

## **M. Bacchetta, the Swiss Banking Association and the Economic science:**

### **An ill-assorted Love Triangle**

A reply to M. Bacchetta's article: "The Sovereign Money Initiative in Switzerland: An Assessment"

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"Nowhere do conservative notions consider themselves more in place than in currency; yet nowhere is the need of innovation more urgent. One is often warned that a scientific treatment of currency questions is impossible because the banking world is intellectually incapable of understanding its own problems. If this is true, the order of Society, which they stand for, will decay. But, I do not believe it. What we have lacked is a clear analysis of real facts, rather than ability to understand an analysis already given. If the new ideas, now developing in many quarters, are sound and right, I do not doubt that sooner or later they will prevail." John Maynard Keynes, A Tract on Monetary Reform, Harcourt, Brace and co, 1924, p. v-vi

**To Maurice Allais**

**Memorial Nobel Prize in Economics 1988**



**1911-2010**

**In Memoriam**

**Seventh Anniversary of his Death (09-oct-2010)**

**October 2017**

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## FOREWORD

The readers of this study will probably be surprised to see that the author has dedicated almost 80 pages to rebut an article of 30 pages written by M. Bacchetta. But the length is necessary to highlight the many mistakes, shortcomings, and serious misunderstandings about monetary economics – all appearing in this article written by a teacher in a prestigious University, the University of Lausanne. Also, it is a big concern to see how the vested interests in the banking sector are trying to deceive the Swiss people by threatening them on the one hand with the worst cataclysms, and, on the other hand, by trying to convince them that the so called “Economic Science” is on the side of their vested interests. The implication is that the supporters of the “Full Money” (Vollgeld/“Monnaie Pleine”/Sovereign Money) initiative are extremists with their heads in the clouds, ignorant of the “Economic Science”. This is in spite of the fact that in the past the promoters of such a reform were among the most brilliant economists in the history of economic thought.

So, after reading such an article, I decided to write a rebuttal not of a few of the arguments, but of all the arguments used by the author and to destroy them from A to Z, both theoretically and also empirically...hence the 80 pages.

For me, the imperative was to tear up the veil of scientism behind which its author and all the vested interests that sponsor him try to conceal themselves, and to denounce this article for what it really is: propaganda.

### Executive Summary

Sponsored by the Swiss Banking Association, Professor Bacchetta (Lausanne University) tries to discredit the Swiss People's Initiative which aims at depriving the banks of the power to create money (sight deposits) by the credit mechanism. The key idea of his article is: the Sovereign Money Reform is totally misguided because it aims to control credit by the control of money. He mentions new empirical evidence (mainly Schularick et al, 2012) which shows that credit and money are independent of each other and that the control of credit, not of money, is the key factor to avert crises. He goes so far as to say that money is not generated by bank credit, and he tries to prove it through his own understanding of graphs provided by others or by himself, which turn out to be either without economic meaning or with conclusion opposite to his.

In this reply it is shown that M. Bacchetta is not wrong in some of his statements but that all his line of arguments, theoretical and empirical, are groundless and devoid of economic meaning.

This is articulated in **four parts**:

- **He has not really understood the Sovereign Money Reform (SMR)** as various remarks show serious shortcomings. In addition, he tries to differentiate the economic consequences of the SMR from the 100% money reform (100% reserves on sight deposits), which is wrong as the two approaches are theoretically almost identical.
- **He has little understanding of the basics of monetary economics from the viewpoint of the money supply and the credit mechanism.** His explanation of the innocuousness of the creation of sight deposits by the banks is ludicrous as he refuses to acknowledge that they have the power to increase the liquidity of the economy. In addition, his inability to differentiate money and saving implies a total lack of understanding of the basics of the monetary dynamics.
- **He has no clue of the basics of monetary economics from the viewpoint of the demand for money and the adjustment process of the economy to the changes in the money supply and the demand for money** His remarks and assertions regarding the demand for money and the "cost of holding money" in the case of Sovereign Money Reform show a nebulous understanding of these concepts which are key in monetary economics. And, of course, based on these misunderstandings, his explanation of the adjustment process between money demand and demand supply is simply incorrect.
- **Based on such weak economic underpinnings, the empirical investigations, calculations and quibbles of M. Bacchetta are flawed and, unfortunately, could trick the reader into making incorrect conclusions**
  - The empirical evidence provided by M. Bacchetta is demonstrated to be inaccurate; be based on misunderstandings; and show the opposite of what M. Bacchetta intends to show. In addition, the econometric analysis is very poor.
  - The calculations made to prove that the SMR is costly use tricks to lead the reader to false conclusions (for example: selection of a specific period to inflate the costs; and ignoring important factors) and these calculations are flawed whatever the aspects considered. In fact, the "economic rent" linked to money creation that the Swiss Community would recoup after a SMR should amount to at least 1.5% GDP.
  - The final quibbles brought by M. Bacchetta are very often without any rationale or documentary evidence and appear to have the aim of scaring the non-economist readers. They can be summarized in five questions:
    - ✓ Does the reform undermine the independence and the solidity of the central bank?
    - ✓ Would the monetary reform jeopardize the efficiency of the monetary policy?
    - ✓ Does the monetary reform break the taboo of no-coordination between monetary policy and fiscal policy?
    - ✓ Would the monetary reform be an issue for the financing of credit banks and of the economy in general?
    - ✓ Would a SMR cause problems in particular cases: the euro, the wholesale funding, the liquid alternative investments?All of these are discussed in depth and M. Bacchetta's (sometimes implicit) criticisms are totally rebutted.

**As final conclusion, we hope that the reader will be able to see through the shortfalls of M. Bacchetta's study, which appears to have the aim of defending those with vested interests in the status quo by the use of arguments to threaten, scare, deceive and delude. We hope the common sense of the Swiss people will prevail as it did with their forebears in 1891, expressed by: The power of money creation and its benefits belong solely to the people, not to the banks!**

## INTRODUCTION

With the publication of the M. Bacchetta's study, the Swiss Banking Association, after several failed actions against the people's initiative "Full Money", is trying to play a new card with a "scientific" flavor. It has sponsored a Professor at Lausanne University to find new arguments in order to discredit the Swiss citizens' action.

M. Bacchetta takes a subtle approach based on a scientific appearance, with some mathematical formulas and some calculations to aim to show that a SMR would give a small gain for the State, a significant loss of welfare for the money holders, and an erosion of the banks' profit margins. All estimates of these are below one percent per year and a mere one decimal to give it a serious tone (+0.5% for the state, -0.8% for the money holders, -0.5% for the banks). In addition, through some insidious remarks, the author tries to discredit the proponents of the monetary reform by questioning their academic credentials (Huber and Robertson) or their economic knowledge, and even their reasoning capability (the others in general).

As we are going to show, the inconsistency of M. Bacchetta's paper should not have required any reply in normal times. But, in the context of the people's initiative, it is necessary to give an appropriate answer in order to avoid some people with little economic background to be taken in by such a kind of "study".

The rebuttal of the author's arguments, often very dispersed in his text, is done under four themes: (1) the proposals of monetary reforms, (2) the money supply and the control of economic trends, (3) the economic meaning of the demand for money concept, (4) the application of the monetary reform and its consequences.

We apologize in advance to readers well versed in economics as the return to basics is often necessary given the deficiencies of M. Bacchetta in various areas of monetary economics.

**I- The Monetary reforms: what are the similarities and differences between the various options? Some key views to address the shortcomings of M. Bacchetta.**

Monetary Reform to stop the scandal of a money supply created in private interests has been promoted by the most brilliant economists in the History of Economic Thought (and among the “youngest “ones by several Nobel Prizewinners including Friedman, Stigler, Allais...and even the most famous Keynesian theorist, James Tobin, in a soft version). M. Bacchetta does not question “their current knowledge in monetary economics... the many arguments inconsistent with empirical evidence or with economic logic” (p.1) or argue with their logic. Instead, he tries to differentiate their version of monetary reform from the version proposed by the Sovereign Money Initiative and to discredit its main promoter, Joseph Huber (Huber & Robertson, 2000), because Joseph Huber is not an economist by his initial background (Sociology) and because this scheme has not allegedly received a lot of attention from the Economic Establishment which M. Bacchetta thinks he belongs to. In addition, being impressed by a recent article written by two economists working with IMF mentioning Chicago Monetary Reform in its title (Benes and Kumhof, 2012-2013), probably due to the aura of the Institution, he criticizes the Sovereign Money Initiative as being different from this one. Unfortunately for M. Bacchetta, as will be shown, all his comments are ill-grounded and prove that he does not really understand the scheme he intends to criticize.

***1.1 The full coverage of sight deposits by banking reserves (proposal called by I. Fisher: “100% Money”).***

In the initial plan elaborated by the economists of Chicago University (led by Henry Simons and Frank Knight) and promoted, sometimes with some changes, by a lot of prominent economists (Fisher, Friedman, Allais...among the most famous ones), the main target of the reform was to forbid any money creation by the mechanism of banking credit through one measure: the abolishment of the fractional reserve banking by the imposition of a full coverage of the sight deposits by banking reserves, that means monetary base solely issued by the Central Banks. In such a situation, the banking system would be unable to create money through the issue of sight deposits as it would be obliged to cover its position by borrowing immediately the amount lent to borrowers from the financial markets. So the sight deposits would continue to operate their role as a means of payment (money) but all the loans would be funded by true savings. In this manner, the two circuits, monetary payments and saving intermediation, would be totally disconnected with all the positive implied consequences: no systemic risk of collapse of the monetary system and, as a result, of the economy; full control of the money supply and the economic trends; and better efficiency of the economic system.

The first idea was to separate two departments inside the same bank to fulfill the different functions, following the old plan of Ricardo (creation of a new National Bank of England) which was the base of the Peel’s Act of 1844 for reforming the Bank of England. But, very quickly, under the impulse of Henry Simons, instructed precisely by this first experience, the plan was to split the institutions to operate

separately the two functions: money payments for the Money banks, and financial intermediation for the credit banks. Allais added another category to further strengthen the whole financial system: the investments banks for the riskiest operations, including the trading and speculative ones. For doing so, the main argument was: avoiding as much as possible the use of quasi-monies by the commercial banks to circumvent the new rules and continue their previous lucrative business by making loans through money duplication.

#### Initial situation (normal case)

Commercial Banks		Central Bank	
Banking Reserves	Equity	gold & Forex reserves	Equity
Loans & Investments  Other assets	Bonds & notes	Financial assets	Banknotes in circulation
	Time & saving deposits		Banking reserves
	Sight deposits	Other assets	Other liabilities

#### After reform 100%Money (normal case)

Money banks		Credit Banks		Central Banks	
account CB	Equity	Account CB	Equity & other capital	Gold & Forex Reserves	Equity
Banking reserves  (100% sight deposits)	sight deposits	Loans & investments	Bonds & notes	CB Loan	banknotes in circulation
			Time & saving deposits		Reserves money banks (100% sight of sight deposits)
		Other assets	CB loan to replace Sight deposits	Financial Assets	bank accounts
				Other assets	Other liabilities

Initial situation (Swiss case)

Commercial Banks	
Banking Reserves	Equity and Other capital
	Bonds & notes
	Time & saving deposits
Loans & Investments	Sight deposits
Other assets	

Central Bank	
gold & Forex reserves	Equity
	Banknotes in circulation
	Banking reserves/ accounts
Financial assets	Other liabilities
Other assets	

After 100% Money Reform (Swiss case)

Money banks	
account CB	Equity
Banking reserves (100% sight deposits)	sight deposits

Credit banks	
CB account	Equity & other capital
Loans & investments	Bonds & notes
	Time & saving deposits
other assets	

Central Bank	
gold & Forex reserves	Equity
	Banknotes in circulation
	Reserves Money Banks (100% sight deposits)
Financial assets	other bank accounts
Other assets	other liabilities

In the Swiss case, given the amount of banking reserves resulting from the policy of SNB to control the foreign exchange rate of the CHF, the reform could eliminate the liquidity in excess (all or the largest part) and the SNB loan would not be necessary.

## **1.2 The Sovereign Money Reform: Electronic Money versus deposits**

The Sovereign Money proposal follows the scheme proposed by Huber & Robertson (H&R) in 2000 which is an ingenious way to simplify the previous scheme by treating the deposits in the same way as the banknotes are treated in the present system.

Presently, when a holder of a sight deposit wants to get banknotes, he goes to his bank and requires it to change an amount of his deposits into banknotes. The bank debits his sight deposit and buys (or borrows) the banknotes at the Central Bank by using its own account with it. On the Central Bank side, the account of the bank (banking reserve) is reduced and the amount of banknotes in circulation is increased. There is no change in the amount of monetary base but only a change in its breakdown: less banking reserve (bank account with the Central Bank) and more banknotes.

In the new system called Sovereign Money, only the money issued by the Central Bank will be legal tender and used in the transactions and payments system and the banks will no longer be able to offer sight deposits to their clients. So the clients will require the banks to change their demand deposits into the electronic money issued by the Central bank (in the same way as for banknotes) and to keep it in specific accounts outside their balance sheets which will play the role of an electronic purse or electronic safe. The various operations can be analyzed as follows:

- For the holders of sight deposits: the changes are tiny as they will use their electronic purse/safe exactly in the same way as their sight deposits
- For the banks: They are requested to repay their debt on demand vis-à-vis their clients and to buy for them the new sovereign money. Thus they will have to use their banking reserves (Swiss case) held at the Central Bank or to borrow money from it (Normal Case) to comply with the new system<sup>1</sup>. Regarding their way of making business:
  - ✓ They can no longer make loans by creating sight deposits as they have to borrow the sovereign money in the markets;
  - ✓ They will have to treat the electronic money as custodians, in the same way as they treat securities held by clients in custodian accounts at present
  - ✓ They will become “pure” financial intermediaries.
- For the Central Bank: The accounts of the banks in its balance sheet will decrease to be replaced by the amount of the Sovereign Money in circulation (Swiss case) or the Central bank will have to lend banking reserves to the banks in order to repay their debt on demand-the sight deposits- (normal case). In this case, the new money in circulation would be counter-balanced by an asset of the Central bank on the banking system.

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<sup>1</sup> The practical details will have to be defined with all the parties in order to avoid any trouble in the transition process. The Huber’s view is the following: “Generally, the idea is to take all sight deposits off the banks’ balance sheets, declare them to be the Central Bank legal tender, and replace the position with a liability of the banks to the Central Bank-which can be dealt with flexibility, according to a covering agreement and principles on the redemption of these liabilities”



After Sovereign money reform (Normal Case)

Monetary Services Cies (MSC)
Electronic Money held by clients (ex sight dep.)

Credit Banks	
Account CB	Equity & other capital
Loans & investments	Bonds & notes
	Time & saving deposits
Other assets	CB loan to replace Sight deposits

Central Bank	
	Equity
Gold & Forex Reserves	Banknotes in circulation
	Electronic Money
CB loan to credit banks	Other bank accounts
Financial assets	Other liabilities
other assets	

After Sovereign Money Reform (Swiss case)

Monetary Services Cies (MSC)
Electronic Money held by clients (ex sight dep.)

Credit banks	
CB account	Equity & other capital
Loans & investments	Bonds & notes
	Time & saving deposits
other assets	

Central Bank	
	Equity
gold & Forex reserves	Banknotes in circulation
	Electronic Money
Financial assets	other bank accounts
Other assets	Other liabilities

So it is very easy to see that, if the lines of thought of the two approaches are different to some extent, they are formally similar in economic terms:

- ✓ The balance sheets of the central Bank are absolutely identical in both cases;
- ✓ The “electronic money” replaces the more complex scheme: banking sight deposits fully covered by monetary base (banking reserves) and is de facto the largest part of the monetary base itself.

Thus, the SMR scheme is an important conceptual breakthrough which will remain as the major contribution of H&R. But, regarding the economic reasoning: reasons and foundations of the reform, consequences and advantages for the economy and the society, there is basically no change. **The Chicago reform and the H&R scheme are basically strictly identical.**

In this context, it is difficult to understand the M. Bacchetta’s criticisms:

- **Difference between the historical project of monetary reform and the Sovereign Money project:** From the economic viewpoint, as it has been shown, there is no difference between the two representations of the same reform, so all the specific criticisms about the lack of discussions around the Huber’s ideas, in addition to being factually wrong, are ungrounded as all the economic literature about the “100% Money” or the “full coverage of sight deposits” is relevant. → **irrelevant**
- **“[SMR] goes one step further as it gives full control of sight deposits by the central bank”(p.1):** In fact, there is no difference as the CB has a total control of the amount of sight deposits in both cases → **irrelevant**
- **Due to the application of the SMR, the Central bank might be obliged to sell assets (p1-2,22):** This is not true. M. Bacchetta shows he is not at ease with the use of the balance sheets of the various institutions in the monetary system → **irrelevant**
- **“The reform implies that all sight deposits are backed by 100 percent reserves at the SNB” (p.14):** In fact, the transaction accounts will be themselves representative of the largest part of the monetary base in the new system, exactly as the banknotes are → **Irrelevant**

All these criticisms and remarks show that M. Bacchetta has only a vague idea of the project he is mandated to criticize, but what appears to be important to him is to knock the people’s initiative. The discussion of the Benes-Kumhof scheme will be another illustration.

### ***1.3 The discussion of the Benes-Kumhof version of the Chicago plan : another proof of the biases in the M. Bacchetta’s mind***

M. Bacchetta spends more than one page of his paper comparing the remarkable work of two economists from the IMF, Jaromir Benes and Michael Kumhof (B&K), about the potential consequences of the implementation of a Chicago-Plan Type in the US, with the SMR. He focuses on two main concerns: (1) dissociating the IMF from the project of monetary reform to avoid the prestige of the Washingtonian Institution being used to help promote SMR in Switzerland and (2) trying to demonstrate that, even though the conclusions of B&K based on the application of a DSGE model were strongly in

favor of the reform, it was not applicable to Switzerland due to the specificity of the country with regard to interest rates and, in any case, it was a project different from the SMR and, therefore, its potentially beneficial results could not be transferred to the latter one. A lot of efforts for a secondary matter!

The SMR Committee mention the article is written by economists from the IMF (rather than some other institution) to show that they are serious high-status mainstream economists. This adds credence to the results modelled by the two economists (B&K). Quoting from their article:

“We study Fisher’s four claims by embedding a comprehensive and carefully calibrated model of the US financial system in a state-of-art DSGE model of the U.S. economy. We find support for all four Fisher’s claims, with the potential for much smoother business cycles, no possibility of bank runs, a large reduction of debt levels across the economy, and a replacement of that debt by debt-free government issued debt” (BK,2013,p.8)

All these features should be of great interest for everyone because they show that the solutions of the problems faced by our market economies should be probably sought in this direction.

But, at the same time, the SMR supporters (see, for instance, Huber, 2014), were criticizing, sometimes harshly, some aspects of the B&K design. As a matter of fact, to radically solve the problem of the creation of near-monies which could undermine the new organization after monetary reform, B&K encompass all the types of deposits (demand, saving, time) which would be backed 100% by reserves and this choice induces some consequences which appear contradictory with the revival of the market economies that the SMR supporters are targeting. The inspiration of the SMR initiative is in line with the initiators of the Chicago Plan: improving the functioning of our market economy, not to replace it! The B&K plan is a new proposal on its own with a flavor of “dirigisme” which a lot of SMR supporters cannot agree with.

Incongruously, M. Bacchetta does not criticize at all the B&K plan per se (so can we assume that he agrees with its conclusions, at least for the U.S?). What he wants is to build a fire wall between the B&K plan as applied to the US and any project of reform in Switzerland and, for this purpose he makes several remarks in order to differentiate Switzerland from the U.S.

The first one is the following:

“One feature is that the Swiss economy is currently in a liquidity trap and the existing amount of central bank reserves is already very large. *The monetary reform would not increase substantially the reserves at the Central Bank*” (p.13)

It is clear that the second part of the sentence has no meaning. As it was seen above, the implementation of the monetary reform would induce the absorption of the most part of the excess reserves, perhaps all, and it would be a good opportunity for the Central Bank to take control again of the Swiss Monetary Policy.

The second one is:

“Another key feature is that Switzerland is an open economy. This has several implications. First, the real interest rate is strongly influenced by foreign interest rates.....” (p.13)

At first view, it is a remark which could be accepted, but a good economist would have immediately added some precisions because it is void without them:

- ✓ Monetary policy in general is constrained if there is a “dirty” floating exchange rates policy (or, even worse, a fixed exchange rate policy) as Mundell (1963) demonstrated with his famous dilemma. If the exchange rates are free, the monetary policy could be independent<sup>2</sup> (at least in theory, see below)
- ✓ If the benefits of the monetary reform are as great as estimated by B&K (higher growth, no inflation....), as M. Bacchetta implicitly agrees with, it would be detrimental to the Swiss people not to impose some restrictions to the free circulation of capital flows as Hélène Rey (2013) is proposing on a global basis now to avoid the catastrophic effects of the liberalization of capital implemented during the 90’s under the impulse of socialist economists turned adepts of ultra-liberalism (Abdelal, 2007)

The last remarks are also totally irrelevant.

“....Second, banks can easily change their assets and liabilities by changing their positions with non residents. There is currency substitution and alternatives currencies, mainly Euros and dollars, can be used for transaction purposes” (p.14)

It is difficult to understand these arguments. Foreigners buy CHF and Swiss financial assets to protect their wealth against the depreciation of their own currencies. In the implementation process of SMR, what could be the advantages for these foreigners to hold other currencies? Compared to the other banking systems (without SMR), the Swiss one would become unsinkable. Compared to the other countries, the control of the economic situation would be improved and the surest countries do not pay interests on the transaction accounts. Using foreign currencies for transaction purposes in Switzerland would amount to put oneself at risk regarding the exchange rates.

#### ***1.4 The strange silences of M. Bacchetta about other works which are not supporting his case***

Strangely for a person who considers himself to be taking a scientific approach, his article, sponsored by the Swiss Banking Association, does not refer to any other works which show that the SMR is a viable response to the instability of our financial system.

##### **➤ The work of Van Egmond and de Vries**

Yet an important work undertaken in the Netherlands is very significant for Swiss citizens in view of the similarity of the two countries. Two economists of Utrecht University, Klaas van Egmond and Bert de Vries (2016), have built an economic model along the lines of neo-classical theory, “to describe the most important mechanisms governing physical output of goods and services in the economy in interaction with the financial system” (p.41) and thus to retrace the evolution of the Dutch economy from 1950 to 2010 for key variables.

The most important results are as follows (p.41):

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<sup>2</sup> The so called Trilemma of Mundell stresses the impossibility to follow the three following objectives at the same time: Independent Monetary policy, Fixed exchange rates, free circulation of capital flows.

- ✓ “The model can give a meaningful reconstruction of the overall long-term dynamic behavior of the financial-economic system”;
- ✓ “The current financial system appears to be fundamentally unstable” and they add: “lacking central coordination, (monetary) economic growth by decentralized money creation brings about the unjustified euphoric herd behavior of the many private banks creating too much money, in the belief of and speculating on an ongoing rise of asset prices. The central bank does not have the possibility to control the decentralized money creating process. The bank’s ability to determine the interest rate is not effective.”

So they undertook “experiments” to find out what would happen if the financial system functioned differently:

- ✓ “The model experiments show that money creation by the government, according to a “money creation rule” which is for example directed towards price stability and/or employment, indeed can stabilize the boom-bust cycle”
- ✓ The Full reserve-Debt free money system is less volatile than the current “money as debt-system”

This work is undeniably an important step in the fight for the reconstruction of a new market economy.

### ➤ **Kaoru Yamaguchi**

To overcome all the theoretical difficulties and all the shortcomings of the basic model used by the mainstream economists, the so called DSGE (Dynamic Stochastic General Equilibrium) model, which was unable to predict any major economic fluctuations, Yamaguchi has developed an Accounting System Dynamics (ASD) approach combining the principles of the system dynamics with the double entry accounting principles, in order to fully integrate monetary and real sectors of the economy. It is based on computer simulation modeling technique to analyze complex non-linear feedback systems and help in the design of policies to improve system performance (2017, p.72)

The main outcome of his research can be summarized as such:

“The current debt money system that creates functional money [demand deposits] ...turns out to be a faulty system...in the sense that it causes monetary and financial instabilities, followed by booms and busts, economic recessions, unemployment, income inequalities, and other issues” (2017,p.79)

Describing the driving force causing these system design failures in the current debt money system, he underlines:

- ✓ “it is the incessant motivation of bankers for higher revenues as their profits.....(2017, p92)
- ✓ “The problem lies in banking system itself which drives the business activities of banks into wild bubbles” (p.93)
- ✓ “it is the real sector of the economy that has to take the burden of servicing the excessive debt generated in the process, which in the end becomes the cause of crises” (p.93)

The only possibility to address the problems involved in the design of the fractional reserve banking is to follow the key recommendations of the Chicago Plan:

“The results of model show that the system under the Chicago Plan does become more stable and its implementation by-product, liquidation of government debt, is also shown to be attained concurrently” (p.126)

And he makes a mockery about the model favored by the mainstream economists, the DSGE model:

“A 100% reserve requirement proposal may seem farfetched and revolutionary in nature. However, it would restrain banks from creating money endogenously. DSGE models failed in predicting the crisis and explaining the anomalies, as they could not model the banks and financial sectors appropriately or adequately. Reforming the system on the basis of 100% reserves will, in fact, render the DSGE model useful for macro policy descriptions. Then reality will start to function like the model’s assumptions.”(p.126-127)

#### ➤ **Patrizio Lainà**

Following the seminal work of Godley and Lavoie (2006), Lainà tried to build a simulation model of the functioning of a full reserve banking based on a stock-flow consistent framework<sup>3</sup>. After modeling the behavior of households, firms, government, banks and Central bank and determining the way interest rates are endogenously fixed, the author can show:

- ✓ **In a steady state:** “in a full reserve banking system with no economic growth, both full employment and zero inflation are achieved. In other words, FRB does not in itself lead to a fall in employment. In addition, it does not cause inflationary-let alone hyperinflationary-nor deflationary tendencies” (2015, p.16)
- ✓ **In a new state with an injection of central bank reserves:** “An increase in central bank reserves translated into a two-thirds increase in demand deposits. Money creation through government spending led to a temporary increase in real GDP and inflation. Surprisingly, it also led to a permanent reduction in consolidated government debt.” (2015,p.25)

His conclusion is clear:

“The claims that FRB would lead to a credit crunch or excessively volatile interest rates were found to be baseless. At all times banks could grant all demanded loans to creditworthy borrowers by adjusting the interest rate on time deposits. An unusually large change in the money supply only led to smooth and relatively small changes in interest rates” (2015, p.26)

#### ➤ **The work of Krainer**

The other important work was proposed by Robert Krainer from Wisconsin University. In a very sophisticated and rigorous framework (2009, 2017), he shows that “in an economy where (1) investors hold rational expectations, (2) output is generated by a linear homogeneous production function, and (3) real investment is allocated across sectors according to the CAPM, **a fractional reserve banking is not Pareto efficient and amplifies business cycles**” (2017, p.107). And his conclusion is: “The policy implication of this analysis is that bank regulation should go further than the Volcker rule or the Vickers Commission proposal by restricting banks to currency and deposit accounts on the central bank. Non-bank financial institutions should then carry out the financial intermediation function now carried out by banks” (2017, p107). Exactly what the SMR aims to achieve!

