THE GEORGE WASHINGTON UNIVERSITY

Group project

Forecast Interest Rates for Hatchet Financial Co.



SUBMITTED TO

PROF. ROB STRAND School of Business and Public Management The George Washington University

BY

Amit Shah

Anil Kumar Cheerla

FINA 222 - 20

CAPITAL FORMATION

WASHINGTON, DC

July 27, 2010

Page **1** of **16**

TABLE OF CONTENTS

TA	BLE OF CONTENTS2
EX	ECUTIVE SUMMARY
1.	INTRODUCTION
2.	ECONOMIC INDICATORS4
3.	OVERALL ASSESSMENT5
4.	FOREIGN IMPORTS10
5.	TAX RATES10
6.	EXPECTED CHANGE OF INTEREST RATES10
7.	FORECAST FOR HATCHET'S DEBT INSTRUMENTS10
	BONDS11
	MORTGAGES12
	MONEY MARKETS
7.	ESTIMATED RISK PREMIUMS14
8.	FEDERAL RESERVE MONETARY & EASING POLICY14
9.	CONCLUSION15
10.	BIBLIOGRAPHY

EXECUTIVE SUMMARY

The interest rates on all debt instruments tend to move together. Therefore, in order to forecast the interest rates on the firm's assets and liabilities for February 2011, an exploration of the factors that will affect the general level of interest rates will be undertaken. Then an evaluation of the factors that cause the interest rates on different kinds of debt instruments to diverge from the general level will ensue.

INTRODUCTION

Interest rates are one of the key indicators of the state of an economy. The movement in interest rates affects banks, businesses, the Central bank, and even the public. It also influences several other variables like exchange rate, foreign investment and stock markets. The term structure of interest rates incorporates investors' anticipations of future rates and thus implicitly of future levels of prices and economic activity.

Interest rate forecasts help banks calculate future expected inflows and outflows during each of the time periods and leverage the interest spread. At Corporate level interest rates help determine investment decisions most of which are based on some expectations regarding alternative opportunities and the cost of capital. It also serves as a useful determinant of the decision to pick between equity and debt or to choose between a fixed and a floating rate. For an investor, the value of a portfolio in the debt market is dependent on the interest rate.

Attention should focus on the economic indices, which will help to forecast what measures will be accepted by the Central Bank in regard to interest rates. In this connection it is worth to pay attention to the following macroeconomic indicators along with their impact on the interest rates are being discussed below:

ECONOMIC INDICATORS

New Home Sales - offers a view of the housing market post-tax credits

• Underlying demand for homes still appears depressed. Bounce from last month's plunge, but demand still very weak. Consumers and lenders are simply growing increasingly concerned about the sustainability of the recovery and remain unwilling to lend or borrow.

Pending Home Sales - view on home sales in progress, but not yet closed

• Overall growth has been slow, shown some recent improvement

Conference Board Consumer Confidence – survey on consumer attitude

• Sentiment slides again on slowing recovery.

The S&P/Case-Shiller Index - key gauge of housing prices, for both year-on-year changes and on a running basis.

• Home prices in this index have been lifting in recent months, but can this continue? A bottom in prices seems clear. Some further improvement expected. Future increases uncertain. The index continues to reflect the tax credit-induced boom from a few months back, not necessarily the current reality.

Durable Goods – Reflects big ticket item sales

• Gains in sales have been spotty

"Advance" Gross Domestic Product - provide an initial look at the overall economy in Q2 and set the stage for a forward look at Q3

• Q2 losing more momentum. The consumer is a major cause of the slowdown in growth, with spending growth falling to around +2.5% from +3% and the trade gap widening by \$30-\$40B.

Employment Cost Index

• Not any big improvement in Compensation, wages and salaries. Unemployment benefits are rising. Slowdown in wage increases

Chicago Purchasing Managers' Survey - report on purchasing activity

• Numbers growth has slowed

U. of M. Inflation Expectations - survey of inflation expectations

• Long-term expectations stable at 2.9% (5/10 yr ahead)

The Reuters/University of Michigan Consumer Sentiment Index - gives an updated look at consumer attitudes

• In late July, attitude took a surprising tumble. Consumers' confidence in the recovery is fading fast and now translating into slower consumer spending.

