In The Course

A Personal Declaration

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Twisting in the Wind

How many dollars of debt must there be
That the Fed just pretends you can't see?
And how many times must the Fed double down
Before it concedes it's in vain?
Yes, how many times must the market be gamed
Before it's allowed to be free?
The answer my friend
Is twistin' in the wind
The answer is twistin' in the wind.
To the tune of Blowin' in the Wind, Bob Dylan

You raise up your head
And you ask, "Is this where it is ?"
And somebody points to you and says
"It's his"
And you says, "What's mine ?"
And somebody else says, "Where what is ?"
And you say, "Oh my God
Am I here all alone ?"

But something is happening here
But you don't know what it is
Do you, Mister Jones ?
Bob Dylan Ballad of a Thin Man *Highway 61 Revisited*

Introduction

This essay is a long runway to a short point. In an attempt to hold the interest of the reader (assuming, optimistically, that there is one) I will begin with the conclusion, digress a fair distance and return to the conclusion that I believe to be subtle but important and that I have not seen discussed elsewhere.

Conclusion: Operation Twist, the latest monetary policy gambit of the Fed, has some straightforward objectives, the desirability of which are subject to debate. It also has the presumably unintended consequence of shifting, relatively, the risk of investment in the short end of the yield curve from predictable (governmental) hands, to more volatile (non-governmental) hands. This increases the potential for, and advances the time of arrival of, a swan, *ex ante* black but *ex post* white, that will light the debt bomb fuse. Operation Twist

increases the risk of a rapid rise in short-term interest rates associated with difficulties in refunding short-term US Treasury debt and a consequential fiscal meltdown.

Vague Unease

From the first moment that the Fed began to signal that its next move in its efforts to stimulate economic activity through monetary policy would be to resurrect a version of Operation Twist, I had a strong intuition that something was terribly wrong with the strategy. I had a difficult time articulating just what I thought was wrong. I just had a sense that it made no sense.

What is the Twist?

As described by the Wall Street Journal,

> The Federal Reserve's latest move, known as Operation Twist, will involve selling $400 billion worth of its short-dated bonds and using those proceeds to purchase longer-term Treasuries.
>
> In the short-term, people who hold long-dated bonds will see the value of those bonds rise, as the Fed buys up these issues and sells off shorter-term ones. The Fed's aim here is to lower long-term rates and lift short-term ones ("twist" the yield curve), with the hope of encouraging people to borrow and invest more.
> The Federal Reserve Says 'Let's do the Twist' *The Wall Street Journal* September 25, 2011

The Fed's market actions are summarized as follows (dollar amounts in billions):

Treasuries the Fed will likely sell:

	What the Fed Has	Likely Sales
0-1 Years	$138	$138
1-2 Years	$156	$156
2-3 Years	$221	$106
Total	$515	$400

On average, $400bn at 1.5-year maturity.

Treasuries the Fed will likely buy:

	Eligible Total	Eligible Outstanding	Eligible New Issue	Likely Purchase
6-7 Years	$353	$179	$174	$140
7-10 Years	$581	$383	$198	$160
10-30 Years	$521	$395	$126	$100
Total	$1,455	$957	$498	$400

Mauldin, John *Thoughts from the Front Line* Catastrophic Success September 24, 2011

Some Basics

To a degree, Operation Twist is a simple monetary dance. The Fed is a significant participant in the market for US Treasury securities (see e.g. http://www.gao.gov/special.pubs/longterm/debt), particularly since the 2008 financial crisis.

- All other things being equal, the Fed sells short-term Treasuries, the supply goes up against fixed demand, the market value of the outstanding short-term obligations goes down (but not by much since the duration of the outstanding short-term debt is short) and the yield (or the interest rate on newly issued short-term obligations) goes up.

- All other things being equal, the Fed buys long-term Treasuries, the demand goes up against fixed supply, the market value of the outstanding long-term obligations goes up (by a lot since the duration of the outstanding short-term debt is long) and the yield (or the interest rate on newly issued long-term obligations) goes down.

Simple enough. The Fed has caused long-term interest rates to decline, not only for Treasury obligations, but for all long-term debt because debt generally is priced by reference to the "risk free" rate on Treasury obligations. Because the cost of long-term borrowing has declined, borrowers will, theoretically, be induced to borrow more and invest the proceeds in job generating activities. homeowners should refinance or buy more houses because the cost has decreased, spending the refinancing proceeds or boosting the housing market, both of which support economic recovery and increased employment.

A less publicized aspect of Operation Twist is the Fed's plan to reinvest the proceeds from maturing mortgage debt that it holds, adding another factor of increased relative demand for long-term mortgage debt and causing a decline in long-term mortgage rates.

Of course, short-term interest rates rise, flattening the yield curve and inducing investors to move in on the curve to shorter term obligations.

