What lessons from the 1930s?

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Abstract

This paper explores three areas in which the experience of the Great Depression might be relevant today: monetary policy, fiscal policy and the systemic stability of the banking system.
We confirm the consensus on monetary policy: deflation must be avoided.
With regard to fiscal policy, the picture is less clear. We cannot confirm a widespread opinion according to which fiscal policy did not work because it was not tried. We find that fiscal policy went to limit of what was possible under the conditions as they existed then.
Our investigation of the US banking system shows a surprising resilience of the sector: commercial banking operations (deposit taking and lending) remained profitable even during the worst years. This suggests one policy conclusion: At present the authorities, in both the US and Europe, have little choice but to make up for the losses on 'legacy' assets and wait for banks to earn back their capital. But to prevent future crisis of this type one should make sure that losses from the investment banking arms cannot impair commercial banking operations. At least a partial separation of commercial and investment banking seems thus justified by the greater stability of commercial banking operations.

Keywords: Monetary policy, Fiscal policy, Debt sustainability, Banking system, Commercial banks

JEL classification: E6; B2

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1. Introduction

The one over arching concern of policy makers on both sides of the Atlantic is to avoid a repeat of the policy errors that contributed to the severity of the downturn in the 1930s. The lessons from the "Great Depression" for monetary policy seem clear.[1] However, the same cannot be said for fiscal policy. It seems that fiscal policy played only a minor role even after the 'New Deal' announced by Roosevelt both in terms of Government deficits and government employment.

As far as the banking sector is concerned, there is little doubt that the inaction of Federal Reserve to avoid banks default contributed to the degeneration of the crisis into depression. In this respect the lesson is clear. Yet a relevant aspect of the Banking Act that represented the policy answer to the banking crisis seems to have been forgotten. The Glass-Steagall Act of 1933 required that commercial banks engage only in banking activities whereas investment banks were limited to capital markets activities. Since 1999 this separation is no longer mandatory. A close look at profits of commercial banks seems to suggest that this is a lesson that should be re-learned

The paper is structured as follows. In the next section we present a brief review of the literature on the role of monetary policy before the Depression started and at the most violent phase of the economic downturn. Section 2 focuses on fiscal policy. After a short summary of the different views on the role it played in the recovery phase, the paper explores how government's concerns about debt sustainability have reasonably affected fiscal policy decisions. Section 4 discusses the situation of the banking system and finds evidence of surprising resilience in the profits of commercial banks. The last section concludes and provides some policy implications.

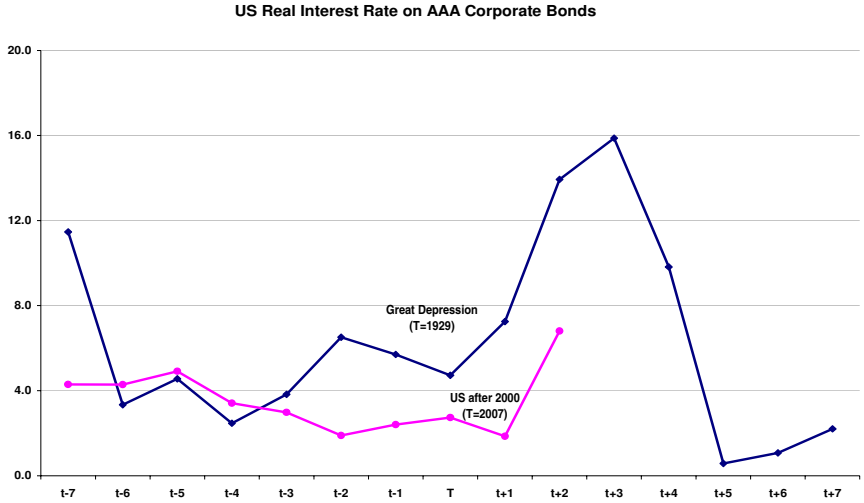
2. Monetary policy

The understanding the role on monetary policy during the 1930s is dominated by the work of Friedman and Schwartz (1963). Even though their argument was not universally accepted, their work has been undeniably influential. It brings forward the idea that the Federal Reserve did not simply played a passive role on the onset of the crisis, as it was largely asserted before the 1960s, but a series of monetary policy mistakes contributed to transform a crisis into the Great Depression. More recently, Bernanke (2000, 2004) developed a more broad argument, which impinges on Friedman and Schwartz main ideas, but emphasizes the international dimension of the Great Depression and the role played by international monetary factors. On one side, he suggests that the adherence to the gold standard was the main cause of successive declines in money supply and the, consequent, increases in interest rate and deflation. On the other side, he finds evidence that, on global scale, the abandon of the gold was followed by economic recovery. This second part of his analysis is consistent with Romer's argument (1993) that monetary policy was the main factor that drove the US out of the Great Depression.

