The Myth of Risk-Free Markets

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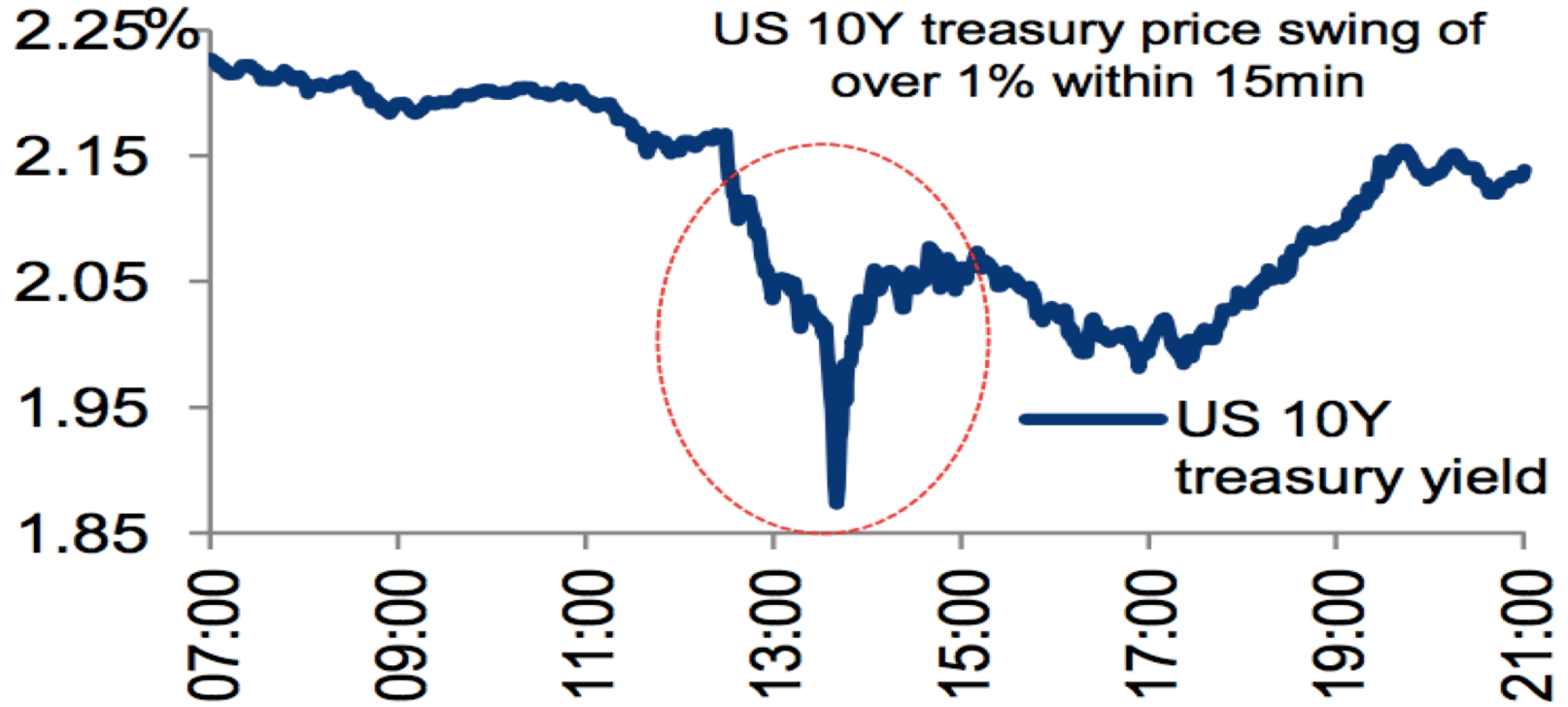
