

Professional Use

## RESEARCH MATTERS



Wes Crill, PhD  
Vice President  
Dimensional Fund Advisors

August 2018

# What Does a Yield Curve Inversion Mean for Investors?

Historically, the US Treasury yield curve has most often been upward sloping, with longer-dated bonds offering higher yields than shorter-dated bonds. However, there have been periods when the yield curve was downward sloping, during which longer bonds were lower yielding than shorter bonds. A common concern for investors is that a yield curve inversion, or transition from upward to downward sloping, could be a precursor to a decline in equity markets.

**Exhibit 1** illustrates growth of a hypothetical \$1,000 investment in the S&P 500 Index since June 1976 plotted against the term spread, defined as the 10-year US Treasury yield minus the two-year US Treasury yield. Also marked on the chart are the onset of the four periods during which the curve inverted for at least two consecutive months, and short-term rates began to exceed long-term rates. As we will see upon further inspection, there has not been a strong link between these inversion periods and stock market returns.

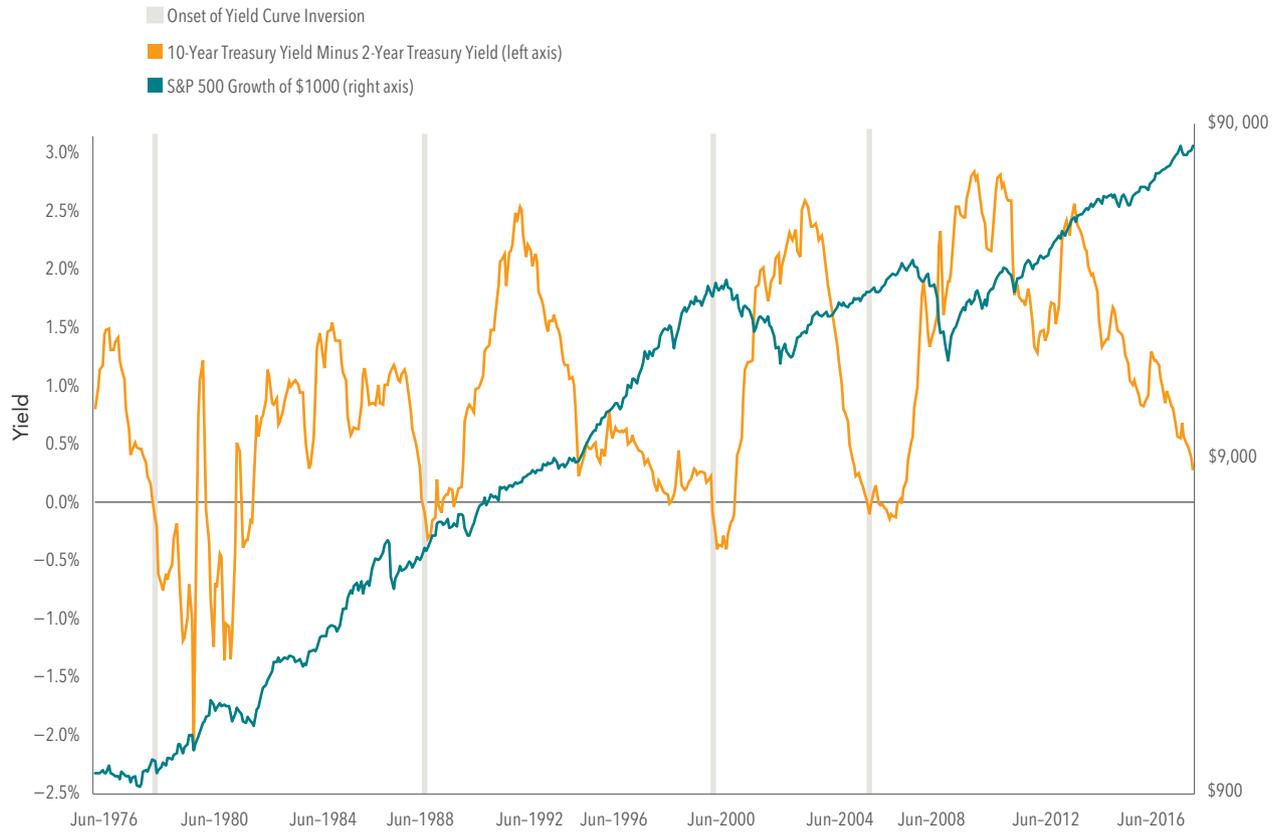
The 2008 financial crisis offers one example to drive this point home. The US yield curve inverted in February 2006, after which the S&P 500 Index posted a positive 12-month return. The yield curve returned to a positive slope in June 2007, well prior to the market's major downturn from October 2007 through February 2009.