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<sup>3</sup> These models represent the economy in terms of a balance sheet, where, by definition, liabilities and assets are balanced. The historical roots of these models can be traced back to the work of Morris Copeland (1949), who sought to find answers to fundamental economic questions, such as “when do total purchases of our national product increase?, where does the money come from to finance them?, when do purchases of our national income decline?, and what becomes of the money that is not spent?”. Those questions led him to lay the foundation of an approach that enabled him to integrate real and financial flows of an economy. Copeland introduced the quadruple entry system, which has become one of the crucial elements in the contemporary SFC models, in which someone’s inflow is someone’s else outflow, based on the double entry-system of accounting ( Yamaguchi et al, 2017,p.41)

## II- Money supply, credit and the control of economic trends: What M. Bacchetta has to learn

After trying fruitlessly to isolate the SMR from the other similar schemes, the bulk of M. Bacchetta's "study" is to attack the theoretical bases of the reform by questioning its assumptions and demonstrating their supposed inaccuracy to achieve its target that is, according to him, to control credit. Given the academic references of the author and his presumption as "a scientist", the readers could be expected to presume M. Bacchetta has a perfect knowledge of the monetary issues. They will be surprised to read what follows.....

### 2.1 First surprise: M. Bacchetta does not understand the way the money is created and its consequences.

It is necessary to report the paragraph here below in a full extent because it could be included in the collection of howlers of the economic literature.

*"At a purely microeconomic, partial equilibrium, level it is true that a bank can increase the quantity of deposits when it provides a loan. But, this is only true at the initiation of the loan. Consider a simple example: I ask a mortgage loan from my bank to buy a house. When my bank grants me the loan, the funds are available on my checking account. So that in this initial operation my bank indeed increases money. Then I transfer immediately the funds to the seller of the house who will see an increase in her checking account. But the seller does not want to keep these funds in her checking account, as it bears a low interest, and transfers them to interest bearing instruments of her bank (e.g. time deposits, bank bonds, saving account, etc). Therefore, at the end of the day my mortgage loan has no impact on the quantity of checking accounts and on M1. At the aggregate level, my loan is matched by an increase in interest-yielding assets of the seller" (p.6)*

Here, M. Bacchetta has neglected a few "small" things:

- By increasing the quantity of deposits, creating money from "thin air", the bank increases the purchasing power of the buyer as well, exactly as a counterfeiter would have done it by printing forged money, but the former is legal and the latter is illegal.
- By using this **NEW** purchasing power, the buyer is able to bid for a REAL good/asset, competing with the other buyers who are using their own saving (counterpart of a production already done) or borrowings from other savers (counterpart of revenues, that means: purchasing power coming from a realized production)
- The market equilibrium in this product/asset has changed without any other impact in other markets, so the **New** buyer can, thanks to this new money created by a bank, overbid the other buyers by pushing the prices up.

Without new money, any change in a market would have had an inverse impact in other markets so that the general price level would not have changed. With the injection of new money, the price level increases, reducing, others things being equal, the purchasing power of all the people but the beneficiary of the bank loan.

That is only the first stage because, of course, the initial deposit created by the bank is going to circulate further. Initially the seller receives the deposit as a payment for the asset he has sold and his cash

balances increases, in excess of what he wants to hold. So he will spend and he will invest, and all the receivers of money will do the same. All this money will increase revenues, spending, saving, hoarding of the agents in the transaction chain. At the end of the day, all this money has to be held because it can't be destroyed by non-bank agents and it will be held in the bank accounts under various forms, depending on the whims of their holders. But, is it possible to say, as M. Bacchetta writes, that nothing has happened because the balance sheet of the banking system is equilibrated anyway? Of course not. Everything has changed: income, spending, saving, prices. And all these changes have only one origin: the increase in demand deposits initiated by the bank "out of thin air".

Is it the end of the story? Of course not. Because the game is played at another level at the same time: The circulation of the banking reserves through the Bank accounts at the Central Bank. Other things being equal, when the seller receives his money, his bank sees its bank account at the CB credited as well. So it immediately invests its idle reserves by lending itself or buying assets in the markets and additional cycle starts again, reinforcing the first one.....

One more thing has been neglected by Mr Bacchetta, which, as the agent of the Swiss Banking Association, Mr Bacchetta should be fully aware of: the fact that interest is demanded on the loans made and that constitutes a part of the Banking product from which the bankers' incomes, bonuses included, depend on..... Interests taken away from money created from the "thin air". What a good business!

[In his article, M. Bacchetta mentions the mortgage markets. It could be suggested to him to look at the graph shown in page 35. This graph shows the correlation between the mortgage loans provided by the banking system and the price level in the real estate markets in Switzerland from 1985 to 2014. Some food for thought for M. Bacchetta!]

However, there is an even more serious problem. Behind all these errors and omissions lies a fact: M. Bacchetta, a supposed expert, has no clue about the creation of liquidity in an economy. He writes:

"To put in other terms, in general money is not generated by credit. This is confirmed by macroeconomic data" (p.7)

The reader might well ask, according to Mr Bacchetta, how the money in circulation is created if it is not by the commercial banks through the credit mechanism or by the Central bank directly. For reference, money creation is explained in an article published by the Bank of England itself (McLeay et al, 2014), a source beyond question.

The "empirical proofs" showed by M. Bacchetta to support his argument that money and credit are not linked will be studied later, because it is first necessary to address M. Bacchetta's confusion regarding his understanding of the notion of "Credit".



## ***2.2 Second surprise: M. Bacchetta has a nebulous conception of what the consequences of various types of credit are***

Linked to the 2007-2008 crisis and the situation of excessive debt which characterized it, a lot of economists are obsessed by the variable “credit”, which is acceptable provided that the phenomenon is correctly analyzed. It is not the case in M. Bacchetta’s study.

For him, if we follow carefully his way of reasoning, the way the loans are funded does not matter. At no time he does raise this question which means that, in his opinion, all the sources of funding are similar in terms of their economic consequences on the nominal income. Given what we have already noticed above, it is not so astonishing in that M. Bacchetta (1) does not know how the money is created by the credit mechanism and (2) pretends that any creation of demand deposits will be transformed miraculously in an “interest-bearing instrument” which will cancel the initial demand deposit and make the situation perfectly OK! M. Bacchetta fails to acknowledge the differences between a funding based on monetary or saving sources.

In the latter case, the saving source, the funds are extracted from an income and that means from a production already realized. A person has received an income and prefers not to spend it for his immediate needs but to invest it in a financial asset in order to benefit from the capital and the interests (returns) at a later date. What he does not consume immediately is used by another person (the borrower) who is engaged to return capital and interests at the end of the loan contract. So there is no change in the total spending of the economy as a whole.

In the former case, the monetary source, the purchasing power put by the banks in the hands of the borrowers has no counterpart in terms of revenues and therefore production. So they compete with the other economic agents to outbid them in the various markets they operate. One result is certain: the total spending increases and the economy has to converge to a new equilibrium. In case of unemployment, they could trigger an increase of production. In other cases, the probable outcome would be inflation or external imbalances.

So, hunting down the Credit (with a big C), as M. Bacchetta does, has no specific relevance if the funding source is not specified and, in the current situation, it is not easy because all the movements are intermingled. One thing is sure: Other things being equal, any operation made by a bank with a non-bank operator creates money by creating demand deposits. But at the same time, other operators make other choices:

- ✓ If they purchase goods, real or financial assets to a non-bank counterpart, the result will be a higher turnover of demand deposits at the global level (velocity of money ( $M1$ )) and a possible “decoupling” between money and credit;
- ✓ If they decide to save inside the banking system, they could move their sight deposits to deposits with a lower liquidity and in this case, some sight deposits will be “destroyed” and replaced by saving deposits without any change globally in the amount of credit registered in the balance sheets of the banks.

It is for all these reasons that interpreting the relations between credit and demand deposits, as M. Bacchetta does, has no meaning.

### **2.3 Third surprise: A complete misunderstanding of the real objective of the monetary reform...and of the monetary dynamics**

As M. Bacchetta ignores how the money is created and the differences between funding by monetary or saving sources and, therefore, has no ideas about the monetary dynamics, it is not surprising that he misinterprets the objectives of the reform. It is not because money is created by the banks through the credit mechanism that the purpose of the reform is to control credit as a whole. The problem is not to control credit but *to control the creation of additional liquidity* because this creation is the key factor which destabilizes the economic circuit from one period to another by injecting a new purchasing power in it without any counterpart on the production side, at least initially (depending on the employment of resources). The monetary reform aims at controlling the formation of nominal income and not the amount of credit which will be derived from this income.

#### **2.3.1 Some basic views of monetary dynamics**

That is the point totally missed by M. Bacchetta because he does not know what the two “sine qua non” conditions for any changes in nominal income (Y), as formulated by Maurice Allais in his reformulation of the Quantity Theory<sup>4</sup> are. Any change in nominal income ( $\Delta Y$ ) will depend on (1) a disequilibrium between actual and desired cash holdings ( $M - M_D$ ) and the change in money supply ( $\Delta M$ )<sup>5</sup>:

$$\Delta Y = (M - M_D) + \Delta M$$

Those conditions are the bases required to understand monetary dynamics at the macroeconomic level. As such, this equation is no more than an identity derived from the study of the economic circuit, a reformulation of the Quantity Equation formulated by Fisher. To become a theory with operational consequences, it is necessary to formulate explanations for the various variables included in this equation, a target which is beyond the scope of this reply. But, it is possible to use it to understand the dynamics of the system and the interaction between the two components.

In the course of the business cycle, any perceived improvement in outlook stimulates the impulse of the economic agents to borrow and propensity of the banks to lend - first to their less-risky clients and, afterward, to the others... This jump in bank lending increases de facto the money supply, namely the demand deposits held by the borrowers who will spend them in the markets (real goods or assets,

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<sup>4</sup> The Fisher's Equation:  $MV$  (Money Supply multiplied by the velocity of money) =  $D$  (total spending) =  $kPQ$  ( $k$ : proportionality factor,  $P$ : price index,  $y$  Nominal gross domestic product/income), that is an equation which defines the velocity of money:  $V = D/M = kPQ/M$  which was saying simply that the number of times a monetary unit changes hands per unit of time generated a flow of transactions in value terms in this period and, therefore, the national income, if the assumption of a proportionality between the former and the latter was made, once the intermediary stages of production taken into account.

<sup>5</sup> We will neglect, as most authors do, Allais included, the change in the circulation of promissory notes outside the banking sector because the statistics are lacking.

financial assets). The economic situation improves. At the same time, another factor interacts to reinforce the movement: the amount of desired cash holdings relatively to the income decreases, because people are more optimistic or interest rates are on an upward path. And so it goes on, until the peak is reached and the expansion process stalls. At that point, the deceleration and recession movement will develop.

In the present institutional environment, the biggest problem is the identification of the best indicator of liquidity (M1, M2, M3, ...Mn) as this is a psychological concept<sup>6</sup>: what part of his wealth does an economic agent consider as immediately available at a minimum cost to fulfill his spending plan without taking the risk of a temporary illiquidity in case of unexpected events.

With the Monetary reform, the situation of the economic agents would be radically different:

- On the control of the money supply/transactional Money: The Central bank would have a full control of its quantity and its trend so it would have all the tools to secure the monetary system and to stabilize the economy around its optimal growth path;
- On the stabilization and minimization of the relative desired cash holdings by the economic actors, several factors have to be taken into account:
  - ✓ The cost of holding cash would be more transparent than now, pushing them to minimize the transactional money
  - ✓ The smaller variability of the economy would reduce the relative need of transactional money for precautionary motive;
  - ✓ The stability of expectations for output and prices would allow them to manage more precisely their monetary assets.

So, the aim of the Monetary Reform is to address simultaneously the two key factors which could secure expansion and stability of the economic output and the price level: control of the money supply and stabilization of the velocity of money. This one of the beneficiary effects of Monetary Reform, but, not the only one.

### 2.3.2 A new institutional organization for more security and more economic efficiency

With the Monetary Reform, two circuits, which are consubstantially intermingled due to money creation through the bank credit mechanism, would be completely separated<sup>7</sup>: (1) the payment/transaction circuit and (2) the saving-investment circuit.

- **The payment/transaction money circuit:** The monetary base (electronic but of the same nature as banknotes) held by the economic agents in the MSC (Money Services Companies) would fulfill all the same operations which are done presently but in a complete security. Whatever the events in the other parts of the financial system, the transactions would continue to be made and the economic system would continue to work, in contrary to what could happen today if the

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<sup>6</sup> Gomez (2010)

<sup>7</sup> For a very clear and stimulating presentation of the case: Baeriswyl (Romain), 2016

State decides not to rescue a big bank about to go bankrupt. So all the moral hazard problem is evacuated.

- **The saving-investment circuit:** The circulation of the transactional money creates the nominal income generated by the working of the economy and the economic agents, at each stage, have to make their choices: spending, investing/saving/borrowing or hoarding. The role of this circuit is to channel the funds to be invested, whatever their maturities, to the borrowers. This circuit can be direct through financial markets (notes, bonds, stocks) or indirect through financial intermediaries which will be the role of the credit banks. So, a true market of all the loanable funds would be created without any interference of the money creation. This design would have two economic consequences:

➔ **More stability** as Fisher explains:

*“the growth of the country will be largely registered by the growth of savings and investments and these two (savings and investments) would keep more nearly synonymous than they are now; for the correspondence between them would not be so much interfered with as it is now-that is, interfered with in boom times by loans unwarranted by savings, and in depression times by savings hoarded instead of invested” (1936,P.111)*

➔ **More efficiency** for the economy as a whole as Fisher still explains”:

*“Interest rates would seek their level in a natural way according to the supply and demand of loans, and real rates would not be perverted by misbehavior of money” (1936,p.140)*

In this context, the Bacchetta’s assertion that “The SMR does not prevent “bank runs” on the banks (and even the Central Bank!) appear minor quibbles without any importance or consistency.

- Vis-à-vis the credit banks: M. Bacchetta forgets to remind his readers that, in any case, any “panics” could not have any impact on the payment system and therefore, on the global functioning of the economy. By design, the payment system in which only the money banks would be involved, would be immune because all the participants would be immune themselves. An important point to keep in mind which radically differentiates the situation under SMR from that which would prevail with the present situation. In addition, in the new organization, the interconnectedness between all the banking institutions, which has dramatically increase over the last thirty years with the development of financial markets, would naturally decrease because credit banks will have to fund their assets with stable resources. Furthermore, to reduce this interconnectedness even more, the separation between credit banks and investments banks (the most important users of this source of funds) could be envisaged as Maurice Allais proposed in his plan.

Anyway, in the new organization:

- The main funding sources would be notes, bonds or time deposits of various maturities based on contracts with clients, so a “bank run” would have no base;
- New Capital Adequacy Ratios would be fixed in accordance with the new situation (More stability than today, no demand deposits) but would have to remain at a significant level, at least in the first stage. Afterward, the market could take place to offer clients with all the mix between returns and risks;

- The banks would be monitored by supervision authorities and the rating agencies which would deliver ratings depending on their strengths and weaknesses as usual, so the customers would have complete information to make their choice.
- In case of bankruptcy, the resolution procedures could be quickly enacted avoiding the necessity for “fire sales”. Even in the worst cases (for example, the worst management as in the “Credit Lyonnais” case) it is difficult to imagine losses not being covered by the capital of the credit bank in jeopardy.

In brief, there is no risk of “bank runs” on credit Banks.

- Vis-à-vis the Central Bank: M. Bacchetta writes of “an indirect run on the Central Bank”, again to scare readers. What he continues to explain is well known in the economic literature but never called “bank run”, rather “a “flight to quality” or “an escape from the currency in circulation”. In the case of Switzerland this is ridiculous. Have we ever seen such a situation in a country with (1) a full control of the monetary aggregates, (2) a full control of the public finances, (3) a surplus in its balance of current payments? I leave the readers to think about such “enormity” and M. Bacchetta to review the Economic History of the World Economy! The reason he gives (diminishing assets on the balance sheet of the CB) is really very poor and it will be addressed at a later stage.
- The “cases” provided by M. Bacchetta:

Bit by bit, M. Bacchetta tries to sow doubts in the minds of uninformed readers by making references to some events, but without giving any details. In case he is unaware of these, we’ll go through them here.

➤ *The first case is related to the triggering of the financial crisis in 2007-2008*

“...It is true that the crisis could be viewed in the perspective of runs, i.e., quick withdrawals of funds... However, these runs were not on demand deposits. They started with the asset asset-backed commercial paper and then spread to money market funds and other financial institutions. Commercial banks were not strongly affected by a run on their checking deposits”(p 10-11).

As always with M. Bacchetta, what is the most interesting is what he hides ...or what he does not know. In this case, he does not know he is describing the defects and the intrinsic fragility of the same banking system he is defending harshly on the other hand in his article, but functioning without the deposit insurance scheme and the implicit guarantee of the State. As a matter of fact, the Money Market Funds are the key pillars of the “shadow banking system”, a pure creator of money, not by making loans directly but, according to the definition of Maurice Allais (1975), by duplication of cash which is, in fact, historically, the first form of creating money. It is precisely for this reason they are out of control by the monetary authorities.

The economic agents who deposit money have in hand shares which are totally substitutable to demand deposits (immediate liquidity and guarantee on the repurchase price) but earning higher interests. At the same time, these funds, which are “equivalent of money” for the depositors, are invested in the markets through direct purchases of “papers”, especially Asset-

Backed Securities (ABS) before the crisis, and Repurchase Agreements (Repos, which are loans collateralized by a note or a bond with an agreement on the repurchase). It is clear that, in the case of trouble regarding the quality of the underlying assets, it is impossible to guarantee the price<sup>8</sup> for such funds - which triggers a feeling of panic among the depositors, who will want to escape and get their money out as soon as possible.

Far from it, M. Bacchetta gives strong arguments to the followers of the initiative about the complete irrationality of the fractional reserve banking which is intrinsically unstable. It is clear that the implementation of a "Chicago plan" type monetary reform in the US would require the MMF exactly to be dealt with in the same way as the commercial banks, which would put an end to the Shadow banking system. Fortunately they do not play any role in Switzerland.

- *The second case is related to the Northern Rock Bank case, a former Building Society turned "investment bank".....*

The Northern Rock Bank (NRB) case left a lasting impression because of the pictures of queues of people outside the bank requesting the repayment of their deposits. But, it is difficult to understand why M. Bacchetta uses the case against SMR whereas it is a case that this reform should have precisely avoided. Remember the problem occurred at the very early beginning of the financial crisis in September 2007, long before the Lehman Brothers collapse. The SMR will not be able to prevent all the credit banks from being badly managed, as was the case with the NRB. The point is that its business model failed. The business model was: on the asset side, lending or buying mortgages loans in the market, repackaging and securitizing them before selling them in the international markets; on the liability/funding side, relying on short term wholesale funding (from other financial institutions) and deposits brought by the public, called "saving" to pay higher rates than the competition but... available on demand. An explosive cocktail! When the first difficulties to sell the "repackaged loans" occurred, NRB faced trouble in trying to raise funds in the market, and was obliged to ask support from the Bank of England. From this point, the NRB panic started because everybody, especially the Chancellor of exchequer (Alistair Darling), feared the "contagion" to other banks and a mass withdrawal of deposits.

Normally, the case of a failed business should be solved smoothly through a resolution procedure. But, in a fractional reserve banking system, any failure of a relatively big bank is a threat for the entire system, including the payment system, thereby necessitating the government to rescue the failing bank with taxpayers' money. In the design advocated by the

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<sup>8</sup> The expression in the US for such a case is "Breaking the buck". "On September 16, 2008, The Reserve Primary Fund [broke the buck](#) when its [net asset value](#) (NAV) fell to 97 cents per share. It was one of the first times in the history of investing that a retail [money market fund](#) had failed to maintain a \$1 per share NAV. The implications sent shockwaves through the industry." (Investopedia)

SMR, the situation would have been much easier to manage. NRB could have been allowed to fail in an orderly manner. Once again, M. Bacchetta chooses the wrong example.

- *The third and last case pointed out by M. Bacchetta is the Financial crisis in Iceland(!), “one of the largest observed in history” (p.11)*

M. Bacchetta has a strange way of reasoning. He uses all the major catastrophes caused by the own system he defends for attacking the SMR and asking: what would have the SMR changed? Apparently, as his economic culture does not give him the answer, he is appeased and, supported by the bankers, pursues tirelessly the defense of the financial system which is the cause of so many sufferings in the History (Reinhart and Rogoff, 2009).

It is difficult to answer as our expertise in the Icelandic economy is limited. But, at least four points have to be stressed:

- ✓ The Icelandic case is a perfect example of the complete failure of the economic theory and the implied policy, of which M. Bacchetta is an incense bearer, which has been developed over the last 30 years with the results that everybody could see now, and will see in the future because, unfortunately, it is not the end of the story and the malfeasance of these economists is still operating;
- ✓ If the SMR had been implemented at that time, it would have cut at least one important source of money creation in Icelandic currency: the interaction monetary base → lending and purchase of assets (financial and real) → creation of money → increase in velocity of money and so on.....(an answer that M. Bacchetta should have found himself!)
- ✓ For a small (very small indeed) economy, the acceptance by the political authorities, whose the goal was to transform Iceland in an International Financial center (Benediktsdottir et al, 2010), of gigantic (relatively) flows of short term foreign capital for only speculative purposes, was not only a proof of incompetency but also a criminal behavior<sup>9</sup>. In a world where the creation of money by the major countries is without limits, the freedom of circulation of short term capital flows cannot be maintained, a fact which is recognized by more and more economists (Rey, 2013)

The interest shown by the Icelanders for the SMR (Sigurjonsson, 2015) is a good final answer to the Bacchetta's question.

### 2.3.3 M. Bacchetta and the empirical data: an obvious lack of knowledge and understanding of monetary phenomena

Throughout his study, M. Bacchetta refers to empirical studies to give him the image of a serious “scholar” and to give it a flavor of “pure science”. And, concerning Switzerland, he proclaims a number of assertions that the readers are invited to take on trust, about the incompatibility of the advantages of SMR with the empirical evidence. Of course, everything is badly interpreted or, very simply, false.

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<sup>9</sup> An effective criminal behavior indeed as Benedicktdottir et al (2010) show it in the pages 14-17: “Looting the banks from the inside”

### 2.3.3.1 The empirical studies found in the economic literature.

Two articles are used in the Bacchetta's article: one, the Schularick & Taylor's (2009), on various occasions, and the second, the Jorda et al's (2017), just mentioned. M. Bacchetta's comments on these are interesting as they reveal his degree of reflection about the monetary subjects.

- The article of Schularick and Taylor: Credit Booms and Bust: Monetary Policy, Leverage cycles and Financial Crisis, 1870-2008 (NBER, 2009)

The purpose of this article is very ambitious, perhaps too much, because, at the end, it gives the impression of an exercise of "wild econometrics" (as Professor Maurice Allais called such kind of research) comparing dubious data (especially the monetary data) and incomparable and changing institutional environments<sup>10</sup>, without any theoretical reflections about the correlations observed by the authors. The graph shown triumphantly by M. Bacchetta (p.3) is the perfect example of an artifact, mixing choux buns, carrots and anything else, without any economic meaning but over-interpreted by people ignorant in monetary economics....in fact, simply in economics ....

Countries	Data (yearly):1870-2008	Financial Institutions
United States, Canada, Australia, Denmark, France, Germany, Italy, Japan, The Netherlands, Norway, Spain, Sweden, United-Kingdom	Aggregate bank loans and total balance sheet size of the banking sector +Monetary aggregates: M0,M1,M2,M3 +Output, inflation, Investment, stock indexes	Amount of outstanding currency domestic lending (excluding interbank lending) of: Commercial banks, savings banks, postal banks, credit unions, mortgage associations , building societies

As a matter of fact, the final results presented by the authors, even disputable, are trivial: The rates of change in credit over 5 years look a better performer to predict economic turning points and financial crisis than the various indicators of the money supply, much better than the narrower indicators of money supply, slightly better than the largest one, M3. They are trivial for two reasons:

- (1) For statistical reasons: The definition and the use of monetary aggregates and their components have changed over time while the category of loans is perhaps more easily recognizable and more stable; in addition, total credit is not affected by changes in the breakdown of financial assets between monetary and non-monetary institutions, but the monetary assets are.
- (2) For economic reasons as it is rather easily explainable: Firstly, because given the difficulty to define what is the "true" money for the economic agents (Allais, 1977), banking credit is perhaps the best indicator of its changes (For France, it was the opinion of Maurice Allais); secondly, based on the observed behavior of the economic agents regarding the way they manage their monetary assets during the business cycle, it is hardly surprising.

