



Economics 101

The Myth about the Reserve Balance

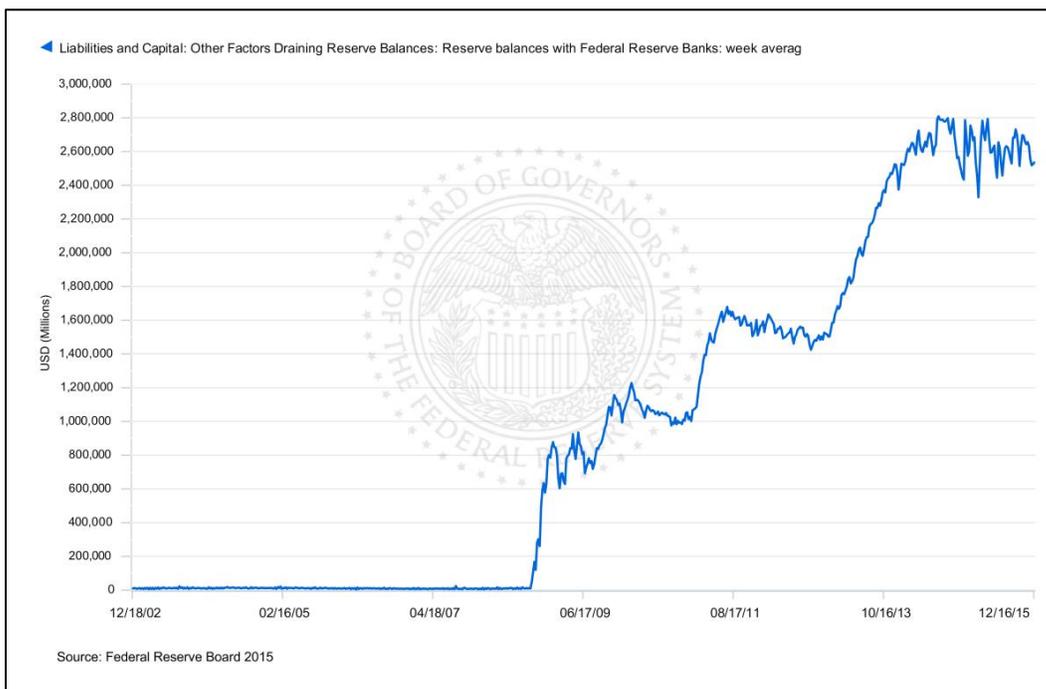
Foreword:

The *Reserve Balance* in the Federal Reserve Bank's (Fed) balance sheet represents the sum of all "sight deposits" held by member banks.

It is often contemplated that this large amount of some USD 2'500 billion mirrors the refusal of financial intermediaries to lend money in form of new credits to economic agents like households or corporates.

In the following we will explain how this *Reserve Balance* varies over time and show the mechanism behind. We will demonstrate that its size solely depends on the Fed's desire to expand or contract its balance sheet.

Finally, we will discuss what hidden risks are behind the huge mountain of the *Reserve Balance* and inform what alternative statistics can be used to measure the lending activity of banks.





The facts:

Let us start with a classical example:

Mr. Smith buys a house from Mr. Miller for USD 500'000. Smith finances his purchase through savings of USD 150'000 and a mortgage over USD 350'000, both accounts held with Wells Fargo. At the settlement date Wells Fargo transfers the contracted amount to Mr. Millers Citibank account.

What are the mechanics behind?

Wells Fargo sends a wire to the Federal Reserve Bank ordering to transfer the USD 500'000 to Citibank (for further benefit of Mr. Miller). The Fed debits Wells Fargo's and credits Citibank's account. The balance of all banking accounts held at the Fed remains the same. Or said differently - no change in the total *Reserve Balance*!

We can interchange the form of the above transaction using a purchase and sale of a security or any other corporate action but the combined sum of the *Reserve Balance* at the Fed still remains the same.

With the above in mind we then get to the question what else alters the stock of the *Reserve Balance* if it is not the demand for credit.

The answer is straight-forward: the size depends almost exclusively on the variation of the balance sheet of the central bank. Since the Great Recession in 2007 the Fed bought through the various asset purchase programs (Troubled Asset Relieve Program "TARP" and then Quantitative Easing "QE 1-3") fixed income papers from all the various economic agents: individuals, pension funds, insurance companies and banks/brokers propriety accounts.

