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Oh wow, the strong German orders data this morning may prove important. Several months ago, I flagged a flattening of the German orders trend, wondering if this reflected slowing US growth and lower oil prices (the Mid East buy a lot of capital goods from Germany). This latest number suggests orders are rising again. If this is correct and the flattening idea was a false alarm, then a reason for an ECB pause is now gone. This suggests further upward pressure on global interest rates or, if the US employment report proves surprisingly soft on Friday, we could be set for another good run up in the Euro.

Meanwhile, as is often the case, Lee Thomas is thinking about the big picture. He wrote an interesting piece last summer on the dangers of the rapid growth of the derivatives market. In the piece below he develops the concept, suggesting that the FED is losing control of monetary conditions. - *Andres Drobny*

Who Controls Liquidity?*

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(*followed by a comment by Andres Drobny)

Summary

We can roughly divide the last century and a half of financial history into 3 periods. During the first, from 1865 to 1913, most credit was in the form of bank credit, and banks were unregulated. It was largely because of the frequent liquidity crises during this period that the Federal Reserve Bank was created in 1913. In the second period, from 1913 until roughly the 1970s, although most credit still resided with banks or savings and loan institutions (S&Ls), regulation was ushered in. Apart from the Great Depression – granted, a big disaster to exclude – there were few banking crises until the S&Ls were deregulated.

The most recent period, however, is different. Because of significant financial innovation, the debt and derivatives markets have usurped bank borrowing, substantially reducing the Fed's power to control credit growth. For this reason the modern era has similarities to the first period (1865 to 1913), when credit creation was unregulated and the financial markets were unstable.

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Liquidity Defined

"The functions of credit have been a subject of much misunderstanding and as much confusion as any single topic in Political Economy" -- J.S. Mill

Credit can indeed be confusing. Let us start by defining liquidity, as we will employ the term. Liquidity is simply how quickly an asset can be turned into cash (liquidated) at a predictable price. However, the term has evolved to mean something quite different. Commonplace observations, such as "the markets are unusually liquid" or "liquidity is driving asset prices higher" don't correspond to our classic dictionary definition of liquidity. In accord with the modern financial market vernacular, let's redefine liquidity to mean the ability to obtain the credit needed to quickly purchase goods, services, assets, or near assets. By near assets we mean things that are not strictly assets, but which give rise to the same economic exposures that assets do. An example is an interest rate swap, which is not itself an asset, but which gives substantially the same exposure to interest rates that a bond does. Another example is an S&P500 futures contract, which gives substantially the same economic exposure that buying all the stocks in the index does.

Historical Determinants of Liquidity

From 1865, when a unified currency was created, to 1913, when the Fed was created, liquidity was governed by the private decisions of bankers. Credit was equal to whatever bankers were willing to lend, subject only to the quantity of reserves they wished to hold. Bankers held reserves because of their sense of prudence -- there was no regulation, so liquidity was based on what bankers thought made good business sense.

If bankers and their customers were dispassionate, there would be no need for a Federal Reserve Bank. But human beings (bankers and their customers) are governed not only by dispassionate calculations of risk and return, but also by animal spirits. Thus, from 1865 to 1913 there were frequent banking panics. Because this period is not nearly as well examined as the post-war experience by today's market practitioners, we have selected a few quotes from the classic reference, *A History of Interest Rates*, by Sidney Homer and Richard Eugene Sylla (3rd edition, revised):

"The panic of 1873 ushered in another major depression." (p. 282)

"In 1884 there was a sharp financial panic." (p. 282)

"The panic of 1893 was marked by a collapse of the stock market and 600 bank failures." (p. 282)



"The last two decades of the [nineteenth] century were marked by a succession of political battles involving the currency and the banking system. Recurrent periods of monetary scarcity and abundance, with extreme volatility in the money markets and frequent financial crises, were unsatisfactory to all parties." (p285)

With the creation of the Fed in 1913, however, liquidity became governable. The Federal Reserve controlled the total quantity of reserves needed to support the banking system's liabilities. If banks were creating too much liquidity, they would run into the Fed's credit ceiling, and the Fed, at the stroke of a pen, could reduce liquidity. Conversely, if banks were creating too little credit, then the Fed could encourage them by supplying more reserves or by lowering the reserve requirement, pumping liquidity into the system.

Liquidity and Macroeconomics

In order to understand how the Fed's control of liquidity provides stability to the financial system, it might be useful to provide a brief review of some relevant monetary theory.

Although most market practitioners today were taught Keynesian economics in school, this offers only one theory of employment, interest, and money. Arguably, it is Austrian economics that explains recent history better than Keynesianism does, although Austrian economic theory is only a footnote in most economics text books.

