



A Reverse Minsky Journey

I am often asked these days,

*“Where did all the liquidity go?
Six months ago, everybody was
talking about boundless global
liquidity supporting risk assets,
driving risk premiums to virtually
nothing, and now everybody is talk-
ing about a global liquidity crunch,
driving risk premiums half the
distance to the moon. Tell me, Mac,
where did all the liquidity go?”*

My short answer is that **liquidity is not a pool of money but rather a state of mind**. This answer is usually greeted with derision, or with accusations that I’ve forgotten everything we all learned about money supply (or was that money stock?) growth in college, floating into some kind of existential lacuna. Neither is true, though I do admit that I’ve never had much fondness for high-church monetarism, while having ever greater respect for what has become known as behavioural economics.

At the macro (systemic) level, liquidity is not about how many pieces of paper with pictures of dead presidents on them we have in our wallets, but rather about how much utility we derive from having them in our wallets. Or, as the cliché went in my youth in rural Virginia, liquidity is about whether the dead presidents are burning a hole in our wallets, or our pockets, as it were.

In today’s loosely regulated, globally integrated banking and capital markets, liquidity is about borrowers’ and lenders’ collective appetite for risk, a function of:

The willingness of investors to underwrite risk and uncertainty with borrowed money and the willingness of savers to lend money to investors who want to underwrite risk and uncertainty with borrowed money.

Thus, my friends, liquidity is a function of the state of our collective minds! And, no surprise, John Maynard Keynes taught us this verity long ago in **The General Theory**, published in 1936. Not only was Keynes a giant in macroeconomic theory, as I've written so many times on these pages, he was also a giant in behavioural economics, demonstrated with virtuosity in Chapter 12 of **The General Theory**, titled "*The State of Long-Term Expectation.*"

Conventional Wisdom Is Addicting

By Keynes' own admission, Chapter 12 was a "digression" from all the other chapters in **The General Theory** because its conclusions depended not on macroeconomic theory but rather "upon the actual observation of markets and business psychology." And in Keynes' observations, what he found most lacking among his analytical brethren was due consideration to the "state of confidence" of business decision makers, a matter to which, he said, "practical men always pay the closest and most anxious attention," but which economists did not analyse carefully,

"content, as a rule, to discuss...(only) in general terms."

Here is Keynes' seminal passage from Chapter 12 (yes, it's long, running to the end of Page 5, but powerful) on the nature of asset prices (stocks specifically, but the application is easily extendible to asset prices generally), conventional wisdom, liquidity and credit availability, or lack thereof (italics are Keynes'; underlines are mine):

"In the absence of security markets, there is no object in frequently attempting to revalue an investment to which we are committed. But the Stock Exchange revalues many investments every day and the revaluations give a frequent opportunity to the individual (though not to the community as a whole) to revise his commitments. It is as though a farmer, having tapped his barometer after breakfast, could decide to remove his capital from the farming business between 10 and 11 in the morning and reconsider whether he should return to it later in the week.

But the daily revaluations of the Stock Exchange, though they are primarily to facilitate transfers of old investments between one individual and another, inevitably exert a decisive influence on the rate of current investment. For there is no sense in building up a new enterprise at a cost greater than that at which a similar existing enterprise can be purchased; whilst there is an inducement to spend on a new project what may seem an extravagant sum, if it can be floated off on the Stock Exchange at an immediate profit. Thus, certain classes of investment are governed by the average expectations of those who deal on the Stock Exchange as revealed in the price of shares, rather than by the genuine expectations of the professional entrepreneur. How then are these highly significant daily, even hourly, revaluations of existing investments carried out in practice?

In practice we have tacitly agreed, as a rule, to fall back on what is, in truth, a *convention*. The essence of this convention – though it does

not, of course, work out quite so simply – lies in assuming that the existing state of affairs will continue indefinitely, except in so far as we have specific reasons to expect a change. This does not mean that we really believe that the existing state of affairs will continue indefinitely. We know from extensive experience that this is most unlikely. The actual results of an investment over a long term of years very seldom agree with the initial expectation. Nor can we rationalise our behaviour by arguing that to a man in a state of ignorance, errors in either direction are equally probable, so that there remains a mean actuarial expectation based on equi-probabilities.