These transactions increase on the asset side of the balance sheet the *Securities*-account and on the liability side the *Reserve Balance*-account by the same amount; latter mirrors new money issued by the Fed to pay for the purchases, as illustrated below:

Fed Balance Sheet as per December 31, 2006 (billions - rounded)				Fed Balance Sheet as per December 17, 2015 (billions - rounded)			
Securities	852	Banknotes	817	Securities	4'250	Banknotes	1'413
Others	52	Reserve Balance	7	Others	288	Reserve Balance	2'536
		Others	80			Others	589
Total	904		904	Total	4'538		4'538

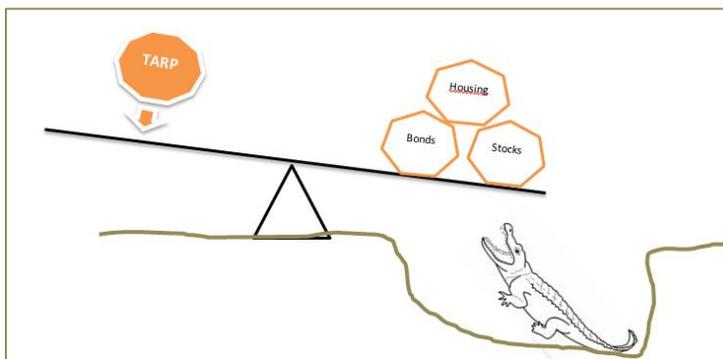
That brings us to the question how to reduce the sheer size of the *Reserve Balance* if and when this would be desired:

The Fed reverses its previous QE-transactions meaning that it must sell US treasuries respectively mortgage backed securities (Tsy resp. MBS) into the open market what will shrink the asset side of the ledger (*Securities*) and simultaneously debits the various member banks accounts lowering the *Reserve Balance*.

In other words, the majority of this cash mountain can only be reduced by reverting TARP and QE1-3. Latter programs have not only been responsible for a massive drop in short-, medium- and long-term rates but have been pushing investors into other asset classes, propping up equities and real estate prices, too.



Anyone's guess what would happen if the Fed decided to reduce its balance sheet...



2008: TARP "saved the world"

We studied research papers from Fed officials saying they do not need to lower the balance sheet but can sterilize the *Reserve Balance* through various alternative operations: it enters into reverse-repos, offers term deposits or even could issue own Fed-bills at a rate higher than what is offered on the *Reserve Balance* accounts. Banks would then switch funds from their regular Fed-account into such instruments what reduces free reserves limiting new loans. So goes the theory from academics but such operation have many pitfalls. Here some examples:

First, as cash would be drained from the banking system, the relative scarceness of short-term money will provoke upward pressure on short-term rates. Banks may then switch out of Fed-issued investments into higher yielding ones with similar duration and quality characteristics. Such private debt instruments, however, are again subject to the money velocity effect and therefore the Fed's ability to sterilize the *Reserve Balance* would be lost... unless, it starts offering an even higher rate than the private sector. Is this a *race to the bottom* with unknown ending?

In short, once the process of sterilization (draining reserves) starts it may become uncontrollable what leads us to the second consideration.

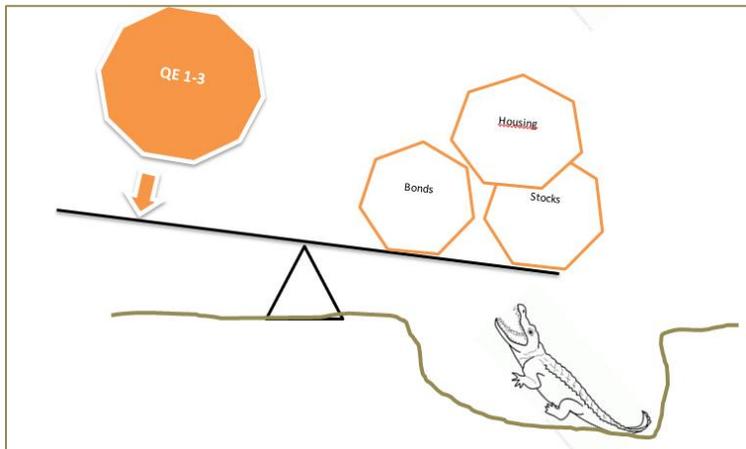
As the Fed then pays a higher rate to its creditors, its interest rate margin starts shrinking. Here, let's remember the meaning of *seigniorage*: a central bank issues money (think of non-interest bearing banknotes and coins) and places the proceeds into interest bearing instruments like government bonds. With respect to the US Fed it is important to remember that their "net interest income" is transferred to the US Treasury – in other words, instead of putting the benefits aside (as to building a buffer) it hands it over to the Government...

We estimate that the USD 4'200billion portfolio consisting of Tsy and MBS have a current yield of some 2.50% with a duration close to 10 years. Should therefore the interest rate cycle start going up, the margin would shrink and could eventually become negative! The Fed's tiny equity of USD 60bn would be eaten up in short time – and then?