But, for some economists who have discovered the instability of the economy at the time of the 2007-2008 Crisis, it was apparently a revelation. According to them, we have entered in a new age: the "age of the decoupling between money and credit", "the age of credit" after the "age of money" and other dimness of this kind..... For them, Credit (with a big C), without making any differences among its

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<sup>10</sup> Personally, knowing in depth the French and the US financial systems, I have some difficulties to understand how it is possible to compare abruptly their functioning regarding money creation, financial intermediation, financial markets (direct financing).



sources of funding, has become the enemy, the monster to be controlled to avoid economic crisis, without any consideration to money supply<sup>11</sup>... For M. Bacchetta, the purpose of his support for this approach is clear: discrediting the SMR by showing it goes wrong in targeting the control of the transactional money supply while only controlling the amount of total credit is relevant.

Already, Joseph Huber (2017) has made a devastating critical analysis of this thesis. His five conclusions are:

- (1) "The general hypothesis of a decoupling of credit and money is muddled and definitely wrong with regard of bank credit and bank-money..... (they) are inextricably tied to one another;
  - (2) The empirics of the study are based on erroneous assumptions and a questionable database;
  - (3) What is actually empirically shown is ongoing overshoot, i.e. the GDP-disproportionate expansion of money, financial assets and debt, especially bank credit and bank money, with destabilizing consequences;
  - (4) The overall stocks of credit, financial assets, and corresponding levels of indebtedness exceed the banking sector's volumes of **primary** bank credit, in the **secondary** credit-that is financial intermediation among nonbanks on the basis of bank-money-creates additional financial assets and liabilities of nonbanks. These, however, remain essentially anchored to the stock of bank-money, because secondary nonbank credit does not normally create money of its own and cannot act as a substitute for bank-money, or only marginally so;
  - (5) The "decoupling" that has actually taken place is the loosening tie of bank credit (bank-money) to the central bank credit (central bank money), and thus a much reduced dependence of banks to central banks."
- (Huber, 2017, p.2)

In the general framework which is the watermark of this study, it is possible to describe the functioning of the economy during the business cycles in few articulated proposals to show that the economic fluctuations and, a fortiori, the economic crisis are linked to monetary causes, of which the money supply is the main factor, and that the fact of a "decoupling" is perfectly compatible with this approach:

- The credit funded by **"true" saving** derived from the current resources:
  - ✓ It cannot have any impact on the nominal income and be destabilizing as it is a transfer of funds already existing from a saver to an investor;
  - ✓ The only potential disruptive factor in this case is a misallocation of the resources due to a divergence between the "natural rate of interest" and the actual one (Wicksell, Mises, Hayek.....). **So, in this case, the only disturbing factor can be the excess in money supply/bank credit which create "false" capital in addition to the "true" capital coming from the saving process.** The resulting interest rate is thus lower than the equilibrium rate, pushing investments in the wrong directions.
- The credit funded by **monetary resources** (bank credit)

It is the first "sine qua non" factor of change of the nominal income, the velocity of circulation being constant. The new money, created from "thin air", is inserted in the economic circuit through the banking credit mechanism and it destabilizes the existing equilibrium between income and spending, pushing the national product in value terms to a new equilibrium level. In this process, the bank loans increase of course as they are the "first mover" ("primum movens") but the new money is spent and induces an increase in nominal income and, therefore, an

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<sup>11</sup> They do not know that, by the way, they are following several decades later, the views of the French bureaucrats who, to fight inflation in the 60's-70's, inflicted to the French economy during decades "an administrative credit rationing" (in French: Encadrement du Credit) because it was impossible to control money in a fractional reserve banking.

increasing saving of which a portion is invested in nonbanks which will transfer the money to other debtors. So the increase in nonbank assets is not incompatible with the money creation process. It is a consequence!

- The credit funded by **changes in the desired money holdings** (The forgotten factor in the analysis of Schularick and Taylor.....M. Bacchetta!)

It is the second “sine qua non” factor to move the nominal income and to change the composition of the asset portfolios, the money supply being constant. In this case, a decoupling between money supply and credit is quite possible, even necessary. In an upward movement of the economy, when people are more and more optimistic, they tend to reduce on average their cash holdings and to change their banking assets to other types of assets with an higher yield:

- ✓ They purchase goods
- ✓ They purchase notes, bonds and stocks and invest money in the nonbanks

So the global result is:

- ✓ An euphoric atmosphere in the economy;
- ✓ An increase in the assets located in the nonbanks and thereby an increase in the distributed credit, an increase in the liquidity of the issuers of market instruments which spend money in various uses.....
- ✓ ....and a stability (other things being equal) of the global money supply and the bank credit which is at its source.

**That is called: an increase in the velocity of money in monetary economics! (a reminder for M. Bacchetta)**

Needless to say, this third factor is very fragile because, at the top of an economic boom, everybody experiences a kind of euphoria: “This time is different” (Reinhart and Rogoff, 2009) and the desired cash holdings are at a minimum level (that means the level of credit is at its maximum). Some bad news and a change in the market sentiment could trigger at any moment the reverse process, more or less abrupt depending of what happened before and the health of the balance sheets. The mischance is that the attempt to increase the cash holdings has negative impact on everything: consumption, investment, asset prices.... So the people are less eager to borrow and the banks less willing to lend. And the course of the money supply is going to reinforce the impact of the increase in the desired cash holdings and to amplify the worsening of the economic situation.

There is no mystery in this movement and in the results of Schularick and Taylor, despite all the important limitations of their work. Once again, M. Bacchetta has mounted the bad horse to attack the SMR.... He will have to revise some assertions as:

“there are several hidden assumptions that run counter to our current knowledge in macroeconomics. For example, a major argument behind the sovereign money proposal is that controlling money allows the stabilization of credit. This in turn will stabilize the business cycle” (p.2)

“the defenders of sovereign money clearly worry about credit but they want to control it by controlling money. This perspective is inconsistent with empirical evidence” (p.3)

- The article of Jorda, Richter, Schularick Taylor: “Bank Capital, Redux:Solvency, Liquidity, and Crisis”

This article plays a very minor role in the Bacchetta's attack but it is interesting to know what he hides from his readers because this is at odds with the main message of his banking sponsors. They want to promote the incorrect idea "all the necessary reforms have been made and our banks are very well capitalized now. Let us make business as usual and get our high salaries and bonuses!"

The Jorda et al's article has a very interesting analysis aiming at answering two key questions:

"(1)...what is the long-run relationship between capital buffers and systemic financial instability?

(2).. Does more capital positively mitigate the social economic costs of financial crises?" (p.1)

M. Bacchetta does not care about that and prefers to stress an uninteresting remark regarding the "bank runs" on banking deposits for impressing the uninformed readers but for which the answer is obvious:

" Jorda and al. show that non-deposit bank liabilities rather than deposits, tend to predict banking crises" (p.10).

Answer: The deposits are covered by an insurance policy and, implicitly, guaranteed by the State, while the other liabilities are not.

More important are the conclusions of the study of Jorda et al. concerning the impact of high capital ratios on the stability of the banking systems because they destroy all the arguments of the bankers and of their voice in this country: The federal Council! They are twofold:

**(1)"Over the long time span, our first finding is that, perhaps counterintuitively, the capital ratio is not a good early-warning indicator or predictor, of systemic financial crises. Rather the evidence suggests that regulators should focus on credit booms as the best signal to watch....."**

**(2)...So the evidence suggests that higher capital ratios in banking systems can bring about more resilience: not of the banks per se, but of the wider economy" (p.10)**

It is exactly the arguments of the promoters of the SMR: The banking system is intrinsically unstable and the higher capital ratios are not only costly for the economy but, in addition, they do not address efficiently this defect beyond remedy. This system has to be rebuilt on a new base, what the SMR proposes: It will be totally stable and a lot of capital could be saved and used in more useful purposes.

#### **2.3.3.2 *His assertions about the monetary developments in Switzerland: Incompetency or deliberate lies?***

The assertions, most often based on alleged empirical observations, are numerous in M. Bacchetta's paper. Even, sometimes, he ventures to show one graph with some comments. Unfortunately for him, in both cases, the readers are puzzled either by the misinterpretation or by the deliberate lie. It is what we are going to show with more empirical evidence which, all, supports the SMR.

- The relationships between money supply (M1 or M3), credit (Cr) , interest rates (k) and nominal income(Y): A proof of decoupling, really?

M. Bacchetta shows a graph describing the development in index terms (which deforms the profile a little bit), base 100 in 1985, of M1/Y (Money supply M1/nominal Income) and Cr/Y (banking Credit/Nominal Income). According to him, in the line of the observations of Schularick and Taylor:

“Schularick and Taylor (2012) document a decoupling between broad money and credit since WWII. This is also true for M1 and credit for Switzerland. Fig (3) [see the image herewith] shows the evolution of credit and M1 (divided by GDP and normalized to 100 in 1984 Q4). IT SHOWS THAT MOVEMENTS IN M1 ARE NOT TIED TO MOVEMENTS IN BANK CREDIT.....” (p.7)

And he adds further for making his case worse:

“One should also notice that sight deposits represent a relatively small proportion of credit: about 25% in the last decades. In other terms, most of the bank credit is not backed by sight deposits” (p.7)

As a matter of fact, M. Bacchetta has neglected one thing, once again a “small thing” (!): Every action of banks with a nonbank operator (loan, purchase of assets...) implies a creation of a sight deposit. They cannot do otherwise, but crediting the account of their counterparty. Afterward, the deposit will circulate and the depositors who will receive this money through their usual activities are free to choose how they will hold it and their choice will be guided by their needs to fulfill their transaction needs they plan over their planning horizon and the level of the interest rates to see if it is beneficial or not to hoard or to invest the money holdings. And, this arbitrage is made at any moment on the inflow of money and on the stock of money already held.

So let's demolish brick by brick the “arguments” and the comments put forward by M. Bacchetta and this demolition will show how huge the confusion in his mind is.

➤ ***The ratio M1 (narrow monetary aggregate)/ Y (nominal income-GDP) refers to the demand for money concept and the obtained results consolidate the SMR***

The study of M/Y (what Maurice Allais called “the desired relative cash holdings”) is interesting because, based on it, it is possible to establish the relationships existing between Money supply, Nominal income and interest rates in an economy.

As a matter of fact, M/Y equal to  $\Phi_D$  (desired relative cash holdings) or its inverse Y/M equal to V (velocity of money) are only equations of definition of two concepts. But, if it is written:

$$M = \Phi_D(k)Y \text{ or } Y = 1/\Phi_D(k)M = V(k)M$$

In which  $\Phi_D$  and V are a function of another variable, i.e. in this case, the short term interest rate k, this equation is no longer an equation of definition, but a model. If, in addition, it is possible to control a key variable as M (money supply), which is the objective of the SMR, this model becomes a model explaining the global functioning of the economy and not only a specific behavior. But, in this case, the coefficients estimated for M in the calculations are not undefined.

Fortunately, in Switzerland, at least as a first approximation, the demand for money or velocity of money functions are not so difficult to model:

#### THE EQUATIONS OF THE DEMAND FOR MONEY AND VELOCITY OF MONEY MODELS

$$\Phi_D(t) = M(t) / Y(t) = \Phi_0 k(t)^{-\beta} \text{ or in log form } \log \Phi_D(t) = \log(M(t) / Y(t)) = \log \Phi_0 - \beta \log k(t)$$

$$V(t) = Y(t) / M(t) = V_0 k(t)^\beta \text{ or in log form } \log V(t) = \log(Y(t) / M(t)) = \log V_0 + \beta \log k(t)$$

$$\text{with } \log V_0 = -\log \Phi_0$$

To be noticed: the equations are equivalent to:

$$\log Y(t) = \log V_0 + \beta \log k(t) + \log M(t)$$

This equation can be seen as an expression of Y depending on k and M with a constraint equal to 1 for the coefficient of M, i.e. a parallel evolution between Y and M for k given.

In first differences of logarithms, these equations become:

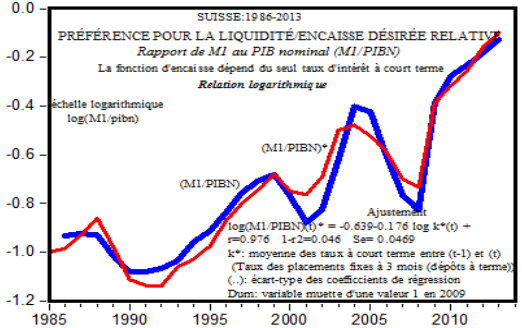
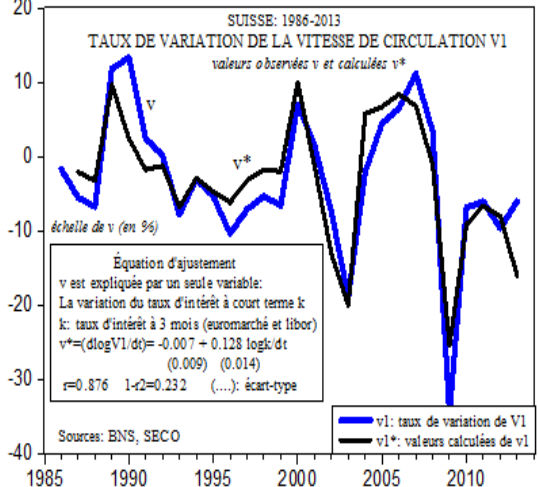
$$\partial \log \Phi_D(t) / \partial t = \partial \log M(t) - \partial \log Y(t) / \partial t = -\beta \partial \log k(t)$$

$$\partial \log V(t) / \partial t = \partial \log Y(t) - \partial \log M(t) / \partial t = \beta \partial \log k(t)$$

$$\text{or } \partial \log Y(t) / \partial t = \beta \partial \log k(t) / \partial t + \partial \log M(t) / \partial t$$

For k constant, the rate of change of M and Y should be equal.

GRAPHS 1 and 1B

<p>Switzerland 1986-2013</p> <p>Desired relative money holdings (M1/Y) or Velocity of money (Y/M1)</p> <p>In log form and first derivatives of logarithms</p> <p>(Gomez,2014,(3))</p>	
	$\log V1(t) = 0.639 + 0.176 \log \bar{k}(t)$ <p>(0.014) (0.008)</p> $\text{Soit } V1(t) = V_0 \bar{k}(t)^\beta = 1.895 \bar{k}(t)^{0.176}$ $\text{ou } \log \Phi_D = \log(M1 / PIBN) = -0.639 - 0.176 \bar{k}(t)$ $\text{soit } \Phi_D(t) = \Phi_0 \bar{k}(t)^{-\beta} = 0.528 \bar{k}(t)^{-0.176}$ $r = 0.976 \quad 1 - r^2 = 0.046 \quad s_e = 0.0469$
	<p><b>First derivatives</b></p> $\partial \log V_1(t) / \partial t = -0.007 + 0.128 \partial \log k(t) / \partial t$ <p>(0.009) (0.014)</p> $r = 0.876 \quad 1 - r^2 = 0.232$ <p><u>Legend</u></p> <p><math>\bar{k}</math> : average of the interest rates between t and t-1 in order to align them to the M1 data dated end of period.</p> <p>Dummy variable, DV: all the calculations contain a DV for 2009</p> <p>(...) standard deviation for the estimated parameters</p> <p>k :taux du marché à 3 mois (Euro-marché/libor 3 mois), ; dlogX/dt=rate of change of variable X= log X(t)-log (X)(t-1) ; r : correlation coefficient ; 1-r2 : part of unexplained variance</p> <p>xxxx : significant coefficients, yyyy : coefficients not different from 0</p>

The results of this simple model are very clear: with only one explanatory factor, the short-term interest rate, the largest part of the variance is explained and the statistic estimates looks very significant, whatever the type of calculations: levels or first derivatives, a very impressive fact.

Over the last three decades, the Swiss economy, as the other western economies, has experienced a dramatic disinflation process with a big drop of interest rates from levels at around 10% in the 90's to zero after the 2007-2008 crisis. So the most liquid assets (DD and STA) have jumped heavily at the expense of more specific saving instruments as time deposits. As a consequence, the money velocities have collapsed to levels never seen ever. **What is remarkable with these results, as simple as they could appear, is that the hypothesis of a unitary elasticity between nominal income and money supply**

can't be rejected, even in the special circumstances we have seen during this long period. On the contrary, it is strongly confirmed.

All these observations are not good news for M. Bacchetta:

- ✓ It is totally absurd to use the ratio  $M/Y$  without taking into account the behavior of the interest rates because this ratio is related to the demand for money and not to the supply of credit, a huge mistake for an economist;
- ✓ These impressive results support greatly the SMR. As a matter of fact, the control of money supply would:
  - Stabilize the economic fluctuations and therefore the volatility of the interest rates
  - A targeted growth rate for the money supply is totally compatible with a similar development in the nominal GDP and a stable growth path characterized by the equilibrium condition  $M_s = M_d$

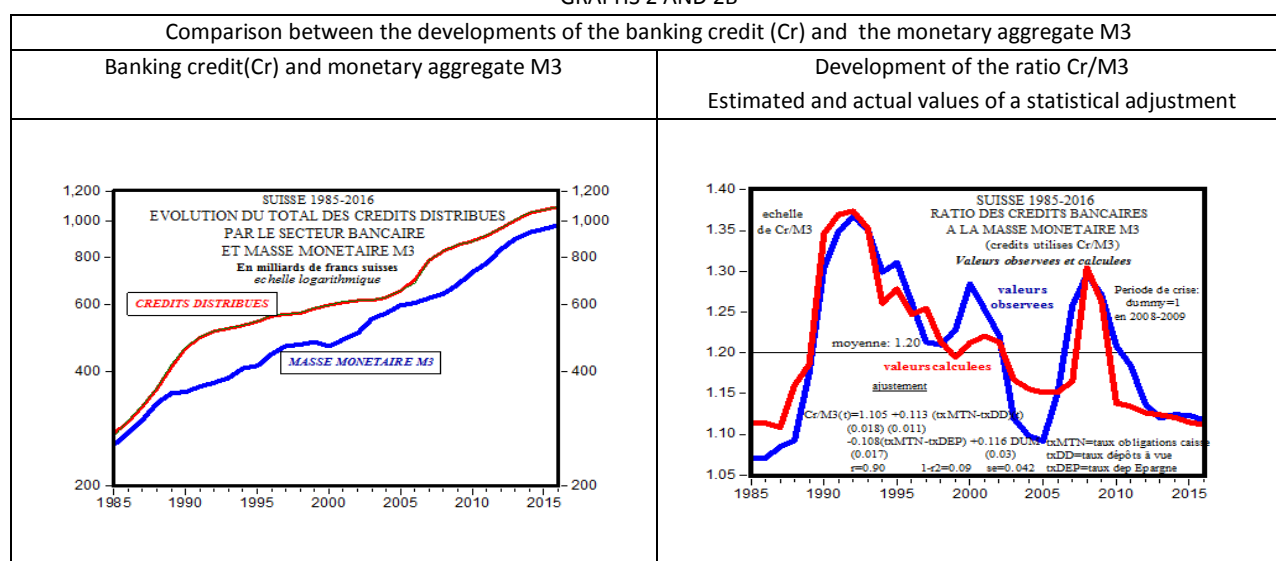
But more bad news is coming for him.....

➤ ***The disconnection between money supply and credit: the laughable tale of M. Bacchetta***

Confusing all the basic concepts of monetary analysis, with a special mention to the confusion between demand for credit and demand for money which should be the basics of monetary economics, M. Bacchetta is unable to address the true problems. In addition, blinded by his ridiculous assumption that credit and money are disconnected (!), he misses to study the relationships between the banking credit and the various monetary aggregates, given the substitutability between various types of deposits in the monetary dynamics, a substitutability linked to the changes in their relative yields.

However, it would have just been enough to study the relationships between the banking credit and the largest monetary aggregate M3 to see how the monetary and quasi-monetary assets match the other side of the balance sheet, given that, on an accounting basis, they are **necessarily** related but not in an inelastic way. The ratio  $Cr/M3$  can fluctuate.

GRAPHS 2 AND 2B



As a matter of fact, there are other items on the liability side and all of them could finance the banking credit: medium term notes bonds issued by the banks, capital and quasi-capital. So it is interesting to note:

- ✓ The banking credit and the monetary and quasi-monetary deposits are of course closely related in the long run;
- ✓ The ratio  $Cr/M3$  amounts on average to 1.20, which is an expected value given the known structure of the banking balance sheet, but fluctuates within a definite range (standard deviation:0.09)
- ✓ The deviations from the average are larger during the period of high inflation and high velocities of money and are getting smaller with the drop in interest rates and in velocities of money.

This fact suggests and confirms that it is not possible to analyze a monetary phenomenon without taking into account, its quantity and its velocity, a concept apparently unknown by M. Bacchetta. As explained before, one source of funding is the difference between the desired and actual cash balances and this disequilibrium can be detected at the aggregate level by the changes in the velocities of money. It can explain some temporary divergence between money supply and the amount of credit. Nothing new, nothing magic! It is a fact known since the beginning of the monetary economics....

Although it is beyond the scope of this reply, some trials have been done to try to understand the behavior of this ratio. The initial attempts have been made according the following assumption: This movement should have been linked to the relative yields of the various types of bank deposits compared to the yield of the medium term notes:

$$Cr / M3(t) = a_0 + a_1(k_{MTN} - k_{DD}) + a_2(k_{MTN} - k_{SD}) + a_3(k_{MTN} - k_{TDouLIB})$$

With  $k$ =interest rates on MTN: medium Term Notes, DD: demand deposits, SD: saving deposits, TD: time deposits 3 months, LIB: Libor 3 months.

The results were good but rather surprising. The best ones were as follows:

$$C_R / M3(t) = 1.105 + 0.113(k_{MTN} - k_{DD})(t) - 0.108(k_{MTN} - k_{SD})(t) + 0.116DUM \quad (1 \text{ en } 2008-2009)$$

(0.018)   (0.011)                      (0.017)                      (0.03)

$$\text{With Dummy: } r = 0.90 \quad 1 - r^2 = 0.09 \quad (\text{without Dummy: } r = 0.848 \quad 1 - r^2 = 0.28)$$

It was immediately obvious that:  $a_1 \approx a_2$  so the equation could be rewritten, with any explanatory loss, as:

$$Cr / M3(t) = 1.105 + 0.110(k_{SD} - k_{DD})(t) + 0.116Dum$$

An interesting result which could be understood as follows: as  $k_{SD}$  represents a smoothing of the time deposits and market rates, it could incorporate a reaction function to the changes in market rates. So, the difference  $(k_{SD} - k_{DD})$  could represent the true cost of holding money as it is felt by the money holders. When this "felt" holding cost increases, the money holders try to reduce their cash holdings, inducing an increase, at the collective level, in the velocity of money and a possible increase in the loanable funds (and the credit) faster than the increase in the money supply. Of course, all these observations should be carefully analyzed and developed but the approach looks fruitful.



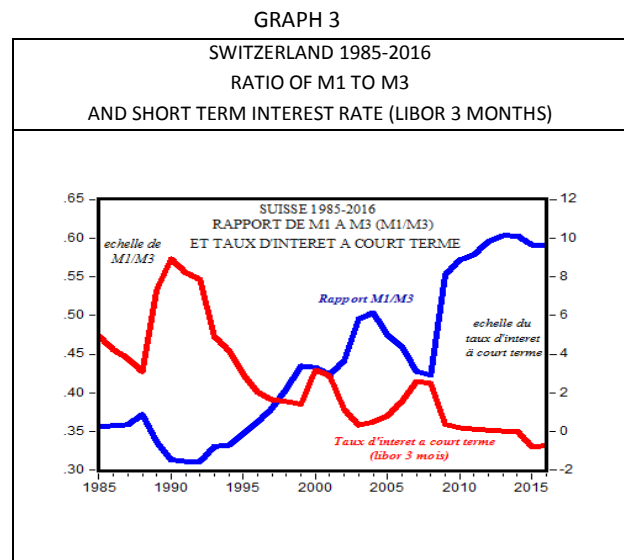
In the debate with M. Bacchetta, the only important thing is: the credit is totally dependent on the development in monetary aggregates and the discrepancies between the two variables are linked to the changes in the velocity of money, themselves depending on the changes in the interest rates and the cost of holding money. There is no mystery in this type of sequence and M. Bacchetta is 100% wrong.

➤ ***The structure of the monetary aggregates and the interest rates***

To complete the picture and the rebuttal of M. Bacchetta, it is necessary to show how the structure of the largest monetary aggregate M3 changes in relation to the developments in interest rates. It is a direct consequence of the demand for money function for M1 studied here above.

In the monetary dynamics, the way to make bank loans is to create demand deposits and these deposits will be spent in the markets (goods, real or financial assets). That is indisputable. But, at the global level, the economic actors can decide to hoard or to dishoard or to change the structure of their financial wealth. Through our indicators, we only catch the results of all these movements and the economic models to be built have to take into account all these factors.

In the opposite graph, it is possible to highlight the choices of the economic actors between the various assets. When the interest rates go up, they choose to invest. When they fall down, they increase their money holdings and the structure of the financial assets held at the global level will change.



