

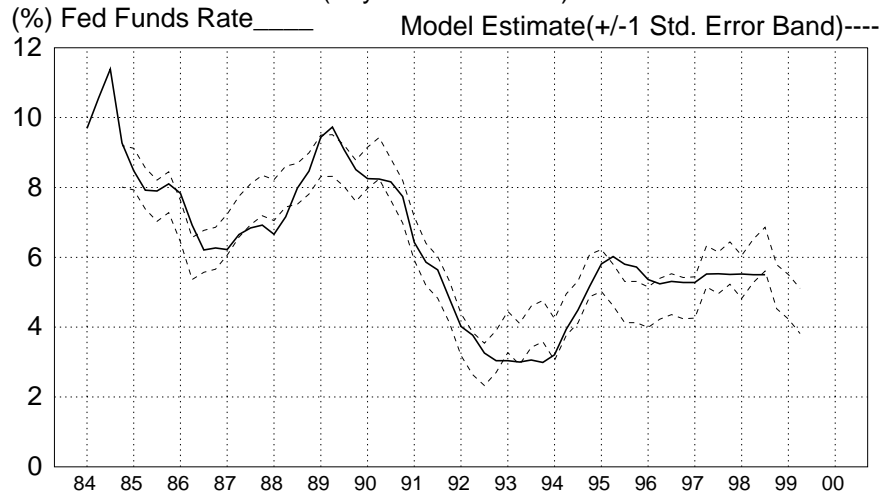
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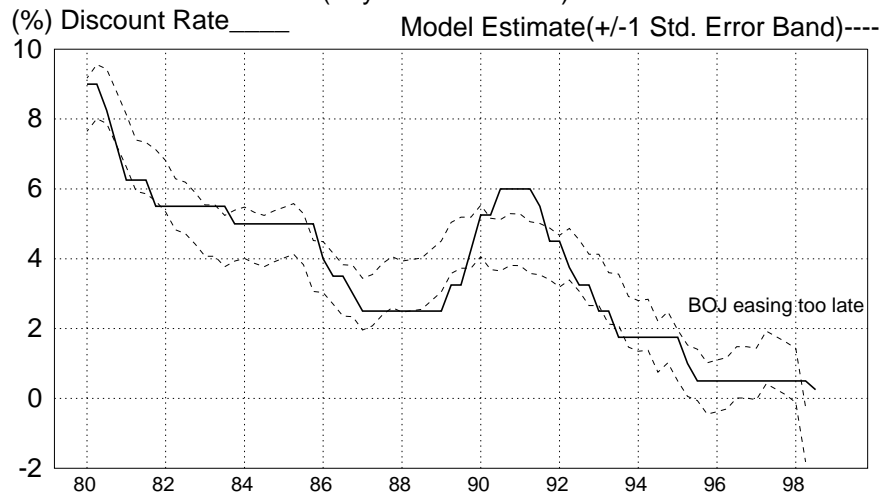
# G-7 Monetary Policy Easing: Fundamentals or Rhetoric?