Some Problems

Lack of Loan Demand. It should be obvious that if businesses don't perceive that they have profitable uses for the proceeds of borrowing, they will not borrow at any interest rate, at least for the purpose of business expansion. They may restructure their balance sheets and they

may take advantage of low rates to create cash hordes, but they won't spend it on plant and equipment or on increased hiring. It is now conventional wisdom that uncertainty in macroeconomic prospects, regulatory policy and tax rates have paralyzed business. Homeowners that can refinance mortgage debt may or may not spend the proceeds but they are more likely to pay down other debt or keep cash reserves. Many, if not most, homeowners can't refinance because of declines in the value of the collateral.

Politicization of the Fed. All things are not equal. An issue that bothers some economists is the relatively short weighted average duration of the national debt. The resulting volatility in the interest cost of financing that debt is troublesome for fiscal planning. The Fed's activities may encourage the Treasury to lengthen the weighted average duration of the national debt, thus reducing the volatility, but also increasing the supply of long-term Treasury obligations, at cross purposes with the Fed strategy. Both Ben Bernanke and Tim Geithner have commented that they are mindful of the objectives of the other. The problem here is the political sensitivity of the Fed to the executive branch. The Fed is supposed to be independent. Politicization of Fed policy is undesirable because it suggests that the Fed will increasingly facilitate the lack of fiscal discipline by the executive and legislative branches of the government.

Invitation to More Central Planning. Alan Blinder commented on what at the time was the anticipated announcement of Operation Twist, focusing on the associated reinvestment of maturing mortgage debt held by the Fed.

> Would [Operation Twist] mark an improvement over QE2, which was limited to Treasuries? I think so—though, again, no one should expect miracles. When the Fed buys or sells Treasuries it is entering the broadest, deepest and most liquid securities markets on earth. It's not easy to push such markets around without moving vast sums (or convincing markets that you might). But markets for MBS [mortgage backed securities] and other private-sector securities are less deep and less liquid—and hence easier to move. They are also more tightly connected to private borrowing and lending decisions—and therefore to growth and jobs.
>
> For these reasons, I was a huge and enthusiastic supporter of QE1, which concentrated on MBS, but only a lukewarm supporter of QE2's Treasury purchases. (It was better than nothing.) Since then, a few scholarly studies have estimated that QE1 was indeed more powerful than QE2. So any move back toward dealing in MBS, or in other private-sector securities for that matter, is welcome. Indeed, if we indulge ourselves in a bit of blue-sky thinking, we can even imagine the Fed doing QEs in corporate bonds, syndicated loans, consumer receivables and so forth.
> Blinder, Alan Ben Bernanke Deserves a Break *The Wall Street Journal* September 28, 2011

Effects on Pension Funds. A number of commentators have pointed out the adverse consequences on pension funds of the Fed's continuation of a policy to artificially depress interest rates, of which Operation Twist is a part.

> However, such low rates are not cause for merriment but for thoughtful pause, as low rates might be good for the government and for those looking for mortgages, but they threaten to wreak havoc on pension plans, as the bond portfolios on which they are built are paying less and less, and that means they are becoming more and more underfunded, and stocks are not helping.

> The problem pension fund trustees have is that lower yields require them to raise their assumption for future liabilities, which must be discounted at a lower rate. Lower bond yields, like falling share prices, increase funding gaps. While few are mentioning this aspect, Spencer Jakab of the FT sent me this note: 'A sensitivity study by Credit Suisse done in mid-August shows how big an impact this can have. The underfunding for S&P 500 members was then an estimated $390bn. A 25 basis point fall in discount rates would have inflated the deficit to $435bn – about the same as 4 percentage points of investment underperformance this year. In August alone the deficit among the broader S&P 1500 widened by some $75bn, Mercer Consulting found. Slumping equities and bond yields brought the deficit from 12 to 31 percent since April alone.'
> Mauldin *id.*

Fixed Income Dependent Retirees. The effect on pension plans is one aspect of a more general problem for retirees. The traditional strategy of the industrious and frugal to provide for their own retirement is upended. A lifetime of work and planning invariably anticipates increasing reliance on lower risk fixed income investing to provide the cash flow necessary for post retirement living expenses. Given the planning horizons of retirement, retirees presumably have a bias toward longer term fixed income obligations. With interest rates generally and long-term rates in particular being driven down by the Fed, the needed and reasonably anticipated income is not there. Retirees faced with inadequate resources either make do with less or move to riskier investments. The incentive to save generally is reduced and government dependency is increased.

Decreased Rate Sensitivity. The increase in the Fed's holdings of US Treasury obligations is a significant part of the increase in the relative importance of intra-governmental holdings, which decreases the Treasury market's overall sensitivity to interest rates. This reduces market discipline (if any is left) of government fiscal policy.