The literature above-mentioned is expression of the general consensus among economists that sustained deflation has to be avoided at all costs. This was not the case after the crash of 1929 when prices started to plunge and deflation persisted several years with dramatic consequences on the economic activity. Between 1929 and 1933, prices fell in the US by a cumulative total of over 25%.With nominal interest rates during this period not even close to zero (they hovered above 4% even for AAA rated issues) this implies, as shown in *Figure 1*, an impossibly high real interest rate during this period. Double-digit real interest rates must be the main explanation of the near collapse of investment until 1933. Certainly, massive bank failures also contributed to this.

[1] See for instance B. Bernanke (2004) and IMF WEO "Crisis and Recovery" (2009).

Figure 1. US real interest rate on AAA corporate bonds



Data source: FRED II. Real rate own computation based on CPI (all items) inflation.

Another indication of the extraordinary level of interest rates is given by the concept of the 'natural' rate[2], which should be close to the growth rate of nominal GDP. As real GDP also fell by about 25% over this period, the difference between the nominal growth rate of GDP and the nominal interest rate (3-4% even for good credit risks) was extraordinary. It is no wonder that borrowers massively default when the market (nominal GDP) contracts at such a rate.

It is now known that this problem has quite easy solution: inject money into the economy. This is what happened after Roosevelt suspended the Gold Standard and devaluated the dollar.

There seems to be little danger that sustained deflation will occur in either the US or Europe today. Wages are still increasing and the money supply is growing rapidly (almost everywhere). The conclusion for monetary policy is clear: the errors of the 1930s will not be repeated, (policy) interest rates have been lowered decisively and quantitative easing is being actively considered even by the ECB.

3. Fiscal policy

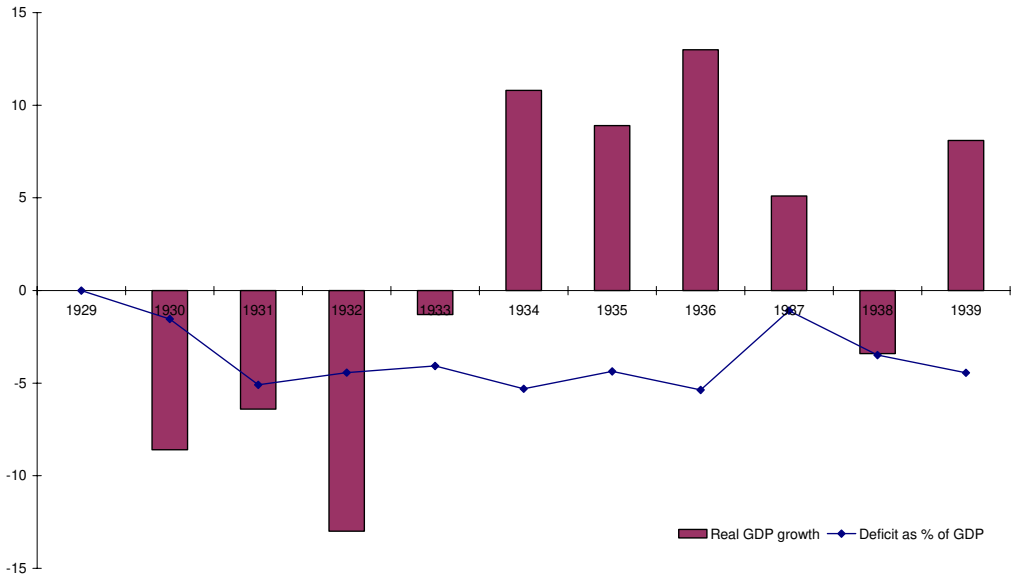
There is less consensus on fiscal policy. Did fiscal policy play a central role in stopping the recession in the 1930s? In particular, did Roosevelt's New Deal mark a clear turning point? The literature on fiscal policy during the Great depression flourished particularly in the 1940s and 1950s. It was dominated by two opposite views. Smithies (1946) argued that fiscal policy was what made possible the recovery after the crisis. On the other hand, Hansen (1946) and Brown

[2] The notion of *natural* rate of interest was introduced by K. Wicksell at the end of the 19th century. Conceptually different from the money interest rate, it is defined as the real interest rate consistent with output equalling its potential and stable inflation. In a context of standard growth model, the natural rate of interest varies over time and depends upon preferences and technology, i.e. the main determinants of the trend growth rate of output.