Finally, when market yields surpass the current yield of the Fed's own portfolio it actually suffers from an *inverse seigniorage* or negative carry! Also, that would mean that the central bank would carry unrealized losses on its fixed-income book...



In this respect an increase in 10y US Tsy from 2.50% to 3.50%, i.e., would translate into a USD 400billion (+/-) loss. How likely is it that under such circumstances the Fed would start selling securities as to drain reserves while accepting a possible bond market crash and provoking even more losses on its book ?



2008-14: QE1-3 "sustained the financial world"

Going into 2016, we cannot exclude that the US central bank will try to immunize the overblown *Reserve Balance* but it may soon realize that such action will provoke further market dislocations and possibly its own solvency!

We question exit theories from Fed officials and anticipate harsh unintended consequences of a sterilization process!

Our recommendation:

Analysts and investors wishing to analyze economic growth patterns through bank lending statistics are better served consulting the *Assets and Liabilities of Commercial Banks in the United States (Weekly)* - H.8 published on a weekly basis.

Looking forward:

We explained that the size of the *Reserve Balance* is independent of commercial banks' lending activities. Only the Federal Reserve Bank itself can change this mountain of cash accumulated over the last 8 years.

How about the right size of the *Reserve Balance*?

Here, we would like to recall that the *Reserve Balance* together with *currency in circulation* (banknotes and coins) constitute the *monetary base* (also called *high powered money*); latter has gone up almost 5-fold since the Great Recession began in 2007, whereas GDP rose over the same period by only 25%. Expressed differently: the money stock grew much faster than the value of goods and services produced (gross domestic product – "GDP"). Isn't this the very definition for inflation as per Austrian school of economic?



Independently how we slice and dice the whole issue of Fed balances sheet respectively the *Reserve Balance* we always arrive to the same conclusion:

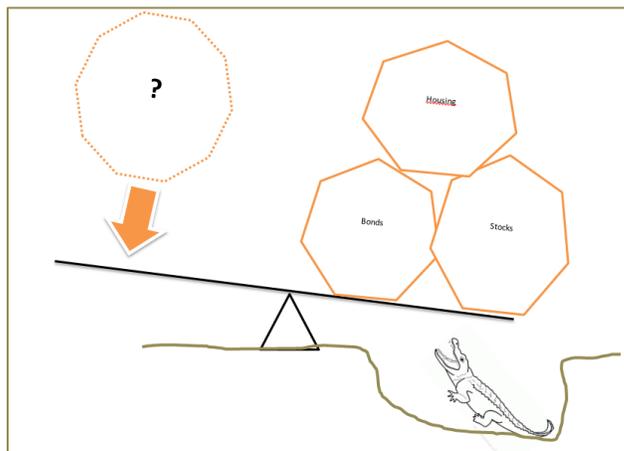
The US central bank through its various stimulation programs has provoked an upwards chain reaction in financial and non-financial assets over the last 7 years; today, valuations are rich to say the least and risks for another meltdown are mounting. Being aware of the negative feedback loop of falling household asset prices and economic contraction we therefore remain doubtful of the Fed's ability to meaningfully reduce the *Reserve Balance* without major dislocations in the cash, bond and stock market.

As we see the financial world, central bank's induced stimuli have only postponed the overdue realignment between debt and economic output – a record high “total debt/GDP” ratio speaks for itself.

And how likely is it that the Fed will acknowledge that its 8-years long money-printing experiment has failed and that it will decide to let markets find their own equilibrium again? If the answer to this question is “unlikely” than one should prepare for another gigantic QE as some leading economic indicators already point towards a new recession...

Then, at the latest, investors may finally learn the real goal of the Fed's activism: Creating *Main Street* inflation as to pump up nominal GDP with the aim to lower debt levels on a relative basis!

Historically, Gold, Silver and their mining stocks have always protected against loss of purchasing power. Also, the same investments show low correlations to common stocks and bonds. Luckily for investors, the time to buy such insurance has never been cheaper...



2016: Crocodile snapping coming?

@UrsGmuer
CH-Nyon, January 2016

Editor's note:

In the various “Economics 101” essays we almost exclusively refer to US economics and Federal Reserve Bank activities. The reason is that we claim that central bank policies are interconnected and obey to Gresham Law – “Bad money crowds out good money”. The theorem says that once country “A” (USA) starts printing money, countries “B-Z” have to follow suit or to suffer hardship.

Link: <http://www.federalreserve.gov/releases/h8/current/default.htm>
<http://www.federalreserve.gov/releases/h41/>