For it can easily be shown that the assumption of arithmetically equal probabilities based on a state of ignorance leads to absurdities. We are assuming, in effect, that the existing market valuation, however arrived at, is uniquely correct in relation to our existing knowledge of the facts which will influence the yield of the

investment, and that it will only change in proportion to changes in this knowledge; though, philosophically speaking, it cannot be uniquely correct, since our existing knowledge does not provide a sufficient basis for a calculated mathematical expectation. In point of fact, all sorts of considerations enter into the market valuation which are in no way relevant to the prospective yield.

Nevertheless the above conventional method of calculation will be compatible with a considerable measure of continuity and stability in our affairs, so long as *we can rely on the maintenance of the convention.*

For if there exist organised investment markets and if we can rely on the maintenance of the convention, an investor can legitimately encourage himself with the idea that the only risk he runs is that of a genuine change in the news over the *near future*, as to the likelihood of which he can attempt to form his own judgment, and which is unlikely to be

very large. For, assuming that the convention holds good, it is only these changes which can affect the value of his investment, and he need not lose his sleep merely because he has not any notion what his investment will be worth ten years hence.

Thus, investment becomes reasonably 'safe' for the individual investor over short periods, and hence over a succession of short periods, however many, if he can fairly rely on there being no breakdown in the convention and on his therefore having an opportunity to revise his judgment and change his investment, before there has been time for much to happen. Investments which are 'fixed' for the community are thus made 'liquid' for the individual.

It has been, I am sure, on the basis of some such procedure as this that our leading investment markets have been developed. But it is not surprising that a convention, in an absolute view of things so arbitrary, should have

its weak points. It is its precariousness which creates no small part of our contemporary problem of securing sufficient investment.

A conventional valuation which is established as the outcome of the mass psychology of a large number of ignorant individuals is liable to change violently as the result of a sudden fluctuation of opinion due to factors which do not really make much difference to the prospective yield; since there will be no strong roots of conviction to hold it steady.

In abnormal times in particular, when the hypothesis of an indefinite continuance of the existing state of affairs is less plausible than usual even though there are no express grounds to anticipate a definite change, the market will be subject to waves of optimistic and pessimistic sentiment, which are unreasoning and yet in a sense legitimate where no solid basis exists for a reasonable calculation.

So far we have had chiefly in mind the state of confidence of the speculator or speculative investor

himself and may have seemed to be tacitly assuming that, if he himself is satisfied with the prospects, he has unlimited command over money at the market rate of interest. This is, of course, not the case. Thus we must also take account of the other facet of the state of confidence, namely, the confidence of the lending institutions towards those who seek to borrow from them, sometimes described as the state of credit. A collapse in the price of equities, which has had disastrous reactions on the marginal efficiency of capital, may have been due to the weakening either of speculative confidence or of the state of credit. But whereas the weakening of either is enough to cause a collapse, recovery requires the revival of both. For whilst the weakening of credit is sufficient to bring about a collapse, its strengthening, though a necessary condition of recovery, is not a sufficient condition."

Double Bubbles

Wow! And wow again! Keynes wrote those words some 70 years ago, and they are a near-perfect, and prescient description of what undergirded

dramatic United States growth in recent years: (1) asset securitisation, notably of subprime loans, and (2) the shadow banking system, defined as the whole alphabet soup of non-bank levered intermediaries.¹ The joint growth of these two beasts into double bubbles was grounded in the irrational belief, nay exuberance in:

- Borrowers' and lenders' presumption of indefinite continuance of the existing state of affairs, notably ever-rising home prices, regardless of ever-retreating affordability for the first-time home buyer,² and;
- Levered lenders' presumption of unlimited command over money at the (low) market rate of interest.