The ISM Manufacturing Survey – Is the definitive manufacturing activity diffusion measure. A strong upturn in manufacturing has been a key element of the economic recovery

• Survey numbers have been slipping

Personal Income & Consumption - provide a final-month reading for consumer spending

• Spending currently the largest source (near 70%) of real GDP. How goes the consumer, so goes the economy. A new growth trend for consumption has emerged, much lower than historically, hard to pin down exactly, but significantly weaker than previous trend. Meager real income growth expected along with weak core inflation. Consumer momentum is slow.

The overall and "Core" PCE Price Indexes - key inflation indicators

• the "Core" now standing far below "target" for most Fed Members

Light-Vehicle Sales - gives an idea of overall demand for the important and large motor vehicle sales component of retail sales and consumption.

• Has been somewhat flat

The ISM Non-Manufacturing Survey - a high-frequency gauge for the services sector, about 60% to almost 85% of the economy, depending on the measure.

• Is slipping

Non-farm Payroll Jobs and Unemployment data - key indicators for consumers' outlook on the current economy and for a host of upcoming economic indicators.

• Payroll growth is positive but weak, weekly hours are stable and hourly earnings show meager growth. Unemployment ticks up slightly.

OVERALL ASSESSMENT

A determination of general, or nominal, interest rates can be broken down further by the Irving Fisher equation: Nominal Rate = Real Rate + Expected Inflation Rate. Thus, both general expectations for inflation and real interest rates need to take into account before an accurate forecast of general interest rates can be undertaken.

Determinants of expected inflation include past inflation, money growth, GDP growth, and Federal Budget deficit. Our analysis suggests inflation will hover around 0% over the following six months. 2009

was deflationary with annual inflation at -0.4%. The first half of 2010 had started out in the sweet spot of inflation, with a 2.6 % rate in inflation in January, however has dropped significantly with June inflation at 1.1%. This data by itself suggests a low level of inflation hovering around 0.5% over the next six months. The issue of money growth is tricky, as despite a dramatic recent increase in the monetary base, the M2 has not changed much (as people and businesses hold on to the new money they have received) and thus the money multiplier has actually decreased. As such, the velocity of money remains depressed (Figure 1) relative to pre-recession years, supporting the potential for slight deflation.



The first quarter GDP growth rate in the U.S. came in lower than had been forecast, 2.7% vs. 3.2%. This negative departure from expectations will put downward pressure on inflation. GDP growth is tied to consumer spending, business investment spending, government spending, and net exports. Consumer spending accounts for 70% of GDP growth, and is unlikely to rise given its dependence on personal income, unemployment, and consumer confidence. Wage increases are unlikely given the oversupply of workers with unemployment hovering around 9.5%.

The ECRI leading index has recently been evoked by economists to warn of a double dip recession.



However, the ECRI itself is not perfect, as the common phrase goes: "The ECRI has predicted 6 of the past 3 recessions".

ECRI Leading Index Flashes Double-Dip Warning 3 Notable Periods When Recession Remained in the Distance



On the contrary, several indicators suggest otherwise. The U.S. Leading indicators do not predict a double dip recession yet.



This is driven by an improving average workweek, new consumer orders, consumer expectations, and money supply. Stocks and interest rate spreads remain stable. However, all is not rosy as some indicators are worsening: unemployment claims, vendor performance, new orders of capital goods, and building permits. High levels of Federal Deficit will further dampen GDP growth. Positive Yield Spread Predicts No Double-Dip



This does not bode well for the U.S. with a federal debt representing 93% of GDP. However, despite a federal deficit that is currently high, 50% of this is due to TARP and related investments, which are now conservatively expected to break even, thus dramatically reducing the deficit and lifting some downward pressure on inflation expectations.