If an investor interpreted the inversion as a sign of an imminent market decline, being out of stocks during the inverted period could have resulted in a substantial opportunity cost. And if the same investor invested in stocks once the curve returned to a positive slope, they would also have been exposed to the stock market weakness that followed.

The paucity of yield curve inversions in the US over the last 40 years means it is challenging to draw strong conclusions about the effect on stock market performance. We can, however, look at other countries to help increase this sample size. **Exhibit 2** shows the hypothetical growth of \$1,000 invested in the local stock market index the month before yield curve inversions began in five major developed nations, including the US, since 1985. Equity returns (as measured by MSCI local currency indices) were a mixed bag in the three years following an inversion, with US index returns higher 66% of the time at the 12-month mark and only 33% of the time 36 months later. When all countries are included, returns of the indices were higher 86% of the time 12 months later and 71% of the time 36 months later. The takeaway here is that it is difficult to predict the timing and direction of equity market moves following a yield curve inversion.

**Exhibit 1: Relation Between Yield Curve Inversions and US Stock Market Performance:**

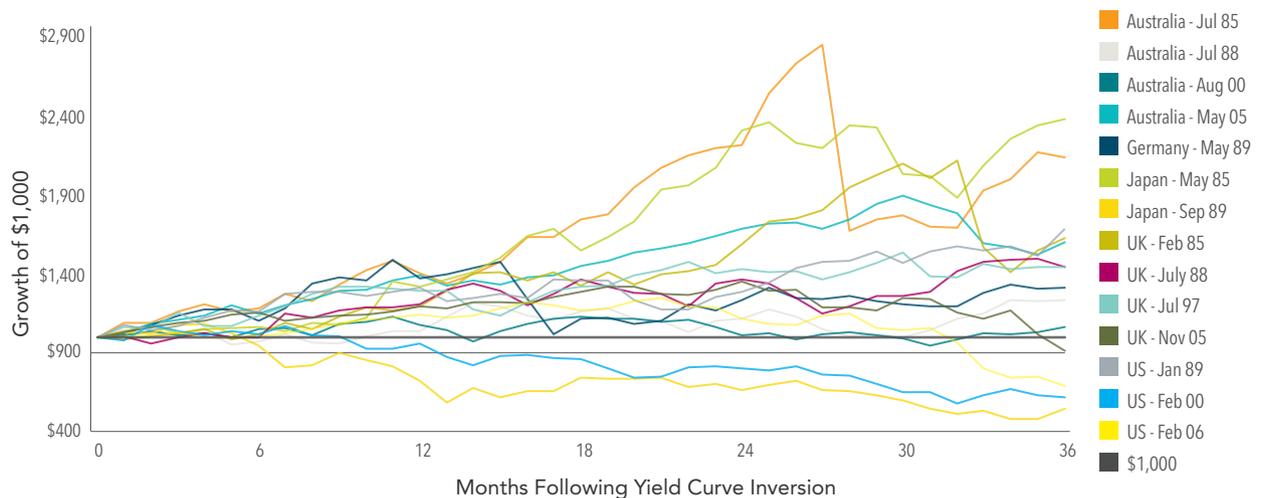
Monthly Data: June 1976–July 2018



US Treasury yield curve data (monthly) obtained from FRED, Federal Reserve Bank of St. Louis. S&P 500 Index © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio.

Past performance is no guarantee of future results.

**Exhibit 2: Stock Market Performance in Selected Developed Countries Following a Yield Curve Inversion**



Yield curve inversions based on 2-year and 10-year government bond yields for each country. Yields obtained from Reserve Bank of Australia, Bundesbank, Japanese Ministry of Finance, Bank of England, European Central Bank, and US Federal Reserve. Stock returns based on local currency MSCI indices. MSCI Australia Index (gross div., AUD), MSCI Germany Index (gross div., EUR), MSCI Japan Index (gross div., JPY), MSCI United Kingdom Index (gross div., GBP), MSCI USA Index (gross div., USD.) These countries were selected to represent the world's major developed country currencies. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. MSCI data © MSCI 2018, all rights reserved.