(1956) debated that fiscal policy was not used extensively and fiscal policy was not successful "not because it did not work, but because it was not tried" (Brown, 1956).

A cursory look at Figure 2 below seems to confirm that in terms of fiscal policy Roosevelt did not mark a radical change and hence could not contribute to a large extent to the revival of the economy.

Figure 2. Government fiscal deficits and growth in the US during the 1930s



Note: Government deficits include both federal and state & local government deficits.
Source: Bureau of Economic Analysis (BEA), US Department of Commerce.

Even before his election the deficit had been allowed to increase to 5% of GDP and it fluctuated within a rather narrow corridor, between 4% and 5% of GDP, until 1936 without any clear break after Roosevelt's election (1932). Growth, however, was very variable over these years, ranging from minus 12% (1932) to plus 10% (1934). During that period federal fiscal expenditure amounted to only 2.3% of GDP[3] (about the same as all public sector infrastructure investment spending today). Roosevelt increased it to 5% in 1934. It is hard to believe that an increase in such a small item could have lead to the huge turnaround in growth between 1932 and 1934.

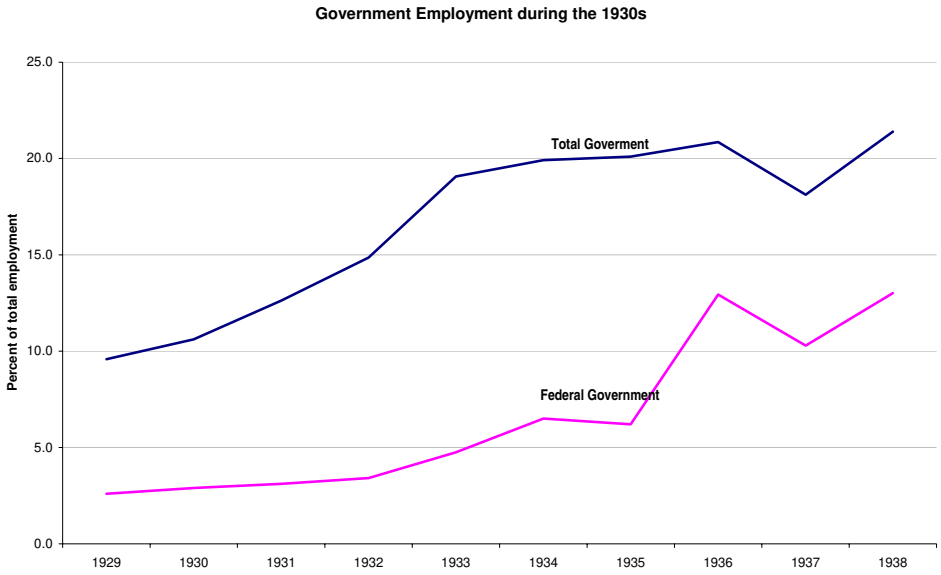
Data on government receipts and expenditure[4] prove that government purchase of goods and services expanded every year and that the US government, at both the federal and state level, made strong efforts to improve directly the labour market. Figure 3 displays the share of government employment (and the federal part of it) in total employment. In 1929, 10% of all

[3] This is the average between 1929 and 1932 of the values derived from the national accounting according to which federal spending includes only current consumption expenditure and gross investment. If one also includes transfers and interest payments, the average of the total federal expenditure over the same period amounts to 4.4% of GDP and increases to 9.7% in 1934. However, a large part of these transfers went to the states and is thus accounted for in the government deficit shown in Figure 2.

[4] Data are from Banking and Monetary Statistics (Washington D.C.: Board of Governors of the Federal Reserve System, 1943) Table 159.

employed were working for the government, but in 1933 (before Roosevelt could have had a strong impact) this percentage had already doubled to close to 20%. However, a clear policy switch in 1934, especially at level of local governments, led to a slowdown in the employment increase.

Figure 3. Government employment during the 1930s



Source: BEA.

