital depleted by housing and subprime losses during the financial crisis.

Figure 2: Financial institutions dominate the market



Data source: Bank of America, Bloomberg L.P., 30 Sep 2022. Based on the ICE BofA U.S. All Capital Securities Index.

TYPES OF PREFERRED SECURITIES

A preferred security's combination of features will classify it as either an equity or a fixed income security, but most preferred securities have elements of each. For example, some preferred securities generate income in the form of interest, while others generate income in the form of dividends. Other common features are shown in Figure 3.

Contingent capital securities (CoCos) are hybrid securities created by regulators after the Global Financial Crisis as a way to help undercapitalized banks. CoCos are primarily issued by European financial institutions to help fulfill their capital requirements, while U.S. banks issue preferred stock. Because CoCos and preferred stock play nearly identical roles and rank similarly within an issuer's capital structure, CoCos are commonly held in strategies that invest in preferred securities.

POTENTIAL BENEFITS OF PREFERRED SECURITIES

Preferred securities potentially offer relatively attractive yields. They may also provide less sensitivity to interest rate changes, portfolio diversification and tax-advantaged income. This combination has created significant interest in the asset class.

Figure 3: Multiple structures exist in the preferred market

Feature	Senior notes	Trust preferred	Hybrids	Traditional preferred stock	Common stock
Character	Debt	Debt	Debt	Equity	Equity
Priority of claims	Senior to trust preferred, hybrids, preferreds and common equity	Senior to hybrids, preferreds and common equity; junior to senior and subordinate debt	Senior to all equity; junior to senior debt, subordinated debt and trust preferreds	Junior to all debt; senior to common equity	Junior to debt and preferred
Nature of payment	Interest	Interest	Interest	Dividend	Dividend
U.S. Tax advantage	None	Typically none	Typically none	DRD ² /QDI ³	DRD ² / QDI ³
Term	Dated	Typically 30 – 40 years	Typically 30 – 60 years	Typically perpetual	Perpetual
Payment deferral option	None	Yes, typically 5 – 10 years	Yes, typically up to 10 years	Yes, typically indefinite	Yes, indefinite
Cumulative/noncumulative	N/A	Typically cumulative	Typically cumulative	Mostly noncumulative	Noncumulative

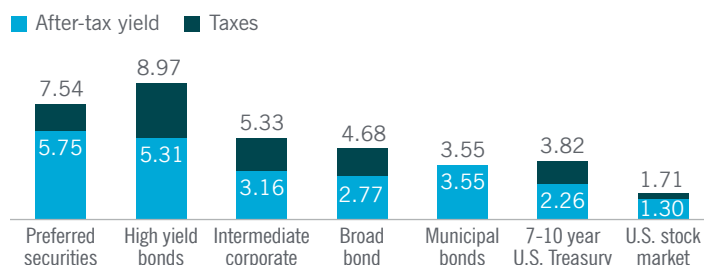
Sources: Preferred Securities Quarterly Guide, Bank of America, 02 Feb 2018; Nuveen.

Attractive relative yields

Because they are lower in the capital structure and thus carry more subordination risk, preferred securities generally contain wider credit spreads and pay a higher level of income than their more senior debt counterparts. As shown in Figure 4, preferred securities have had attractive yields relative to other asset classes. They have offered more income-generating power than equities and most fixed income asset classes, with the exception of high yield bonds.

Figure 4: Preferred securities have offered attractive income

Yield-to-worst (%)



