

Charting the Neutral Rate With Richard Clarida

JUNE 2025

Former Federal Reserve Vice Chair Richard Clarida explains where yields may be headed, as well as positioning considerations for the long-run by charting the relationship between r* and term premium.

IMPORTANT NOTICE

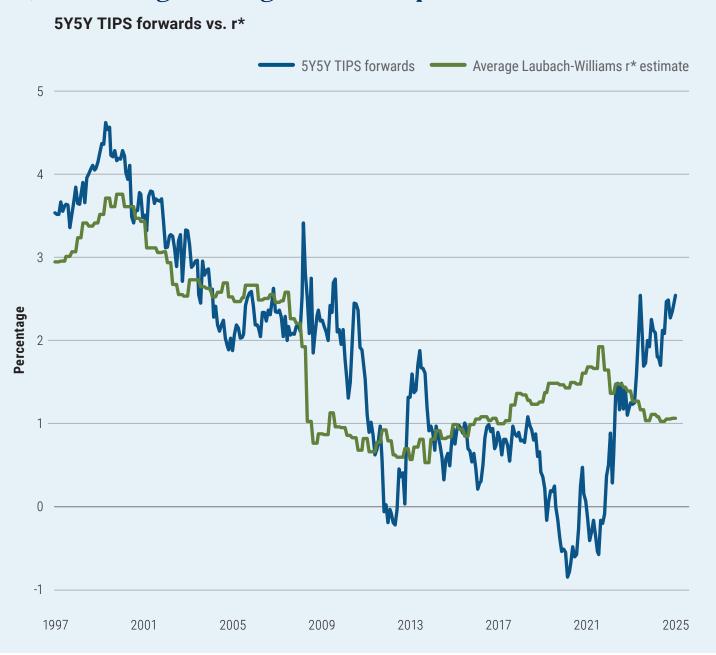
Please note that this communication contains the opinions of the manager as of the date sent and may not have been updated to reflect real time market developments. All opinions are subject to change without notice.

Forward pricing on inflation-linked bonds has diverged from the real neutral rate, reflecting a rising real term premium

Recent rate volatility has left investors demanding clarity on the direction of yields and what fair compensation for risk-taking should be; but searching for answers when current environments do not seem to align with prior trends can be challenging. Over the past 25 years, the 5-year, 5-year forward Treasury inflation-protected securities (TIPS) yield has closely tracked the Federal Reserve's estimate of the real neutral interest rate. That rate - commonly referred to as r* - is the estimated neutral or natural real interest rate that neither hinders nor stimulates economic growth, employment, and inflation. The close relationship between these two measurements reflects market confidence in the Fed's long-term economic outlook.

However, in recent years, the 5Y5Y TIPS forward yield has risen above r*, suggesting that investors expect real interest rates to be higher over the medium term than the Fed's benchmark, signaling in part a higher real term premium.

Source: Bloomberg, PIMCO as of 2 June 2025 Past performance is not a guarantee or a reliable indicator of future results. Refer to Appendix for additional investment strategy, outlook and risk information



Likewise for 10-year U.S. Treasury yields relative to nominal neutral

A similar trend is evident in the 10year U.S. Treasury yield, which for decades remained anchored near the Fed's nominal neutral rate.

Since 2021, however, the 10-year yield has risen while the neutral rate has fallen. In essence, investors are demanding higher returns for taking on the risks of longer-term borrowing along a steeper yield curve, especially in a world of challenging debt and deficit dynamics.

The rise in long-term yields could have broad implications, increasing borrowing costs for businesses and consumers and potentially hampering economic activity if sustained.

With this fragmenting environment in the backdrop, how should we think about valuing fair term premium?