\*

In conclusion, it is possible to say that the comments of M. Bacchetta on the graph he provides as a “proof” of his assertions are groundless, showing once again his misunderstanding of the monetary phenomena. He confuses two concepts: demand for money and credit and from there, he dreams on... In fact, to bring together the aggregate amount of credit and M1,  $Cr/M1$ , the road should have been a little bit longer:

$$\frac{Cr}{M1} = \frac{Cr}{M3} \times \frac{M3}{M1}$$

with a detour via  $M/Y$  and the demand for money function.

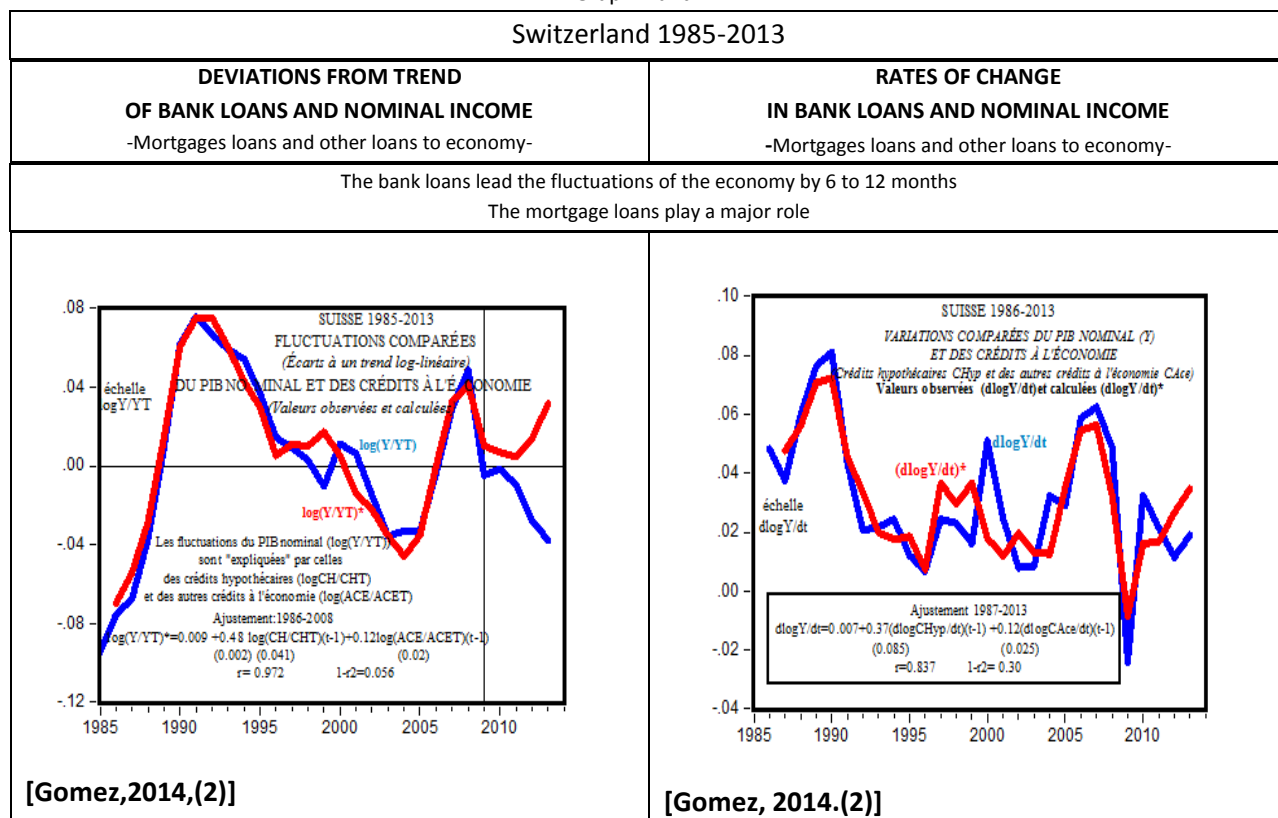
It is the road we have chosen to show that the statistics do, indeed, support the theory used by the initiators of the SMR.

- Bank loans, deposits and business cycles: new proofs of the M. Bacchetta's deceits and his lack of understanding

“There is little evidence that money amplifies business cycles in modern economies” (p.3)

Here are the facts:

Graph 4 and 4B



These graphs show the correlation between the deviations from trends and the rates of changes of nominal income and the bank loans, these ones being broken down between mortgage loans and other loans. There are at least two types of remarks to be done.

The first ones are related to the relations between the time series:

- ✓ There is an undeniable co-movement between the bank loans and the GDP at current prices;
- ✓ The analysis of leads and lags show the bank loans lead the GDP fluctuations by 6 to 12 months

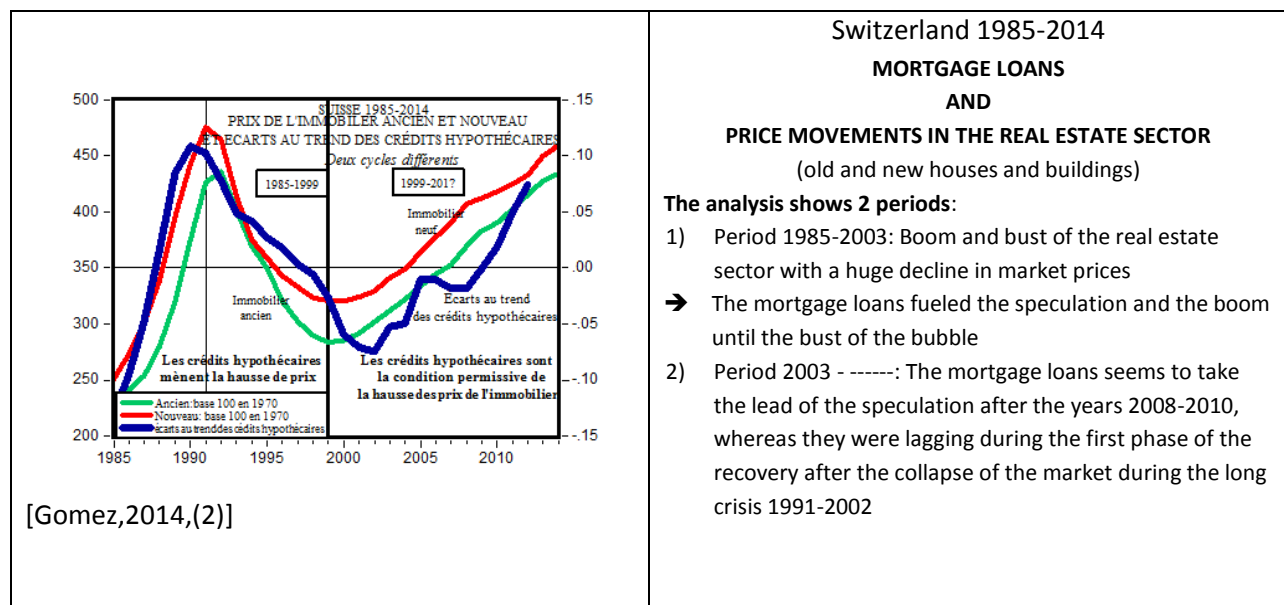
That is an observation in complete disagreement with the Bacchetta's views (p.3) who suggests the opposite.

The second ones are related to the relative importance of the loans in the economic fluctuations according to the sectors they finance:

- ✓ The mortgage loans are the most important factor in the economic instability
- ✓ The regression coefficients show that it is necessary for the mortgage loans to grow by 2% to sustain an increase of 1% in GDP.

This importance of the mortgage loans in the speculation in the real estate market and their impact on the big price waves experienced by the Swiss economy, including the crash in the 1990's, can be confirmed and illustrated by the graph below comparing the fluctuations of the mortgage loans and the price index in the real estate sector (Old and new residential houses and buildings).

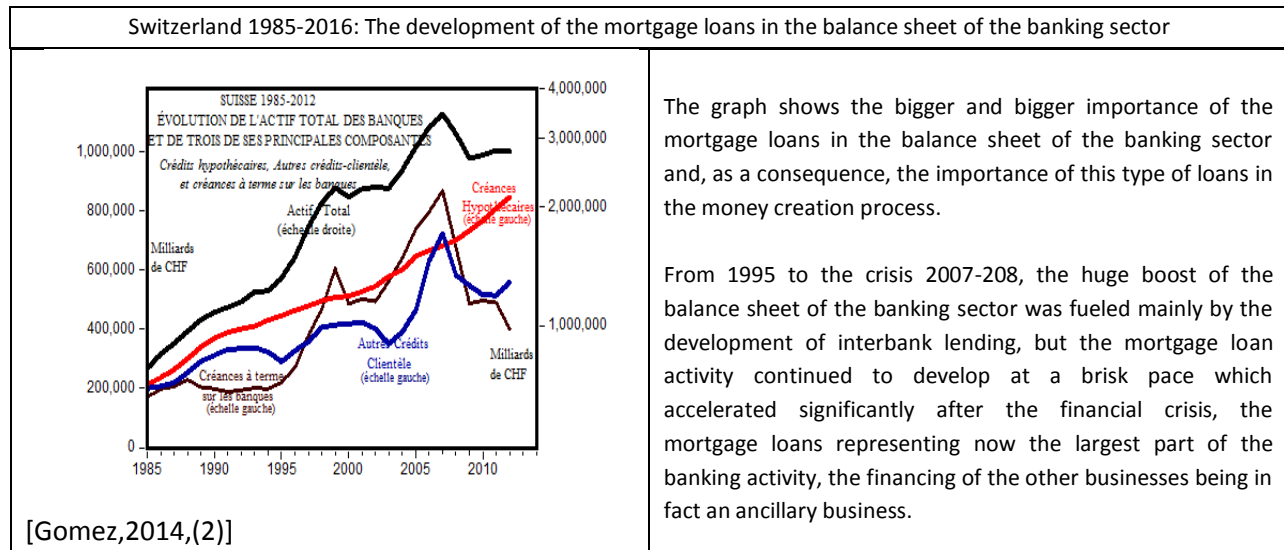
GRAPH 5



The importance of the real estate sector in the mechanism of transmission of monetary influences is obvious in all the Western countries and this is the main factor pushing the prices of the existing real estate higher and higher with, as consequences, an increase in the rents paid by the tenants and an unfair increase in the inequalities, unfair because not linked to the merits of the persons. In Switzerland, the problem is especially acute.

Looking at the development over time of the mortgage loans delivered by the banking sector is really impressive. Over the last thirty years, they have grown at a higher rhythm than the GDP (between 4 and 5% per year). The increase in their percentage in the banking balance sheet was tamed by the huge development of the interbank lending during the period 1995-2007. But, after the crisis and the collapse of such an activity, they are now by far the largest portion of the balance sheet of the banking sector and play a major role in the money creation process, inducing inflation not in the markets for goods and services (except services linked to real estate) but in the real estate market, firstly in the existing one where, by definition, the supply is fixed.

GRAPH 6



In this context, it is funny to read M. Bacchetta when he writes:

“What has proven significant in recent work, however, is credit..... There has been much less empirical work on the causes of the financial bubbles, but Jorda and al. (2016) show that credit-driven housing bubbles are particularly damaging for the economy” (p.12)

By saying that, he is not aware that he betrays his sponsors and destroys his cause. His mind is too confused and his understanding of the monetary matters too limited to catch the ludicrous character of his assertions.

- The bank deposits and the business cycles: The irremediable misunderstanding of M. Bacchetta

The problem with (and for) M. Bacchetta is that each idea he puts forward betrays his misunderstanding of monetary matters. For example, when he writes:

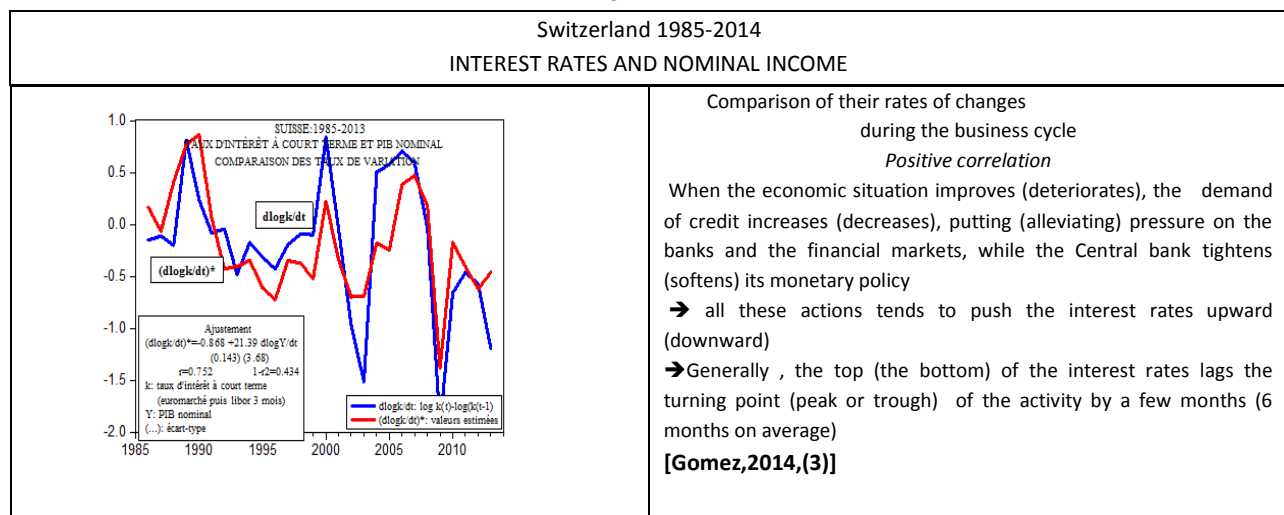
“There is little empirical evidence that money amplifies business cycles in modern economies. On the contrary, bank deposits tend to decline before financial crisis” (see Jorda 2017)

That means: he does not know anything of the debates about the influence of money on the economy which have occurred, at least since the end of WWII, with the most prominent figures as, for example, the economists of the Chicago School, Clark Warburton (1952) and, especially, Milton Friedman who, with the collaboration of Anna Schwartz, devoted two books (1963,1982) to the interaction between money and business cycles in the United States and the United Kingdom. For all the works published on the subject, the fact that the money supply is a leading indicator for business cycles was considered as a proof of the influence of money on the economic activity, not the opposite as M. Bacchetta claims. The debate was so overheated that the Keynesians, under the leadership of James Tobin, were obliged to try to prove that a phenomenon which is a leading indicator for something was not necessarily the

phenomenon causing it, the famous: “Post Hoc Ergo Propter hoc” of Tobin<sup>12</sup> (1970). In addition, M. Bacchetta should know that the money supply has been included in the “index of leading indicators” used to forecast the turning points of the economic activity from the beginning of the existence of this indicator (more than sixty years now...).

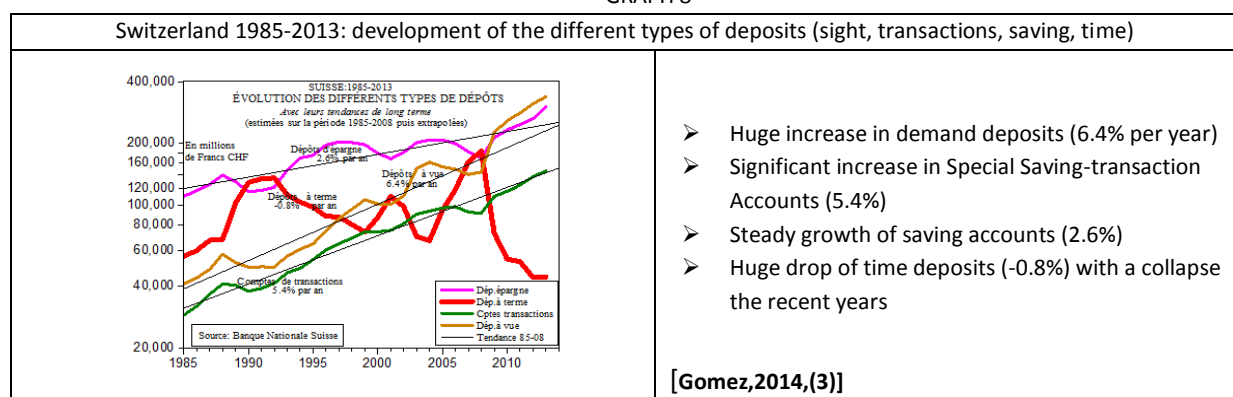
Anyway, more operationally, the development of the composition of the public’s financial assets over the business cycles has to be understood in liaison with the changes in interest rates, which will explain why the velocities of money amplify the business cycle, upward and downward, given that the course of the interest rates is closely linked to the business cycle represented by the nominal income.

GRAPH 7



So, the weight of the various financial assets in the financial wealth of the economic agents changes in relation the fluctuations of the interest rates. It is what we have tried to draw.

GRAPH 8



<sup>12</sup> Tobin (James): Post Hoc propter Hoc, *The Quarterly Journal of Economics*, Vol. 84, No. 2 (May, 1970), pp. 301-317

Several graphs and calculations are presented to support the facts.

Among the points to be noticed:

- ✓ All the most liquid financial assets (Demand deposits  $D_{DD}$ , saving-transaction accounts  $D_{STA}$ , saving deposits  $D_{SD}$ ) behave globally in a similar way because they are very sensitive to interest rates and thereby are close substitute to the Time deposits  $D_{TD}$  with which they are strongly negatively correlated. When the interest rates go up, the rate of growth of  $D_{DD}$ ,  $D_{STA}$ ,  $D_{SD}$  decelerates or decline and the  $D_{TD}$  jump. Inversely, of course when the IR go down.
- ✓ Inside the most liquid assets, depending on the evolution of interest rates, the  $D_{DD}$  and  $D_{SD}$  look close substitute of  $D_{TD}$  while  $D_{STA}$  and  $D_{SD}$  are very close substitutes depending on the interest rates on  $D_{SD}$ .

Globally, if we rely on all the observations, it is possible to show the following link.

- ✓ The interest rates are pushed up or down by the economic fluctuations (positive correlation)
- ✓ The moves in interest rates modify the allocation of financial assets, toward the most “illiquid” when they are up, the most liquid when they are down.
- ✓ So, as a result, the circulation velocities of the most liquid assets increase or decrease according to the move of the interest rates, that means, they accompany the economic cycle and amplify it.

TABLE 1

Switzerland 1985-2014					
Systematic correlations between the rates of change of couples of variables					
Sight deposits (DAV), Transaction-saving accounts (CTR), saving deposits (DEP), Time deposits (DAT)					
Nominal GDP (PIBN) and short term interest rate (k)					
Corrélations systématiques entre les taux de variation des différentes variables prises deux à deux					
Dépôts à vue (DAV), Comptes de règlement (CTR), Dépôts d'épargne (DEP), Dépôts à terme (DAT),					
Pib en valeur nominale (PIBN) et taux d'intérêt à court terme.					
(Les taux de variation sont calculés pour toute variable $X$ comme $\partial \log X / \partial t = \log X_t - \log X_{t-1}$ )					
	DAV	CTR	DEP	DAT	k
DAV	1	0.812	0.781	-0.923	-0.850
CTR	0.812	1	0.857	-0.739	-0.707
DEP	0.781	0.857	1	-0.765	-0.775
DAT	-0.923	-0.739	-0.765	1	0.841
K	-0.850	-0.707	-0.775	0.841	1
PIBN	-0.717	-0.731	-0.685	0.773	0.752

### III- M. Bacchetta and the economic meaning of the demand for money concept,

If the money supply mechanism and its consequences are not understood by M. Bacchetta, as we have seen here above, the concept of demand for money does not look also well assimilated.

#### ***3.1 M Bacchetta does not understand the concept of demand for money and the behavior that it describes***

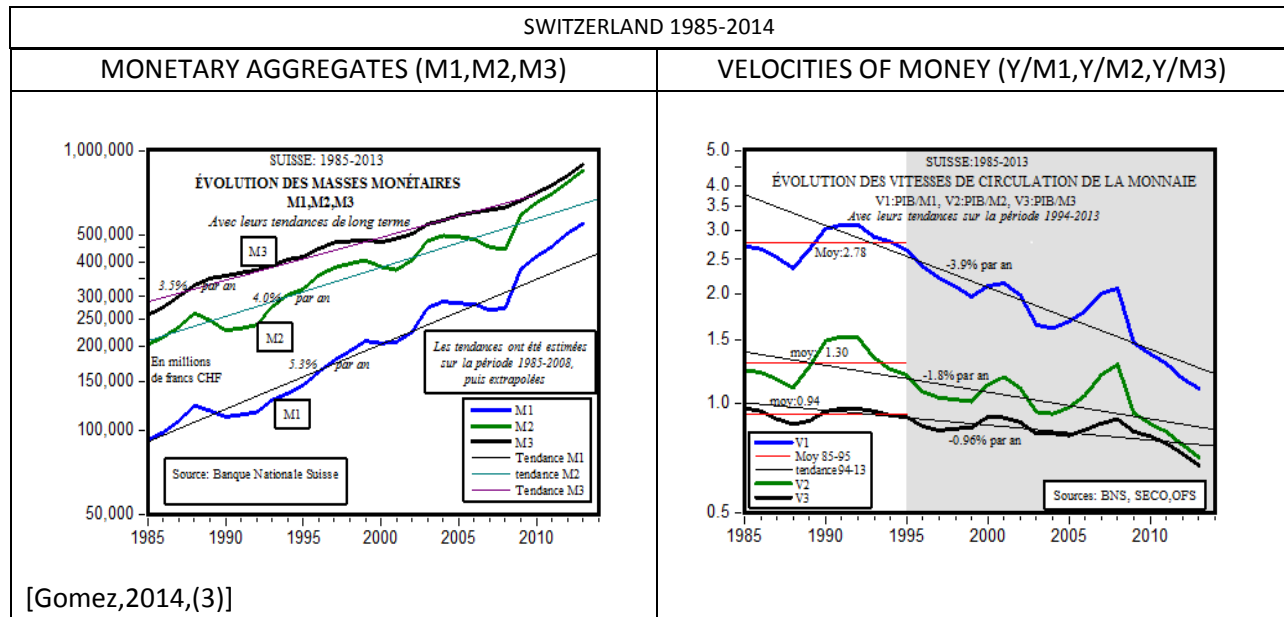
M. Bacchetta's understanding of the demand for money concept is clearly nebulous and naïve. It is obvious when it is possible to read this:

*"But the role of money used for transactions has clearly changed in the last decades. It is likely to keep changing in the near [underlined by us] future and the liquidity service of demand deposits will most likely drop. Cochrane (2014, p.199) puts it clearly: "with today's technology, you could buy a cup of coffee by swiping a card or tapping a cell phone, selling two dollars and fifty cents of an S&P 500 fund, and crediting the coffee seller's two dollar and fifty cents mortgage-backed security fund. If money (reserves) are involved at all –if the transaction is not simply netted among intermediaries- reserves are held for milliseconds. In the 1930's, this was not possible". With a decline of transaction in the demand for transaction money, the potential revenue for the Central bank would also shrink. The development of new forms e-money will also require a different analysis. However, at this stage we ignore what form of e-money will be widely used and to what extent central bank can control it". (p.4)*

It is true that the demand for money, with its macro-economic indicators (Velocities of money,  $Y/M$ , or its reverse, relative desired money holdings,  $M/Y$ ), can show very different evolutions in the long run according to the countries or the time spans which are studied. There are some historical key studies in the economic literature in this field: Selden (in Friedman, 1956) or more recently Bordo and Jonung (2003) which show the importance of the Institutional changes over time in the people's behavior regarding the management of their money holdings. But, the arguments provided by M. Bacchetta aim at impressing the ignorant readers. Nothing else!

Firstly, in no country has an increase in velocity of money been seen over the last decade, despite huge progress in the banking technology, especially in the speed of collection of the operations and the wirings of funds. On the contrary, a big drop was experienced everywhere. Of, course, the collapse of the interest rates can explain this fact to a large extent.

GRAPH 9



So, to assess a potential drift factor in the data, a trend factor was added to the model presented here above.

Instead of:  $V(t) = V_0 k(t)^\beta$ , the new model was:  $V(t) = V_0 e^{\alpha(t)} k(t)^\beta$

in which  $\alpha$ , with its statistical significance and its sign, could represent the existence and the direction of the drift factor.

Values of $\alpha$ for $V_1$ and $V_2$	
$V_1 = Y / M_1$	$V_2 = Y / M_2$
-0.011(0.003)	0.004(0.0024)
In green: Statistically significant, in red: not statistically significant	

When the influence of interest rates is held constant, the slope of the drift factor is significant and negative for  $V_1$  and insignificant for  $V_2$ . But, overall, the amplitude of the drift is relatively small<sup>13</sup>.

Regarding M. Bacchetta's views, what it is possible to say for the time being is that these results are not in accordance at all with his expectations. They are contradictory indeed.

Secondly, the huge decrease of the demand for money (increase in velocity of money) described by M. Bacchetta due to the technology and the progress in payment technology shows in fact his lack of understanding of what the real factors explaining the behavior of economic agents structurally are in this area. Of course the decrease in the transaction costs could reduce somewhat the optimum level of

<sup>13</sup> An interesting point is that, if we compare with the results based on first derivatives (here above), the value of the constant (-.007) is not statistically different from our estimate of  $\alpha$ , which shows the robustness of this simple model.



cash holdings required to cope with a defined spending plan [Allais(1947), Baumol (1952), Tobin(1956)]<sup>14</sup>, but, citing Cochrane, all the examples given by Bacchetta are wrong from the viewpoint of a rational behavior if the risk is taken into account: Shares in a S&P 500 fund and the mortgage-backed security fund are poor substitutes to cash holdings because of market risks and costs which are both real (transaction itself plus the management costs of the funds) and psychological (the time devoted to the choices of assets). For investments in interest rates instruments, the risks and costs have to be compared to the interest rates earned on a daily basis ( $k/360$ ).... Concerning the saving deposits which could be added to this list, they could not be available on demand, depending on the initial contract and so on... That means that the economic agents (households, companies.....) will continue to need monetary (pure liquid) assets to equilibrate the inflows and the outflows of money and to avoid any disruption in the flow of payments. One change could substantially modify this situation: A strong development of new types of jobs ("Uber" type) which could change the seasonality of the payments received by the workers/employees and paid by the companies (from a monthly basis to a daily one, or even hourly!) In the same way as the decrease of the number of farmers after WWII reduced the demand for money (increase in the velocity of money) globally. But, it is a long way to go and nobody can anticipate what will be the future. For the time being, the views of M. Bacchetta are only pure free thinking without any consistency.