Data source: Bloomberg, L.P., ICE BofA, FactSet, 31 Dec 2022. Performance data shown represents past performance and does not predict or guarantee future results. The tax treatment of dividends is subject to change based on changes in tax rules and regulations. Chart shows yield-to-worst adjusted for applicable tax rates. After-tax calculations shown use 37% federal income tax and 3.8% Medicare surtax rates for high yield bonds, intermediate corporate, broad bond market, and 7-10 year U.S. Treasuries. For preferred securities and U.S. stock market, after-tax calculations assume all income is QDI-eligible and is taxed at the 20% QDI rate plus 3.8% Medicare surtax rate. Municipal bond income is not subject to federal income taxes or Medicare taxes. Representative indexes: preferred securities: ICE BofA U.S. All Capital Securities Index; intermediate corporate bonds: Bloomberg Intermediate Corporate Index; municipal bonds: Bloomberg Municipal Bond Index; broad bond market: Bloomberg U.S. Aggregate Bond Index; 7-10 year Treasuries: Bloomberg 7-10 year U.S. Treasury Index; U.S. stock market: S&P 500 Index; high yield corporate bonds: Bloomberg U.S. High Yield 2% Issuer Capped Index.

Tax-advantaged income potential

Since preferred securities are stock/bond hybrids, certain preferred securities generate qualified dividend income (QDI). This income is typically created by common stocks and taxed at the lower capital gains tax rate. In contrast, traditional fixed income investments create income subject to ordinary income tax rates.

Most dividends are classified as either ordinary (unqualified) or qualified, with the primary difference being the rate at which the dividends are taxed. Ordinary dividends, like interest income, are taxed at an investor’s federal income tax rate, which ranges from 10% to 37% for 2022. Qualified dividends are taxed at the long-term capital gains rate of 0%, 15% or 20% for the 2022 tax year, depending on the investor’s tax bracket. Therefore, investors may see a significant tax savings and higher after-tax return with qualified dividends versus ordinary dividends or interest income, regardless of their income tax bracket.

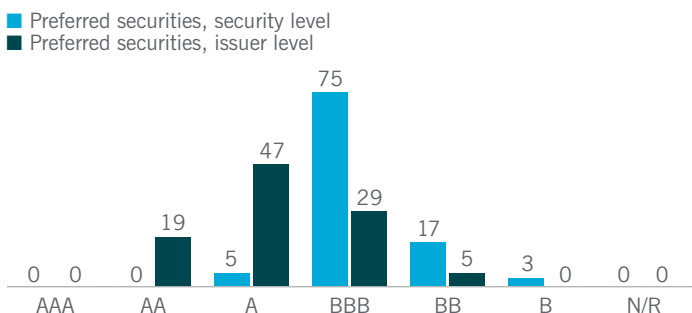
A high quality investment

Preferred securities are generally issued by high quality companies. Due to their subordinate capital structure position, preferreds may be rated 3 to 5 quality notches lower than the senior debt of the same issuer. For instance, an entity issuing a preferred security rated BB would typically have investment grade senior unsecured debt rated BBB or higher. Although preferred securities are lower

in the capital structure than traditional bonds, many are investment grade in nature. They may produce a higher yield than investment grade corporate bonds without the credit risk of a below-investment-grade, high yield bond.

Figure 5 shows how the quality of the company issuing the preferred securities is typically much higher than the rating of the individual securities. For example, most individual preferred securities are rated BBB, but most companies issuing preferred securities are A rated.

Figure 5: Preferreds are predominantly from high quality issuers and rated investment grade (%)



Data source: FactSet, Nuveen, 30 Sep 2022. Performance data shown represents past performance and does not predict or guarantee future results. Breakdown of the credit quality of the constituent components of the ICE BofA U.S. All Capital Securities Index; security and issuer level ratings based on the highest rating of Standard & Poor's, Moody's, Fitch, A.M. Best or DBRS Morningstar (security level only). AAA, AA, A and BBB are investment grade ratings; BB, B, CCC/CC/C and D are below-investment-grade ratings.

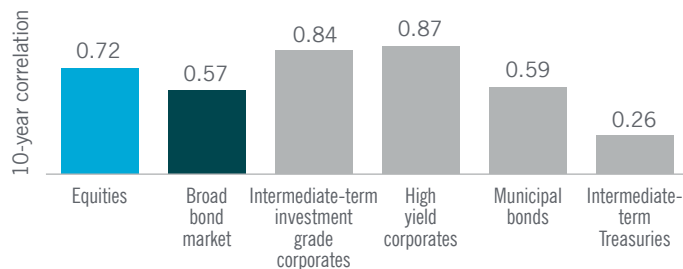
Increased diversification

Since preferred securities include features of both bonds and stocks, it is not surprising that the asset class exhibits relatively low correlation to both traditional fixed income and equity categories, as shown in Figure 6. This means that adding a slice of preferred securities to a portfolio may improve overall portfolio diversification.