Fixed Income

## Merrill Lynch U.S. Monetary Policy Function (Taylor Rule Variant)



## Merrill Lynch Japanese Monetary Policy Function (Taylor Rule Variant)



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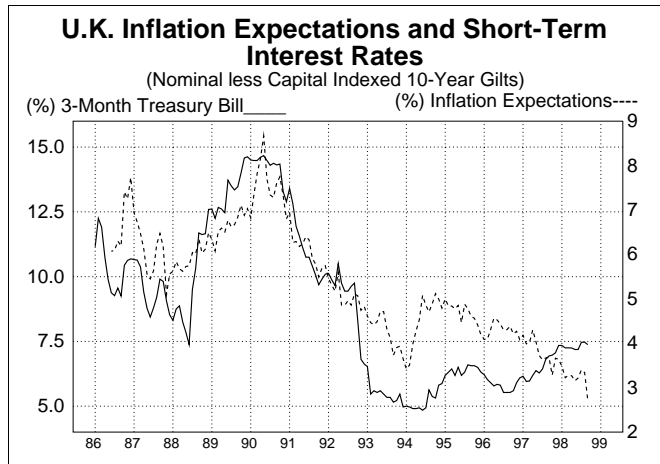
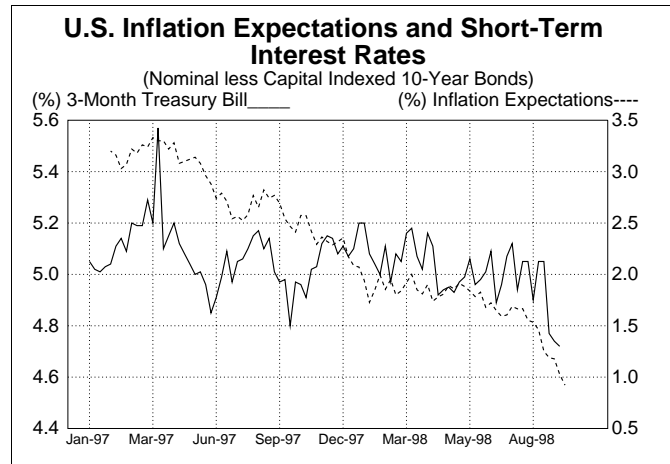
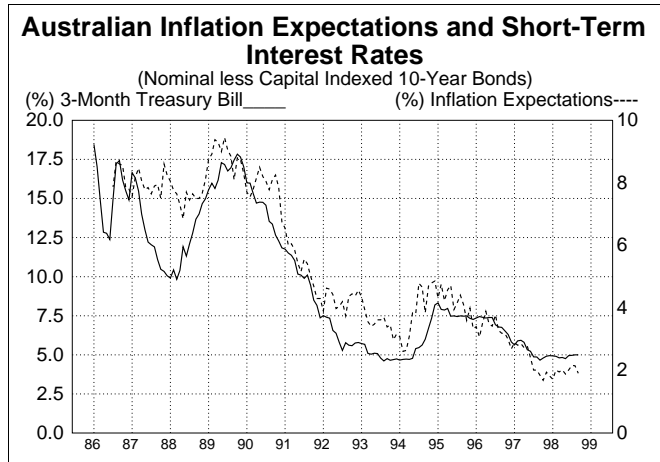
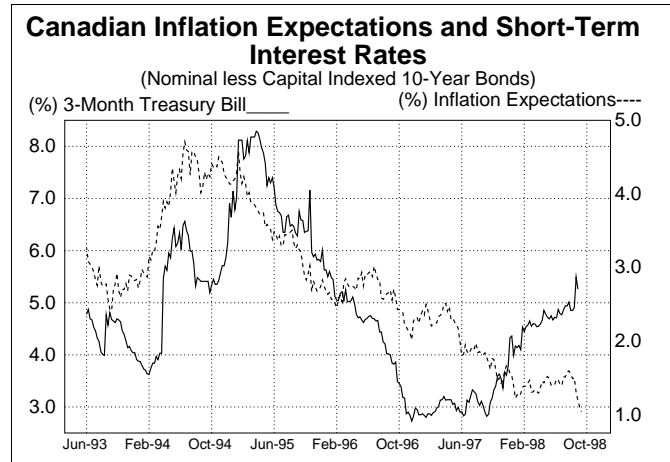
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## 1. Records Continue To Be Broken

G-7 bond yields continue to tumble, despite the fact that none of the respective central banks having yet embarked upon a substantial easing phase. During the past two weeks, Japanese JGBs fell to 0.67%, an all time low. Not to be outdone, German 10-year bunds fell to 3.89%, representing almost a 100-year low, U.K. Gilts are hovering around a 40-year low at 5.0% and the long bond in the U.S. is at its lowest level to date. In past the flight-to-quality argument has propelled the declines, but some portion of the fall is the direct result of the disinflationary forces working their way through the global arena.