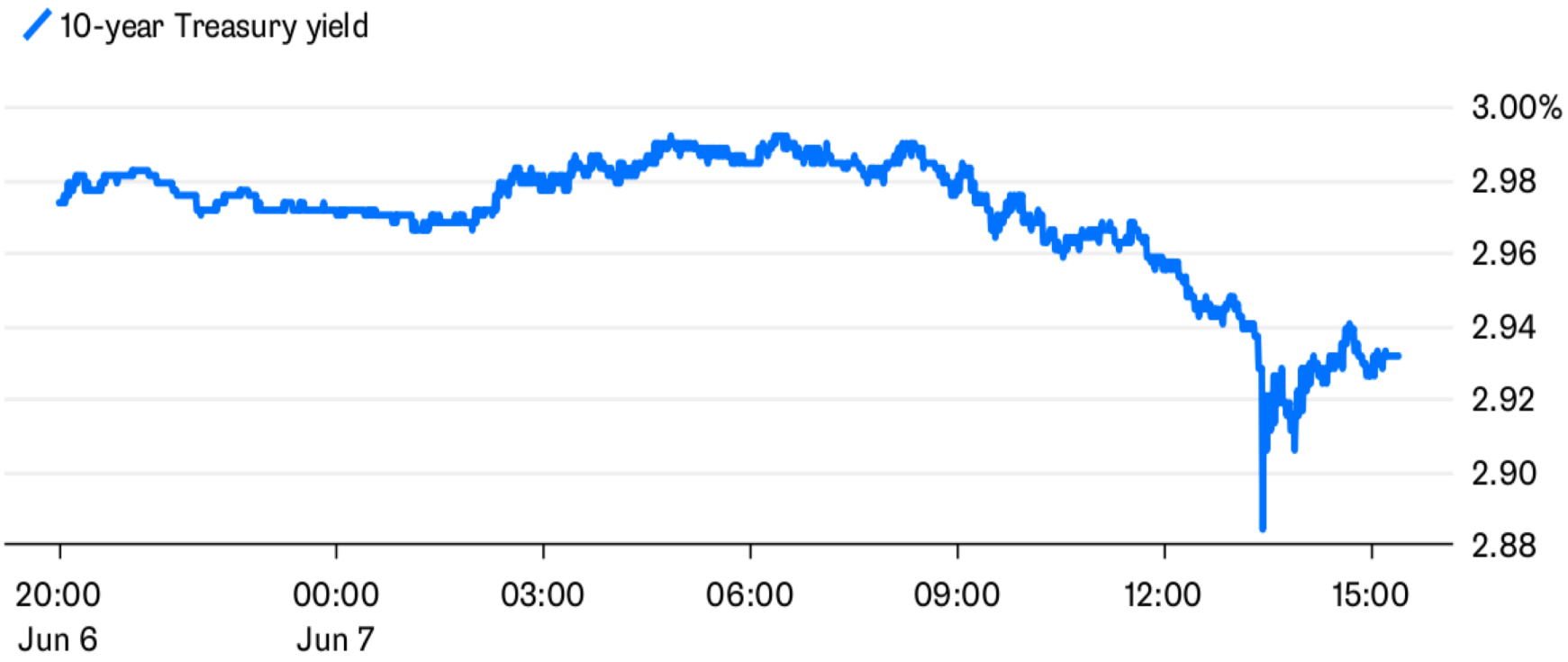
Treasury “flash crash”: 10-year Treasury value rose 1% and re-traced in 15 minutes