Real GDP Growth as Level of Government Debt Varies					
Select Advanced E	Select Advanced Economies (1790-2009)				
	Central (Federal) Government Debt/GDP				
	Below 30% 30% - 60% 60% - 90% 90% and A			90% and Above	
Average	3.7	3.0	3.4	1.7	
Median 3.9 3.1		2.8	1.9		
# of Observations	866	654	445	352	
Select Emerging Market Economies (1900-2009)					
	Central (Federal) Government Debt/GDP				
	Below 30%	30% - 60% 60% - 90%		90% and Above	
Average	4.3	4.1	4.2	1.0	
Median	4.5	4.5 4.4 4.5		2.9	
# of Observations	686	450	148	113	
Figure6					

90% Debt/GDP = Threshold Above Which GDP Suffers US Federal Debt Presently 93%

Further indicators of low inflation include the Consumer Price Index, which is currently below the "healthy" amount of 1-2%. Thus we expect inflation to be near zero, and potentially slightly below zero. Fortunately, do not expect severe deflation which can result in stagflation (low GDP, high inflation). With expected inflation in February 2011 near 0%, using the Irving Fisher equation, nominal interest rates should equal real interest rates.

Expected real interest rates can be forecast using both **liquidity preference theory** and **loanable funds theory**. Our analysis suggests a **low real interest rate of 1%**. In our current economic climate, there is a high risk aversion and concern for income preservation, thus liquidity is low, which would normally drive up real interest rates (supply for money less than demand). This was the situation immediately after the financial market meltdown in 2008. However, the Federal Reserve, in an attempt to subvert the liquidity preference to manipulate interest rates, has tinkered with the supply of loanable funds.

In the United States, the consumer price index (CPI) rose 2.4% in March 2010 (versus March 2009), boosted by higher crude-oil prices, but the core rate of inflation (excluding food and energy) rose only 1.2%. Historically, these current readings are well below the historical averages for both headline and core inflation, both of which have averaged around 4% during the past several decades. The generally low expectations for economic recovery in the developed world have served to reinforce a perception that inflation will remain muted.

Low U.S. inflation rates are mostly attributable to two factors. First, there continues to be a significant amount of slack (underutilized capacity) in key areas of the economy, most notably in the labor markets. In the United States, unemployment remains high at nearly 10%, putting downward pressure on income growth and consumer demand. Second, the aftermath of the financial crisis has precipitated a massive financial de-leveraging, whereby financial institutions seek to lower their debt levels and clean up their balance sheets. This process has provoked an outright decline in U.S. bank lending, a contraction of credit that has a deflationary impact. As a result of these factors, the unprecedented monetary stimulus enacted by central banks, including the U.S. Federal Reserve, has been somewhat blunted.

The Fed expanded its balance sheet by more than \$1 trillion to aid the ailing financial sector, but most of that extra money now shows up as "excess reserves" held by banks as opposed to being lent out into the economy. Despite the Fed's quantitative easing efforts and near-zero percent interest rate policy, the money supply (M2) is growing at only a 1.5% year over- year rate—certainly not inflationary territory.

While broad-based inflation remains relatively muted overall, the potential for strengthening economies, rising commodity prices, and still-loose monetary policies to push inflation up may be higher than expected.

Thus, in the current forward looking timeframe through February 2011, the Loanable Funds theory dominates. Specifically, The Federal Reserve has used the discount window to essentially set the rate at which a business will borrow funds and the rate at which a business will charge for funds. Going forward through February 2011 the FOMC minutes indicate that the Fed is more concerned about unemployment than inflation, and thus will continue to target a low discount rate around 1% to stimulate the economy. Households and foreigners also contribute to the loanable funds, however have recently been less a contributor (for which the Fed is attempting to compensate for) factor as overall world consumption has declined. Under normal conditions (which are not present currently) suppliers of loanable funds are likely to loan more during lower expected inflation, which is unlikely as inflation rates will already be near zero percent in Feb 2011 by our forecast. Low unemployment also increases the willingness of suppliers to loan funds. This too will not be the case as we do not expect unemployment to improve dramatically over the next six months. While both lower expected inflation and lower unemployment rates would normally reduce supply and increase real interest rates, this effect is essentially removed by the Feds manipulation of the discount window as it attempts to stimulate the economy. Regarding demand for loanable funds, the U.S. homeowner is by far the largest. This demand for home mortgages has dramatically reduced. Mortgage transactions will remain low as refinancing demand has already been soaked up and the supply of properties on the market will continue to rise as foreclosures continue (keeping prices low and resulting in the number of home sales to remains low as would be sellers are reluctant to sell for less than they owe on the house). Lower than expected GDP, as mentioned above, will further drive real interest rates down. Foreigners also contribute to the supply of loanable funds.



