Market Abuse Case Studies

Tyler Forbes Spoofing in US Treasuries

Market Abuse Case Study No.	Name:
001	Tyler Forbes
Offence:	**Detection Control:**
Spoofing in US Treasuries	MAST Layering/Spoofing Metric

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Name:
Tyler Forbes

Civilian Authority:
Financial Industry Regulatory Authority (FINRA); U.S Department of Justice.

Offence:
Spoofing in US Treasuries

Detection Control:
MAST Layering/Spoofing Metric

Findings:
Forbes injected false information into the marketplace and created an artificial imbalance... resulting in... [him] executing his orders at better prices."

Key Facts

In 2021, Tyler Forbes pleaded guilty to manipulating the price of certain US Treasury securities via an unlawful spoofing scheme whilst working as a trader for BofA Securities.

FINRA alleged that between February and June 2019, Forbes "failed to observe high standards of commercial honor and just and equitable principles of trade by facilitating 194 instances of 'spoofing'", especially in on-the-run 2Y and 3Y. US Treasury notes.

Forbes would typically enter a bona fide order on one side of the market in a Treasury note whilst nearly simultaneously entering a fully visible non-bona fide order on the opposite side of the market.

The size of the non-bona fide orders – usually either $250 million or $500 million – created an imbalance between the resting buy and sell quantities. This skew misled other market participants into believing there was more interest in buying or selling the note. This drove the price in a direction that benefitted Forbes' bona-fide orders on the other side of the market.

Regulator Findings

FINRA ruled that Tyler Forbes "failed to observe high standards of commercial honor and just and equitable principles of trade by facilitating 194 instances of "spoofing," a type of fraudulent trading involving the use of non—bona fide orders while simultaneously entering bona fide orders on the other side of the market."

His use of non-bona fide orders "created a false appearance of market depth and activity so his bona fide proprietary order would receive a favourable execution". At the same time, these orders "sent false signals to other market participants concerning the natural supply and demand for U.S. Treasury notes on the electronic trading platforms on which U.S. Treasuries trade, which caused other market participants to (1) execute transactions on the opposite side of the non—bona fide order, (2) withdraw orders at the inside price opposite non—bona fide order, or (3) move the bid—offer prices higher or lower."

His activity "injected false information into the marketplace and created an artificial imbalance in the true supply and demand that drove trading behavior, resulting in... [him] executing his orders at better prices." FINRA concluded that Forbes had contravened Section 17(a)(3) of the Securities Act of 1933 in violation of FINRA Rule 2010.

On April 14, 2022, Forbes pled guilty to one count of manipulation of security prices in violation of Title 15, United States Code, Sections 78i(a)(2) and 78ff before the United States District Court for the Eastern District of New York, in United States v. Tyler Forbes, Crim. Case No. 1:22-cr-00097. On July 28, 2022, a judgment in the criminal case was entered against Forbes. He was sentenced to a prison term of time served followed by two years of supervised release and ordered to pay a fine of $15,000.