Perhaps the funniest consequence of this, totally missed by M. Bacchetta, is that the situation he describes should happen as well in the present monetary system as the interest rates on demand deposits have been close to zero in the last 20 years and could remain at this level for long. In this case, if we follow the way of reasoning of M. Bacchetta and we keep his assumptions, it is not the Central Bank which will suffer the most, but rather the Banks which sponsored him! Without any use of demand deposits as means of payments, no creation of money by the credit mechanism.....As the nominal income will continue to increase at a constant or growing price level, the additional money, whatever the necessary amount, will be provided by the Central Bank. And the banks will become pure intermediaries between saving and investment. The most important objectives of the monetary reform SMR would be fulfilled! That means that, contrary to M. Bacchetta's opinion, the monetary reform is not backwards-looking but forward-looking ....according to his own criteria!

### ***3.2 M. Bacchetta has no clue of what the cost of holding money really is and how the economy has to take charge of it***

The discussion about the cost of holding money also induces some strange remarks:

"A major feature of the sovereign money reform is that money would not bear any interest. This implies that there would never be interest on checking accounts even in period of high interest rates. **This means that the reform would**

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<sup>14</sup> In the literature, the model showing that the transactional cash balances can be affected by the interest rates ( $i$ ) and transaction costs ( $F$ ) was attributed to Baumol (1952). However, the discoverer of the formula was in fact Allais (1947,p.239) in a footnote because it was for him a secondary result. He showed that the Money to income ratio ( $M/Y$ ) could follow the formula:  $M / Y = \sqrt{F / 2iY}$

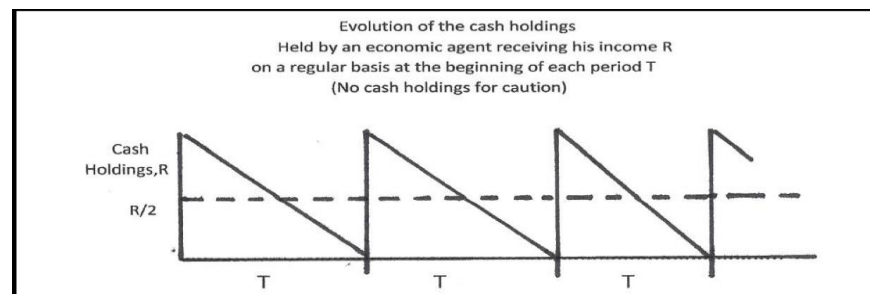
**increase the cost of holding money.** As pointed out by Friedman (1969), this cost should be minimized. Instead, sovereign money increases this cost.” (p.4)

It is not so difficult to detect the demagogic intent of M. Bacchetta behind this point. By claiming that the monetary reform will modify some rules which are beneficial to some people, even if the impact is diminishingly small, he hopes to gather those who react instinctively against it, without thinking of all the aspects of the question. But, by using this political trick, he disqualifies himself as an economist and shows the real purpose of his article.

To explain the various aspects of the problem from an economic viewpoint, it is necessary to stress four points.

3.2.1 The purpose of the checking account (Sight deposits) is to manage the inflows and the outflows of money in order to be able to make all the payments as necessary and to avoid any disruption in the transactions process

In the simplest case which is very common, a person who receives his salary for every period  $T$  (a month for example), will have to manage his disbursements that he plans to do during this period  $T$  in order to live without meeting any problems, until the next inflow, the payment of his salary, and so on. If it is assumed that he will spend or invest uniformly during  $T$  and that his cash holdings will reach the zero mark the last day of the month, it is possible to describe the process by the following chart.



As it can be seen, in this case, the average cash holding during the month is  $R/2$  if  $R$  is the income paid at the beginning of the month. So, for this individual, the velocity of money is 2 on a  $T$ (monthly) basis and 24 on a 12  $T$  (annual) basis<sup>15</sup>.

The function of a checking account is not to keep money in order to invest for the short or long term. It is not a “true” saving. It is just a stock of money in hand to manage the flows of cash. Even if, in the real world, people keep some money for precaution or keep money in waiting the right moment to buy

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<sup>15</sup> Be aware that the cash holdings are a “stock” and the revenues/incomes a “flow”, so their time dimension is not the same.

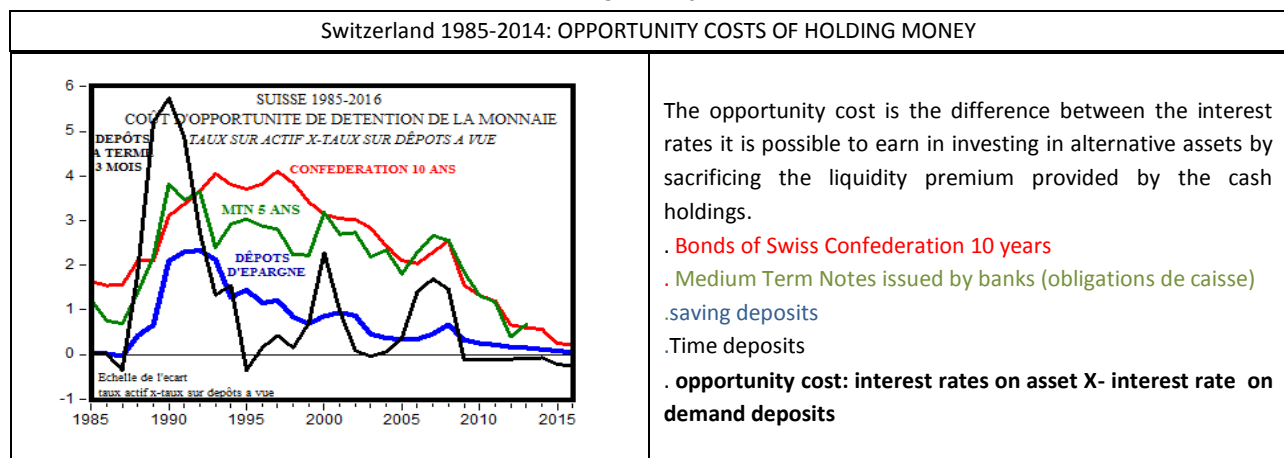
something (real or financial asset), the function of a checking account is to be used and mobilized at any moment for achieving the spending plan over the planning horizon of each economic agent.

### 3.2.2 Holding money gives a liquidity advantage to its owners but the choice of keeping money has to be balanced with the opportunity costs of making it.

Talking about the cost of holding money, as M. Bacchetta does, has no intrinsic meaning. Holding money gives an implicit advantage: a liquidity premium. It is measured by the yield provided by the other assets in which this money could be invested: It is the opportunity cost of holding money. For mobilizing more money for investing more, it is necessary for the alternative assets to pay more to compensate the money holders for the sacrifice of liquidity.

Above (2.3, p.30), the arbitrages made by the economic agents between the various assets depending on their relative yields have been shown and analyzed.

GRAPH 10



Generally, in the main western countries, paying interest on demand deposits is prohibited. In the past, this practice had generally disastrous consequences because, in order to keep or increase their market shares, the banks were competing among themselves to attract deposits.... undermining their own health by obliging them to invest in riskier and riskier assets and to reduce their profits and thereby their capital base, a perfect explosive cocktail of which the 1929 crisis was a striking example. So, the President Roosevelt banned this possibility for the banks in 1935 and most of the countries followed after WWII.

But this practice remained in some countries as Switzerland. Probably, it is an historical relic, when the commercial banks were obliged to compete with cash issued by the Central Bank (banknotes) and to avoid a change of deposits into banknotes, which was/is a disaster for a banker as he has to get rid of assets and to reduce his sources of profits. Before becoming one of the richest countries in the World, Switzerland was a poor country with a lot of farmers and dairy cow breeders, so the banknotes,

especially after the referendum of 1895 and the institution of a central bank, the Swiss National Bank, having the monopoly to issue banknotes, were very popular and the bankers had to compete against them.... Afterward, as Switzerland is also a conservative country, it was difficult for any bank to make the first move.....

So claiming, as M. Bacchetta does, that suppressing this remuneration (very tiny indeed) is a drama proves only that he has not understood the meaning of the “holding cost of money”. Rather than “increasing the cost of holding money”, paying an interest on the demand deposits increase “the liquidity premium of the money” for the economy as a whole because the opportunity cost will have to be paid in any case. It will be necessary to pay more for investing. That’s all and that is a true impediment for the development of the country. The loss of welfare is not where M. Bacchetta locates it..... And it is not all the story.

### 3.2.3 Paying interest rates on checking accounts/sight deposits is probably an historical relic but it is not a sound and efficient economic action

As a matter of fact, the remuneration of demand deposits has no argument in his favor on an economic basis:

- **It is unfair as it remunerates no true saving and therefore no contribution to the increase of the production capacity and improvement in the efficiency of the economy.**
  - ✓ The depositors are already implicitly remunerated by the services provided by the liquidity of the asset.
  - ✓ The remuneration is not the results of a “true” saving effort and the loans which are the counterpart of these deposits in the balance sheets of the banks are financed not by the deposits but by the money creation where the demand deposits come from. The banks makes loans or buys assets by issuing debt on themselves (demand deposits) which circulates in the economy as means of payment because the banks “guarantee” the payment on demand in the only legal Swiss money: the money issued by the central Bank (banknotes and bank reserves).
  - ✓ Whatever the money holders do with their money they cannot change the size of the balance sheets of the banks, except changing their deposits in monetary base (i.e. bank notes or coins issued by the Central bank). This means the amount of credit is independent of their individual choices of whether or not to hold this money.
- ➔ The source of this remuneration is only a sharing of the economic “rent” linked to the money creation through the credit mechanism. However the biggest part of this “rent” is cornered by the banks themselves and holding money in deposit accounts is a very inefficient form of cash management.
- **It is a source of inefficiency for the economy as the costs of using an efficient payment system (investment, maintenance) are not properly allocated to the users at their real costs.**

The banks have charged their clients more and more but their tariffs are often obscure and, due to the mix of all their activities, competition is hampered. So the users are not necessarily the

payers and nobody can say that the functioning of these markets warrants competitive prices which are prices at the marginal cost, a condition of maximum efficiency for the economy.

➔ The so-called “loss of welfare” put forward by M. Bacchetta is a joke as this payment of interest reduces the efficiency of the economy and, therefore, the global welfare of everybody.

➤ **It is totally counterproductive at the economic level for two reasons:**

- ✓ It increases all the funding costs of the economy as only the opportunity cost is important to incentivize people to sacrifice liquidity and to invest in the most productive economic assets and creating capital;
- ✓ It incentivizes the propensity to hoard (the other side of the previous point), which is counterproductive and potentially destabilizing for the economy as a whole.

➔ On the contrary, everything should be done to push the money holders to consume or to invest in a productive way. The objectives of any sound policy should be to minimize “idle cash reserves”.

The conclusion of all these reflections is that the M. Bacchetta’s arguments are very poor and that his assertion regarding the payment of interest on demand deposits “to minimize the cost of holding money” has no economic ground.

3.2.4 Regarding the cash management at both the individual and economy levels, the monetary reform is the only way to achieve all the objectives for improving and securing the stability, the fairness and the efficiency of the economy

The monetary reform aims at separating the monetary and the financial intermediation functions of the banks. This separation implies that the Monetary Services Companies, which will take charge of all the operations through the payment system, will have to equilibrate their accounts. So the costs will be charged to the money holders according to their use of it (intensity and nature of the operations). Compared to the present system, there will be at least three major advantages:

- **Increasing the stability and growth of the economy:** by pushing the money holders to make a clear choice between keeping money on their money accounts for transactional needs, with the implied costs, and investing funds at various maturities for other purposes (and receiving interest), the reform tends to limit the volatility of the hoarding behavior and thereby to stabilize the total demand and the economic activity. So, the velocity of money should reach its maximum level compatible with the institutional structures of the economy (“idle” reserves at their minimum)  
➔ **The economy will be put on its optimal growth path guided by a well ordered growth of the money supply and a stabilized demand for money.**

- **Improving the fairness of the economy for all the people:** As the tiny interests paid by banks to the money holders are not the return of any effort to increase the productivity of the economy as a whole (saving), that means that these payments have to be analyzed as a participation to the “economic rent” linked to the privilege of creating new money through their credit activity. The benefits of this privilege are thus shared between the banks (the largest part) and some other beneficiaries for various reasons.  
**→ With the reform and the abolition of this privilege held by the banks, the money holders will lose this small advantage but will get, as Swiss citizens, the full benefit of the creation of money by the SNB, in the form of tax reductions for example.**
  
- **Enhancing the efficiency of the economy:** The separation of the monetary services from the other activities of the banks will have two majors consequences: (1) more clarity in the pricing of banks’ services leading to better informed customers; (2) an easier opening for new financial services competitors specialized in this area. This is likely to increase the rate of introduction of new technology and the competition should rapidly reduce the costs and prices.  
**→ Overall, this new climate of competition should make (1) prices converge to their optimum level, the marginal cost of each type of operations, and (2) the economy as a whole to reach a better efficiency and thus a better allocation of resources (Allais 1967, 1987)**

\*

M. Bacchetta is mistaken again when he cites Friedman (1969) about the minimization of “the holding cost of money”. Firstly, Friedman was a warm supporter of the Chicago Banking Plan (1960), a point M. Bacchetta omits to mention:

“As a student of Henry Simons and Lloyd Mint.... I shall follow them also in recommending that the present system be replaced by one in which 100% reserves requirement are required” (Friedman, 1960, ed.1992)

Secondly, it is true that Friedman was in favor of Central Banks paying interest on the the reserves of the banks and, through them, to the money holders, but not “to reduce the holding cost of money” but rather “to improve greatly the attractiveness of the plan” (1960, ed.1992, p72) and to escape from “the difficulties of avoidance that were the bug-a-boo of the earlier proposals” (1960, ed.1992, p.66)<sup>16</sup>.

These arguments are less than convincing and it is obvious that Friedman missed key points. The proposal SMR is more in line with what Keynes was looking for:

“Those (monetary) reformers, who look for a remedy by creating artificial carrying-costs for money through the device of requiring legal-tender currency to be periodically stamped at a prescribed cost in order to retain its quality of money, or in analogous ways, have been on the right track” (cited by Phillips, 1995, p.148)<sup>17</sup>....

and what Allais also proposed to secure stability of the economy and to enhance its efficiency (Allais, 1967, 1977, 1987).

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<sup>16</sup> The reader interested in this question will find a full exposition of the arguments in (Friedman, 1960, ed.1992, p. 70-75)

<sup>17</sup> Clearly Keynes was referring mainly to Silvio Gesell (The natural economic Order) in this citation.

By its design, the SMR changes the deal: no more interest on demand/deposit/checking accounts but giving the citizens all the benefits of money creation and, by doing so, more stability, more fairness, and more efficiency.

### **3.3 M. Bacchetta confuses the two concepts, demand for credit and demand for money, and does not understand how money supply and demand for money interact**

The following paragraph should be given to all students as examples of all the mistakes made by the beginners in economics and to be absolutely avoided:

“Claiming that banks create money basically assumes that money demand is totally elastic. In that case, it is the supply that determines the quantity. A standard money market equilibrium can be written as  $M_s = P \cdot L(Y, i - i_m, c)$  where  $M_s$  is the money supply,  $P$  is the price level and  $L$  is a real demand for money demand function from the private sector. It typically depends positively on a measure of economic activity  $Y$  and negatively on the opportunity cost of holding money  $i - i_m$ , where  $i_m$  is the interest on money and  $i$  is the alternative interest rate, typically government bonds. The variable  $c$  represents other factors like financial technology. **If we assume that prices are rigid in the short run, an increase in  $M_s$  is only possible if  $Y$  increases or if  $i$  decreases. Since banks cannot directly influence  $Y$  and  $i$ , any increase in  $M_s$  in the short run cannot be directly by banks” (p.7)**

It is very embarrassing to be obliged to explain M. Bacchetta the real meaning of the equilibrium equation. It is not at all to determine the money supply by money demand but, given the money supply (all the money in circulation has to be held by the economic agents) and the characteristics of the demand for money (transactional, precaution and “speculation”/investment motives), **what are the levels of interest rates and Income which mean that all the actual money holdings are desired monetary assets.** A complete different picture from what Bacchetta understands! How does it work?

According to the various economic models, the money supply is determined by:

- Either, the demand for credit (*and not for money! A very common mistake of the beginners*), the Central bank providing the required monetary base as much as needed;
- or, by the monetary base issued by the Central Bank, through the so-called “money multiplier” ( $M_s = mB$ , where  $B$  is the monetary base and  $m$  the money multiplier) by which any excess reserves issued by the Central Bank will be used by the banking system that will create new money through making directly new credit or buying financial assets in the markets.

In the present circumstances, we could add another possibility: The Central bank determines the largest portion of liquidity by buying in the markets large chunks of financial assets or foreign currencies.

Once the money is created by whichever method, the money supply is given. At the individual level, the economic agents (households, companies...) are free to choose the level of monetary assets they desire to hold for managing the expected inflows and outflows of money and to fulfill the various needs:

transactional, caution, “speculation”/investment. So they will try to get rid of excess cash holdings by buying real or financial assets but each disbursement is, by definition, a receipt for another, and so on.... **BUT, what is possible at the individual level is impossible at the global level.** All the money in circulation has to be held and....desired. **Consequences:** the income (more a monetarist approach) and the interest rates (more a Keynesian approach) have to adjust so that all the money in circulation is “desired”, so a new equilibrium is reached for each level of money supply.



#### IV- The assessment of the monetary reform: the mistakes and skullduggeries of an economist who tries to please his sponsors

In the fourth part of his “study”, M. Bacchetta tries to play his last cards by a systematic reform-bashing of the monetary reform, starting his attacks with some hazardous calculations and ending them by additional criticisms of the alleged consequences of the reform to finish convince his readers.....No nuance, no reference to the troubles of the present financial system and to the numerous economists who have supported the monetary reform, no, nothing which could displease his sponsors! Only the closing arguments of a prosecutor, not an analysis of an economist!

##### **4.1 The smokescreen of M. Bacchetta for hiding the harmful effects of the present monetary system**

How is it possible to discuss the various aspects of a proposed reform without comparing it to the present monetary and financial system with all its numerous defects and all the suffering and “losses of welfare” (as M. Bacchetta likes to say) inflicted by this system to the countries and people living under it?

TABLE 2

A succinct summary of the “speculative bubbles” and financial crises in the last three decades					
Country/zone/sectors	Real estate	Stock market	sectors	peak	Consequences
International banks			Loans EM	1982	Defaults; US banks at risks; debt restructuring (Brady)
USA/Europe		X		1987	Mania, crash, brokers and Inv. Banks saved by Central banks
Japan	X	X	Bus. loans	1989	Collapse stock and Real estate markets, collapse of the banking sector (recapitalization), deflation and low growth up to now
Europe/Scandinavia (Switzerland inc.)	X			1987-1992	Big drop of the real estate markets, huge losses of banks, the Scandinavian banking sector about to collapse
Mexico		X	Loans	1994	Mania, “Tequila Crisis”, Massive support of USA and IMF.....
Asia	X	X	X	1997	Collapse of the markets, big recessions in the countries, banking systems being bankrupt
Internet		X	Loans to medias, telecoms	2000	Collapse of the stock markets, over-investment in the media, telecoms sectors, recessions or slowdowns in the USA, Europe, Emerging markets
USA/Europe	X	X		2007-2008	First world crisis in the real estate markets, huge increase in the global indebtedness of the economies, stock market crashes, biggest recession in the after-war period

In their book, “This Time is different”, Reinhart and Rogoff, as it is summarized by their editor, “document that financial fallout occurs in clusters and strike with surprisingly consistent frequency, duration, and ferocity ... While countries do weather their financial storms, they prove that short memories make it too easy for crises to recur” (2009). Only a look at the last decades shows the number of disasters triggered by this system.

The latest crisis, the 2007-2008 one, was one of the worst economic disasters in History, with huge losses everywhere, especially in the US as reported by Atkinson, Luttrell and Rosenblum (2013):

“The 2007-2009 financial crisis was associated with a huge loss of economic output and financial wealth, psychological consequences and skill atrophy from extended unemployment, an increase in government intervention and other significant costs. Assuming the financial crisis is to blame for these associated ills, an estimate of its cost is needed to weigh against the cost of policies to prevent similar episodes. We conservatively estimate that 40 to 90 percent of one year’s output (\$6 to 14 trillion, the equivalent of \$50 000 to \$120 000 for every U.S Household) was foregone due to the 2007-2009 recession. .... This more comprehensive evaluation of factors suggests that what the U.S gave up as a result of the crisis is likely greater than the value of one year’s output.” (A,L,R; 2013)

And the consequences of this crisis are still undermining our present, ten years later.... No doubt that the immediate actions of the central banks were successful in avoiding the total collapse of the western economies, but the consequences of this financial crisis are a protracted low growth, the slowest recovery experienced in our economies since the end of WWII, and a characterized risk of deflation. So, the central banks were obliged to radically change their usual practices and to engage new types of monetary policies called “Quantitative Easing” which have inundated all the economies and the financial markets of the developed world with huge injections of liquidity, triggering a collapse of nominal interest rates which, for the first time in the economic history, have converged to zero (“The zero lower bound”) and even experienced negative territories, an aberration never seen before. Of course with terrific consequences for the short and long term:

- In the short term: Financial bubbles in all the financial assets, from the bond markets to the stock markets, inducing huge increases in the inequalities between people, without any reason based on merits and personal success, massive transfers of wealth between creditors and debtors, the “massacre” of the savers.....
- In the long term: Increasing difficulties for the pension funds to maintain the level of the pensions, increasing difficulties for the young to save efficiently and build their wealth over time, a problem of gigantic misallocation of resources linked to the absence of “true” interest rates....

And, all this, for what results? The results have been very poor indeed as economic growth is still sluggish while the central banks cannot escape from their huge expansionary monetary policies without creating the conditions of a collapse of the financial markets and of a new recession, perhaps more serious than the previous one insofar as the central banks would have exhausted all their policy instruments.

But, M. Bacchetta does not care about all these gigantic problems our economies are facing nowadays, problems created by the functioning of the present monetary system and for which the SMR could be an obvious solution.

#### 4.2 The M. Bacchetta's calculations of the "loss" induced by the implementation of the SMR: Bad economics, bad faith or outright dishonesty? To the readers to choose.....

In the presentation of Bacchetta's calculations, his way of reasoning will be closely followed to reveal all his tricks in order to find what he was looking for to please his sponsors: A negative result for the assessment of the impact of the monetary reform.

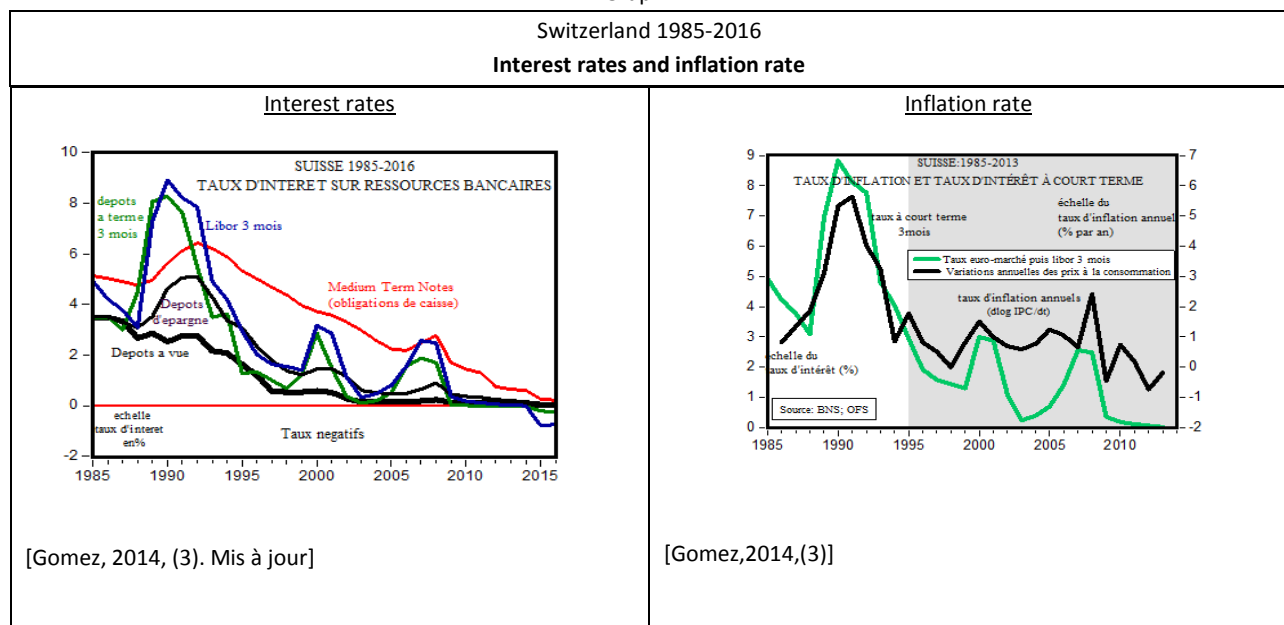
##### 4.2.1 A key point: The tricks regarding the estimate of the "loss" of the depositors according to M. Bacchetta.