Momentum of consumption called into question by soft jobs, high unemployment, weak retail sales, and declining confidence. U.S. economic downside risks now from European sovereign debt crisis and fiscal restraint, Chinese restraint on its economy, soft housing, weak state and local government spending, and weak U.S. consumer fundamentals. Fed is staying almost as easy as it can. Interest rate hikes far off; not until well into next year.

In fact, the recent return to U.S. treasuries is one of the few factors driving up real interest rates. Our analysis determined that the Fed is the main factor controlling interest rates, and their upper limit target of 1% (through the discount window) will drive real interest rates around 1%. Given that inflation will remain around zero, nominal interest rates will likely be around 1% in April of 2011.

FOREIGN IMPORTS

The U.S. consumer price index has shown a high correlation with the import prices of non-petroleum products, implying non-commodity import prices have some influence over U.S. domestic inflation. This generally has helped mute inflation over the past decade, as cheap imported goods contributed to low inflation. When low-cost goods producers, such as China, experience higher inflation, they can transmit that inflation abroad through their non-commodity exports. So we cannot afford to ignore emerging-country inflationary pressures.

TAX RATES

Tax rate reductions enacted by Congress in 2001 are scheduled to expire at the end of this year and revert back to their pre-2001 levels—meaning an increase of between 3 and 4.6 percentage points in each bracket. Taxpayers in the top bracket would pay a marginal rate of 39.6% in 2011, and the 10% bracket would disappear, bumping the lowest earners into the 15% bracket. The resulting increases in income taxes, capital gains and dividend tax rates, new healthcare reform tax and estate taxes will erode the net income of household investors and their savings potential thereby shrinking the supply of loanable funds (downward shift in supply curve) leading to lower interest rates.

EXPECTED CHANGE IN INTEREST RATES

The current low short term interest rates reflect the easy availability of money and low or declining inflation. Higher longer term interest rates reflect investors' fears of future inflation, recognizing that future monetary policy and economic conditions could be much different. This situation usually develops early in the economic cycle when a country's monetary authorities are trying to stimulate the economy after a recession or slowdown in economic growth. Interest rates have some variables which affect the interest rates in time, such as default risk, tax treatment, marketability, term to maturity, call or put features and convertibility.

Debt Instruments (Hatchet Financial Co.)			
Assets	Liabilities & Capital		
Treasury Bill Repos	Commercial Paper		
Fannie Mae MBSs	Debenture Bonds		
D.C. Bonds			

FORECAST FOR HATCHET'S DEBT INSTRUMENTS

The yield spread between the longer-term and shorter-term interest rates predict future changes in interest rates. If the spread is high the long rate tends to fall and the short rate tends to rise. If we believe in expectations theory of term structure, then rational expectations of future interest rates are the dominant force determining current long-term interest rates. On the contrary, predictable changes in excess returns must be the main influence moving the term structure. M2 money supply growth, the feedstock of inflation, is running below 2% year over year. M2 growth has been unusually low because the banks have been reducing net lending. M2 money growth is normally HIGHER than the inflation rate, since money growth must accommodate economic growth as well as inflation. By mid 2011, inflation will depend on future money growth plus cyclical pressures generated by a growing economy. M2 growth will increase noticeably once bank lending expands later in 2010, as banks, businesses and consumers gain confidence in the economic rebound. If we look at the spread between regular treasury bonds and inflation-protected