Less sensitivity to interest rate changes

Managing interest rate risk remains critical for fixed income portfolios. When interest rates are low and remain low for long periods of time, the bigger risk to portfolios can be sudden, unexpected increases in rates. Indeed, when interest rates go up, bond prices go down, but different types of bonds have varying sensitivities to changes in interest rates.

Figure 6: Preferreds may improve portfolio diversification



Data source: Morningstar Direct, 01 Oct 2012 to 30 Sep 2022. Performance data shown represents past performance and does not predict or guarantee future results. Representative indexes: preferred securities: ICE BofA U.S. All Capital Securities Index; equities: S&P 500 Index; broad bond market: Bloomberg U.S. Aggregate Bond Index; intermediate-term investment grade corporates: Bloomberg Intermediate Investment Grade Corporate Index; high yield corporates: Bloomberg U.S. High Yield Corporate Bond Index; municipal bonds: Bloomberg Municipal Bond Index; intermediate-term Treasuries: Bloomberg 7-10 Year U.S. Treasury Index. Correlation ranges between -1 and +1. A correlation coefficient of +1 implies that as one security moves, either up or down, the other security will move in the same direction. A correlation coefficient of -1 means that if one security moves in either direction the other security will move in the opposite direction. Correlation of 0 means the movements of the securities are completely random.

Since most preferreds have longer-dated maturities (many are perpetual), it may seem counterintuitive for them to perform in a rising rate environment. Longer-maturity securities are generally more sensitive to rising rates. As active managers, we use several features of the preferred universe to help us reduce the impact of changing interest rates on our portfolios.

Higher coupon rates. The higher average coupon rate of preferred securities can make them less sensitive to changes in interest rates because the income of the bond remains constant as rates change, reducing the impact.

Credit spread sensitivity. Due to their lower position in the capital structure, preferred securities are often more sensitive to changes in credit spreads than other types of bonds. On a relative basis, they may perform well during periods of gradually increasing interest rates, as credit spreads often tighten during periods of rising rates.

Different available coupon structures. Preferred securities are issued with a number of different coupon structures that active managers can use to help adjust the portfolio for changing rate environments.

Fixed rate coupons generally pay a specified coupon rate for life. These structures can be beneficial when rates are expected to decline, as the coupon will remain more valuable and provide constant income during low rate periods.

Fixed-to-floating rate coupons pay a fixed coupon for a preset number of years (commonly 5 or 10), then convert to a floating rate coupon for the remaining life of the security or until it is called. The floating rate coupon is based on a benchmark rate, such as 3-month LIBOR, plus a predetermined spread set when the security is issued. Once it converts to a floating rate structure, the coupon will generally reset every three months.

Fixed-to-fixed rate coupons also pay a fixed coupon for a preset number of years, then reset at regular intervals (typically five years) to another fixed rate. The reset rate is based on a market rate plus a margin. For example, a Goldman Sachs preferred security was issued in 2019 with a fixed coupon of 5.5% until 2024, when it resets to the 5-year Treasury rate plus 3.6%.

Compared to fixed-rate coupon structures, fixed-to-floating and fixed-to-fixed rate coupon structures typically experience less duration extension when rates rise. This feature makes them less sensitive

to rate changes in a rising rate environment. They usually experience better relative price performance (Figure 7), since the prices of lower duration bonds are less affected by rising rates. Lastly, the floating and resetting rate nature of the coupons allows the securities to capture increases in interest rates, because the coupon should increase with interest rates.