Furthermore, it seems likely that at current trading levels, bond yields are likely pricing in several easings to monetary policy. The bond market obviously believes it will only be a matter of time before the G-7 nations shift the bias of monetary policy towards an easing stance. Our empirical work supports this.

Inflation and perhaps more importantly inflation expectations continue to drop. In addition, our central bank reaction functions suggest G-7 easings are imminent. Given the already low levels of bond yields, in addition to the extent to which bond markets have priced in easings, it is likely that yield curves will begin to steepen following such action. Our empirical work shows quite consistently that the flow through is less than one (ie, a 1% reduction to short-term interest rates leads to a less than 1% change in bond yields). In other words, a relaxing in policy settings, although allowing yields to continue their rally, will lead to an eventual steepening of the curve. Investors should begin to position themselves for such outcomes.

**Exhibit 1**

**Exhibit 2**

**Exhibit 3**

**Exhibit 4**


## 2. The Debt Market Is Crying Out For An Easing

The lessons from the 1980s perhaps remain too well entrenched in the way central banks formulate policy. Central banks remain focussed on being pre-emptive to contain inflation, and more importantly, to fend off prospective inflationary pressures before they surface economy wide. This is fine. However, the line often drawn in the sand tends to be made based on a one track mind mentality. That is, the usual policy rhetoric fails to understand that it needs to be pre-emptive in responding to dis-inflationary pressures as well. This is precisely what we are facing at the moment.

Estimates of inflation expectations continue to post new lows. Exhibits 1-4 show inflation estimates from indexed (inflation) linked bonds are around all time lows. In the U.K., such low levels are normally associated with short-term interest rates around the sub 5.5% level. Likewise, in Canada, present short-term interest rates clearly look excessive. Obviously the recent hike by the BoC was a direct result of the relentless pressure being exerted on the Canadian dollar. In the U.S., inflation expectations are around a full percentage point below actual rates of inflation. Plainly the bond markets are seeing things differently than the respective central banks, and in fact have been for some time.

Germany and Japan do not issue inflation protected bonds, so to get a feel for inflationary expectations we make use of two alternative measures. For Germany, the IFO business survey expectations for prices is shown in Exhibit 5. Currently, expectations are for falling prices and are consistent with the falls in yields. In Japan, a useful measure for tracking monetary policy settings and inflation expectations is the output gap. From Exhibit 6, one can clearly see the dire situation Japan's economy is in. It is currently entering its sixth consecutive year of a negative output gap and given the severity of the slump, short-term interest rates, even at astonishingly low levels, appear fundamentally sound.

Over the past month, many financial commentators have voiced their opinion about the need for some sort of concerted relaxation in credit conditions by the G-7 nations to ease the credit crunch currently choking emerging markets and prevent the possibility of a global meltdown taking place. Our empirical work shows that the fundamentals suggest the bias is towards an easing stance.