Those two presumptions, or conventions, in Keynes' lexicon, did indeed provide, as he intoned, "a considerable measure of continuity and stability." Conventional wisdom Rule 1 held that rising home prices would cover all lax, even fraudulent mortgage underwriting sins. Conventional wisdom Rule 2 held that the "depositors" of the shadow banking system, more properly known as asset-back

commercial paper holders, would forever roll their investments, content and confident in the low default experience of shadow banks' assets, per Rule 1.

In 2007, facts inconveniently neutered both of these Rules: Soaring early-payment defaults in the early months of 2007 on the 2006 vintage of subprime loans undermined Rule 1; and this summer, a *de facto* run on the shadow banking system (holders of asset backed commercial paper refusing to "roll" their holdings, demanding all their money back) undermined Rule 2 (see Chart 1).

Just as Keynes predicted, when the conventional basis of valuation for the originate-to-distribute (to the shadow banking system) business model for subprime mortgages was undermined, the asset class imploded

The Shadow Banking System Comes Out of the Shadow in the Brilliant Light of a Run

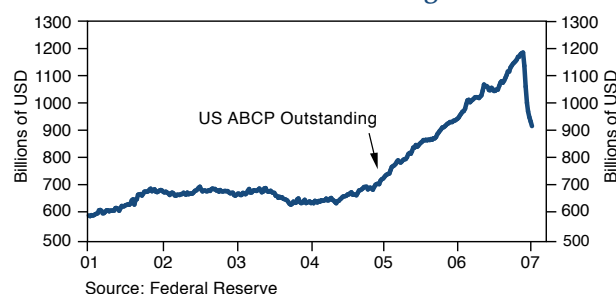


Chart 1

“violently.” And the implosion was not, as both Wall Street and Beltway mavens predicted, contained. Rather it has become contagious, first on Wall Street, with all “risk assets” re-pricing to higher risk premiums, frequently in violent fashion, and now on Main Street, where the housing recession is taking a new leg down, with debt-deflation accelerating in the wake of a mushrooming mortgage credit crunch, notably in the sub-prime sector, but also up the quality ladder.

Yes, **we are now experiencing a reverse Minsky Journey²**, where instability will, in the fullness of time, restore stability, as Ponzi Debt Units are destroyed, Speculative Debt Units are severely disciplined, and Hedge Debt Units make a serious comeback (remember, in Minsky terms, Hedge Units are the good guys!). Meanwhile, rather than speaking of endogenous containment of the bursting of the double bubbles, the mission of policy makers, notably monetary policy, is to exogenously **contain the contagion** – cutting off the fat tails of systemic risk on Wall Street and of recession on Main Street.

Bottom Line

I have high confidence that Fed Chairman Ben Bernanke understands every Keynesian word quoted above! I also have high confidence that he fully understands that a reverse Minsky Journey **lowers the neutral real Fed funds rate**, in mirror image of how a forward Minsky Journey lifts it. He and his colleagues demonstrated that understanding in the most powerful way possible: deeds, not just words, with a 50 basis point cut in the Fed funds rate to 4¾% two weeks ago, when the Street consensus was for only 25 basis points.

There are many, many basis points of easing to come, as time and credit market dynamics prove that liquidity is indeed a state of mind, not some abstract measure of the money stock or pool of money putatively on the sidelines, ready to be put to work. Liquidity is all about the appetite of investors to assume risk with levered money and the appetite of savers to provide such investors the leverage they seek.

And until the housing sector recession – with inventories half the

distance to the moon (see Chart 2) and prices deflating in most major markets (see Chart 3), with debt-deflation/defaults in the wake – has run its course, liquidity will remain both scarce and expensive, even if it notionally remains plentiful.

Remember, as Keynes wisely said:

“For whilst the weakening of credit is sufficient to bring about a collapse, its strengthening, though a necessary condition of recovery, is not a sufficient condition.”