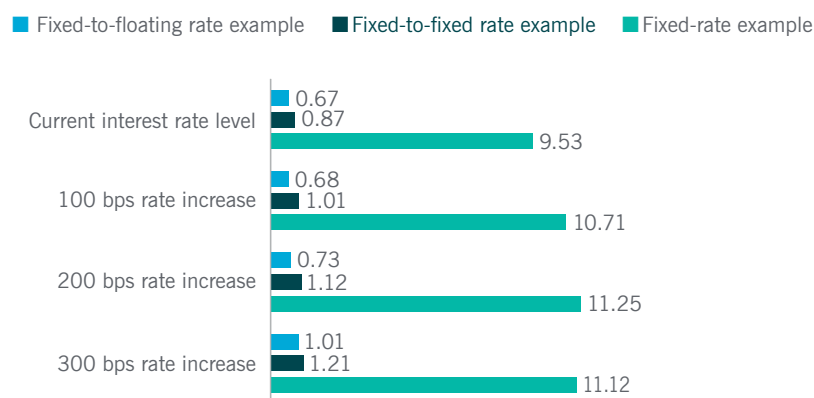
Industry composition. Banks represent about 63% of the issuer base and insurance companies another 13%.⁴

The banking sector has generally benefited in a rising rate environment. Bank profit margins will likely improve as interest rates rise and banks can earn more on loans and investments. A higher interest rate environment generally means the economy is improving, which can increase demand for loans and decrease the percentage of nonperforming loans. In a declining rate environment where bank profits are squeezed, active managers can rotate into other industries with less rate sensitivity.

Insurance companies can more easily achieve their investment return targets when rates rise, using higher quality investments. This can reduce the amount of assets they are required to hold,

Figure 7: Securities with adjustable rate coupons remain less sensitive to interest rate changes

Effective duration (years)



Data source: FactSet, 30 Sep 2022. Assumes immediate parallel shift of the 30 Sep 2022 yield curve with OAS (option-adjusted spread) and volatility held constant. Performance data shown represents past performance and does not predict or guarantee future results. Hypothetical scenarios are for informational purposes only. Scenario data is provided by a third-party source believed to be reliable. Securities mentioned are used as examples for educational/informational purposes only; inclusion does not constitute a recommendation to buy or sell or imply inclusion in any Nuveen investment vehicle.

diminish the risk they will not meet their return targets and improve their overall profitability. Rising rates also mean an increase in the discount rate, making the present value of insurance companies' liabilities decline. This means they do not have to hold as much in reserves.

Figure 8: Retail and institutional investors value preferred securities from the same company differently

Issue Type	Retail		Institutional	
Par	\$25		\$1,000	
Coupon	5.85%		5.90%	
Call date	Sep 2023		Jun 2024	
Payments	Noncumulative		Noncumulative	
Maturity	Perpetual		Perpetual	
Rating	Baa2/BB+		Baa2/BB+	

Year-end	Yield	Price (% par)	Yield	Price (% par)
2020	3.10%	106.85	3.98%	106.13
2021	1.75%	106.61	3.53%	105.51
2022	8.60%	91.54	8.75%	89.56

Data source: Bloomberg, L.P., 31 Dec 2022. Performance data shown represents past performance and does not predict or guarantee future results. Yields represent yield-to-worst. Securities mentioned are used as examples for educational/informational purposes only; inclusion here does not constitute a recommendation to buy or sell or imply inclusion in any Nuveen investment vehicle.

MARKET INEFFICIENCIES MAY CREATE ALPHA OPPORTUNITIES

In addition to the various structures detailed in Figure 3, the more than \$500 billion U.S. preferred securities market is primarily composed of two types of issues:⁵

- \$25 par value securities that trade on the major stock exchanges and target retail investors.
- \$1000 par value securities that trade over the counter and target institutional investors.

These distinct market segments offer opportunities for a professional asset manager to add alpha by managing portfolios between these denominations.

Mispricing between issues

Two preferred markets means pricing discrepancies can and do often occur. For example, a company may issue both \$25 and \$1000 par value securities with the same credit and structural risk. A professional manager can compare the difference in economics for essentially the same security, selling what they believe to be the overpriced security and buying the underpriced security. In some cases, the difference in valuations between the two markets can be substantial.