Notwithstanding the increase in the government spending, at the same time tax rates were raised on personal and corporate income (which at that time was shrinking severely due to the fall in output). That is the reason why the effect, on net i.e. deficit, is not visible and it seems that fiscal policy was no tried.

Grounded on this evidence, Cole & Ohanian (2004), among others, argue that the New Deal was even contractionary. Yet, the opposite conclusion is drawn by Eggertsson (2009). He goes beyond the conventional 'macro' view of the New Deal as made of the Banking Act and Federal spending. Using a dynamic general equilibrium model that incorporates inflation expectation, the paper shows that the New Deal had expansionary effect by increasing monopoly power and facilitating union militancy. These elements of the New Deal contributed to generate inflation expectations, which lowered real interest rates and resulted in stimulating private spending.

Here we want to contribute to this debate by offering another perspective of the fiscal issue.

It is sometimes alleged that Hoover, Roosevelt's predecessor, could have been more active. However, if rather than measuring expenditure in terms of GDP, one looks at the ratio with respect to tax revenue, already in 1932 federal expenditure was two times larger than expenditure and the ratio fell to 1.8 in 1934. These values are larger than President Obama's fiscal package as documented in *Table 1*.

Table 1. Government expenditure-to-revenue ratio

	1932	**1933**	**1934**	**1935**		**2008**	**2009**	**2010**
Federal expenditure-to-revenue	2.0	1.5	1.8	1.7		1.2	1.7	1.5

Source: Congressional Budget Office Baseline Budget Projections and BEA Federal Government Current Receipts and Expenditures.

In its projections, the Congressional Budget Office estimates the ratio at 1.7 for 2009 and at 1.5 for the following period. From this perspective, one cannot really argue that fiscal policy was not used during the 1930s.[5] During that time the size of the government's budget in the economy was so small that it would have been impossible to have a deficit (as a proportion of GDP) comparable to today's values.[6]

This brings us to another aspect to take into account in assessing whether fiscal policy was tried during the 1930s: debt sustainability.

The standard exercise for assessing debt sustainability focuses on the fiscal adjustment necessary to keep the debt-to-GDP ratio constant. This requires that:

$$(1)\ \frac{PD_t}{Y_t} = \frac{D_{t-1}}{Y_t}\left(\frac{i-y}{1+y}\right) + \frac{SF_t}{Y_t}$$

where PD is the primary deficit, Y is the GDP at current prices, D the general government debt, i is the "implicit" interest rate (actual interest paid divided by the stock of debt), y is the (long run) nominal GDP growth rate, SF is the stock-flow adjustment and subscript t stands for time. The element $(D_{t-1}/Y_t)\times[(i-y)/(1+y)]$ represents the so-called *snowball effect* and crucially depends of the difference between (long run, steady state) interest rate and growth rate. Finally, the stock-flow adjustment captures the various factors that influence changes in the valuation of the stock of debt (or debt assumption outside the budget). It is customary to deflate debt by GDP, however, debt has to be serviced by taxes and in reality tax revenues might be limited to a certain proportion of GDP, dictated by the prevailing social and political forces. Equation (1) might thus be more usefully rewritten as:

$$(2)\ \frac{PD_tT_t}{Y_tT_t} = \tau\frac{PD_t}{T_t} = \frac{T_tD_{t-1}}{T_tY_t}\left(\frac{i-y}{1+y}\right) + \frac{SF_t}{Y_t} = \tau\left\{\frac{D_{t-1}}{T_t}\left(\frac{i_t-y}{1+y}\right) + \frac{SF_t}{T_t}\right\}$$

where τ represents the (maximum) tax to GDP ratio, which is assumed to be fixed.

[5] For a different point of view see Romer (2009) who strongly reaffirms the idea that in the 1930s fiscal policy fails to generate recovery because it was not tried.

[6] Given that in the 1930s, unlike today, federal spending was much smaller than State and Local Government spending, to get a complete overview of the fiscal situation, the table below shows data also for the aggregate, total Government.

US Government and state and local spending relative to revenue

	1932	1933	1934	1935		2008	2009	2010
Total government expenditure-to-revenue ratio	1.3	1.3	1.4	1.3		1.3	1.29*	1.3*

Source: BEA, US Census Bureau, US Government Accountability Office and own computation

Combining US Census Bureau and US Government Accountability Office data and forecast, we guesstimate that the ratio total expenditure-to revenue is about 1.3 for both 2009 and 2010. These values are of the same magnitude as those in the 1930s; hence it does not seem that fiscal

From this point of view, the large drop in nominal GDP and consequently in tax revenue[7] had the effect of making the ratio debt over tax revenue explosive. One could therefore argue that in the 1930s the US government did not have room to further expansionary fiscal policy.