Paul McCulley
 Managing Director
 3 October 2007
 mcculley@pimco.com

When the Offer Side of a Market Exceeds the Bid Side, Prices Fall

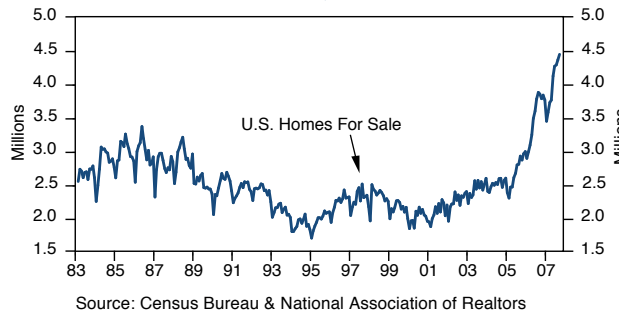


Chart 2

Price Deflation Begets Debt Deflation

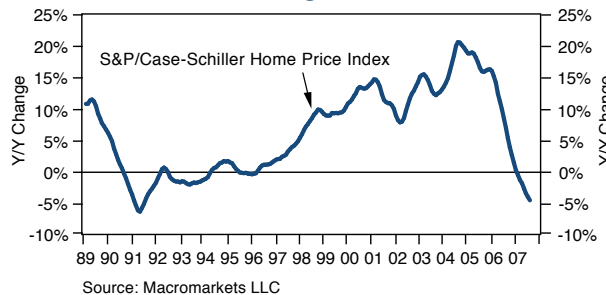


Chart 3

- 1 See September 2007 Global Central Bank Focus, “Teton Reflections” for more details on the shadow banking system. <http://europe.pimco.com/LeftNav/Featured+Market+Commentary/FF/2007/GCBF+Aug-Sept+07.htm>
- 2 See March 2007 Global Central Bank, “The Plankton Theory Meets Minsky” for a discussion of the decisive role of the first-time home buyer in housing market dynamics. <http://europe.pimco.com/LeftNav/Featured+Market+Commentary/FF/2007/GCBF+3-07.htm>

P I M C O

Amsterdam

PIMCO Europe Ltd

Amsterdam Branch

Schiphol Boulevard 315

Tower A6

1118 BJ Luchthaven Schiphol

The Netherlands

31-20-655-4710

London

PIMCO Europe Ltd

Nations House

103 Wigmore Street

London W1U 1QS

England

44-20-7872-1300

Munich

PIMCO Europe Ltd

Munich Branch

Nymphenburger Straße 112-116

80636 Munich

Germany

49-89-1221-90

PIMCO Europe Ltd, PIMCO Europe Ltd Munich Branch, and PIMCO Europe Ltd Amsterdam Branch are authorised and regulated by the Financial Services Authority in the UK. PIMCO Europe Ltd Munich Branch is additionally regulated by the BaFin in Germany in accordance with Section 53b of the German Banking Act and PIMCO Europe Ltd in Amsterdam is additionally regulated by the AFM in the Netherlands. The services and products provided by PIMCO Europe Ltd are available only to investors who come within the category of the market counterparty or intermediate customer as defined in the Financial Services Authority's Handbook. They are not available to individual investors, who should not rely on this communication.

Past performance is no guarantee of future returns. This article contains the current opinions of the author but not necessarily those of the PIMCO Group. Such opinions are subject to change without notice. This article has been distributed for educational purposes only and should not be considered as investment advice or a recommendation of any particular security, strategy, or investment product. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed.

The S&P/Case-Shiller® Home Price Indices measures the residential housing market, tracking changes in the value of the residential real estate market in 20 metropolitan region across the United States. In addition, the S&P/Case-Shiller® U.S. National Home Price Index is a broader composite of single-family home price indices for the nine U.S. Census divisions and is calculated quarterly.

No part of this publication may be reproduced in any form, or referred to in any other publication, without express written permission. © 2007, PIMCO.