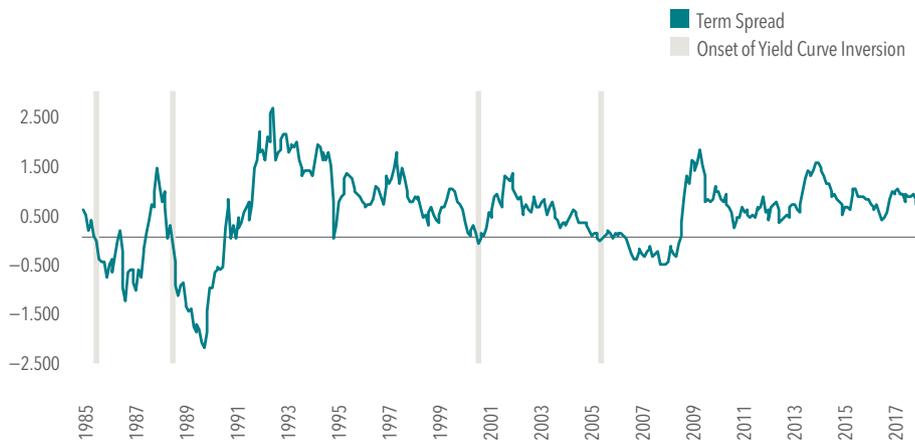
Past performance is no guarantee of future results.

Though the data set is limited, our analysis of yield curve inversions in five major developed countries shows that an inversion may not be a reliable indicator of stock market downturns. So, what can investors do if they are concerned about potential equity weakness? By developing and sticking to a long-term plan that is in line with their risk tolerance, investors may be better able to look past short-term noise and focus on investing in a systematic way that will help meet long-term goals.

**APPENDIX: TERM SPREAD AND SELECTED INVERSION EVENTS**

For the purposes of this paper, a new inversion is defined, based on month-end data, as two consecutive months of inversion. Using two consecutive months of inversion helps to avoid short-term events that may not be as impactful to markets. An inversion is deemed to have ended when there has been no more than one inversion within a 12-month period. (Again, the one-month exception avoids potential false positives.)