But both Keynesian and Austrian economics owe much to the Swede Knut Wicksell, who emphasized the relationship between, in his terminology, the "natural rate" of interest and the "money rate" (the actual rate). For Wicksell, the money rate was determined on the financial side of the economy, and the natural rate was determined on the real side. At the natural rate, the supply of and demand for capital, savings and investment, are in equilibrium.

The supply of capital is savings, and the demand for capital is governed by the rate of profit that entrepreneurs can earn by investing. (Recall that Keynes emphasized that the demand for capital is determined by what entrepreneurs *think* they can earn by investing; Austrians took this as a *known* variable based on a physical 'production function', in order to emphasize the role of monetary factors'.) If the actual rate of interest is driven below the natural rate (by too much liquidity), then savings decline and entrepreneurs can earn excess profits by borrowing at the money rate of interest and investing in capital goods. Today it might seem more natural to talk of investing in equities, which represent claims to capital goods. Stock prices rise, unemployment is driven down, and inflation is eventually driven up. And if the interest rate is set above the natural rate, the opposite occurs: savers save more and entrepreneurs are discouraged from investing, unemployment rises and inflation falls. Business cycles can be explained by the waxing and waning of liquidity.





Essentially, Keynes took Wicksellian economics in one direction, to explain business cycles. The Austrian school took it in another direction, and explain financial bubbles and resulting crises.

Keynes wrote about depression economics. For Keynes the demand for capital depends on entrepreneurs' assessment of what new investment will yield, not by some objective 'production function'. Suppose the natural rate is low, perhaps because entrepreneurs have pessimistic views about the profitability of new capital investments. Also, suppose that interest rates cannot be driven below the natural rate (the famous liquidity trap). In this scenario, prices fall and unemployment rises, and monetary policy is impotent to reverse the slump.

The Austrian school took Wicksell in another direction. As did Wicksell, Von Mises and Hayek argued that a liquidity glut drives the rate of interest below the natural rate, and this eventually leads to higher prices (inflation). But all prices do not rise simultaneously. Rather, capital goods are affected first, leading to excess profits and rising stock prices in this sector of the economy. At this stage consumer prices may be stable or even falling.

However, to quote Von Mises, "there is no way of avoiding the collapse of a boom brought about by credit expansion." Non-Austrian economists were optimistic during the 1920's, rejecting the idea that liquidity was too abundant by pointing to stable inflation. Just before the 1929 crash, Irving Fisher made his famous prediction that stock prices had reached a permanently high plateau. In contrast, many Austrian economists were predicting it would all end in tears.

Today's Austrian World

Events today are evolving as they would in an Austrian world, where liquidity is too abundant. For those inclined to ask about inflation, it is important to remember that for the Austrians, goods price inflation is a late cycle event. Asset price inflation comes first.

And for those who ask how can there be "too much" liquidity if the Fed controls bank liquidity, either: (i) the Fed is providing too much liquidity, or (ii) liquidity is being created outside the banking system. As for (i), think about the Funds rate at 1%. In our analysis, however, we prefer to focus on (ii), how financial innovation means that much liquidity is now created outside of the Fed's control.

Sure, the Fed still regulates the banking sector, and ordinarily banks' ability to expand assets is governed by the banking system's liabilities. However, where in the past banks generally held their assets (bank loans) until maturity, banks can now sell their assets to be securitized. *In other words, the debt markets substitute for bank credit.* Once loans



have been securitized, only two players remain: debtors and investors (who own their debts). Because the Fed and the commercial banks have been removed from the picture, debt creation depends on the quantity that securitized debt investors (not bankers) deem prudent to hold. For example, if such investors are willing to hold everything that New Century produces, there is no mechanism in place to block them from doing so. Liquidity – the ability to create debt and the associated assets – is effectively unregulated, just like before 1913.

But securitization is not the only innovation that has reduced the Fed's ability to control liquidity. Derivatives are another (see 'The Crash of 2008', Lee Thomas, **Drobny Guest Research**, June 26, 2006). Consider the position of an investor who wants to own stocks in a leveraged way. He once had only two choices, both of which were regulated. He could borrow from a bank and then invest the proceeds in the stock market, whereby the bank must reserve against the debt on its balance sheet. Alternatively, he could use margin, which is directly regulated. In either case, regulations hold the investor in check. Should the authorities feel the party has gotten out of control, they can take away the punch bowl.

Consider the same situation in today's world of more developed financial markets. A potential leveraged equity investor no longer needs to borrow from a bank, but can simply just buy an equity futures contract or enter into a total return swap. In either case the commercial banks are cut out of the transaction, thus effectively cutting out Fed oversight. The margin required to buy futures contracts or enter into a swap is small, so it is easy to take large positions, creating abundant liquidity. But if the Fed feels there is too much speculation, the most it can do is raise a single price, the Fed funds rate.