Exhibit 5

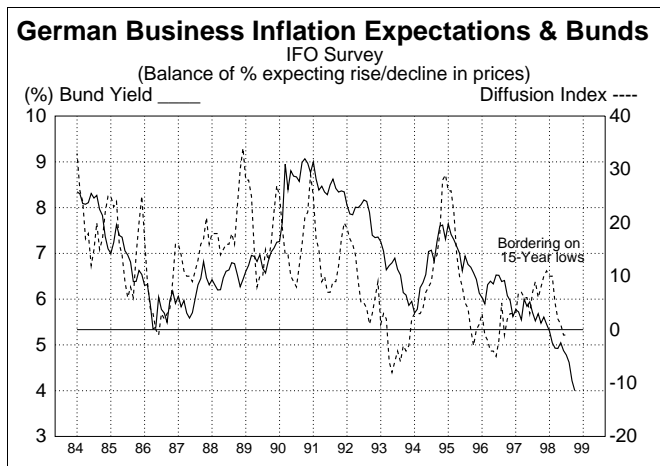
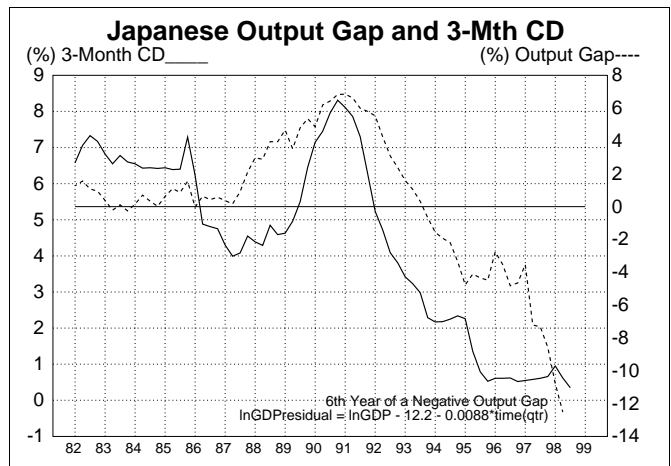


Exhibit 6



### 3. Merrill Lynch Monetary Policy Reaction Functions

One way to sift through the rhetoric and focus on the fundamental pressures on monetary policy settings is via simple monetary policy reaction functions (Taylor rule variant). We assume the rate targeted by the central bank is simply a function of three key variables, all entered at their optimal lead: 1) an indicator of whether the business cycle is above or below its non-inflationary level; 2) the year-on-year inflation rate; and 3) the equilibrium real rate seen consistent with trend growth.

The monetary policy function can be viewed as a feedback rule. Monetary policy will be tightened when output is above full potential levels and inflation is rising. Business cycle effects are captured through either the explicit unemployment rate or growth in GDP, or alternatively an unemployment rate or output gap using either the Hodrick-Prescott filter or time trend approach (depending on which terms were more significant).

Inclusion of the equilibrium real rate is based on the presumption that there is some level of real short-term interest rate that is consistent with trend growth, and that policy should be adjusted so as to maintain a rate consistent with potential growth. A four-year moving average was used as the long-run proxy because of the variability in the real rate.

Note, the model's main use is for the likely direction policy will take, and it is not intended to generate a precise forecast of the short end. Further, the variation in the targeted rate not explained by these drivers (movement towards the upper and lower standard errors in our models) helps determine whether policy is becoming more restrictive or accommodative. Finally, rather than assigning fixed weights to the variables, as has been done in the past (Taylor rule), we estimate the response coefficients in an unrestricted manner.

Looking at the results from our models (Exhibits 7-12), it is clear that monetary policy settings on average appear tight. Furthermore, the U.S. reaction function suggests a fifty basis point easing over the next six months is not an unlikely proposition. How can this be so?

The two key variables in the model are inflation and the non-accelerating inflation rate of unemployment (NAIRU). With the best now over in the U.S. labour market, a gradual move back towards a 5.0% unemployment rate will tip the NAIRU into a deflationary zone (see Exhibit 13 and 14). Also, as has been the case for a good part of two years, the upward pressure on rates from the tight labour market (and goods market) has been more than offset by positive effects from the low inflation environment (sub 2.5% levels). This will continue for some time. The same outcomes are prevalent in Canada, Germany and Japan. Monetary policy also appears slightly excessive in the U.K.

Finally, as we have been stressing for some time, the yield curves for the major industrialised nations point to a slowing in growth. The inverted slope of the U.S. yield curve (using the Fed Funds rate as the short rate) indicates the risks of a recession are mounting unless the Fed is quick to act. Applying a modelling technique known as Probit estimation, we can deduce the probability levels of a recession eventuating at various slopes of the yield curve. Using the current level of the 10-year Treasury and the Federal Funds rate, the probability of a recession is around 60% (in four quarters time) (see Exhibit 15 and 16). Given the fact the two-year bond is now trading almost 100 basis points below the Federal Funds rate and the results from the above analysis, the message is clear. The Fed needs to act soon.