Source::Bloomberg, PIMCO as of 2 June 2025 "Nominal Neutral" is defined as 2 plus the average of the Laubach-Williams and Holston-Laubach-Williams r* estimates. **Past performance is not a guarantee or a reliable indicator of future results**. Refer to Appendix for additional investment strategy, outlook and risk information

10-Year yield vs. nominal neutral



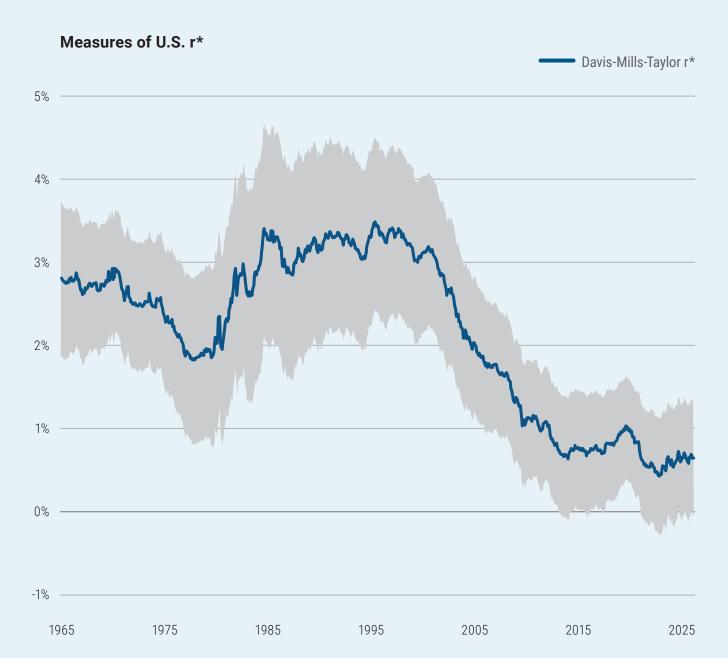
Despite heightened risks, estimated r* continues to run near 1%

The answer lies in the relationship between r* and term premium.

Despite these upward moves in nominal yields, the underlying real neutral rate (r*) has remained relatively steady, even declining slightly in recent years. This stability suggests that the fundamental drivers of economic growth and productivity have not dramatically changed.

Nominal bond yields can be thought of as the sum of expected average short-term real interest rates plus a term premium - the extra yield investors demand for holding longer-term bonds. The steady real neutral rate implies that much of the recent increase in nominal yields is driven by changes in the term premium rather than shifts in the core economic fundamentals.

Source: Davis, Mills, et. at Journal of International Economics, Federal Reserve, Bloomberg, PIMCO as of 2 June 2025 Shaded area is 25th to 75th percentile range of estimates from Davis Mills r*.



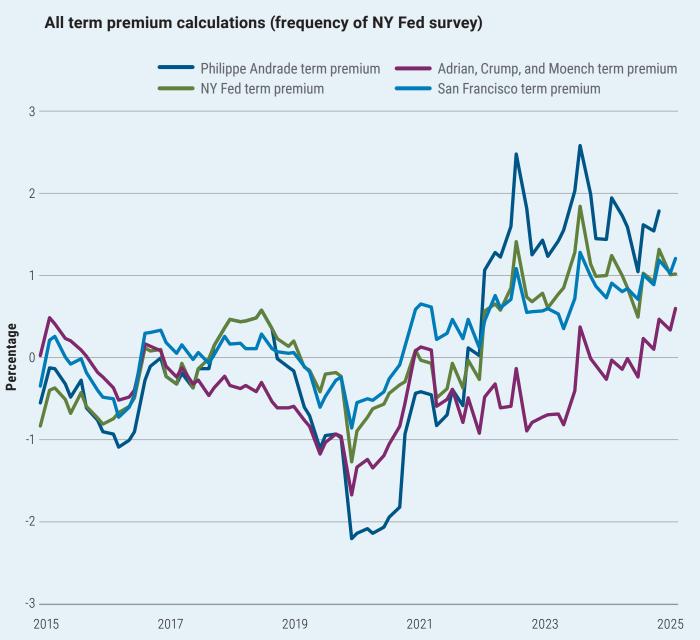
Strategic duration positioning can help counter the gradual rise of term premium

Indeed, the term premium has surged close to a 10-year high, reflecting heightened investor demand for compensation against risks such as inflation volatility, interest rate uncertainty, policyrelated risks, and potential liquidity constraints in bond markets.