Detecting spoofing with MAST

On May 13th 2019 Tyler Forbes placed a spoof $250 million buy order for a 10-year Treasury note opposite a legitimate iceberg sell order.
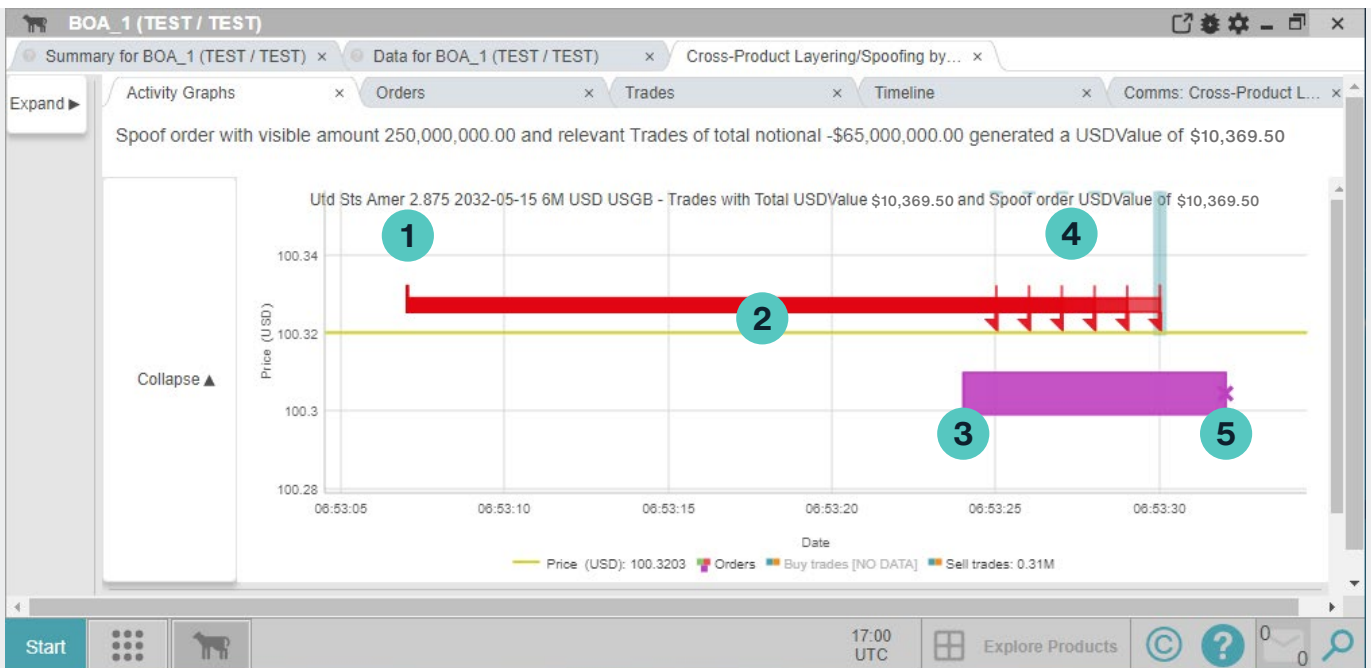
1. At 06:53:07, Forbes entered a $65 million iceberg order to sell 10yr. US Treasury notes at 99.5781.

2. There were no trades during the next 17 seconds. Forbes's $65 million iceberg order remained unexecuted.

3. At 06:53:24, Forbes entered a fully displayed resting order to buy $250 million of the 10Y notes at 99.5625, which was the inside bid price. The displayed inside bid quantity increased from $61 million to $311 million. Forbes's order represented approximately 80% of the displayed consolidated best bid and increased the displayed liquidity by 509%.

4. Less than one second later, and continuing for the next six seconds to 06:53:30, Forbes received a full execution of his $65 million sell order at the inside offer price of 99.5781.

5. At 06:53:32, two seconds after executing his last sale transaction, Forbes cancelled the $250 million buy order he had placed just eight seconds earlier.

1. Forbes placed his spoof buy order at 06:53:24. Over the next six seconds, his genuine sell order – divided into smaller lots - were all filled.

2. Once his sell order had successfully cleared, Forbes cancelled his spoof order.

3. MAST calculates a severity score for each trade and order. In this instance, it has assigned the large spoof order a score of **$10,369.50**.

How MAST recognises price manipulation

MAST's Layering/Spoofing metric detects spoofing by measuring the degree to which the market impact of a potential spoof order benefits any transactions on the other side of the market. It balances this benefit by also considering the risk to the trader of placing a spoof order, namely the cost to them of having to unwind an unwanted execution.

By measuring market impact, MAST is able to recognise that Forbes' $250 million non-bona fide order for the 10Y. note exerted upwards pressure on the instrument's price from which his resting sell order benefitted. It derives its USD Value score for the instance by considering both the benefit to the sell order and the hypothetical cost of having to unwind his large spoof order. This lets it prioritise the most serious instances of spoofing for investigation.

How MAST detects cross-product abuse

MAST's general market modelling allows the system to understand how positions across a combination of instruments (bonds, futures, swaps etc...) and across a series of maturities are all linked and can share sensitivities to common factors – like the shape of convenience curve and the price of the spot for commodities, or the shape of the interest rate curve for rates.

In the event that Tyler Forbes had used a mix of different US Treasuries, MAST would have remained capable of detecting the abuse. To do so, MAST recognises that the value of each Treasury is sensitive to changes in the dollar yield curve. It therefore links the trades and orders together through the hypothetical market impact they have on this yield curve.

THE CHALLENGES OF FIXED INCOME MARKET SURVEILLANCE SERIES

In **Part One**, we explore why fixed income is different, particularly in relation to cross-product abuse.

In **Part Two**, we explore market manipulation and how we might use market impact models to address the challenges of fixed income market surveillance.

In **Part Three**, we discuss market abuse utilising multiple products, also known as cross-product abuse, with a focus on the fixed income asset class.

Advance your surveillance function

Detect cross-product abuse, reduce false positives, and prioritise high-risk alerts.

Reach out to learn more.

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