Table 2 reports data on the gross federal debt, in absolute level and as ratio with respect to GDP and to tax revenue, during all the 1930s.

Table 2. US Government debt during the 1930s

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Gross debt (millions of dollars)	16.2	17.8	20.8	23.8	28.5	30.6	34.4	37.3	39.4	41.9	45.0
Gross debt-to-Treasury Receipts ratio	4.0	3.8	5.6	10.4	11.3	9.2	8.0	8.4	7.0	6.4	7.4
Gross debt as % of GDP	15.7	17.6	23.3	35.4	42.2	43.2	41.7	41.1	40.6	45.8	45.5

Source: Banking and Monetary Statistics, Chapter 13, BEA for GDP and own computation.

The debt-to-receipts ratio increased sharply in 1933 and 1934, then it steadily declined but it never went back to the level of the early 1930s.[8] The debt-to-GDP doubles in 1933 with respect to the 1930's value, yet the value seems fairly low and therefore sustainable, at least if compared to current, equivalent ratios in many European countries. The problem is that what matters in evaluating debt sustainability is the ability to repay it. In the 1930s, the federal Government had limited capacity in levying taxes; in 1929 total treasury receipts were only 4% of the GDP. This suggests that the Federal Authorities had reason to be cautious because, given the low tax revenues on which they could count, the debt would become unsustainable absent a strong resort to the inflation tax or dramatic changes in the taxation policy.

Overall, data on federal and local government fiscal policy document that most of the action occurred at federal level while the states kept following a tight fiscal policy during the depression. The opposite approach seems to dominate nowadays in Europe. Only a very small fiscal initiative has been undertaken at EU level while the bulk of the expansionary measure lies at national level.

Infrastructure as the focal point of fiscal policy

The invocation of Keynes as providing the intellectual justification of fiscal policy expansion during the 1930s seems also not quite justified. It might be useful to carefully (re-)read Keynes in 1942:

> Organized public works, at home and abroad, may be the right cure for a chronic tendency to a deficiency of effective demand. But they are not capable of sufficiently rapid organization (and above all cannot be reversed or undone at a later date), to be the most serviceable instrument for the prevention of the trade cycle. (Keynes, Collected Writings, Vol. XXVII, p. 122)

[7] According to the Banking and Monetary Statistics, Treasury income and profit tax receipts fell from 2.4 billions dollar in 1929 to 0.7 in 1933.

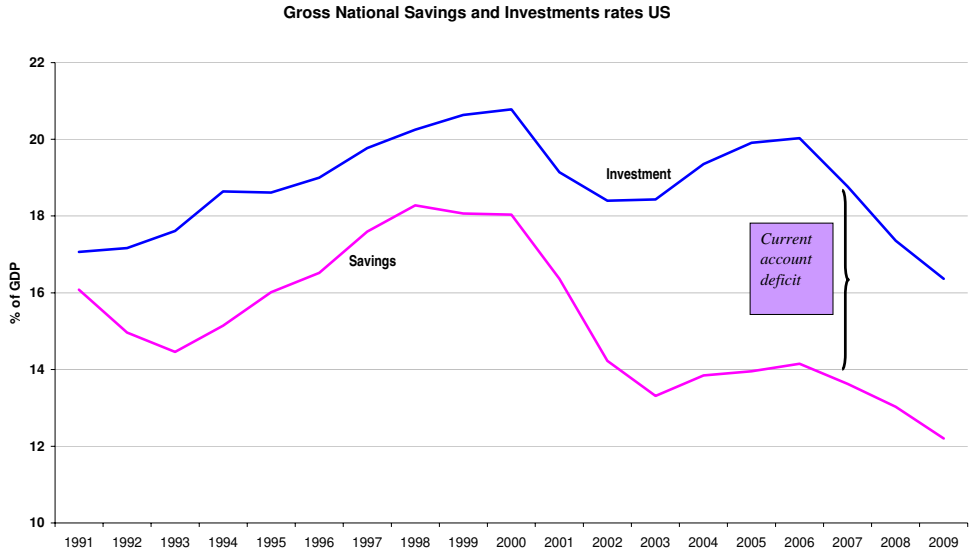
Keynes' mature policy ideas of the late 1930s and 1940s seem to differ from his simple advice of the early 1930s. The reason is quite simple: infrastructure expenditure always takes a long time to implement. Moreover, public sector infrastructure investment accounts only for 2 to 3% of GDP in both the US and the EU. It would have to increase by a large percentage (+40%) in order to have an appreciable impact on demand. In Japan, public sector infrastructure was always much higher and reached at one point 7% of GDP. However, this does not seem to have had a strong impact on either demand, or supply, as the trend growth did not increase in Japan. On the contrary, as shown in Annex I, it has contributed to capital overhang.