bonds (TIPS), it is less than two percentage points, about equal to today's inflation rate. We do not believe the Federal Reserve will raise interest rates, nor do I believe that market forces will significantly increase bond interest rates. Our approach is to use the existing spread between the corresponding treasuries and the financial instrument yield and compare it to the spread emerging from the difference between the forecasted treasuries and new expected yield rates. So all debt instruments were compared with treasuries with similar maturities and the spread was calculated. The forward rates are calculated in order to find the difference between the implied forward rate and current interest rate. The greater the difference, the greater the expected change in one year interest rate. The new expected spreads are based on the anticipated increase (slight) in interest rates. The new yields are calculated based on the remaining maturity period, current market demand and expected rate of return. The final step is the calculation of the estimated premiums and the change in asset prices and yields due to expected interest rate movements (rise). All the calculations are available from the excel worksheet that is listed below. Overall the expectation of higher rates changes the demand for funds and supply of funds in different maturity markets, which forces the flat yield curve to pivot upward and become upward sloping.

BONDS (D.C BONDS & DEBENTURE BONDS)

Most fixed-income securities suffer price declines when interest rates rise. Returns among various types of U.S. investment-grade bonds have been highly correlated due to their high sensitivity to interest rate movements which is illustrated below:



Shorter-term bonds typically have lower price sensitivity to changes in interest rates. During times of rising rates and rising inflation, many shorter-term instruments that can reduce the downside risk of rising rates will fail to provide a positive real return (total return minus the rate of inflation). With yields on short-term fixed-income investments (e.g., Treasury bills, certificates of deposit, money market funds) at historic lows, many investors have become more reliant than ever on income from bonds with longer maturities.

Corporate bonds have higher credit risk due to the issuers' ability to generate sufficient revenues to service their debt payments. Bond prices are more susceptible to other risks, such as business performance and corporate credit conditions. Increases in interest rates over time change not only the

yields of new bonds but also the prices of existing bonds. Newly issued bonds earn higher income, but existing bonds suffer a price decline as they become less attractive due to their lower coupons.

Bond prices move inversely to interest rates. When interest rates go up, bond prices go down. Applying the loanable funds theory, higher expected inflation and higher government borrowing will increase bond supply thereby lowering the bond prices. The money supply from fed will raise incomes, raise aggregate price levels and raise inflation expectations. Apart from the macro-economic variables, intrinsic security variables such as Term to Maturity, Default Risk, Tax Treatment and Marketability/Liquidity explain the interest rate differences.



The expected excess return of corporate bonds over Treasuries has a number of components. The risk-premium compensates bondholders for liquidity risk, credit risk.

Debenture Bonds

Since they are not backed by certain assets or income to guarantee against its default in paying back the principal at maturity, there is a huge default risk and liquidity premium. **Assumption:** The bond is not callable

Today's 2.4% yield for intermediate Treasury bonds stands at roughly half the long-term average of 4.8% If interest rates rise, this will raise the yields (income) of future bonds, but result in a price decline for existing bonds that would mute their returns. A decline in interest rates could boost prices, but with such current low yields, the upside is much more limited than it has been at other times in history. Although Federal Reserve (Fed) officials continue to indicate that the federal funds rate will remain low for an extended period, a variety of factors point to a potential rise in market rates in the future. Among these factors is the recent end of the Fed's \$1.2 trillion purchase of mortgage bonds, a growing economy, the possibility of inflation as the federal government finances massive deficits, and the resulting huge increase in Treasury bond supply that investors will need to purchase. This expectation of higher interest rates in the future is one reason why long-term Treasury interest rates are now nearly 4% above short-term interest rates.

MORTGAGES (FANNIE MAE MBSS)

The Federal Reserve affects short-term interest rate maturities, the Fed Funds rate, and the Overnight Lending rate and these factors have a direct impact on the Prime rate. However, mortgage interest rates are dictated by the trading of mortgage-backed securities, which trade on a daily basis. The daily ebb and flow of money is what matters most when it comes to the movement of mortgage interest rates. Many interest rates on consumer loans and mortgages are based on the yield of the 10-year note. The investor is exposed to prepayment risk, market risk, and credit risk. The price of any bond, including mortgage-backed securities, is a function of several factors such as prevailing interest rates, the coupon rate, the

length of time the security is expected to be outstanding, and the liquidity of the issue, which can fluctuate with market conditions. Mortgage securities are relatively more sensitive to interest rate movements than traditional fixed-income investments because they affect prepayment rates that, in turn, affect the average life and yield of mortgage-backed securities as well as returns from reinvesting principal. The Fed ending the MBS program and the first-time buyer tax credit ending will also affect the MBS prices in the secondary markets. While the price of the Treasury bond can be expected to fall, the price of the Fannie Mae is expected to fall further. The Treasury bond's maturity is the same, but the expected maturity of the Fannie Mae increases as higher mortgage rates tend to cause investors to postpone purchasing new homes or refinancing. The longer the maturity, the greater the price volatility for any given change in interest rate levels, so an increase in expected maturity adds risk.