However, this is not a sudden or isolated event indicating market disruption; the multi-year rise in term premium suggests an orderly repricing of risk, which active portfolio management can help navigate. In particular, a fall in short term interest rates and a rising term premium signals that investors can look to lock in compelling yields over the intermediate term.

As we're already beginning to see, economic cycles in this world are going to be amplified. Financial markets are going to be volatile. For an active investor, such environments are a playground for credit selection and strategic duration positioning opportunities.

Source: Bloomberg, Haver Analytics, Federal Reserve, PIMCO as of 2 June 2025



Appendix

PERFORMANCE

Past performance is not a guarantee or a reliable indicator of future results

CHARTS

Performance results for certain charts and graphs may be limited by date ranges specified on those charts and graphs; different time periods may produce different results. Charts are provided for illustrative purposes and are not indicative of the past or future performance of any PIMCO product

FORECASTS

Forecasts, estimates and certain information contained herein are based upon proprietary research and should not be interpreted as investment advice, as an offer or solicitation, nor as the purchase or sale of any financial instrument. Forecasts and estimates have certain inherent limitations, and unlike an actual performance record, do not reflect actual trading, liquidity constraints, fees, and/or other costs. In addition, references to future results should not be construed as an estimate or promise of results that a client portfolio may achieve

INDEX

It is not possible to invest directly in an unmanaged index

OUTLOOK

Statements concerning financial market trends or portfolio strategies are based on current market conditions, which will fluctuate. There is no guarantee that these investment strategies will work under all market conditions or are appropriate for all investors and each investor should evaluate their ability to invest for the long term, especially during periods of downturn in the market. Outlook and strategies are subject to change without notice.

RISK

Investing in the bond market is subject to risks, including market, interest rate, issuer, credit, inflation risk, and liquidity risk. The value of most bonds and bond strategies are impacted by changes in interest rates. Bonds and bond strategies with longer durations tend to be more sensitive and volatile than those with shorter durations; bond prices generally fall as interest rates rise, and low interest rate environments increase this risk. Reductions in bond counterparty capacity may contribute to decreased market liquidity and increased price volatility. Bond investments may be worth more or less than the original cost when redeemed.

INVESTMENT STRATEGY

There is no guarantee that these investment strategies will work under all market conditions or are appropriate for all investors and each investor should evaluate their ability to invest long-term, especially during periods of downturn in the market.

Appendix

This material contains the current opinions of the manager and such opinions are subject to change without notice. This material is distributed for informational purposes only and should not be considered as investment advice or a recommendation of any particular security, strategy or investment product. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed.