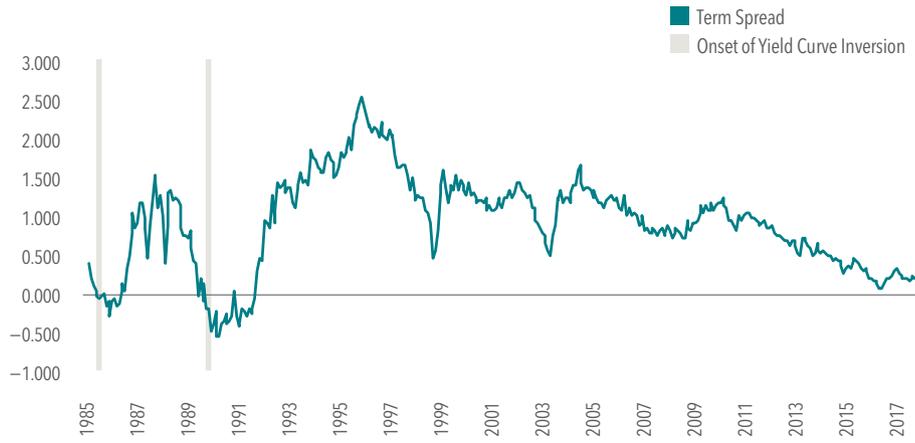
**Australia**



**Germany**



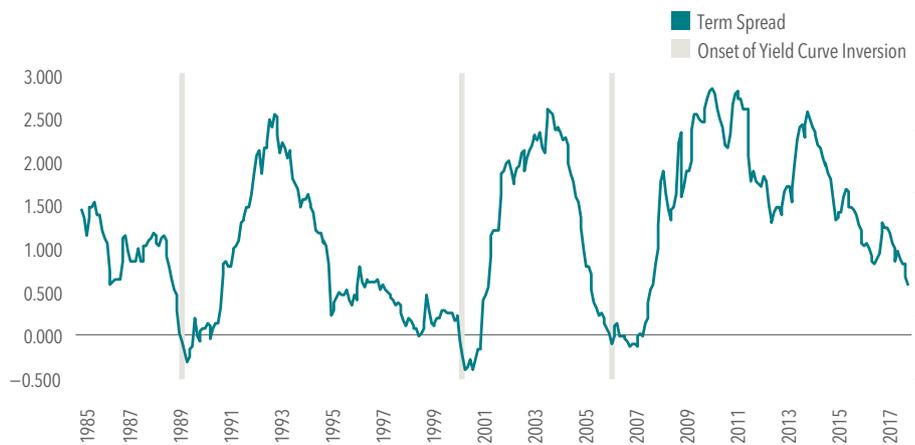
Japan



UK



US



---

**FOR PROFESSIONAL USE ONLY. NOT FOR USE WITH THE PUBLIC.**

The information in this document is provided in good faith without any warranty and is intended for the recipient's background information only. It does not constitute investment advice, recommendation, or an offer of any services or products for sale and is not intended to provide a sufficient basis on which to make an investment decision. It is the responsibility of any persons wishing to make a purchase to inform themselves of and observe all applicable laws and regulations. Unauthorized copying, reproducing, duplicating, or transmitting of this document are strictly prohibited. Dimensional accepts no responsibility for loss arising from the use of the information contained herein. All figures contained within the material are in USD.

"Dimensional" refers to the Dimensional separate but affiliated entities generally, rather than to one particular entity. These entities are Dimensional Fund Advisors LP, Dimensional Fund Advisors Ltd., DFA Australia Limited, Dimensional Fund Advisors Canada ULC, Dimensional Fund Advisors Pte. Ltd., Dimensional Japan Ltd., and Dimensional Hong Kong Limited. Dimensional Hong Kong Limited is licensed by the Securities and Futures Commission to conduct Type 1 (dealing in securities) regulated activities only and does not provide asset management services.

Eugene Fama and Ken French are members of the Board of Directors of the general partner of, and provide consulting services to, Dimensional Fund Advisors LP.

**UNITED STATES:** This document is issued by Dimensional Fund Advisors LP, an investment advisor registered with the US Securities and Exchange Commission under the Investment Advisers Act of 1940, as amended. This information is provided for registered investment advisors and institutional investors and is not intended for public use.

**CANADA:** This document is issued by Dimensional Fund Advisors Canada ULC for registered investment advisors, dealers, and institutional investors and is not intended for public use. Commissions, trailing commissions, management fees, and expenses all may be associated with mutual fund investments. Please read the prospectus before investing. Unless otherwise noted, any indicated total rates of return reflect the historical annual compounded total returns including changes in share or unit value and reinvestment of all dividends or other distributions and do not take into account sales, redemption, distribution, or optional charges or income taxes payable by any security holder that would have reduced returns. Mutual funds are not guaranteed, their values change frequently, and past performance may not be repeated. The other Dimensional entities referenced herein are not registered resident investment fund managers or portfolio managers in Canada.

**AUSTRALIA:** In Australia, this material is provided by DFA Australia Limited (AFSL 238093, ABN 46 065 937 671). It is provided for financial advisors and wholesale investors for information only and is not intended for public use. No account has been taken of the objectives, financial situation or needs of any particular person. Accordingly, to the extent this material constitutes general financial product advice, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to the investor's objectives, financial situation and needs. Any opinions expressed in this publication reflect our judgment at the date of publication and are subject to change.

**WHERE ISSUED BY DIMENSIONAL FUND ADVISORS LTD.**

**UNITED KINGDOM:** Issued by Dimensional Fund Advisors Ltd. (DFAL), 20 Triton Street, Regent's Place, London, NW1 3BF. DFAL is authorised and regulated by the Financial Conduct Authority (FCA). Directed only at professional clients as defined by the rules of the FCA or within the meaning of Markets in Financial Instruments Directive (MiFID) (2014/65/EU). Information and opinions presented in this material have been obtained or derived from sources believed by DFAL to be reliable, and DFAL has reasonable grounds to believe that all factual information herein is true as at the date of this document.

**GERMANY:** Issued by Dimensional Fund Advisors Ltd. (DFAL), 20 Triton Street, Regent's Place, London, NW1 3BF. DFAL is authorised and regulated by the Financial Conduct Authority and permitted to provide its regulated activities on the basis of a European passport cross border into Germany under the supervision of the German Financial Services Supervisory Authority (BaFin) – BaFin registration No. 120215. This document is directed exclusively at recipients who are professional customers as defined in the Securities Trading Act ("WpHG") or who are otherwise eligible as professional customers under the WpHG.