# Monetary Policy Reaction Functions

Exhibit 7

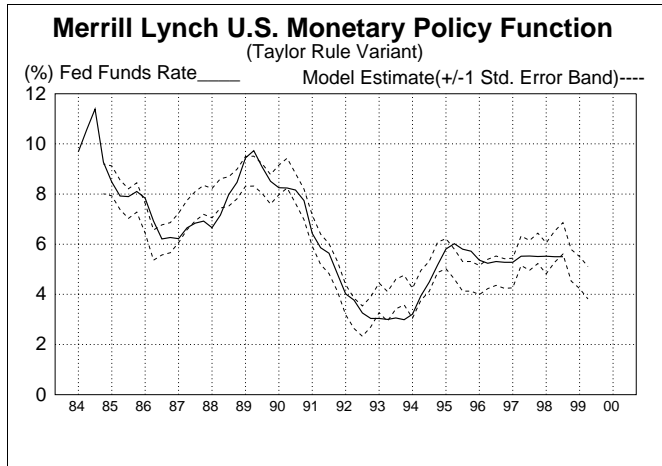


Exhibit 8

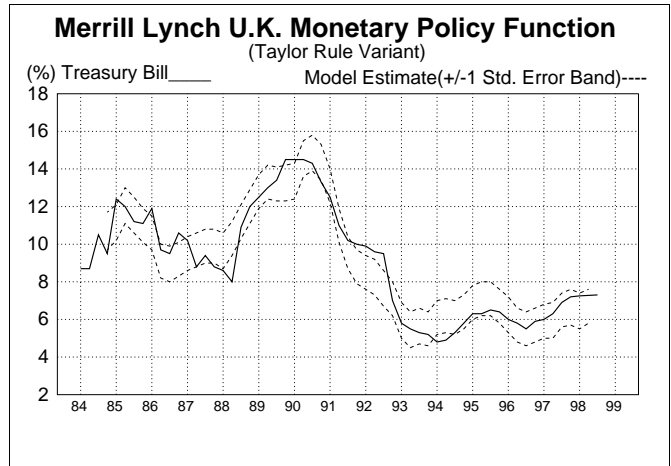


Exhibit 9

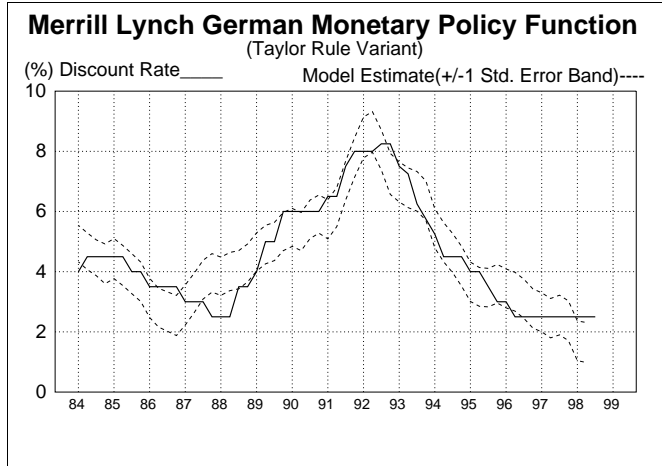


Exhibit 10

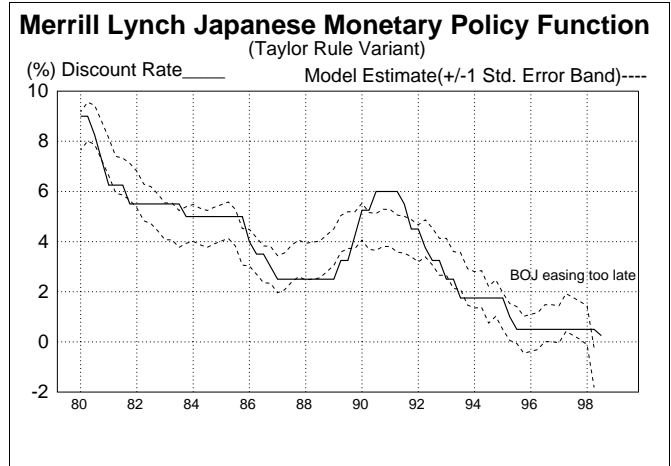