PIMCO as a general matter provides services to qualified institutions, financial intermediaries and institutional investors, Individual investors should contact their own financial professional to determine the most appropriate investment options for their financial situation. This is not an offer to any person in any jurisdiction where unlawful or unauthorized. | Pacific Investment Management Company LLC, 650 Newport Center Drive, Newport Beach, CA 92660 is regulated by the United States Securities and Exchange Commission. | PIMCO Europe Ltd (Company No. 2604517, 11 Baker Street, London W1U 3AH, United Kingdom) is authorised and regulated by the Financial Conduct Authority (FCA) (12 Endeavour Square, London E20 1JN) in the UK. The services provided by PIMCO Europe Ltd are not available to retail investors, who should not rely on this communication but contact their financial adviser. Since PIMCO Europe Ltd services and products are provided exclusively to professional clients, the appropriateness of such is always affirmed. PIMCO Europe GmbH (Company No. 192083, Seidlstr. 24-24a, 80335 Munich, Germany) is authorized and regulated by the German Federal Financial Supervisory Authority (BaFin) (Marie- Curie-Str. 24-28, 60439 Frankfurt am Main) in Germany in accordance with Section 15 of the German Securities Institutions Act (WpIG). PIMCO Europe GmbH Italian Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy), PIMCO Europe GmbH Irish Branch (Company No. 10005170963, Via Turati nn. 25/27 (angolo via Cavalieri n. 4) 20121 Milano, Italy (angolo via Cavalieri n. 4) 20121 Milano, 909462, 57B Harcourt Street Dublin D02 F721, Ireland), PIMCO Europe GmbH UK Branch (Company No. FC037712, 11 Baker Street, London W1U 3AH, UK), PIMCO Europe GmbH Spanish Branch (N.I.F. W2765338E, Paseo de la Castellana 43, Oficina 05-111, 28046 Madrid, Spain), PIMCO Europe GmbH French Branch (Company No. 918745621 R.C.S. Paris, 50-52 Boulevard Haussmann, 75009 Paris, France) and PIMCO Europe GmbH (DIFC Branch) (Company No. 9613, Unit GD-GB-00-15-BC-05-0, Level 15, Gate Building, Dubai International Financial Centre, United Arab Emirates) are additionally supervised by: (1) Italian Branch: the Commissione Nazionale per le Società e la Borsa (CONSOB) (Giovanni Battista Martini, 3 - 00198 Rome) in accordance with Article 27 of the Italian Consolidated Financial Act; (2) Irish Branch: the Central Bank of Ireland (New Wapping Street, North Wall Quay, Dublin 1 D01 F7X3) in accordance with Regulation 43 of the European Union (Markets in Financial Instruments) Regulations 2017, as amended; (3) UK Branch: the Financial Conduct Authority (FCA) (12 Endeavour Square, London E20 1JN); (4) Spanish Branch: the Comisión Nacional del Mercado de Valores (CNMV) (Edison, 4, 28006 Madrid) in accordance with obligations stipulated in articles 168 and 203 to 224, as well as obligations contained in Tile V, Section I of the Law on the Securities Market (LSM) and in articles 111, 114 and 117 of Royal Decree 217/2008, respectively, (5) French Branch: ACPR/Banque de France (4 Place de Budapest, CS 92459, 75436 Paris Cedex 09) in accordance with Art. 35 of Directive 2014/65/EU on markets in financial instruments and under the surveillance of ACPR and AMF and (6) DIFC Branch: Regulated by the Dubai Financial Services Authority («DFSA») (Level 13, West Wing, The Gate, DIFC) in accordance with Art. 48 of the Regulatory Law 2004. The services provided by PIMCO Europe GmbH are available only to professional clients as defined in Section 67 para. 2 German Securities Trading Act (WpHG). They are not available to individual investors, who should not rely on this communication. According to Art. 56 of Regulation (EU) 565/2017, an investment company is entitled to assume that professional clients possess the necessary knowledge and experience to understand the risks associated with the relevant investment services or transactions. Since PIMCO Europe GMBH services and products are provided exclusively to professional clients, the appropriateness of such is always affirmed. PIMCO (Schweiz) GmbH (registered in Switzerland, Company No. CH-020.4.038.582-2, Brandschenkestrasse 41 Zurich 8002, Switzerland). According to the Swiss Collective Investment Schemes Act of 23 June 2006 ("CISA"), an investment company is entitled to assume that professional clients possess the necessary knowledge and experience to understand the risks associated with the relevant investment services or transactions. Since PIMCO (Schweiz) GmbH services and products are provided exclusively to professional clients, the appropriateness of such is always affirmed. The services provided by PIMCO (Schweiz) GmbH