**NETHERLANDS:** Issued by Dimensional Fund Advisors Ltd. (DFAL), 20 Triton Street, Regent's Place, London, NW1 3BF. DFAL is authorised and regulated by the Financial Conduct Authority and permitted to provide its regulated activities on the basis of a European passport cross border into the Netherlands. In addition, DFAL has a branch office in the Netherlands, which is subject to limited Dutch regulation and supervision by the Dutch Authority for the financial markets (Autoriteit Financiële Markten). DFAL is registered in the trade register of the Dutch Chamber of Commerce under number 56245629.

DFAL issues information and materials in English and may also issue information and materials in certain other languages. The recipient's continued acceptance of information and materials from DFAL will constitute the recipient's consent to be provided with such information and materials, where relevant, in more than one language.

**RISKS**

**Diversification does not eliminate the risk of market loss.**

**JAPAN: Provided for institutional investors only.** This document is deemed to be issued by Dimensional Japan Ltd., which is regulated by the Financial Services Agency of Japan and is registered as a Financial Instruments Firm conducting Investment Management Business and Investment Advisory and Agency Business. This material is solely for informational purposes only and shall not constitute an offer to sell or the solicitation to buy securities or enter into investment advisory contracts. The material in this article and any content contained herein may not be reproduced, copied, modified, transferred, disclosed, or used in any way not expressly permitted by Dimensional Japan Ltd. in writing. All expressions of opinion are subject to change without notice.

Dimensional Japan Ltd.

Director of Kanto Local Financial Bureau (Financial Instruments firms) No. 2683

Membership: Japan Investment Advisers Association

**HONG KONG: FOR LICENSED FINANCIAL ADVISORS IN HONG KONG.** If this material was provided to you from Hong Kong, it is deemed to be issued by Dimensional Hong Kong Limited (CE No. BJE760), which is licensed by the Securities and Futures Commission to conduct Type 1 (dealing in securities) regulated activities only and does not provide asset management services. If this material was provided to you from Singapore, it is deemed to be issued by Dimensional Fund Advisors Pte. Ltd., which holds a capital markets services license for fund management and operates as an exempt financial adviser under Singapore law serving accredited and institutional investors as defined under the Singapore Securities and Futures Act. Dimensional Fund Advisors Pte. Ltd. is not regulated nor licensed by any regulatory authority in Hong Kong.

**This document should not be forwarded to prospective investors. For use by licensed financial advisors only in Hong Kong solely for internal training and educational purposes and not for the purpose of inducing, or attempting to induce, such financial advisors to make an investment nor for the purpose of providing investment advice. Not for use with the public.**

Unauthorized copying, reproducing, duplicating, or transmitting of this material are prohibited. This document and the distribution of this document are not intended to constitute and do not constitute an offer or an invitation to offer to the Hong Kong public to acquire, dispose of, subscribe for, or underwrite any securities, structured products, or related financial products or instruments nor investment advice thereto. Any opinions and views expressed herein are subject to change. Dimensional Hong Kong Limited, Dimensional Fund Advisors Pte. Ltd., and their affiliates shall not be responsible or held responsible for any content prepared by financial advisors. Financial advisors in Hong Kong shall not actively market the services of Dimensional Hong Kong Limited, Dimensional Fund Advisors Pte. Ltd., or their affiliates to the Hong Kong public.

**SINGAPORE: FOR LICENSED OR EXEMPT FINANCIAL ADVISORS IN SINGAPORE.** This document is deemed to be issued by Dimensional Fund Advisors Pte. Ltd., which holds a capital markets services license for fund management and operates as an exempt financial advisor under Singapore law serving accredited and institutional investors as defined under the Singapore Securities and Futures Act.

**This document has not been reviewed by the Monetary Authority of Singapore and should not be forwarded to prospective investors. For use by licensed or exempt financial advisors only in Singapore for internal training and educational purposes and not for the purpose of inducing, or attempting to induce, such financial advisors to make an investment. Not for use with the public.**

This information should not be considered investment advice or an offer of any security or fund for sale. All information is given in good faith and without any warranty and is not intended to provide professional, investment, or any other type of advice or recommendation and does not take into account the particular investment objectives, financial situation, or needs of individual recipients. Dimensional Fund Advisors Pte. Ltd. does not accept any responsibility and cannot be held liable for any person's use of or reliance on the information and opinions contained herein. Neither Dimensional Fund Advisors Pte. Ltd. nor its affiliates shall be responsible or held responsible for any content prepared by financial advisors.

dimensional.com