Figure 8 is a historical example that shows two securities that were nearly identical: one \$25 par and one \$1000 par. Retail investors often focus on coupon rate when valuing securities, which can drive \$25 par securities to relatively rich levels in their search for income. Institutional investors tend to value securities based on yield spreads to U.S. Treasuries or senior debt. The result can be an extreme difference in valuations between the two securities. Although yields in the two markets have recently been more similar, institutional \$1,000 par securities have historically offered greater yield than \$25 par securities.

Active management of scheduled call risk

Most of the preferred security universe has explicitly stated call provisions. Most preferred issuers will call securities when they can be refinanced at cheaper levels. This is usually in response to lower interest rates and/or tighter credit spreads, or when the issuer already has excess capital on its balance sheet. Scheduled calls of preferred securities trading at premiums may lead to investor loss, especially when investors are not actively managing yields to call.

Figure 9: Sample scheduled call losses

Ticker	Call date	Price prior to call	Realized yield-to-call	Size of deal (\$MM)
JPM H	30 Apr 2021	25.32	-17.4%	1,150
JPM G	30 Apr 2021	25.30	-16.3%	1,425
FHN A	13 May 2021	25.36	-4.0%	100
KKR A	04 May 2021	25.61	-6.8%	345

Data source: Bloomberg, L.P. Performance data shown represents past performance and does not predict or guarantee future results. Realized yield-to-call is annualized. Securities mentioned are used as examples for educational/informational purposes only; inclusion here does not constitute a recommendation to buy or sell or imply inclusion in any Nuveen investment vehicle.

Recently, valuations for retail \$25 par preferred securities became so rich that a significant population of securities traded at negative yields-to-worst/yields-to-call. This illustrates some of the vast pricing differences between the retail and institutional markets.

In 2021, for example, four fairly large preferred deals were called, all trading at negative yields to call. This resulted in substantial investor losses, as shown in Figure 9.

Managing call risk should be a high priority for preferred investors. A professional asset manager has the experience and resources to understand and position portfolios for these extreme pricing scenarios.

Larger block sizes and greater liquidity

The institutional side of the market typically trades in larger block sizes, while the average retail investor typically does not have large enough positions to efficiently access this market.

Access to the international market

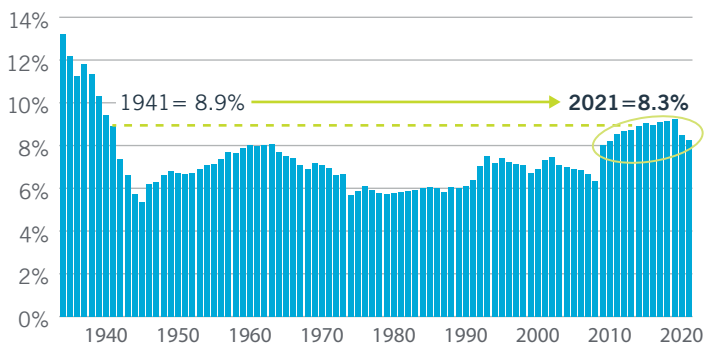
Securities issued by non-U.S. entities in U.S. dollars constitute 44% of the U.S.-dollar-denominated market.⁶ This market tends to be dominated by institutional \$1000 par value securities. Retail investors typically ignore this market, and research departments provide less coverage. Adding these securities to a portfolio may increase issuer diversification and reduce correlation with U.S. asset classes.

THE BANKING SECTOR REMAINS STRONG

Because banks are the largest sector in the preferred universe, their stability is critical to the outlook. Banks have significantly higher capital levels and greater liquidity than they did prior to the Great Financial Crisis. They also continue to pass annual regulatory stress tests with flying colors.

All U.S. banks subject to the Dodd-Frank Annual Stress Tests (DFAST) passed the most recent 2022 exam.⁷ DFAST assumptions are more severe than

Figure 10: Common equity ratios have improved



Data source: Federal Deposit Insurance Corporation, New York Federal Reserve Bank and Bloomberg, L.P., 01 Jan 1934 – 31 Dec 2021.

the actual conditions banks experienced during the 2008 - 2009 Great Financial Crisis. During this year's exam, the banks' average capital never fell below 2x their regulatory minimum.