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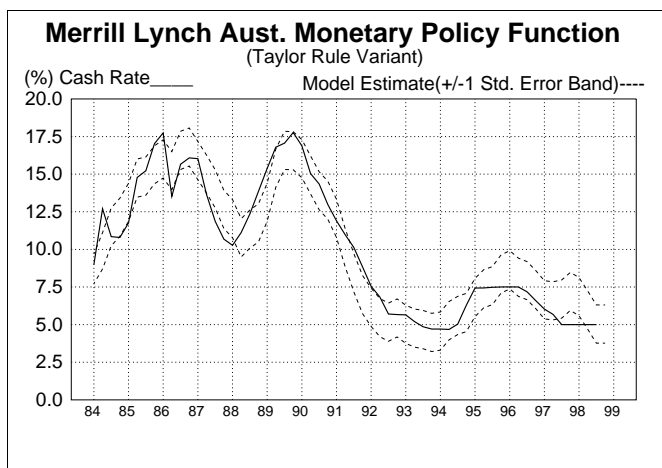
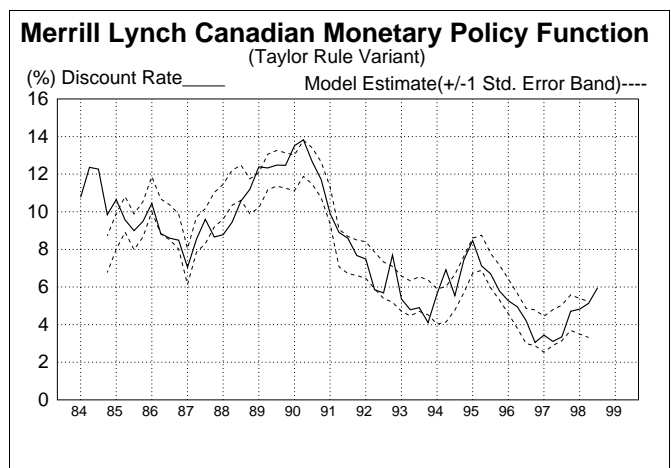
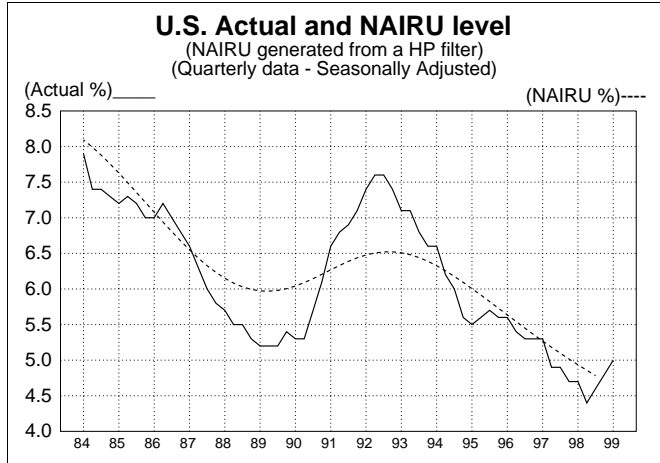
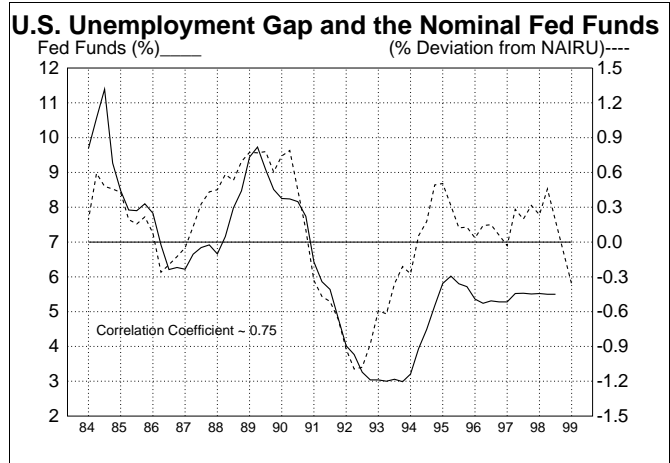
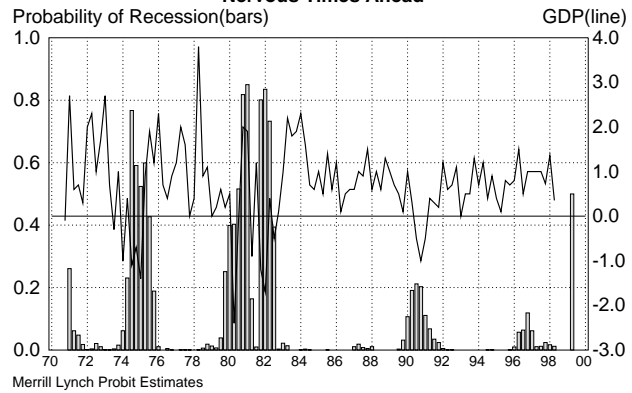