In the monetary reform, there will be no remuneration of the money holdings in Sovereign Money (SM) for several reasons already above mentioned (p.36, 37). It is not a specific feature which characterizes the reform per se because it has been the case for decades in the USA and in Europe for prudential reasons in order to protect banks against too acute competition among them which could be likely to undermine their financial health. In the context of the reform, any remuneration of this kind is a sharing of the "economic rent" linked to money creation and it is much better to make all the society benefit from it (p.37). But, for M. Bacchetta is a way to attack the reform by trying to show that the public could lose "something" if it votes for the reform. In his estimates, this item counts for the biggest part of the "loss" according to Bacchetta: -0.82% of GDP per year if the reform is implemented and the payments of interest on "money holdings" abolished. To reaching this high loss, M. Bacchetta had to employ some tricks.

- **Selecting the right period to inflate the interest rate paid on sight deposits, the period 1984-2006.**

A simple look at the graphs herein below will be better than a long speech.

Graph 11



The period for calculations (1984-2006) was chosen to include the time span characterized by high inflation rates and, therefore, high interest rates, and to exclude the very low interest rates after the beginning of the financial crisis. For the readers, it is a key point to be aware of the “scientific ethics” of M. Bacchetta and the seriousness of his work. Only one thing was important: obtaining the highest number to show the maximum “loss”

Averages of interest rates on sight deposits according to various time spans		
1984-2006 (Bacchetta)	1996-2006 (10 years)	1996-2016 (21 years)
<b>2.74%</b> <b>(1.65%!-CG-)</b>	0.438%	0.28%

Unfortunately, for M. Bacchetta, his position cannot be maintained. The period starting from the middle of the 90's years has been characterized, concerning inflation, by the so called “period of great moderation” and all the developments since then, especially after the financial crisis, show that the inflation risk is highly unlikely as the central banks, despite their huge injections of money and the interest rates at their lowest levels ever seen in the history, have been so far unable to even reach their target of 2%. With the monetary reform, characterized by a strict control of the money supply, the risk is even more subdued.

So, if he reasons as an economist and not as an agent of the Swiss Bankers Association, he has to agree that the calculations have to be made on a period post 1995: the better should be 1996-2016, but to avoid any controversy about the period and the impact of the financial crisis, let's agree on the decade 1996-2006 which covers a full business cycle: upswing (1996-2000), downswing (2000-2003), upswing (2004-2007).

It has to be recognized that it is not good news for M. Bacchetta as the average of the interest rates on sight deposits falls down to a meager 0.43%.... which destroys the purpose of his calculations. And it is not the end of the story.....

To be noticed: a very embarrassing fact
As the calculations made by M. Bacchetta were checked with the same SNB data, it was found a strange substitution with some consequences for his conclusions. Rather than using the arithmetic average on the sight deposits (1.65%), in accordance with his approach, he used the interest rate on saving deposits (2.73%), probably because it was bigger and more in accordance with what he wanted to prove. Consequence: the calculations of the “loss” on sight deposits were made with 2.73%, i.e. a full point difference and therefore a bigger “loss” (in the Bacchetta's way of thinking). A very opportune “choice” which is also an absurdity at the theoretical level: less sight deposits→more saving deposits→ a reduction of the “loss”(here below)

- **“Forgetting” the reallocation of the money holdings due to the monetary reform**

That is the second trick of M. Bacchetta or an additional proof of his difficulties to cope with the monetary economics.

M. Bacchetta gives the results of an econometric calculation to estimate the semi-elasticity of the money demand (a concept that he does not understand very well as we have seen above). **The model is very badly specified** and strong reservations<sup>18</sup> have to be made. But it is possible to follow the reasoning and the conclusions of M. Bacchetta to show all their shortcomings. So, let’s accept that the money demand should drop by 35% if the interest rates on sight deposits were no longer paid.

“I estimate the decline in the average return on sight deposits to be 2.73. This implies that  $\Delta m1 = -35.5\%$ ” (p.16)

[note CG:  $\Delta m1$  is the change in demand for money holdings between before and after the reform due the “estimated” decrease of 2.73% in the interest rates on sight deposits”]

It is possible to wonder: What is the economic meaning of this assertion in the M. Bacchetta’s mind? What does “a reduction in money demand” mean in his mind? **Does that mean that the money will evaporate miraculously out of the economic and monetary circuit?**

Of course not. That means only that the money holders, given the new situation of the market, will optimize their cash management and will invest their excess transactional money in other assets (increase in the velocity of money) either by investing in other banking assets (saving deposits, time deposits, medium-term notes) or in nonbank assets. In the first case, only the weight of the components of the bank balance sheet will change. In the second case, the amount of money holdings circulating in the economy won’t change but the amount of transactions (real and financial assets) will do.

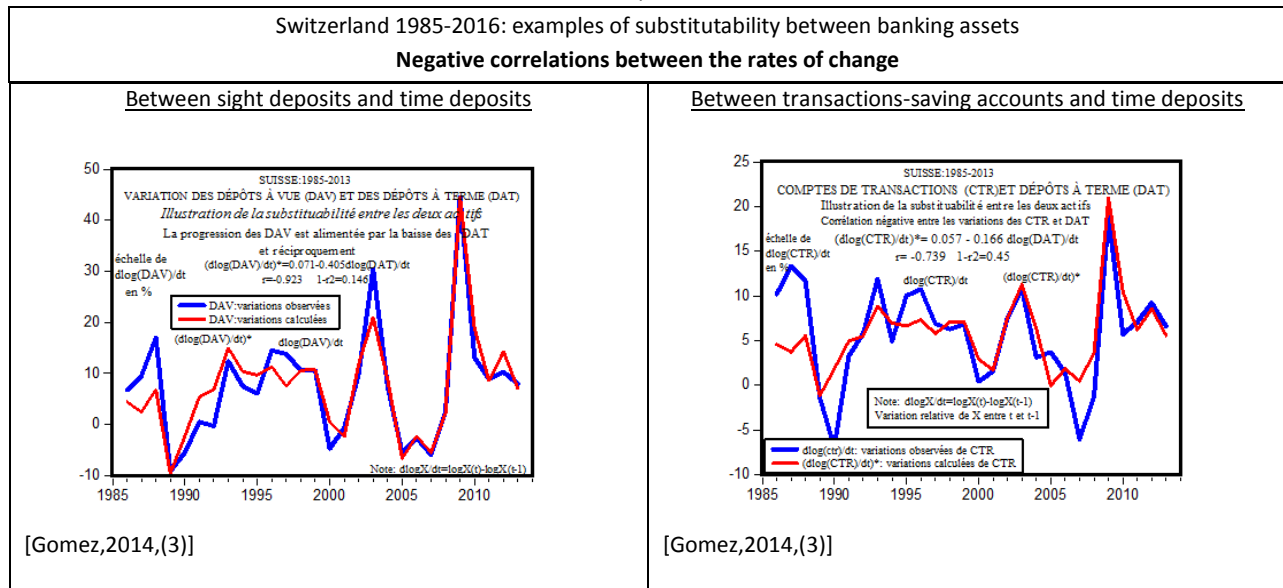
By doing so, the composition of their earnings changes also. When the money holders invest in saving and time deposits or in medium-term notes issued by the banks, the yields on these assets are much higher than the interest rates on sight deposits.

TABLE 3

Switzerland: 1996-2006		
Interest rates on alternative assets <b>as a multiple</b> of interest rates on sight deposits		
Saving deposits	Time deposits	Medium-term notes
3.15	2.95 (but low significance of the average due to high volatility)	9.66

<sup>18</sup> Two reservations have to be made: (1) the relevant interest rates are the short term interest rates and not the long term interest rates. The calculations of the correlation coefficients are quite clear on this matter (see Annex 1) (2) a proof of the inaccuracy of the model used is the estimates of the elasticity between money and nominal income. An estimate of 3.72 has no economic meaning. **That means that the model is badly specified as the variable Y plays a role as a proxy of the trend in interest rates during this period. The very simple specification of our demand for money (velocity of money) model (p.26) is doubtless much more superior in all respects. That is a new example of the use of “wild econometrics” (Allais) without any understandings of the economic meaning of the results obtained.**

Graph 12



**The figures speaks by themselves:** If the estimates of M. Bacchetta are used and if the money holders decrease their money holdings (their “idle” reserves) by 35.5%, they would get more earnings and not less and, doing so, they do not experience any feeling of discomfort in that they have optimized the composition of their assets through a new arbitrage liquidity-earnings giving them the same level of satisfaction. In addition, the economy as a whole is better financed.

As usual, the explanations of M. Bacchetta are abstruse and confused to give him an aura of “scientist”. He wants to base his reasoning on a scheme assimilating tax and reserve requirements and to deduce some conclusions. But, he is wrong from the beginning:

“The sovereign money reform implies a 100% reserve requirement. There is an extensive literature on reserve requirements that they act as a tax on deposits. With the 100% reserve requirement, the tax is simply equal to the reference rate  $i$  (the marginal interest rate a bank would get if it did not have to hold reserves at the SNB)” (p.18)

There is no reserve requirement in the SMR as the circulating money is the monetary base itself, like the banknotes today. In addition, what could be the levy on these accounts which are no longer included in the balance sheets of the banks and which will be open to an acute competition between incumbents (existing banks) and newcomers (specialized money services companies, Paypal, Applepay.....? In fact, M. Bacchetta has a lot of difficulties to understand the new organization and to cut himself from the functioning of the present financial system. But, for our purpose, the main point is that he estimates the cost of the reform for depositors in the period 1984-2006 as the interest rate on deposits (2.74%, the highest figure as already noticed) multiplied by the amount of transaction deposits (monetary base excluded) before the reform. That is this calculation which gives an annual “cost for depositors” (Bacchetta) of 0.82% of GDP.

It is clear that this Bacchetta's result (as the others!) has no meaning. Beyond the dishonesty linked to the choice of the period (1984-2006), M. Bacchetta "forgets" a key factor: the reallocation of the assets and the implied better cash management. WHEN ALL THESE TRICKS ARE REVEALED AND ADRESSED, THE COST FOR DEPOSITORS DUE TO THE NON-PAYMENT OF INTEREST RATES ON SIGHT DEPOSITS IS NIL OR ALMOST NIL WHATEVER THE CIRCUMSTANCES as demonstrated above.

#### 4.2.2. Second key point: The inability of M. Bacchetta to understand the monetary reform and what the "economic rent" linked to the creation of money is.

The second stage of the M. Bacchetta tactic, to reach his goal of rubbishing the SMR, is to minimize the benefits (at least the immediate monetary ones), i.e. the amount of the "economic rent" resulting from the "nationalization" of money. Two points will be distinguished.

- **His assertions regarding the situation of the central bank "in the current liquidity trap" and his complete failure to understand the SMR**

It is necessary to mention the entire paragraph to demonstrate that M. Bacchetta has no clue of what the SMR is:

"In the current situation, sovereign money would give no additional gain to the central bank. First, interest rates are about zero so that  $i=0$ . Moreover the level of reserves already represents about 100% of demand deposits, i.e.  $M1=H$  [H for High powered Money= monetary base- CG] Therefore, sovereign money would not increase the central bank balance sheet and would have no impact on its profits. If the State has to incur some additional costs from managing M1, the net impact could even be negative" (p.17)

The process by which the SMR reform will be implemented has already been described here above (p.8). Let's summarize it in a few points: (1) on day 1, given the conditions offered on the various assets, the deposits holders in the bank will have to choose between electronic money and investments in other assets according to their risk-return features; (2) At the same time, the banks will use their reserves at the central bank to feed the new account: Electronic money in circulation (exactly as the banknotes are treated today). So, it will be possible to change radically the present situation:

- The money holders will have to reallocate their monetary assets in a clearer way depending on their preferences;
- The huge excess reserves of the banks will be wiped out (at least for their largest part) overnight and will become the "electronic money in circulation" at the Swiss National Bank balance sheet ( a simple accounting move from one item to another)

While nobody can presently forecast when the present situation will end without monetary reform (with its huge disadvantages for savers and pensions), the implementation of the SMR solves the problems that the developed economies are facing. And on the contrary to what M. Bacchetta alleges, it is possible to start from day 1 a new monetary policy and to increase the money supply at the rhythm compatible with the targeted increase in nominal GDP.

- **The wrong estimate of the monetary “economic rent” and of the benefits brought by the SMR to the Swiss Society**

While M. Bacchetta discussed in another part of his study the ways the SMR initiators propose to inject the new money into the economy to criticize them<sup>19</sup>, he uses in his calculation the most favorable one in order to comply with the objective of his mandate from the Swiss Bankers Association: showing that the SMR is costly for the Swiss economy. Here, what he has selected is: loans by the Swiss National Bank (SNB) to the commercial banks, the seigniorage being in this case the interest rates on these loans. (After a SMR most new money would be expected to be spent, not lent, into the economy. The resulting seigniorage would be the total face value of this new money spent into the economy, rather than the interest flowing from new money lent into the economy). So, in fact, everything is wrong in his calculations:

- **The main way to inject money:** If it is possible to imagine all the possibilities offered to the Central bank to inject money, and they are numerous, but the direct lending to commercial banks can be envisaged only in special cases;
- **The base of the seigniorage:** he uses all the sovereign money (!) as a base for lending (rather than spending) which is nonsense;
 

“it is natural to assume that the SNB lends its additional resources to commercial banks at rate  $i$  [the interest rate on federal bonds-CG]” (p.17)

In fact, most new money created will be spent, not lent, into the economy as discussed below.
- **The way of calculating the seigniorage:** Given this base, he computes the seigniorage as the interests received on the circulating money(!) and finds 0.80% of GDP which is the result of a very simple approximation .
 

“..If we compute [the annual seigniorage as]  $i.(M1^+ - h^-)$  <sup>20</sup> over the period 1984-2006, we find an annual rate of 0.80% of GDP<sup>21</sup>” (p.17)

The real calculation of the seigniorage is:

- **The annual injection of the new money to comply with the monetary target of the monetary policy<sup>22</sup>.** For example, in Switzerland, a target of 3%/3.5% increase in the money supply seems a reliable target, given the estimated potential growth rate in the long run (around 1.5%), the targeted rate of inflation which could be in Switzerland around 1.5%/2% , the unitary elasticity

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<sup>19</sup> The topic will be treated herein below p. 66-69

<sup>20</sup> This equation means: interest rate on federal bond  $i$  multiplied by (circulating money after reform- monetary base before reform)

<sup>21</sup> This approximation is explained in note 25, p.17: “I used the average interest rate on federal government bonds. The average over the period in 4 percent. The average of  $M1-H$  [  $M1$ -monetary base] is 34 percent of GDP”. So, 0.80% is simply  $4 \times 0.34 \times 0.645$  (the reduction of money holdings by 35.5%) = 0.87% (rounded down to 0.8!)

<sup>22</sup> There is a mathematical equivalence between the money created today and the actual value of capitalized interests received ad infinitum if this sum is indefinitely lent (Allais 1977 and 1987).



between money supply and income). It has to be noticed that such a target is equivalent to the long run growth of M3 in our country.

TABLE 4

Estimated annual injection of money in Switzerland for various assumptions of amounts of sovereign money compared to actual money supply (M1=614.755 billion CHF as of end of June 2017) Targeted annual increase of Mt = 3.5% <b>Seigniorage estimates</b> <b>(monetary rent/of which new funds available to Swiss citizens to be spent in the economy)</b>			
Decrease of actual deposits by	15%	25%	35%
Sovereign money (electronic+banknotes)	535	482	429
<b>Annual increase 1<sup>st</sup> year: Total (electronic money)</b>	<b>19</b> <b>(of which 16)</b>	<b>17</b> <b>(of which 14)</b>	<b>15</b> <b>(of which 12)</b>
The estimates of sovereign money includes banknotes +sight deposits + transaction-saving accounts but the decrease is assumed for the deposits only. The injections of money/seigniorage are for total M1 (of which the contribution of deposits)			

The way the money has to be injected will be discussed later but there is no innovation in this treatment compared to the proposals of the economists as prestigious as Simons (and his colleagues of the Chicago School), Fisher, Friedman, Allais.....

- **The recovery of the “economic rent” related to the “old money”** (the circulating money resulting of all the injections of money in the past)

Generally, in the usual schemes for the implementation of the monetary reform, a loan of the central bank to the commercial banks is planned to allow them to repay their debt on demand (sight deposits). By doing so, the society creates a claim on the banks and this channel is a way for the citizens to recover the “economic rent” linked to the privilege of creating new money from “thin air” with all the advantages attached. This recovery can be done through the interest rates paid by the banks on the CB loan and, with precaution, by the repayment of the debt itself which could permit, for example, to amortize the public debt (For example: Fisher, ...Benes-Kumhoff). In this case, even if the M. Bacchetta’s understanding is far from this approach, his treatment of the seigniorage could have been acceptable for a part, and a part only, of the “economic rent”. But, it is not the case because, due to the monetary policy implemented in Switzerland over the past ten years, the commercial banks have plenty of banking reserves at the SNB. So, the treatment of the “economic rent” by M. Bacchetta is grossly wrong.

In fact, in Switzerland, for the reasons mentioned here above, the second (and additional) way to recover the “economic rent” enjoyed by the banks is not applicable. So, the seigniorage linked to the capture of the “economic rent” would in terms of GDP (2016), according to the previous table, as follows:

TABLE 5

Estimates of the “economic rent”/Seigniorage in terms of GDP GDP 2016: 658.978 bil.chf				
Decrease of electronic money compared to liquid deposits by	15%	25%	35%	45%
“Economic rent” / seigniorage (bil.CHF)	19/16	17/14	15/12	13/10
In percentage of GDP Total/electronic money	2.8%/2.4%	2.6%/2.1%	2.3%/1.8%	2.0%/1.5%

In the worst case<sup>23</sup> (a drop of the electronic money to 293 bil.chf from 535 as of June 2017), the seigniorage linked to the electronic money creation should not be lower than 1.5% GDP. Globally this seigniorage is between twice and three times Bacchetta’s estimates and a significant contribution to the “welfare” (as M. Bacchetta says) of the citizens indeed. Of course, this benefits the citizens in general rather than the banks, but bankers are also citizens.

4.2.3 Third key point: The state of affairs of the banks is not properly analyzed by M. Bacchetta due to his biased vision of the monetary reform and his mandate to bash it

The “raison d’être” of the reform is to abolish the privilege of money creation appropriated by the banks, so it is fair to expect a priori some damages for them after the implementation of the SMR. However the analysis of the situation is more complex and what M. Bacchetta analyzes is a theoretical loss of earnings potentially resulting from SMR rather the actual situation of banks in Switzerland.

For M. Bacchetta, the case of the banks is simple:

- In a “normalized” situation (with significantly non-zero interest rates, compared to the present situation), they will lose the net interest (interest received  $i$  minus interest paid on sight deposits  $i^m$ ) on the deposits that cannot be used for further lending, that means, in his mind, the liquid deposits held by banks before the reform. That means, in the very inflated variables used due the characteristics of the period covered (Reminder:1984-2006), an estimated “loss” of 0.80% GDP, 0.77% after some adjustments.
- After tax (35%), the loss of the banks due to the reform would amount to 0.50% of GDP.

All these calculations, acceptable in principle as the cost for the banks of the abolishment of their exorbitant privileges, are wrong in the Swiss case. The reasons are simple.

Firstly, it is necessary to consider the situation in which the banks operate now and in the foreseeable future (several years) in the context of the SMR.

<sup>23</sup> From the viewpoint of the seigniorage only, for this reform brings numerous additional advantages

On an accounting basis, the balance sheets of the banks will decrease, on the liabilities side, by the amount of liquid deposits transformed into electronic central-bank money) and, on the asset side, by the same amount held in the banking accounts at the SNB. There will be no change in the assets and only, on the liabilities side, some limited changes in the amounts of saving and time deposits along with medium-term resulting from the portion of liquid deposits not transformed into electronic money and invested in higher yielded assets. At the global level, given the weight of liquid deposits in the huge balance sheet of the banking sector, it is a slight change, almost negligible.

In addition, the other changes in the P&L of the banking sector should rather favor it:

- All the activities linked to the payment system and to the cash management services will be externalized and located in subsidiaries (Money services companies), with their related P&L and the necessity for them to balance their accounts;
- The negative interests paid to the central bank by the banks for their huge excess reserves held in the SNB accounts will disappear<sup>24</sup>
- Once the financial system stabilized, some relief in the capital and other rules and ratios could be envisaged, given the more stable environment provided by the reform and the complete protection of the payment system it guarantees.

Therefore, in the first stage, no shock is to be expected in the credit banks and they will have all the time to adjust to a new business model, **starting from a quasi-intact profit base**. It is good not to forget that, in a lot of countries, especially in the US, the nonbank banks (the equivalent to the new “Credit banks”) have been daunting competitors to the traditional banks. That means that the creation of money is not the alpha and omega of the financial players. They will have to reinvent themselves: (1) changing their cost base; (2) improving productivity (3) introducing new technologies....

No doubt that the challenge will be at high risks for incumbents because, losing their monopolistic advantage regarding the creation of money, they will have to face more and more competitors (from Fintechs especially) in all the banking activities, from cash management to asset management, and the new technologies can destabilize the most established positions. Of course, the sponsors of M. Bacchetta could be afraid to confront this new future. But, who among the “true” and independent economists would complain about that?

M. Bacchetta has no right to say that the reform will inevitably induce a decline in the profits of the banking sector. It probably abolishes one source of illegitimate earnings but it does not undermine at all the future of the banking industry and does not even scratch the profitability in the short term.

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<sup>24</sup> A negative interest rate is levied on the reserves held by the banks at the SNB, with a threshold equal to 20 times the minimum required reserves for the exonerated amount.

Overall, the conclusions are that the calculations made by M. Bacchetta include “tricks” and they are basically wrong whatever the aspect considered. The monetary reform will bring increasing resources to the Swiss citizens most likely bigger than 1.5% GDP. The estimates of M. Bacchetta, hazardous and biased, are a pure manipulation and have no economic value.

**4.3 “When one wants to kill one’s cat, one says it has got the rabies” (French proverb): The last (up to now?) quibbles of M. Bacchetta to bash SMR.....**

4.3.1 Does the reform undermine the independence and the solidity of the central bank?

- **The independence of the central bank**

Discussing the transfer of the “economic rent” derived from money creation to the Swiss community, he writes:

“ All modern central banks are prevented from directly financing the government and the SNB has always been a leading example in terms of independence. .... It would clearly put political pressure on the SNB” (p.23)

The point concerning the ban on the financing of the government budget will be raised later because it is a big mistake to confuse this subject with the subject of the independence of the central bank.

One point is sure: Contrary to what M. Bacchetta suggests, the objective of the monetary reform is not to suppress or even limit the independence of the SNB but, in contrast, to reinforce this independence by incorporating it plainly in the Constitution with the precise objectives to be pursued for the benefit of all the Swiss Community and with all the required powers attached. Clearly, the Central Bank is a branch of the Government but the Judicial Power is also a branch of the Government and its independence from the Executive Power is affirmed in a Constitutional State within the respect of the rule of law. It will be the same for the Central Bank and its president will have the same kind of power as a President of a Supreme Court.

- **The solidity of the Central Bank**

Of course, M. Bacchetta suggests that the balance sheet of the SNB in the context of the reform would be much weaker than now and, as usual, he begins his indictment by a mistake due to his lack of understanding or his intent to be detrimental to the SMR:

“ ... The Committee behind the initiative argues that the SNB could transfer an additional CHF 15 billion each year to the state. The only way to do that is to sell the assets of the central bank... In other words, the initiative’s committee is basically proposing to frontload the distribution of SNB profits at the cost of lower profits for future generations” (p.22-23)

It should be clear for everyone that the initiative’s committee has never proposed to sell the SNB assets and to reduce the SNB balance sheet in order to transfer the money to the government... For one simple

and obvious reason: it is absurd! Except for M. Bacchetta, who shows once again his complete misunderstanding of monetary matters. If the SNB does so, it would reduce the monetary base and the quantity of Sovereign money! Exactly the opposite result of what the SNB would intend to do: increasing every year the money supply by 3 to 4% on average in accordance with the objectives of its monetary policy. The only way to do that is to increase and not to reduce the balance sheet of the central bank. So the central bank will have to create new money (exactly like today when the central bank buys billions of equivalent CHF in the Forex market) to be transferred to the government. How? By creating and crediting this money on the accounts of the Government (and/or cantons) in the form of permanent credit to be redeemed upon request (if it is necessary to stabilize the economy for example).

This point raises immediately the problem of the strength of the balance sheet of the central bank that M. Bacchetta rates highly. He is right but the reasons he gives are risible as usual insofar as he does not understand how the system works:

“... Having a central bank with assets much lower than the amount of currency in circulation strongly threatens the confidence in the system. Moreover, since the assets are currently in foreign exchange reserves, the SNB would need to sell foreign currency assets, which would pressure on the Swiss franc” (p.23)

And talking about a hypothetical bond issue by the Central bank to reduce liquidity, he adds:

“... But how safe would central bank debt be perceived if its assets do not match existing liabilities” (p.24)

Nobody knows, what could be the appearance of a balance sheet in which assets do not match liabilities..... But let's remind M. Bacchetta the main basics for assessing the value of a money: (1) a money supply under full control; (2) a budget balanced by stable and non-inflationary receipts (even if some resources are provided by the central bank in the context of a new system); (3) an equilibrated balance of payments....Concerning the balance sheet of the central bank, the only feature to keep in mind: the central must be able to withdraw the required money to stabilize the economy at any moment. It is the reason of this emphasis on good assets which can be sold easily in the market without losses (no counterparty risk, no market risk, liquidity). Even if this is not very well respected today by the SNB (however, apparently with no bad effect on the value of CHF), it will continue to be the mantra of the SNB policy after the reform. For the permanent credit to be redeemed upon request, the guarantee will be the Swiss economy itself and the capability of the government to tax Swiss citizens if necessary.