Importantly, European and U.K. banks also undergo regular stress tests. Like the U.S. tests, the most recent UK and EU stress tests demonstrated that their member banks held substantially larger capital, liquidity and leverage buffers than they did heading into the Great Financial Crisis.

Unlike in 2007, global central banks, regulators and governments have willingly supported the banking sector, both directly and indirectly. Regulators have provided meaningful capital relief for banks, freeing up additional balance sheet capacity across the banking sector and allowing banks to provide additional credit and liquidity to the global economy.

Our outlook for the bank sector is quite constructive. We have yet to see the full impact of rising interest rates on bank earnings, which should be substantial over the coming quarters. We believe that a jump in net interest income across the bank sector, coupled with stress test results demonstrating the strength of bank balance sheets, should be a catalyst over time to push credit spreads lower.

In summary, we feel both U.S. and European banks are significantly better capitalized and more able to withstand a severe economic shock than at any point in history. The larger common equity capital cushions create a protective buffer for preferred investors. On the balance sheet, preferreds sit

above common equity. The more common equity capital banks hold, the greater the safeguard for preferred security investors.

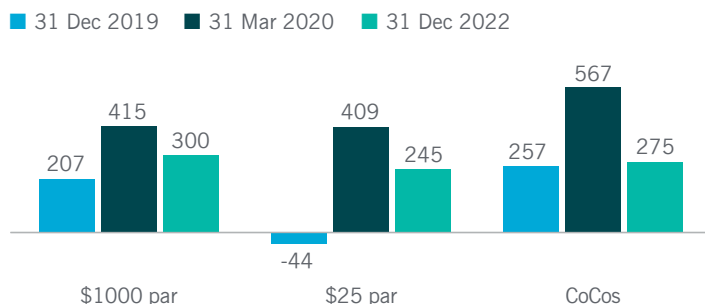
THE DEMISE OF LIBOR

Preferred securities often are issued with coupon rates that are fixed for a period of time, then fluctuate based on a benchmark rate, such as the London Interbank Offered Rate (LIBOR). LIBOR is a widely used floating-rate benchmark index, but its credibility has declined over time. As a result, the Secured Overnight Financing Rate (SOFR) has been chosen as the alternative when the U.S. dollar LIBOR is phased out by 30 Jun 2023. SOFR is based on transactions in the overnight repurchase markets (repo), and the massive size of the underlying market makes SOFR a transaction-based rate, better reflecting current financing cost.

Moving forward, new issue prospectuses typically include language that describes how the security will adapt to a market without LIBOR. Recently issued preferred securities may reference SOFR, and the 5-year CMT rate (constant maturity Treasury) has also become a popular alternative to LIBOR. While the transition away from LIBOR has not had a meaningful impact on preferreds, we believe it is critical to review prospectus language to ensure sufficient LIBOR fallback language.

Figure 11: Preferred spreads remain attractive

Option-adjusted spread to Treasuries (bps)



Data source: Bank of America, Nuveen, 31 Dec 2022. Performance data shown represents past performance and does not predict or guarantee future results. Representative indexes: \$1000 par preferred: market capitalization-weighted blend of the ICE BofA U.S. Investment Grade Institutional Capital Securities Index and the ICE BofA U.S. High Yield Institutional Capital Securities Index; \$25 par preferred: ICE BofA Core Plus Fixed Rate Preferred Index; contingent capital (CoCo): ICE BofA Contingent Capital Index.

WHY CONSIDER PREFERRED NOW?

Besides the solid fundamentals of the banking sector, there are other reasons to consider preferred securities for portfolios today, including:

Favorable technicals. We anticipate that net supply (new issue less redemptions) in the preferred market will be relatively flat for the foreseeable future. Today’s capital levels and stable credit ratings suggest little need for banks or insurance companies to increase the amount of preferred and CoCo securities outstanding. We believe limited net supply, coupled with strong investor demand for high-quality, tax-efficient income solutions, should support valuations.