Note: Data for 2014 October 15.
Source: Bloomberg Finance LP, Deutsche Bank Research

What a Ride

In just a few minutes, Treasury yields tumbled as traders scrambled for an explanation



Source: Bloomberg

BloombergOpinion

Joint Staff Report:

THE U.S. TREASURY MARKET ON OCTOBER 15, 2014

U.S. Department of the Treasury

Board of Governors of the Federal Reserve System

Federal Reserve Bank of New York

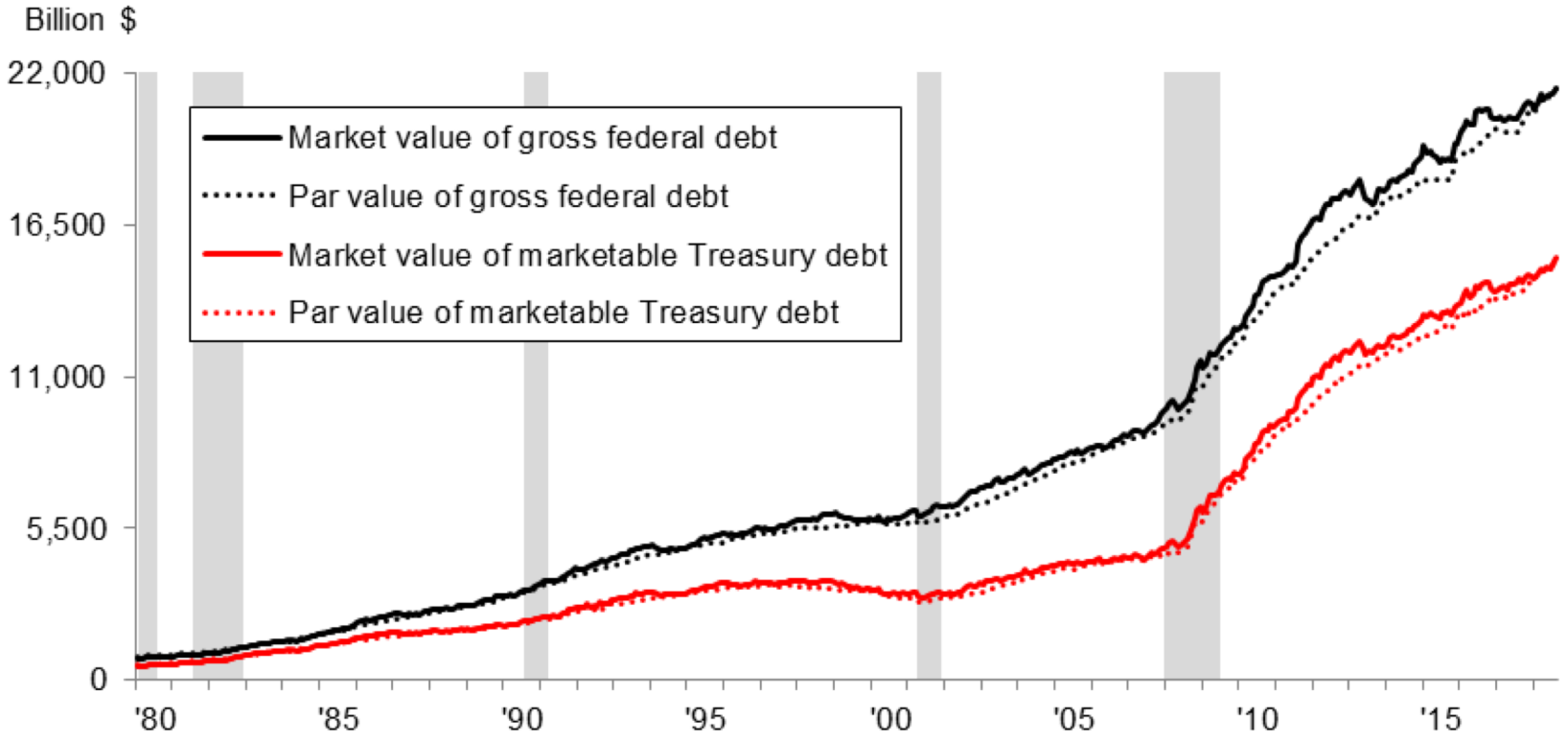
U.S. Securities and Exchange Commission

Significance of the U.S. Treasury Market

- The U.S. Treasury market is arguably the most important and systemic market anywhere in the world.

- ❑ Funds the U.S. Government
- ❑ Risk-free “safe asset” for investors worldwide
- ❑ Provides a benchmark for a range of assets and securities
- ❑ Essential to the financial system as a cash-like form of collateral

Chart 2A
Market Value of U.S. Government Debt



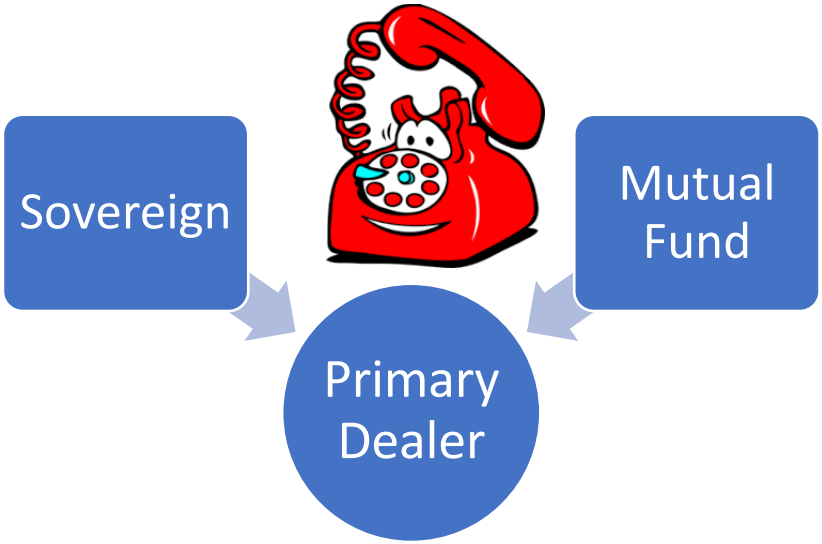
NOTE: Gray bars represent recessions.
SOURCES: U.S. Treasury; Federal Reserve Bank of New York; Wall Street Journal; Bloomberg L.P.; Federal Reserve Bank of Dallas calculations.