are not available to retail investors, who should not rely on this communication but contact their financial adviser. PIMCO Asia Pte Ltd (8 Marina View, #30-01, Asia Square Tower 1, Singapore 018960, Registration No. 199804652K) is regulated by the Monetary Authority of Singapore as a holder of a capital markets services licence and an exempt financial adviser. The asset management services and investment products are not available to persons where provision of such services and products is unauthorised. | PIMCO Asia Limited (Suite 2201, 22nd Floor, Two International Finance Centre, No. 8 Finance Street, Central, Hong Kong) is licensed by the Securities and Futures Commission for Types 1, 4 and 9 regulated activities under the Securities and Futures Ordinance, PIMCO Asia Limited is registered as a cross-border discretionary investment manager with the Financial Supervisory Commission of Korea (Registration No. 08-02-307). The asset management services and investment products are not available to persons where provision of such services and products is unauthorised. | PIMCO Investment Management (Shanghai) Limited. Office address: Suite 7204, Shanghai Tower, 479 Lujiazui Ring Road, Pudong, Shanghai 200120, China (Unified social credit code: 91310115MA1K41MU72) is registered with Asset Management Association of China as Private Fund Manager (Registration No. P1071502, Type: Other). | PIMCO Australia Pty Ltd ABN 54 084 280 508, AFSL 246862. This publication has been prepared without taking into account the objectives, financial situation or needs of investors. Before making an investment decision, investors should obtain professional advice and consider whether the information contained herein is appropriate having regard to their objectives, financial situation and needs. To the extent it involves Pacific Investment Management Co LLC (PIMCO LLC) providing financial services to wholesale clients. PIMCO LLC is exempt from the requirement to hold an Australian financial services licence in respect of financial services provided to wholesale clients in Australia. PIMCO LLC is regulated by the Securities and Exchange Commission under US laws. which differ from Australian laws. | PIMCO Japan Ltd, Financial Instruments Business Registration Number is Director of Kanto Local Finance Bureau (Financial Instruments Firm) No. 382. PIMCO Japan Ltd is a member of Japan Investment Advisers Association, The Investment Trusts Association, Japan and Type II Financial Instruments Firms Association. All investments contain risk. There is no guarantee that the principal amount of the investment will be preserved, or that a certain return will be realized; the investment could suffer a loss. All profits and losses incur to the investor. The amounts, maximum amounts and calculation methodologies of each type of fee and expense and their total amounts will vary depending on the investment strategy, the status of investment performance, period of management and outstanding balance of assets and thus such fees and expenses cannot be set forth herein, I PIMCO Taiwan Limited is an independently operated and managed company. The reference number of business license of the company approved by the competent authority is (112) Jin Guan Tou Gu Xin Zi No. 015 . The registered address of the company is 40F., No.68, Sec. 5, Zhongxiao East Rd., Xinyi District, Taipei City 110, Taiwan (R.O.C.), and the telephone number is +886 2 8729-5500. | PIMCO Canada Corp. (199 Bay Street, Suite 2050, Commerce Court Station, P.O. Box 363, Toronto, ON, M5L 1G2) services and products may only be available in certain provinces or territories of Canada and only through dealers authorized for that purpose. | **Note to Readers** in Colombia: This document is provided through the representative office of Pacific Investment Management Company LLC located at Carrera 7 No. 71-52 TB Piso 9, Bogota D.C. (Promoción y oferta de los negocios y servicios del mercado de valores por parte de Pacific Investment Management Company LLC, representada en Colombia.). Note to Readers in Brazil: PIMCO Latin America Administradora de Carteiras Ltda. Av. Brg. Faria Lima, 3477 Itaim Bibi. São Paulo - SP 04538-132 Brazil. Note to Readers in Argentina: This document may be provided through the representative office of PIMCO Global Advisors LLC AVENIDA CORRIENTES. 299. Buenos Aires. Argentina. I No part of this publication may be reproduced in any form, or referred to in any other publication, without express written permission. PIMCO is a trademark of Allianz Asset Management of America LLC in the United States and throughout the world. @2025, PIMCO.

5880096 CMR2025-0612-4582305