#### 4.3.2 Does the monetary reform jeopardize the efficiency of the monetary policy?

Astoundingly, M. Bacchetta claims also that “The monetary policy would be clearly hampered by the sovereign money initiative” (p.23). He writes:

“...in the real world, the economy is bumpy and the SNB needs to react quickly to the changing environment. With the initiative, the SNB could no longer use its current instruments that work in great part through a quick impact on the monetary base. The SNB would have to find other, less efficient [underlined by us], ways to influence monetary policy” (p.24)

The mission of the SNB will be to reach a long-term target (of real GDP potential growth + targeted inflation rate), over a business cycle of five years for example, following a sliding average. But, it should

not be obliged to respect this target on a short-term basis (yearly) because, as M. Bacchetta says rightly (for once!), it is necessary to adapt to the economic situation and all the events which could occur.

But, on contrary to what M. Bacchetta claims, the central bank would have a wider, and not a narrower, range of policy instruments at its disposal to cope with all the possible circumstances:

- A direct control on the money supply injecting through the public budget with all the direct consequences (see section below on fiscal policy) on the interest rates or the total demand.
- All the open market tools to fluidize the market movements and smooth them if necessary would continue to be used,
- Issuance of bank bills (as mentioned by M. Bacchetta!) which is already an existing possibility;
- In special circumstances, direct loans to commercial banks could be envisaged (see section below on financing new credits)

Even if a policy of targeted exchange rate policy is implemented, various types of instruments can be used (issuance of bills for example) or designed to sterilize the creation of money linked to the inflows of capital (if no measures are taken to restrict the freedom of capital flows in a context of “tsunamis” of liquidity).

It is out of the scope of this study to review various scenarios of possible economic circumstances and the responses which could be used to cope with them in the context of SMR. But, it could be done at any moment, at least to put the M. Bacchetta’s mind at ease.....

It is not possible to finish this point without mentioning an additional major mistake of M. Bacchetta:

“ With the initiative, the SNB could no longer use its current instruments, that work in great part through a quick impact on the monetary base” (p.24)

He is wrong: it would be possible for the SNB to use its current instruments. However, the point concerns the vision of the monetary policy as a whole and it has to be analyzed specifically.

#### 4.3.2 Is the new monetary policy derived from the implementation of the monetary reform worse than the present one and a return to a failed system experienced in the past?

In the past, before the launching of the “inflation targeting” type of monetary policy in the late 90’s, a policy aiming at controlling the monetary base was in operation and failed. M. Bacchetta tries to regard this as grounds to attack the SMR, even if he does not clarify his arguments, and to praise the new monetary policy implemented since then.

“ ....The initiative implies that the SNB would return to monetary targeting, since it focuses on money supply. The SNB adopted such a strategy after the end of the Bretton-woods system until 2000 when it shifted to a policy focusing on inflation forecasts and on the control of short-term interest rates. There were good reasons (which I will not review here) to abandon such a system and going back to it would clearly lead to worse monetary policy” (p.24)

Of course, he is wrong on the two subjects.

- **The monetary policy implemented in the 70's-80's and its failure**

To stop the accelerating inflation process that the western economies experienced in the 60's-70's, the "Monetarist school" took the lead over the "Keynesian school" and reinstated money at the core of the economic thought regarding the explanations of inflationist phenomena and, more generally, of the instability of the market economies. One key conclusion was: To stabilize the economy it is necessary to control tightly the monetary aggregates and, especially, the narrower one representing as closely as possible the transactional money, i.e. the monetary aggregate M1 (coins and banknotes, demand deposits). So the process envisioned by its promoters was simple: definition of a target of growth for the selected monetary aggregate, calculating the amount of reserves required to reach this target, using all the open market instruments to ration the creation of monetary base and limit it to the pre-defined target.

It is clear that for the leader of this movement, Milton Friedman, a monetary reform, in the line of the Chicago plan, would have been ideal (Friedman 1960). However, in response to the opposition of the bankers, he thought that it would be possible to overcome the hindrances linked to a fractional reserves banking system and to operate a strict control of the banking reserves at the central bank by the Monetary authorities through the usual market operations. It turned out to be a huge mistake. In fact, the main hindrances were twofold:

- Difficulties for defining the accurate monetary aggregate which was necessary for the central bank to control in that the financial innovations and the development of new types of deposits had blurred the frontiers between money and saving (Gomez, 2010)
- The impossibility of controlling monetary aggregates through a strict control of the banking reserves according to the monetary multiplier model ( $M=mB$  where M is monetary aggregate, B the monetary base and m the money multiplier) because, in a fractional banking reserves system, the loans come first and the central bank is obliged to ratify the money creation initiated by the banking system.

The consequences were: impossibility to respect the monetary targets, high volatility of the interest rates, persistent inflation process coupled to an increase in the unemployment rate.

Can the results of this experience be extrapolated to the proposal of SMR and to serve as a base to criticize it? Certainly not. The implementation of a policy based on monetary targets is possible precisely because this new policy will be preceded by a *complete* reform of the monetary and financial systems.

- *Is the monetary policy called "inflation targeting" a success?*

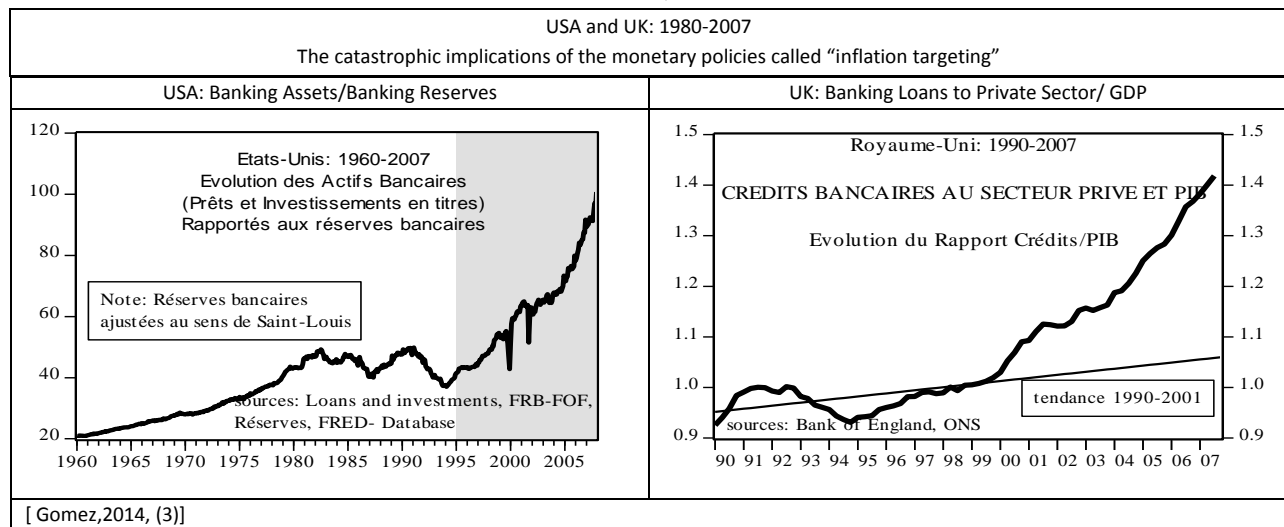
It is unbelievable that M. Bacchetta promotes the monetary policy implemented by the central banks since the end of 90's, and claims it has been a success! It is this system which has led to the 2007-2008 crises, and which continues to give problems even now. Let's summarize the problems raised by this monetary policy in a few points.

- The basic assumptions underpinning the design of this policy are rotten (Gomez, 2014)

- ✓ The inflation rate is a lagging indicator, so any action based on its movement will be counterproductive and will amplify the fluctuations;
  - ✓ The inflation rate used by the monetary authorities gives most often false signals about the “true” pressure of the demand in the economy
  - ✓ The benign neglect of the development of asset prices in the context of “free money” is the inevitable cause of financial and, therefore, economic catastrophes.
- The culpability of this monetary policy in forming the conditions giving rise to the 2007-2008 crisis

The graphs here below tell all the story of the failures of this monetary policy, which is still in operation, and all the inconsistencies of the theory which underpins it.

GRAPHIQUE 13



- The horrific consequences of the after-crisis policies implemented by the central banks, called “Quantitative Easing” to counteract the consequences of their before-crisis policies:
- ✓ Slowest recovery of the after-war period and rupture in the long-term growth rate of the economies
  - ✓ A tendency to deflation and inability of the central banks to boost the total demand in spite of massive injections of monetary base through purchases of huge quantities of financial assets in the markets;
  - ✓ Development of assets bubbles (bonds, stocks, real estate) due to massive injections of liquidity with the implied consequences on the undeserved increase in wealth of the wealthy and the increase in inequality;
  - ✓ Due to zero or quasi-zero interest rates: intertemporal discoordination of economic activities, plundering of the savers and the future pensioners...

When surveying this disaster, it is easy to understand why M. Bacchetta does not want to review the arguments in favor of the so called “Inflation targeting policy”. Taking account of the disasters caused by the blind application of absurd principles, it is derisory to write that “the control of the short term interest rates” (p.24) is enough to cope with them and with all the failures of the present monetary system. Any comments on it would be self-destructive and untenable. And, taking account of the potential advantages brought by the SMR (to stimulate the economy, lifting it out of the doldrums and putting it on an optimal growth path) it is the whole edifice built to defend the case of his sponsors



which would tumble down. M. Bacchetta should think more, generally and particularly, on this thought of Reinhart and Rogoff:

“ The current phase of the official policy approach is predicated on the assumption that debt sustainability, can be achieved through a mix of austerity, forbearance and growth...this claim is at odds with the historical record of most advanced economies” (2013, p.1)

#### 4.3.3 Does the Monetary reform jeopardize the independence and the efficiency of the fiscal policy?

M. Bacchetta asserts:

“ .....These transfers [the new money created by the central bank-CG] will allow to finance government deficits, i.e., to increase its expenditures or to decrease its revenues without a need to issue debt. This means that monetary policy would be tied to fiscal policy. **It is well known that deficit financing by the central bank is extremely bad policy** [the mantra-cg]. All modern central bank are prevented from directly financing the government ... it would be also important that central bank transfers affect fiscal policy as little as possible” (p.23)

The banning of budget financing by money creation was put in place in western countries from the 70's (in France for example: 1973, under the Presidency of Georges Pompidou) to control inflation, a big problem at that time, by cutting one source of creation of monetary base. As a matter of fact, in a fractional reserves banking system , it is especially dangerous: budget deficit to be financed by the central bank → creation of monetary base → creation of bank money based on this new monetary base → increase in private (bank loans) and government expenditures (monetary base) → disequilibrium between nominal total demand and real output → inflation gap → inflation → race between prices, salaries, costs..... The problem is made worse for the budget deficit by the time lag between expenditures (to be paid immediately) and revenues (a big part of the taxes are paid with a time lag: one year for the income tax for example). So when an inflation process is already engaged, the budget deficit will tend to grow and also the “emergency calls” of the governments to the Central bank.... with, as a result, the engagement of a dangerous spiral. The extreme case of course, often mentioned and still in the collective memory, is the “German Hyperinflation” in 1921-1922 during the Weimar Republic. In the context of a fractional reserves banking system, it is not only understandable, it is also necessary because no monetary policy is conceivable otherwise

But, precisely, the proposal of injecting the new money through the budget is not made in this monetary system but in a new one based on 100% money or Sovereign Money principles and that changes everything. In such a monetary system, there are at least three important features to be kept in mind:

- **The fiscal policy is tied to the monetary policy and not the opposite as M. Bacchetta alleges.**

Totally independent, the Central bank would fix, on an annual basis, the amount of money that would be injected through the budget of the Confederation (and/or the cantons). It would be a resource for the public finances in addition to the other revenues (taxes and duties) and the Confederation and the cantons would have to manage their finances, knowing that, on average in the long term, the amount of resources they will receive on an annual basis will be between 1.5-2% GDP. In case of the SNB would

decide to lower its targeted injection for the year in view of the economic circumstances, the choice of the Confederation/cantons would be between raising taxes or borrowing money through financial markets or credit banks. This decision would depend on their assessment regarding the temporary or permanent nature of the drop in their monetary resources. The impact on the economy will be twofold: on one hand, the increase in liquidity would decelerate (or even decrease in the worst case) with the implied consequences; on the other hand, the raised taxes or the increase in government borrowing would slower the total demand. Of course, in case of an increase in the injections of money decided by the Central bank, the choices would be symmetrical.

The difference with an injection of money in a fractional reserves banking system (FRBS) is obvious: In the case of a FRBS, the risk is that the monetary base created through the financing of the budget be amplified by the creation of money by the banking system through the credit mechanism, with a total loss of control of the money supply by the Central bank; in the case of SMR, such a risk does not exist as the injection of money represents the increase in money supply itself without any risks of duplication by the credit banks. The Central bank keeps the full control of the key variables determining the trajectory of the economy.

- **The additional monetary resources are equivalent to tax revenues**

In no other field the regress of the economic thought has been as large as in monetary economics, as the contribution of M. Bacchetta shows. The mainstream economists are no longer able to recognize what is the distinctiveness of money compared to saving, as it was already demonstrated (p. 18-19). But, in the same vein, the sameness between creation of money and taxation has disappeared from their reflections. They argue naively that the role of the banks “transform the maturities” but they ignore incredibly that the banking sector creates money through the credit mechanism. Yet creating money is to withdraw resources in the markets without producing beforehand the same value of resources in a productive activity. It is a pure levy on the social product without a preliminary contribution to it, unlike saving which a pure transfer of resources. So, it is fair that the “economic rent” benefits to the Community and not to private interests.

The point was already stressed by Ricardo, speaking about the Bank of England:

“In the case of issue of paper, the advantage will always be in favor of the issuers of paper, and as the government represents the people, the people would have saved the taxes if they, and not the bank, had issued this money. ... The public would have a direct interest that the issuers should be the State, and not a company of merchants or of bankers” (Ricardo, 1817, p.179-180)

*[note CG: At that time, paper was equivalent to demand deposits today]*

After him, the tradition of “Currency school” and their followers of the “Chicago plan” maintained this approach of the money creation. For Allais (1977) , the appropriation by the Community, through the State, of all “the unearned revenues” (“Revenus non gagnés”), the “false rights” of Jacques Rueff , a category which the “monetary rent” belongs to, was a condition of fairness in a “free Society” and also a

condition of efficiency for the economy. As a matter of fact, this appropriation could allow to lighten the tax burden on the productive activities and to boost the productivity of the economy. For example, in Switzerland, the tax relief for the companies located in Switzerland proposed by the Federal Council, called RIE III, was rejected by the Swiss citizens fearing a compensatory increase in their own taxes. It was a blow against the long-term prospects of the Swiss economy. In fact, such a loss of earnings for the State and the cantons would have been easily compensated by the gains linked to the “nationalization of money”. A lost opportunity ....for the moment!

- The necessity to break the taboo and to coordinate monetary policy and fiscal policy

Apparently, M. Bacchetta is very satisfied with the way “inflation targeting” is used in the monetary policy to influence the economy: through the manipulation of the short term interest rates, possibly by inundating the economy with liquidity and pushing them to zero or into negative territories ..... It should be clear that, for the supporters of the SMR, such a policy is nonsense pushed to its most extreme consequence. What is the reason for such an aberration? A pure ideological reason: the refusal to consider the possibility to use the channel of budget to inject the new money in the economy! However, at the economic level, the differences between the two ways are perfectly clear.

In the present monetary policy, the central banks try to move the economy by the manipulation of the expectations (the so called “forward guidance”) of the economic agents and the short term interest rates. In the circumstances of the financial and economic crisis, it has been a complete failure:

- The drop of interest rates to zero (or even negatives rates) has created several very dangerous financial (bond and equity markets) and economic (real estate) bubbles with a minimum impact on the economic growth at the moment but with potential high risks for the future. This is irrespective of the consequences on the wealth inequalities, the plundering of the savers and of the future pensioners, the discoordination of economic activities.....

As Turner (2016) writes:

“Sustained ultralow interest rates, meanwhile, are likely to encourage risky and highly leveraged financial speculation long before they stimulate real economy demand. And they can only stimulate real economy demand by encouraging a return to the private credit growth that first created the debt overhang problem” (Turner, 2016, Kindle 57%)

It is also possible to add with the IMF:

“The extended period of monetary accommodation and the accompanying search for yield is leading to credit mispricing and asset prices pressures and increasing the danger that financial instability risks could derail the recovery.” (IMF, Global Financial Stability Report 2014, p.1)

- “The forward guidance “play” of the Central Banks is only useful for the speculators on the financial markets who buy or sell according to expected moves of the monetary policy but its influence on the inflation expectations is nil and, in any case, it is thwarted by the opposite feeling of the economic actors that the central banks do not really control the situation and that the exit risks of such a policy are unknown or, at least, underestimated.

In fact, with such a design, it is not possible for monetary policy to have a direct effect on the economic circuit, the circuit where the domestic product is created through the interaction between the flows of incomes, investments and outlays of the various actors of the economy. It aims at changing the mood and incentives of the economic actors, to spend or to invest, by the use of very uncertain and imprecise instruments: the words and the short term interest rates, of which all the competent economists know the limits<sup>25</sup>.

Under the SMR, the amount of money to be injected through the budget, as an additional resource, would have a direct and full (no hoarding to be feared in this case) impact on the economy, whatever the method of injection used. (The method is chosen by the Political Authorities - Confederation and/or cantons - and includes the possibilities of increasing public spending or decreasing taxation). The total demand would be stimulated on a large scale basis without any bias in favor of specific sectors and no interference with the parameters guiding the decisions of the economic agents, except the available income. The stimulation would have a short term effect: the immediate increase in global income, and a longer term effect: the prospect of a sustainable support over time of the total demand in that the injections of money would be renewed and increased at the rate of growth of the GDP. So, in this context, both the demand is directly stimulated but, in addition, the expectations are stabilized.

Are these views only shared by maverick economists, as the opponents of the SMR are claiming? Not exactly as some examples can show! After WWII, Milton Friedman (Memorial Nobel Prize 1976) proposed “A Monetary and Fiscal Framework for Economic Stability” (1948), combining a 100% Money reform and a budget with budgetary stabilizers increasing or decreasing injections of money according to the fluctuations of the budget around an equilibrium level of full-employment. A remarkable article which should still be required reading for anyone wanting to reform monetary policy. Maurice Allais (Memorial Nobel prize 1988), from 1947 to his death in 2010, showed tirelessly the importance of the control of money supply and the use of budget as the way to inject the new money in the economy, not only for economic stability reasons but also for other important reasons. The “nationalization of money” means additional resources for the budget by the transfer of the “monetary rent” from private to public interests with two beneficiary effects:

- Improving the fairness of the society by suppressing the “unearned incomes”, the “false rights of Jacques Rueff” and distributing them for the benefit of the citizens
- Improving the efficiency of the economy by reducing the taxation on the producers of economic value and increasing the incentives to make more progress

More recently, with the development of the economic crisis 2007-2008, more and more economists have requested to break the taboo so praised by M. Bacchetta: the monetary financing of the budget,

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<sup>25</sup> The transmission of the manipulation of the short term rates to the economy can be undermined by various factors: the longer term interest rates can react inadequately by changes in the opposite directions of the yield curve and of the risk premiums, the sensibility of economic agents to the changes in interest rates is dubious, uncertain, loose, lagging....except in the real estate sector with all the problems attached to the developments of the prices in this activity.

“The Devil” as Adair Turner, former Chairman of the Financial Services Authority, calls it (2016). In his latest book (2016), he writes:

“Faced with this malaise, it can seem that all policy levers are ineffective: many central bankers indeed are keen to stress the limits to what they can achieve. But inadequate nominal demand is one of very few problems to which there is always an answer. Central banks and governments together can create nominal demand in whatever quantity they choose by creating and spending fiat money. Doing so is considered taboo- a dangerous path toward inflationary perdition. **But there is no technical reason money finance should produce excessive inflation, and by excluding this option, we have caused unnecessary economic harm**” (Turner, 2016, kindle 56%)

Everything is said and it should be obvious that the SMR is the most rational response to all these problems.

#### 4.3.5 Is the monetary reform an issue for the financing of credit banks and of the economy in general?

It is normal that “the normal citizen” raises the question: if the banks cannot make one type of credit, will it be possible to get loans when he needs it? But it is more puzzling to see economists such as M. Bacchetta asking the same question. After rightly noting that the sight deposits represent 25% of the total credit and 15% of the total banks balance sheets and preventing himself from the ridicule by saying: “there is no doubt that Swiss banks would be able to find funding”<sup>26</sup>, M. Bacchetta adds:

“However, switching to alternative funding may create short term costs. For example, consider the situation where banks want to rapidly increase their credit and need to issue new liabilities. Such a situation would occur if the Swiss economy exits the liquidity trap. In the transition, it might take some time to organize alternative funding, especially for smaller banks. This may slow down a potential credit recovery. Therefore, there might be short-run risks in the search of alternative financing” (p.21)

Moving on, he discovers that there are other financial instruments to fund the new loans: equity and long term debt ... and saving deposits that he considers as a “not responsible” alternative source of financing:

“The basic idea behind the initiative is that....the financing of banks should come from more “responsible” investment decisions. This is likely to be true for equity and long term debt. But some alternative sources of financing may not be more “responsible.” And some other may banks more prone to crises. First there might be an increase in savings deposits.... Second there might be a shift towards sight deposits in euro” (! CG) (p.21).

So let’s reconsider the question of the financing of the economy after the implementation of SMR from an unbiased economic perspective, the question of euro being studied in the next point:

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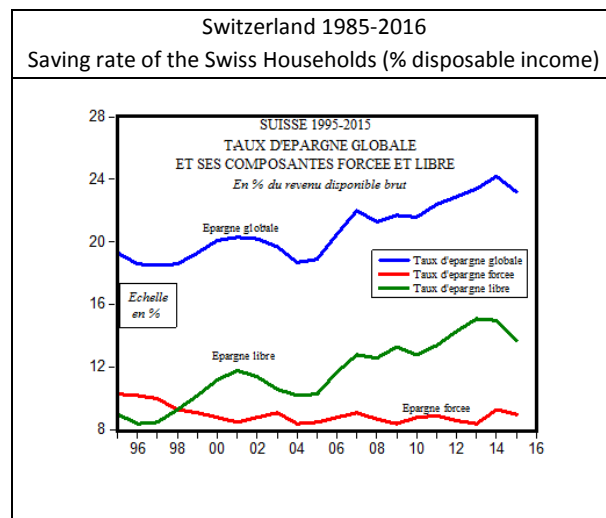
<sup>26</sup> But still suggesting that is mainly due to the attractiveness of the Swiss Franc, not fearing the contradiction with his other remarks that the SMR would be bad for the Swiss Franc, for both the Swiss citizens and the foreigners.....

- Starting point: No change or an improving situation compared to the Present.

For the Swiss economy as a whole, the present situation is characterized by an abundant supply of saving.

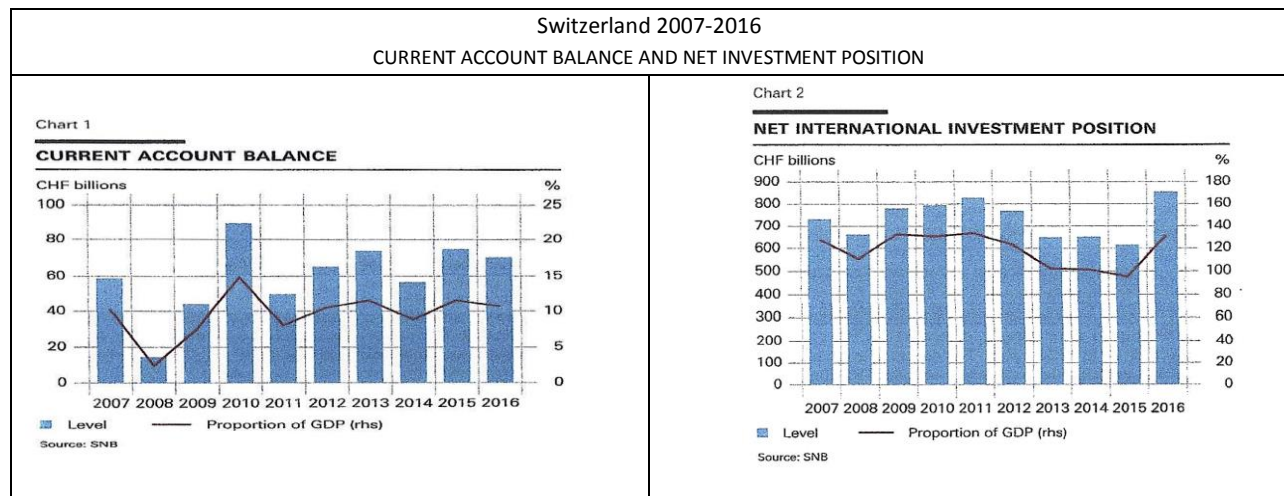
The saving rate of households is among the highest in the world (After Norway and Korea) and .... It is increasing.

GRAPH 14



More globally, if all the Swiss economic actors are taken into account, the Swiss economy shows an impressive excess saving which is illustrated by the surplus of the balance of payments (current account) and, for an illustration of the past developments, by the Net International Investment Position.

GRAPHS 15 and 15B



For the Swiss banks, the situation is much better:

- They have “lost” the demand deposits which are now located in a subsidiary specialized in the payment services...
- ... But they have redeemed their debt on demand by using the costly excess reserves.