Compelling valuations. Credit spreads ended the third quarter at levels comparable to mid-2020 when the market was rebounding from the initial fallout of Covid-19. We believe these wider spread levels present an opportunity for investors. A jump in banks’ net interest income, coupled with stress test results, should be a catalyst over time to push credit spreads lower in our market.

Attractive income. Preferred securities offer very attractive income that can help to cushion returns if rates continue to rise. Many preferred securities are also eligible for the lower qualified dividend income (QDI) tax rates. With the U.S. deficit projected to exceed \$1 trillion, tax rates should drift higher, making tax-advantaged income more attractive.

Lower likelihood of impairment. Due to their fundamental strength, the bank and insurance industries have very low forecast default rates in both the U.S. and Europe over the next year relative to the broader credit market. This helps to ensure preferred issuers can continue to pay dividends and/or coupons.

“Preferred securities offer very attractive income that can help to cushion returns if rates continue to rise.”

Figure 12: Banking and insurance default rates expected to remain low*1-year default rate forecasts (%)*

Industry	United States	Europe	Industry	United States	Europe
Banking	0.0%	0.5%	Media: broadcasting and subscription	3.5%	2.4%
Sovereign and public finance	0.0%	0.4%	Wholesale	3.7%	1.7%
Utilities: electric	0.1%	0.0%	Beverage, food and tobacco	3.8%	2.6%
Utilities: oil and gas	0.2%	0.1%	Hotel, gaming and leisure	4.1%	5.0%
Energy: electricity	0.3%		Health care and pharmaceuticals	4.3%	2.6%
FIRE: real estate	0.7%	0.4%	Aerospace and defense	4.3%	1.6%
FIRE: insurance	0.7%	0.8%	Retail	4.3%	5.0%
Transportation: consumer	0.9%	0.9%	Media: advertising, printing and publishing	4.4%	2.1%
FIRE: finance	1.1%	2.2%	Consumer goods: non-durable	4.4%	2.1%
Forest products and paper	1.3%		Containers, packaging and glass	4.6%	5.1%
Energy: oil and gas	1.7%	1.6%	Services: business	4.6%	2.6%
Chemicals, plastics and rubber	2.2%	1.8%	Environmental industries	4.7%	
Metals and mining	2.2%	0.4%	Services: consumer	5.6%	3.4%
Media: diversified and production	2.4%	1.7%	Automotive	6.7%	1.0%
Transportation: cargo	2.4%	0.9%	Telecommunications	7.0%	4.4%
Capital equipment	2.9%	2.8%	Consumer goods: durable	7.6%	2.3%
Construction and building	2.9%	2.5%	Utilities: water		0.1%
High tech industries	3.3%	3.5%			

Data source: Moody's Investors Service Default Report, September 2022. Some default rate forecasts are not reported due to small sample size. Forecasts are issuer-weighted and include both investment grade and speculative grade companies.

For more information, visit us at [nuveen.com](https://www.nuveen.com).

Endnotes

Sources

1 “Hybrid Capital,” J.P. Morgan, 14 Oct 2014. **2** Dividend Received Deduction allows corporations to deduct 70% of the income received from federal taxable income. Please consult a qualified tax advisor for details on your particular situation. **3** Qualified Dividend Income is taxed at the capital gains rate. **4** Data source: Custom blend of 60% ICE BofA U.S. All Capital Securities Index and 40% ICE BofA Contingent Capital USD Hedged Index, as of 30 Sep 2022, Nuveen. **5** Data source: Nuveen, 30 Sep 2022. \$50 and \$100 par securities exist, but they are much less common. **6** Data source: Based on ICE BofA U.S. All Capital Securities Index and ICE USD Contingent Capital Index as of 30 Sep 2022, Nuveen. **7** Data source: <https://www.federalreserve.gov/publications/2022-june-dodd-frank-act-stress-test-results.htm>. **8** Data source: JPMorgan, 30 Sep 2022.

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