MONEY MARKETS (TREASURY BILL REPOS & COMMERCIAL PAPER)

The expectations theory suggests that variation in the slope of the yield curve should be systematically related to the subsequent movement in interest rates. Money markets rates at different maturities are strongly influenced by current and expected levels of the funds rate. The overnight repo rate normally runs slightly below the Fed funds rate. By rolling overnight repos, Hatchet can keep surplus funds invested without losing liquidity or incurring price risk. The company also incurs very little credit risk because the collateral is always high grade paper. The repo rate serves as a benchmark for the level of short-term interest rates. Rates on commercial paper can be higher than other short-term cash instruments, reflecting the default risk and needs of the corporation to quickly raise financing. The commercial paper market can be a barometer of economic activity and credit markets generally. Because commercial paper has default risk, its yield is higher than the yield on Treasury bills.

Assumption: future repo rates will be below fed funds rate & Commercial paper is rated A1

r							
	Coupon Rate and Interest Rate Sensitivity						
	Prices of 5.5% Coupon Bond (semi-annual payments) Fannie Mae MBS						
			Maturit	Bond Yield Spread over spread over Treasurie	Spread of risk-free rate used by market over Treasurie	Extra Risk Premiu	Correspondin g Treasury
	Rate of return	Amount	у	s (bps)	s (bps)	m (bps)	Yield
Current	5.50%	\$45,000,000	30 yrs	1.47	1.47	0	4.03
Forecas		\$38,076,923.0					
t	6.50%	8		2.97	1.47	150	3.53
		(\$6,923,076.9					
	Change in Price	2)					
	Prices of 4.5% DC Bond (semi-annual payments)						
Current	4.5	45,000,000	20 yrs	0.47	0.47	0	4.03

ESTIMATED RISK PREMIUMS

Forecas	4.0	41226520.61		1 27	0.47	0.0	2.52
L	4.7	41320330.01		1.57	0.47	0.9	5.55
	Change in price	-3,673,469					
	Prices of 4.75% Debenture Bond (semi- annual payments)						
Current	4.75	15,000,000	5 yrs	2.99	2.99	0	1.76
Forecas t	4.95	14,540,816		3.16	2.99	0.17	1.79
	Change in price	-459,184					
	Prices of Treasury Bill Repos						
current	0.22	10,000,000	daily	0.01	0.01	0	0.21
forecas	0.15			0.01	0.07		0.16
L	0.15			0.01	0.07		0.10
			daily				
	Change in price	-7,000	basis				
	Commercial Paper (rated A1)						
			7				
current	0.6	70,000,000	, months	0.4	0.4	0.4	0.2
forecas t	0.96			0.6	0.4	0.2	0.26
ι 	Change in price	182.000		0.0	0.4	0.2	0.20

FED MONETARY & EASING POLICY

In a recent testimony, Bernanke stated that the Fed would be ready to loosen policy again if the economy dips into recession again. He stressed that the **economic expansion is proceeding at a "moderate pace." In light of the "unusually uncertain" economic outlook, Bernanke re-iterated the Fed's preparedness to "take full policy actions as needed to foster a return to full utilization of our nation's productive potential in a context of price stability."** But the Fed does not have many options now. The Fed could restart the MBS purchase program, but so far, low mortgage rates have failed to entice potential buyers into the market in significant numbers. The central bank could also lower the interest rate it pays on reserves to spur banks to lend this money, but it is unclear whether banks would be compensated for the perceived risk they would be taking on. The problem is that even if the funds are available, the desire to lend and borrow isn't. Banks, businesses, and households are very risk averse right now, displaying a clear preference for liquidity. The money supply is up, but there is no velocity behind it. Monetary policy is looking increasingly impotent.