Structure of the U.S. Treasury Market: Primary Market

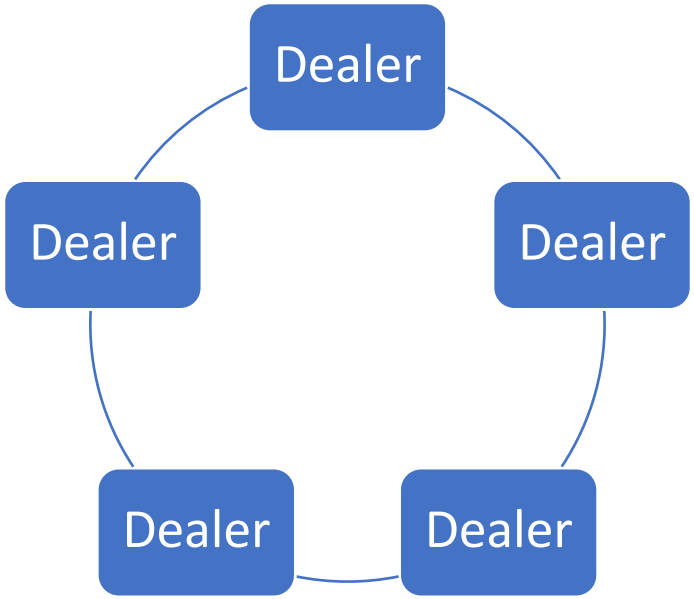
23 Primary Dealers

Structure of the U.S. Treasury Market: Secondary Market

DEALER-to-CUSTOMER



Inter-Dealer Trading



Changing Market Structure

- While the customer-dealer market has remained relatively analog, the inter-dealer market is now electronic and automated.

- Around 56% of trading by volume is driven by high frequency trading – utilizing sophisticated algorithms to transact in milli/micro-seconds.

- Bank dealers drive 35%; hedge fund and non-bank dealers is 9%.

- According to one study of Brokertec, 8 out of the top-10 firms by volume were not the primary dealers but HFT traders.

New Risks in Treasury Markets

- The growth of high-speed automated trading introduces fragilities in Treasury trading market structure.

- For HFT, algorithms must be pre-programmed in advance:
  - ❑ Anticipatory dynamic means that predictions may be inaccurate.
  - ❑ Algorithms may struggle in unusual trading conditions.
  - ❑ Traders may use similar models, potentially amplifying price moves.
  - ❑ Some algorithms may be programmed to be disruptive in new ways.

- Problems in the Treasury market can have large spillover effects.

Fragmented Public Oversight

- Regulatory structure is ill-prepared to deal with these risks.

- Oversight of Treasury markets is heavily fragmented, and no one regulator has effective primacy over the market.

- ❑ High decision costs to develop consensus on harms
- ❑ Information fragmentation
- ❑ Turf battles
- ❑ Co-ordination costs on monitoring and enforcement
- ❑ Varying internal institutional priorities

Private Self-Regulation

- Private self-regulation is unlikely to fill the gap left by public oversight.
- Primary dealers may have had an incentive to self-monitor: (i) access to the Treasury auction market; (ii) small group of repeat players.
- This is no longer the case. HFT traders and primary dealers are a more diverse group: (i) differential regulation; (ii) cheap exit for HFTs.
- High competition also erodes profits. This can create a collective incentive to underenforce discipline on traders.

Implications

- The U.S. Treasury market requires arguably greater regulatory intensity than that in the equity/derivatives markets.

- But there are tensions between developing a high-compliance regime and retaining the gains of electronic, automated trading.

- Can the system withstand macroeconomic shocks: (i) large sell-offs by foreign holders; (ii) interest rate rises; (iii) complex macroeconomics.

Solutions