Exhibit 12



**Exhibit 13**

**Exhibit 14**

**Exhibit 15**

**Probability of a U.S. Recession**  
 GDP(Quarter-on-Quarter % Change) vs. Probability  
 Nervous Times Ahead



**Exhibit 16: Merrill Lynch Estimated Probabilities of a U.S. Recession**  
 (1971:1-1998:2 – Quarterly Data)

Slope of Yield Curve (basis points)	Probability of recession
120	0.04
75	0.10
45	0.16
20	0.23
00	0.30
-20	0.38
-45	0.48
<b>-75</b>	<b>0.61</b>
-100	0.70
-120	0.77
-180	0.92
-240	0.98

## 4. Yield Curves To Steepen Following Easings

The above analysis indicates that there may still be room for bond yields to rally going forward. However, a large part of the expected easings appear to have already been priced into bond yields.

Exhibits 17 to 20 show simple univariate regression results valuing bonds solely as a function of short-term interest rates. As can be seen, the large falls over the past 12-18 months have not been consistent with what short-term interest rates would have depicted. Hence, the rally has been led by the Asian crisis flight to quality arguments and the incipient disinflationary conditions that have surfaced. However, part of the decline no doubt is based on the assumption that short-term rates will be eased at some point in time. The discrepancies between the actual and predicted yield level based solely on the short-term rate are so large that even overlaying the flight-to-quality arguments, etc, some degree of easing must surely be priced into the market.

Simple regression analysis shows that short-term rates can explain around 50% of the movement in U.K. Gilts and around 75% for both Canadian and U.S. bonds. In other words, because these terms have not moved and yields have declined, the bond market has been extremely forward looking with respect to monetary policy.