For an investor wanting to buy bonds with limited capital a similar situation occurs. Once the investor would have had to take out a loan at the bank, which would in turn have to worry about pesky reserve requirements. Today the same investor can receive on an interest rate swap, or buy bond and note futures. The Fed doesn't enter the picture.

The liquidity in our financial markets can be enormous, if by liquidity you mean the ability to obtain credit to buy assets, or take futures and swap positions. And the Fed cannot control this phenomenon. Even in the part of the financial system that the Fed does control (at least in principle), securitization renders regulation less powerful than once it was. The only thing the Fed controls is the Funds rate (and the bank reserve ratio), which is to say only one part of the credit creation process. As innovation has greased the machine, so to speak, the Fed has given up control in the process. Note, for example, the very Austrian type review of financial conditions in the late 20th century provided by our source, *The History of Interest Rates*:





"It might have been supposed that the spectacular growth of credit markets in the United States and elsewhere and the simultaneous improvement in market technology and economic know-how would have lead to a more stable range of interest rates. Quite the opposite occurred. The larger, more efficient credit markets served the free world's economies well for many decades, but at length their seeming ability to provide unlimited sums on request was overexploited." (p. 327)

Once upon a time, I would have applauded the idea that regulation of the credit creation process had passed from public to private hands. The invisible hand, I thought, would be better than the iron fist of regulation. But experience and history convince me that markets are manic depressive, veering from too much optimism to too much pessimism. Because commercial banks no longer control credit creation and the Fed no longer even effectively controls commercial banks, expect financial markets to increasingly resemble casinos. This is how Keynes, himself a very successful speculator and an early global macro player, described them.

Policy Implications

Arguably, if the Fed controls only one of the levers that can manipulate credit creation, it will have to push or pull that lever more firmly than it would if the slightest touch had a more substantial effect. In such a scenario, we can expect the Fed Funds rate to be manipulated more often and with greater vigour than it has been in the past. It is difficult to ignore the fact that the last time the Fed stimulated the economy, it felt the need to lower the Funds rate by a considerable amount.

However, we should be careful not to overstate recent history. After all, the rapid evolution in financial technology and the Fed's control of liquidity began to diminish as long as 40 years ago. And this time lowering the Funds rate may have had an exaggerated effect, as low, low rates ignited a fire in the housing markets. However, financial innovation has seemingly accelerated since the first steps to determine bank and S&L interest rates by supply and demand conditions, rather than by fiat. It seems likely that financial panics outside of the commercial banking system will become more frequent. The collapse of Long Term Capital management was not the first extra-banking panic, and it will almost certainly not be the last.

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Andres comments: There are still some missing ingredients here. Perhaps the biggest question is about recent stability. If the FED is losing control and potential financial market volatility is increasing, why then have we recently experienced a period of incredible stability, both in many financial markets (but not all...eg, housing) and, more generally, in economic performance? The falling amplitude of business cycles over the past 15-20 yrs also seems inconsistent with a world where animal spirits increasingly dominate decision making. Something still doesn't add up in all this.

Nonetheless, Lee's theory, about financial market overshooting, does seem to fit many facts. We have indeed experienced a series of financial crises, from the 1997-98 Asian/Russian/LTCM story to the bursting of the equity bubble in 2000, to the now unfolding property market/credit spreads story. So, far it's all worked out OK. But, we seem to be in the midst of a great experiment, where the monetary authorities have persistently tried to dampen the effects of a variety of financial busts from spilling over into overall financial market turbulence and, more importantly, into general economic performance. So far, so good. But, at the cost of future trouble and turbulence? Part of the Austrian story is that excessive debt build up will ultimately have to be paid for.

And, the theory helps explain how there can be such starkly different opinions on the outlook for financial markets generally and perhaps equities especially. Is liquidity still so abundant that the biggest risk is in fact another melt-up in asset values? Or, has asset market appreciation been such, that there is little the authorities can do to prevent an upcoming bust led by property? Both views have a considerable number of adherents; there is no consensus on this one. Or, go canvass a bunch of economists and check how many think US rates will be lower at the end of the year, and how many think they will be higher. There is an unusually wide dispersion of forecasts right now, even for this usually indecisive cohort! In a financial market overshooting world, it can be particularly difficult to define when the environment has turned.

Lee's theory has several other implications. It suggests, for example, that the current popular approach by the monetary authorities to change rates in a gradualist manner is likely to promote instability rather than ultimate stability. Gradualism may well prove to be a policy error. Monetary policy has become a more blunt instrument according to Lee's theory, and has thus led initially to excess liquidity and should eventually lead to a financial crash and economic payback for excess exuberance.

The theory also helps explain why the financial sector has boomed over the past few years, and why financial stocks have outperformed most other sectors by a long way since 2003. Especially in the US. But, if this is indeed an Austrian type of overshooting phenomenon, then it also warns that that financials are especially vulnerable to an unwind of the process.

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