> In past decades, tense political disputes over actual or projected fiscal deficits induced sharp increases in interest rates—particularly on long-term bonds. The threat of economic disruption by the so-called bond market vigilantes demanding higher interest rates served to focus both Democratic and Republican protagonists so they could more easily agree on some deficit-closing measures.
>
> In contrast [to historical examples of bond market reactions to proposed spending plans], after the passage of ObamaCare in March 2010, long-term bond rates remained virtually unchanged . . .. The bond market vigilantes have disappeared.
>
> Without the vigilantes in 2011, the federal government faces no immediate market discipline for balancing its runaway fiscal deficits. . . .
>
> * * *
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> To know how to restore market discipline, first consider what caused the vigilantes to disappear. Two conditions are necessary for the vigilantes to thrive:
>
> (1) Treasury bonds should be mainly held within the private sector by individuals or financial institutions that are yield-sensitive . .
>
> (2) Private holders of Treasurys must also be persuaded that any fall in short-term interest rates is temporary—i.e., that the Fed has not committed itself to

keeping short-term interest rates near zero indefinitely. Long rates today are the mean of expected short rates into the future plus a liquidity premium.

The outstanding stock of U.S. Treasury bonds held outside American intergovernment agencies (such as the Social Security Administration but excluding the Federal Reserve) is about $10 trillion. The proportion of outstanding Treasury debt held by foreigners—mainly central banks—has been increasing and now seems well over 50% of that amount. . . .

Central banks generally are not yield-sensitive. Instead, under the world dollar standard, central banks in emerging markets are very sensitive to movements in their dollar exchange rates. [Interventions to defend local currencies require purchase of dollars and the central banks] . . . unwillingly accept the very low yield on Treasurys as a necessary consequence of these interventions. . . .
McKinnon, Ronald Where are the Bond Vigilantes? *The Wall Street Journal* September 30, 2011

Relative Effects Matrices

More than one of the above commentators references the difference between total US federal debt outstanding and the amount of such debt held by "the public" or parties other than US government agencies, GSE's and the Fed. In considering the fiscal effects of the size of US government debt, I generally focus on total debt because even if Treasury obligations are held by other parts of the federal government, they still represents obligations and the interest must still be paid. They frequently represent the source of payment of real obligations. For example, the Social Security Trust Fund has no funds, but as of August 2011 owns $2.7 trillion of Treasury securities. (source: www.socialsecurity.gov) The Trust Fund still has its payment obligations and the fact that the Federal Government has borrowed the payroll tax revenues and replaced them with Treasury securities simply means that the credit risk of default is shifted to the US Treasury rather from the Trust Fund.

However, the relative holdings of "the Public" and of Government agencies, the Fed, etc. should make a difference in market effects and the degree of volatility. That is the thought behind the following set of matrices that are intended to focus on the relative effects of changed values, rates and durations as a function of the relative holdings of US Treasury obligations by government and non-government investors.

Principal

	Intra Gvt.	Public
Short	-	+
Long	+	-

Interest Earned

	Intra Gvt.	Public
Short	-	+
Long	+	-

Market Value

	Intra Gvt.	Public
Short	-	+
Long	+	-

Duration

	Intra Gvt.	Public
Short	-	+
Long	+	-

Back to Vague Unease

I find it difficult to keep in my head all at the same time the effects of Operation Twist on these relative relationships. Given the Fed's program to sell short-term debt and purchase longer term debt, the principal amount of short-term debt held by the Fed will decrease relative to the Public, and vice versa for longer term debt. The articulated objective of Operation Twist is to drive down longer term rates relative to short-term rates (flatten the yield curve). Therefore, the interest rate (or yield) on long-term debt held by the government will go down and the interest rate (or yield) on short-term debt will go up. The same will be true of debt held by the Public in terms of interest rates, however relative yields on the respective overall portfolios will move in opposite directions. The inverse is true of the market values of the short-term and the long-term holdings of Treasury obligations held by the government and the Public. The market values will move in the same directions, but the relative market values on an overall portfolio basis will move in opposite directions. Finally, the duration of the portfolios will move in opposite directions, relative to each other.

Return to the Point

So, what is the point? Operation Twist shifts the relative holdings of short-term US debt from the government to the Public, increases the yield on short-term US debt held by the Public, reduces (marginally) the market value of the short-term US debt held by the Public and shifts the short duration portion of US debt from the government to the Public. Because the Public is more rate sensitive than the Federal government (and foreign central banks), when everyone wakes up and wonders why they should lend money to the United States at near zero interest rates when its political "leaders" evidence no will or even inclination to sober up fiscally, the difficulties of refunding government short-term debt will come sooner than they would have absent Operating Twist. Once that difficulty becomes apparent, the run on the bank will proceed apace – the debt bomb will detonate. The black swan will arrive (and change color) sooner than it otherwise would have.

The US national debt is like a warehouse of ordinance with short fuses. When the lights go out, someone or something will enter the warehouse with a kerosene torch. The Fed's latest move has shortened the fuses and enlarged the torch.

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