They have kept all their assets (that means: no change in the level of financing by the banks in the economy) which earn interests and, on the other hand, the interests to be paid on their liabilities have not changed, or only slightly due to the transfer of a portion of demand deposits to other banking liabilities yielding interests, but this possible additional cost could be compensated by the reduced charges on the banking reserves and, perhaps, by some economies on the cost of the payment services<sup>27</sup>.

Globally, the monetary situation of the Swiss economy is dramatically improved as the huge excess reserves have been erased. So, it is possible to build a new monetary policy on this base.

- **The injection of new money through the budget of Confederation or Cantons.**

Let's assume an injection of X billion CHF,  $\Delta M$  through a reduction in taxation. The economy would receive a double impulse:

- On the budget side: the outflow of nominal public spending would exceed the inflow coming from the taxes on resources already produced by  $\Delta M$
- On the budget of the other economic actors, the available revenues/incomes would increase by the same  $\Delta M$

Thus, on one hand, the public budget would be continuously in a position to support the growth of total spending. On the other hand, the increase in available resources of the economic actors would support also the development of consumption and saving/investments. Both of them would contribute to the increase in nominal GDP by multiplier/velocity effect. And therefore, this increase in GDP would generate additional saving to be invested either directly in the real or financial markets or, indirectly, through financial intermediaries, i.e. credit banks.

And this impulse would be repeated on a yearly basis and would increase at the rhythm in line with the targets of monetary policy, in the order of magnitude of 3.5-4% per year. So, other things being equal, i.e. the global saving rate being constant, the increase of saving would grow similarly.

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<sup>27</sup> The externalization of money services could compensate this relatively small additional cost but we have no knowledge of studies having analyzed precisely the possible net cost of the payment system for the banks which would have been transferred to the Payment services companies.

If this way of injection is compared with the present one, the differences are obvious and not in favor of the present one. As a matter of fact, in this case, the injection of money is not done equally throughout the economy but, being done by the banks through the credit mechanism:

- it is concentrated in the hands of a few individuals (the borrowers)
- it is concentrated, for risk management reasons and, ipso facto, for capital management reasons (lower capital ratios for the loans to the real estate market with mortgages) in some sectors, especially one, the real estate market.

So the consequences of the injection of money are threefold in this case:

- the prices of “objects” in this sector are kept under pressure because the supply is quasi-fixed (existing real estate), with a tendency to create bubbles which will likely boom and bust, with all the implied consequences, at some moment in the future;
- In addition to the bankers, some individuals benefit from these price movements and many others suffer;
- At the global level, the indebtedness to GDP ratio grows continuously with a decline in the marginal increase in GDP relatively to the increase in debt, i.e. more and more debt is necessary to obtain an additional increase in GDP.

It is precisely what everybody can check with his eyes or with statistics.

Under the SMR, the saving-investment circuit would be totally disconnected from the payment circuit. In the saving circuit, all the funds to be invested (new saving) or reinvested (the redemptions of the previous loans and issues of notes and bonds) would be set against the demand of funds for investments. The interest rates on the various maturities would reflect exactly the preferences of the savers and the marginal efficiencies of the investments in the different sectors of the economy. The interest rates which would result from this confrontation between the offers and the bidders of funds would be the “true” natural rates of interest (Wicksell) which would allocate in an optimal<sup>28</sup> way the flows of capital in the economy.

Normally, the central bank should avoid lending directly to commercial banks, except, perhaps, in one case (to be seen later, next point). But, of course, it is always a possibility for the SNB.

That is why the problem of a potential scarcity of funds to be invested under SMR is a no brainer for a “true” economist understanding the monetary dynamics and the basics of the economic growth models. There is no problem at all. On the contrary, the SMR allows a substantial improvement in the way the economy works. It is too bad that M. Bacchetta does not seem able to understand the question and to talk about it in a smarter way.

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<sup>28</sup> That is normally the Bacchetta’s language to give him a varnish as a “scientist”. But, I think my use of this word is adequate in this case.



- **The financial instruments to be offered by the credit banks...and their competitors to cope with the demand of credit**

Is it possible for the banks to survive without demand deposits? Would it be possible for them to find alternative sources of funding to cope with the demand of credit? These childish questions (real or feinted?) are the watermark of Bacchetta's article and, especially, of its fourth part dedicated to the "stage 2 of the impact of Sovereign Money in Switzerland" P.20-22). Curiously, while all his (fake) calculations are based on loans of the Central bank to the credit banks, he does not even mention them in this part which is focused on the resources of the banks under the SMR. So let's pose the problem in a rational way.

Given, as seen above, that the volume of saving would be increasing and that the funds to be invested would be looking for adequate risks/returns according to the preferences of the investors, the credit banks would have to offer the adequate products. What could they be?

In fact, at the day one of the implementation of the reform; the Swiss credit banks will start with balance sheets totally in line with the requests of the monetary reform. As a matter of fact, their balance sheets, once the demand deposits evacuated to the Money Services Companies, would have three major items on the liability side:

- Capital and other quasi-capital instruments (contingent capital)
- Mid-long term marketable liabilities (mainly Bonds and medium-term notes)
- Time deposits (different maturities), this type of deposits encompassing now the category of saving deposits as every deposit must have a maturity under SMR and no banking deposit can be transformed into electronic money on demand without penalties

So, as we saw earlier, at the time of the change of system from the previous to the new one, the money holders were requested to choose between keeping their cash holdings as they were or changing them in the new time deposits. At the same time, the depositors in saving accounts also were invited to change the clauses of their deposit contract to take into account the new rules resulting from the implementation of the reform.

For the system, reaching the "cruiser speed" should be rather easy given the high sensibility of the Swiss depositors to the change in interest rates as it was shown (Gomez, 2014). The increasing flows of saving coming, the credit banks would be competing to attract the funds, in competition with other types of issuers, including the specialized financial institutions, the corporations, the public entities....

More and more, it is possible to envisage two evolutions:

- The short-term and medium term notes should replace the time deposits with a major advantage: a better liquidity for the holders (at the price of a limited but real market risk) especially with the development of internet and the possibility to organize exchange platforms.

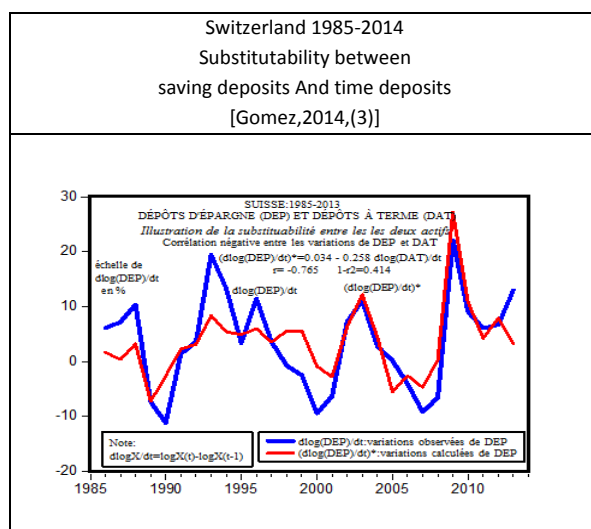
- The banking function could be disintegrating and reinventing itself to be replaced by highly specialized vehicles taking the form of Mutual Funds, as it is imagined by Laurence Kotlikoff (2010) with his project of Limited Purpose banking:

“Under limited purpose banking, all banks.....would operate as pass-through mutual fund companies, which sell mutual fund- safe as well risky collection s of securities. That is , the banks will simply function as middlemen. They would never themselves own financial assets or borrow to invest in anything except those specific assets, such as computers, office furniture, and buildings, needed to run their mutual funds’ operations. Hence, banks would never be in a position to fail because ill-advised financial bet” (2010, 123-124)

But, with the technological revolution in process and the development of internet, more surprises can be expected for the incumbents. One thing is sure: the SMR would be compatible with all of them whatever they will be.

In this context, what could be the role of the central bank vis-à-vis the credit banks? In normal circumstances and in principle: nothing! The credit market should be in balance by its own working to secure an optimal allocation of resources. Any intervention could trigger an intertemporal discoordination of the economic activities as Baeriswyl (2014) argues in a very interesting article. One restriction however: In exceptional circumstances, a crisis of confidence could occur, pushing the demand for money up with the implied consequences under an SMR model: drop of the “loanable funds” and inopportune increase in interest rates at a critical moment. In this case, in our opinion, an intervention of the central bank in the credit market can be possible, in relation with the usual action through the money injected through the budget. As usual, the action of a central bank has to be pragmatic and not ideological.

GRAPH 16



#### 4.3.6 Has the SMR to fear the other bugaboos of M. Bacchetta, the euro, the wholesale funding, the liquid alternative investments?

- **Are the foreign currencies, especially the euro, a threat to the SMR?**

M. Bacchetta mentions: the interest rate on sight deposits in euro when ....the period of liquidity trap will be over, and we could add: notwithstanding the fact that the remuneration of sight deposits is not the current practice in Europe as well as in USA (It was a reason for the development of the Money Market Funds).

“There might be a shift toward sight deposits in euro. These deposits would not be part of sovereign money and would keep yielding a positive interest rate( once we exit the current liquidity trap) These accounts are already available in many Swiss banks , so that the switch would be easy. It may lead to an increase in euro-transactions in Switzerland” (p.21)

So, once again, let’s think about this argument in a rational way.

First of all, on contrary to the opinion of M. Bacchetta, the characteristics of the new CHF won’t be weaker but stronger than the other currencies (invulnerability of the payment system, no systemic risk, full control of the money supply, better predictability of the economic trends).

Secondly, the credit banks will be allowed to receive only time deposits and not sight deposits, whatever the currencies, and any duplication of liquidity will be thus prevented. It is almost impossible for a Swiss bank to create sight deposits in a foreign currency, the development of the so called Eurodollar in the 60’s-70’s being the exception which confirms the rule (Gomez, Reply to Avenir Suisse). In this case, the banks can play only a role of intermediaries (exactly as in the CHF), not of creator of money.

Thirdly, assuming that the remuneration of deposits be allowed the interest rates on sight deposits (we remind, on a daily basis, interest rate/360) would be more than counterbalanced by the exchange rate risk, the conversion costs and the charges linked to the use of an account in foreign currencies....

- **The development of liquid alternative assets**

According to M. Bacchetta:

“... banks may innovate to make alternative investment more liquid (e.g. the citation of Cochrane in the introduction). Basically, they can reduce switching costs between investment funds and money needed for transaction. This could drastically reduce the demand for sight deposits without changing the behavior of depositors” (p.21) [this point is already mentioned p.34-36]

Of course, as already pointed out, he disregards the market risks, the costs linked to the use of mutual funds (management of funds, conversion charges), and the psychological costs (selecting the funds, checking permanently the accounts,....are time consuming activities, boring for the common user). So,

all the examples given by M. Bacchetta (citing Cochrane) show that he has not understood what the demand for money is (see above, p.34-36).

In addition, by doing so, the banks would shoot themselves in the foot. They would open the competition to the mutual funds for their own businesses and would open the way to a transformation Kotlikoff-like of the banking activities into a pure intermediary role between mutual funds and investors, i.e. the objective of the Kotlikoff's project: Limited Purpose Banking!

Needless to say that, if the situation he envisioned happened in the present institutional environment, it will be also the end of the banks as creators of money

M. Bacchetta should know that the possible use by the bankers or other operators of various ways to bypass the new rules has been a major concern for the designers of the reform since the beginning (mainly Simons, Friedman, Allais...). It is linked to the problem of the "near-monies", but not restricted to this. It for this purpose that the questions (1) of creation of subsidiaries for the operations in electronic money- Money services companies (which could be only, of course, e-companies)-, (2) of banning of payments by transfers of notes and shares (by assignments), (3) of banning the multi-endorsement of letters of exchange.... are open.

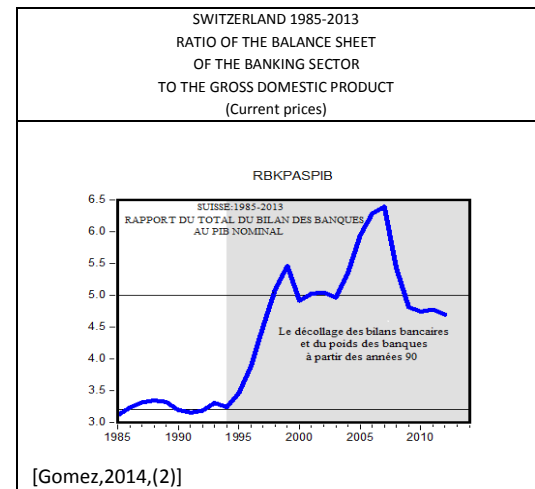
- **The development of fickle funding**

The means used by M. Bacchetta to attack the SMR are often very strange: he criticizes the SMR for alleged potential and dangerous developments that the present financial system has been developing heavily over the last twenty years.... without any impact on the long-term growth, except huge financial and economic crises!

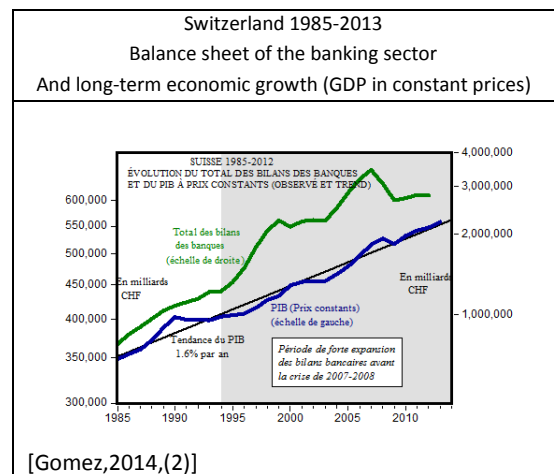
"But alternative funding may attract more fickle funding. For example, banks may rely on short-term debt borrowing from other financial institutions. But these sources of funds are more volatile than sight deposits as the recent financial crisis has illustrated (Bear Stearns, Lehman Brothers or Northern Rock). There are many other examples of dramatic financial crises, where the source of the problem is the short-term international borrowing by banks in demand deposits (e.g. The asian crisis or Iceland). In particular, this could increase the exposure of the Swiss banks to international contagion" (p.22)

To start answering M. Bacchetta, it seems necessary to remind him of all the excesses (follies?) perpetrated by the system that he defends so harshly and ... so naively, precisely in the domain of wholesale funding.

Between 1994 and 1999, the total balance sheet of the Swiss banking sector has jumped from three times the nominal GDP to 5 times (in less than 5 years!). After that, first crisis, the internet crisis with its stock market mania and the over-investment in some sectors (new companies developing all the internet possibilities, telecoms....), which triggered a limited bump in the development of the bank balance sheet. It was only a trial run before “the mother of all the crises” in 2007-2008. Between 2003 and 2007, the balance sheet of the Swiss banks made a new spectacular jump from 5 times the Swiss GDP to 6.5 times (!). And it was the catastrophe! Not really for the bankers but for the people as a whole....



But, there is a fact even more impressive than this explosion of the bank balance sheet and this fact should give matter for thought. THIS FACT IS: ALL THIS TURMOIL IN THE BALANCE SHEET OF THE BANKING SECTOR AND ITS GIGANTIC AND MONSTROUS BLOATING DID NOT HAVE **ANY IMPACT** ON THE ECONOMIC GROWTH, ABSOLUTELY NOTHING! From this viewpoint, the buoyant banking activity developed during the pre-crisis period did not bring any additional value to the welfare of the Swiss people. But, of course, it was not the same feeling that was experienced by the bankers for whom it was a very good period... with high salaries and ample bonuses. The result: a distorted income distribution in favor of the bankers and detrimental to the rest of the population.



And, if the analysis of the graph is fine-tuned, it is possible to show that, if the huge increase in the bank balance sheet has not improved the long-term prospects of the Swiss economy, its fluctuations have increased its volatility in the short run.

As shown in the graph above (Graph 6 p.36), this increase in the bank balance sheet has been due essentially the development of capital market activities:

- A huge increase in the interconnectedness inside the banking system with a development of the loans to banks and liabilities vis-à-vis banks which has receded only after the crisis;
- A development much more rapid than the credit to customers (mortgage loans and other loans) and coupled with the increase in the holdings of securities.

So the question to be asked M. Bacchetta is obvious: Does he think really that all these developments would have been possible without the capability given to banks to create money without any restriction?

Now, regarding the question of this type of funding under SMR, the answer will cover five aspects:

A general aspect to be kept in mind: under SMR, the payment system is protected whatever the circumstances, so no collapse of the whole financial system is to be feared (no systemic crisis)

Second aspect: No need of this type of funding for covering the financing of loans to Swiss borrowers

The specter of a scarcity of resources has been already answered: the flow of saving is ample and will be increasing under the SMR in that the Swiss economy is an economy experiencing a situation of saving in excess for internal uses;

Third aspect: For developing their international activities, these borrowings and investments in various currencies will be under their accountability with no specific impact on the internal money supply:

- The credit banks would not be authorized to hold “sight deposits” (or any liquidities to be redeem on demand) and would have to respect the same constraints as for their activity in CHF;
- They would have to respect the ratios of liquidity and the limits regarding the matching of maturities;
- They would be under the scrutiny of the Supervision authorities and the rating agencies;
- In case of troubles, the shareholders and the other creditors would be fully responsible to find a solution in case of shortage of liquidity and the authorities would implement the resolution process if a solvability problem is detected.

Fourth aspect: If these borrowings or inflows of capital are exchanged in CHF, there are several cases to be considered:

- ➔ Free floating exchange rates: no problem, the bidders of CHF match the offers
- ➔ Dirty floating exchange rates or quasi fixed exchange rates: implementation of all the techniques to sterilize the inflows

Fifth aspect: before the crisis, the main factor driving these interrelationships between banks was the development of the capital market activities and the trading of securities. It is normal to wonder, following a suggestion of Maurice Allais, if it is not better to separate those activities from the others (A Glass-Steagal Act somehow) to make the sector of credit banks even more stable as the risk afferent to each bank would be more readable. That is an open question.

So the conclusion is clear: the need for such funds would be very limited for inward investments but the banks could continue to use them in their capital market activities. Although they do not threaten the stability of the economy and even the sector of the credit banks, the separation of these activities could be envisaged.

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## CONCLUSION

Sponsored by the Swiss Banking Association, the project of M. Bacchetta is to discredit the Swiss people's initiative against the privilege of the banks to create money. Money creation has historically been cornered by the banks with all the nefarious consequences experienced by countries and their people, of which the latest avatar is the crisis 2007-2008 which, ten years later, threaten the present and the future of the western economies. To achieve this, M. Bacchetta tries to show the lack of support of this initiative among the "respected" economists (i.e. mainstream economists), its alleged theoretical inconsistency, portraying the initiators of the proposal as being a few maverick economists without strong background in economics, its supposed cost for the Swiss economy and, finally, all the far-fetched difficulties and risks that Switzerland could face in case of a success of what M. Bacchetta considers as a foolish idea: abolishing the power of money creation plied by the banks!

The key idea of his article is: the Sovereign Money Reform is totally off the point because it wants to control credit by the control of money. Using some statistical studies (he mentions mainly Schularick et al, 2012), he tries to show that credit and money are independent of each other and that the control of credit, not of money, is the key factor to avert crises. He goes so far as to say that money is not generated by bank credit.... And he tries to prove it through his own understanding of graphs provided by others or by himself, which turn out to be without economic meaning or with conclusions opposite to his.

In our reply, we show that M. Bacchetta is not wrong in some of his arguments but that all his line of arguments, theoretical and empirical, are groundless and devoid of economic meaning.

Our demonstration is articulated in **four parts**:

**1- He has not really understood the Sovereign Money Reform (SMR)** as various remarks shows serious shortcomings. In addition, he tries to differentiate the economic consequences of the SMR and the 100% money (100%reserves on sight deposits), which is wrong. He appears to want to isolate Robertson and (mainly) Huber, the promoters of the SMR, as persons without economic background, in order to avoid being confronted with the supporters of the 100% Money, the most brilliant economists in the history of economic thought (among the Memorial Nobel Prizes: Friedman-1976, Tobin-1981[under the scheme of narrow banking], Stigler-1982, Allais-1988.....)

**How is it possible to criticize a proposal without a deep understanding of it?**

- 2- He has no clue of the basics of monetary economics from the viewpoint of [the money supply](#) and [the credit mechanism](#).** The way M. Bacchetta uses to demonstrate that the possible creation of demand deposits by the banks (as a partial equilibrium, he says) is totally neutral for the economy is absolutely ludicrous and shows, on the contrary, he does not understand money creation through the credit mechanism, a scheme that he criticizes without providing any other alternative explanations. This lack of knowledge implies serious consequences for him: (1) he cannot understand the differences between a credit funded by money creation and a credit financed through saving based on produced income; (2) he cannot understand the monetary dynamics and the fact that the SMR aims at controlling the development of total income and not the credit per se.

**How is it possible to criticize a proposal without having the basic knowledge for doing so?**

- 3- He has no clue of the basics of monetary economics from the viewpoint of [the demand for money](#) and [the adjustment process of the economy](#)?**

All the arguments and remarks put forward by M. Bacchetta in this area show a nebulous understanding of the demand for money concept, which is a key concept in monetary economics. The arguments he provides to underpin an alleged decrease in demand for sight deposits due to the implementation of new technologies are wrong or off the point and laughably predict, without him realizing it, the end of the money creation power of the banks..... In addition, his explanation of the intrinsic (according to him) “high cost of holding money” is seriously flawed. And, cherry on the cake, his understanding of the equality between  $M_s$  (money supply) and  $M_d$  (demand for money) in the economic models, for explaining why the banks according to him cannot create as much money as they want, is probably one of the most ludicrous argument it is possible to hear or read in a professional life. Only this point, and there are many others, should disqualify M. Bacchetta as an expert in monetary economics!

**Bis repetita: How it is possible to criticize a proposal without having the basic knowledge for doing so?**

- 4- Based on such weak economic underpinnings, the empirical investigations and the calculations of M. Bacchetta are obviously totally flawed as well as using “tricks” to inflate negative results. His other quibbles are as void as the other parts of the “study”.**

- **The graphs as empirical “proofs”:** If the Schularick et al (2012) article (and the graph used by M. Bacchetta) is an example of “wild econometrics” without theoretical underpinnings and based on comparison of dubious data related to very different financial systems and has thereby a disputable economic meaning, the graph comparing the ratio (narrow money supply/nominal GDP) and the ratio (Total bank credit/Nominal income) provided by M. Bacchetta is more interesting because it shows in full light all the theoretical inconsistencies of his author and demonstrate exactly the opposite of what he intends to do.



- **The calculations as estimates of the “cost” related to the implementation of SMR**

- **The tricks:** For estimating this cost and inflating the numbers,(1) M. Bacchetta excludes the more recent period (2007-2016), considered as abnormal, but includes the period 1985-1996, characterized by high inflation rates and high interest rates, so that he can use an interest rate for the remuneration of sight deposits of 2.74% (!) whereas the average for the full pre-crisis business cycle (1996-2006) is....0.45%, (2) Even for the period selected by him, he does not use the “right” interest rate on sight deposits (1.65%) but the rate on saving deposits, more suitable to his needs and aims (2.74%), (3) he “forgets” that any transfer to more remunerated deposits (from sight to saving or time deposits) offsets partially or totally the initial “interest rate loss ” on sight deposits .
- **The mistakes in the treatment of the profits and losses linked to the SMR:** It is easy to show that with the right approaches and the right data for the households and companies, the banks, the central bank, the state, all the “stories” told by M. Bacchetta are misleading and wrong.
- **The model used for “the demand for money function”:** The only econometric estimate provided by M. Bacchetta shows he gets econometrics under control as badly as economics. He provides a lot of statistical tests (calculated automatically by the computers) but he does not see what is obvious at the first glance: the parameters of the estimated equation are for sure statistically significant but they have no economic meaning!

**Finally, the only result to be kept in mind is that the “economic rent” linked to money creation which will be recouped by the Swiss community would amount to around 1.5% GDP.**

- The final quibbles are delivered by M. Bacchetta to scare the non-economist readers, very often without any rationale or documentary evidence, encourage his readers to question:
  - ✓ Does the reform undermine the independence and the solidity of the central bank?
  - ✓ Does the monetary reform jeopardize the efficiency of the monetary policy?
  - ✓ Does the monetary reform break the taboo of no-coordination between monetary policy and fiscal policy?
  - ✓ Is the monetary reform an issue for the financing of credit banks and of the economy in general?
  - ✓ Has the SMR to fear the other bugaboos of M. Bacchetta, the euro, the wholesale funding, the liquid alternative investments?

Of course, all of these are discussed deeply and the criticisms of M. Bacchetta (sometimes implicit), are totally rebutted.

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At the end of our reply, we have a feeling of dismay faced with this intellectual disaster and the vacuity of the arguments used by M. Bacchetta.

A feeling of dismay vis-à-vis the Swiss banking Association which agreed to sponsor such a paper, demonstrating its only concern is to defend at any price the privileges of the banking corporations without any interest in the common good of the country and the Swiss Citizens.

A feeling of dismay vis-à-vis the Swiss People that some vested interests try to abuse and manipulate them by threatening them with catastrophes or by producing fake studies with a scientific appearance purporting to show downsides, all of which are purely imaginary.

A feeling of dismay vis-à-vis the economics which every economist should try to further the science and improve the understanding of the actual facts, not only by saying others are not qualified, but by a strict observation of facts, the seriousness of his analysis and the building of economic models compatible with the empirical evidence. Unfortunately, it is not the case of the M. Bacchetta's paper! It is even the opposite and it is very sad.

Christian Gomez 23/10/2017

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