Exhibit 17

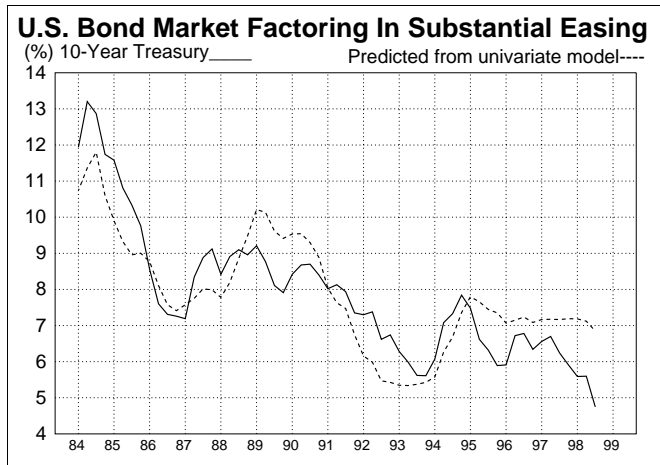


Exhibit 18

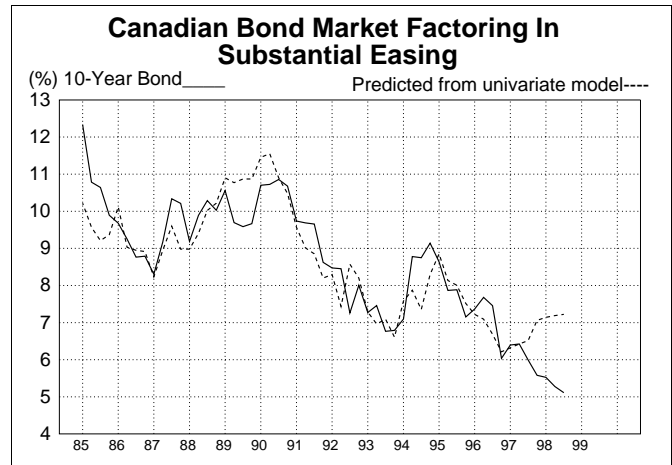
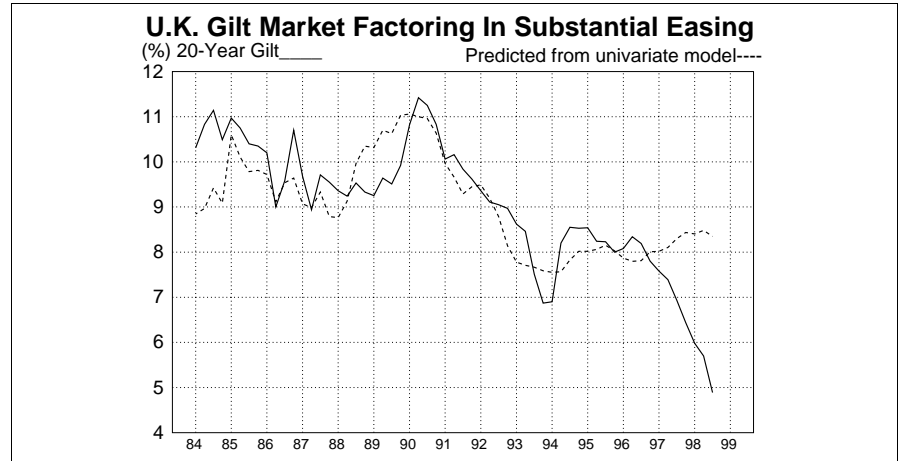


Exhibit 19





**Exhibit 20: Merrill Lynch Regression Results**  
 $\text{Long Bond}_t = \text{constant} + \text{Short-Term Rate}_t$ 

Country	Time Period	Slope Coefficient	Explanatory Power
Y.K. 20 Year Gilt	Q184- Q398	0.36	0.51
Canada 10 Yr Bond	Q184- Q398	0.52	0.75
U.S.A. 10 Yr Bond	Q184- Q398	0.85	0.70

Because the estimated response coefficients of bonds to short-term interest rates is less than one, a reduction in rates should still allow the bond market to rally, but with a gradual steepening of the yield curve due to the slope being less than one and the fact that a certain amount of anticipatory adjustment has already taken place.

So how should investors position themselves? We still believe that downward movement in yields is intact (G-7, including Australia and N.Z.), and given the degree to which bonds yields have fallen relative to the level of short-term rates, that steepening in the yield curves is likely to emerge.

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