CONCLUSION

Debt Instruments	Forecast rates in Apr, 2011
Treasury Bill Repos	0.15%
Fannie Mae MBSs	6.5%
D.C. Bonds	4.9%
Commercial Paper	0.86%
Debenture Bonds	4.95%

Forecasted rates in April, 2011

As evident from the analysis conducted above, it is obvious that we've a muted inflationary environment but the possibilities of inflationary pressures are rising. The slight increase in interest rate that we've predicted has reduced the value of long-term financial assets such as the Fannie Mae MBS, DC Bonds & Debenture bonds. Since the long-term debt instruments are subject to multiple risks as stated in our analysis, we observe big impact on long-term assets with varying maturities. The values of these instruments fall while the yields tend to rise. The yields rise to compensate for the risk premiums – the inflation risk, credit risk, pre-payment risk and liquidity risks. In case of money market instruments, since they are highly liquid, the risk factors are reduced, hence command low yield increases. In case the economic recovery does not show improvement and further deteriorates owing to various macroeconomic or financial events, then our forecasted increase in interest rates may not hold true. Instead the economy may fall into prolonged recession (suggested as double recession amongst some circles) forcing the Fed to keep the rates low and undertake additional measures to revive the economy. On the contrary if we see drastic improvement in the economy with inflationary pressures, then the interest rates may rise more than what we forecasted which is not going to happen until late 2012. So Under the given economic circumstances with no signs of economic recovery, the Fed is going to retain the quantitative easing process. If at all the Fed sees a heating economy, then it may resort to stop the easing process, take passive steps to close liquidity and engage proactively by raising interest on reserves, withdraw funds (reverse repos, term deposits) and sell assets to shrink the balance sheet.

BIBLIOGRAPHY

Lemke, Wolfgang, and Theofanis Archontakis. "Bond pricing when the short-term interest rate follows a threshold process."*Quantitative Finance* 8, no. 8 (December 2008): 811-822. *Business Source Premier*, EBSCO*host* (accessed July 19, 2010).

Krippner, Leo. "A Theoretically Consistent Version of the Nelson and Siegel Class of Yield Curve Models." *Applied Mathematical Finance* 13, no. 1 (March 2006): 39-59. *Business Source Premier*, EBSCO*host* (accessed July 19, 2010).

Fongemie, Claude A. "A note on Fisher's equation and Keynes's liquidity hypothesis." *Journal of Post Keynesian Economics* 27, no. 4 (Summer2005 2005): 621-632. *Business Source Premier*, EBSCO*host* (accessed July 19, 2010).

Rendu de Lint, Christel, and David Stolin. "The predictive power of the yield curve: a theoretical assessment." *Journal of Monetary Economics* 50, no. 7 (October 2003): 1603. *Business Source Premier*, EBSCO*host* (accessed July 19, 2010).

Rudebusch, Glenn D. "Publishing Central Bank Interest Rate Forecasts." *FRBSF Economic Letter* 2008, no. 2 (January 25, 2008): 1-3. *Business Source Premier*, EBSCO*host* (accessed July 19, 2010).

Fongemie, Claude A. "A note on Fisher's equation and Keynes's liquidity hypothesis." *Journal of Post Keynesian Economics* 27, no. 4 (Summer2005 2005): 621-632. *Business Source Premier*, EBSCO*host* (accessed July 19, 2010).

http://blog.instaforex.com/

Caporale, Guglielmo Maria and Nikitas Pittis (1997), "Domestic and external factors in interest rate determination", *Applied Financial Economics*, 7(5): 465-471

http://online.wsj.com/mdc/public/page/marketsdata.html

Yield Spreads and Interest Rate Movements: A Bird's Eye View by John Y. Campbell and Robert J. Shiller

<u>http://www.nasdaq.com/aspx/company-</u> <u>newstory.aspx?storyid=201006041144dowjonesdjonline000580&title=interest-rates-in-</u> <u>commercial-paper-market-rise-again#ixzz0utlUiQez</u>