Long-term changes in the savings/investment balance?

The key question for fiscal policy today is thus whether today's problem is of a cyclical or a structural nature. An emphasis on infrastructure investments as part of fiscal stimulus packages is justified mainly if the problem is one of "chronic tendency to a deficiency of effective demand" to use Keynes' words. Is this likely to be the problem today in Europe or the US? The answer should be yes if there are reasons to believe that investment will remain weak for a long time and/or savings rates increase permanently. For the US both might be the case, but not necessarily for Europe.

In the case of the US, one can argue that the credit and housing bubble has lead to a capital overhang[9] and that there are many indications that household savings should increase as asset prices have collapsed and credit availability has fallen (Mayer, 2009). The key question now is whether government (and enterprise) dis-savings can make up for this turn-around by households. The trend-wise increase in the US current account deficit from the 1990s until 2006 suggests by itself a chronic savings/investment imbalance in the US. However, Figure 4 below shows that the *national* (as opposed to the personal) savings rate in the US actually slightly increased between 2003 and 2006 (although the household savings rate fell).

Figure 4. National Savings and investment rates in the US



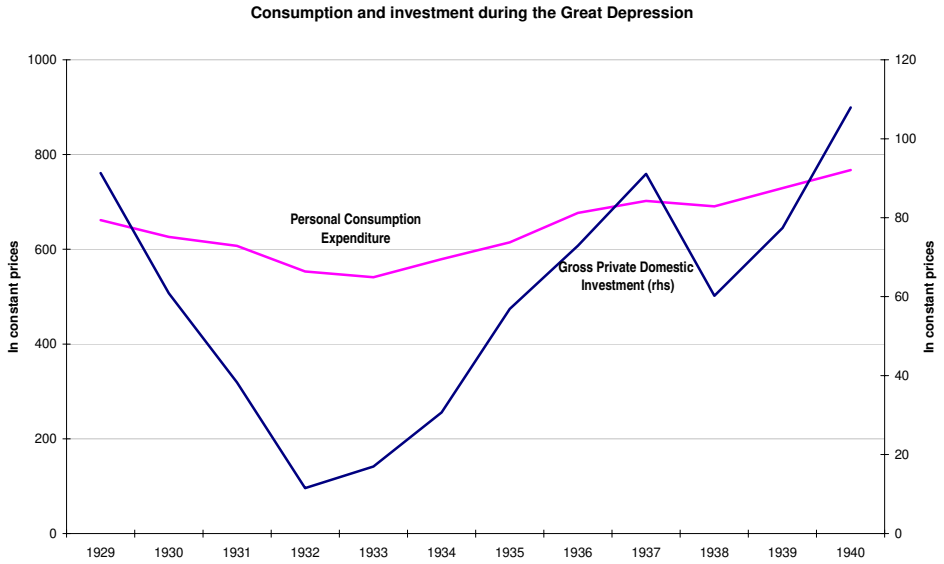
Source: World Economic Outlook, IMF.

[9] At least in the housing market, as shown in Gros (2007).

US personal (household) savings *declined* during the Great Depression: the personal savings rate was 4.5% in 1929, it fell to minus 1.5% in 1933 – and increased with the recovery to over 6% in 1937. The current crisis started with the household savings rate essentially at zero and now it is sharply increasing. The starting point for the two crises is thus definitely different. The key driver of the Great Depression was the extraordinary investment cycle during that period – not a deficiency of household savings.

Figure 5 shows that investment collapsed between 1929 and 1932 – (going from about $100 in 1929 to less than $20 (real $2000) in 1932 – but subsequently rebounded quickly. The huge variations in growth during the 1930s were thus essentially driven by extraordinarily large swings in investment whereas consumption remained relatively constant.

Figure 5. Consumption and investment during the Great Depression

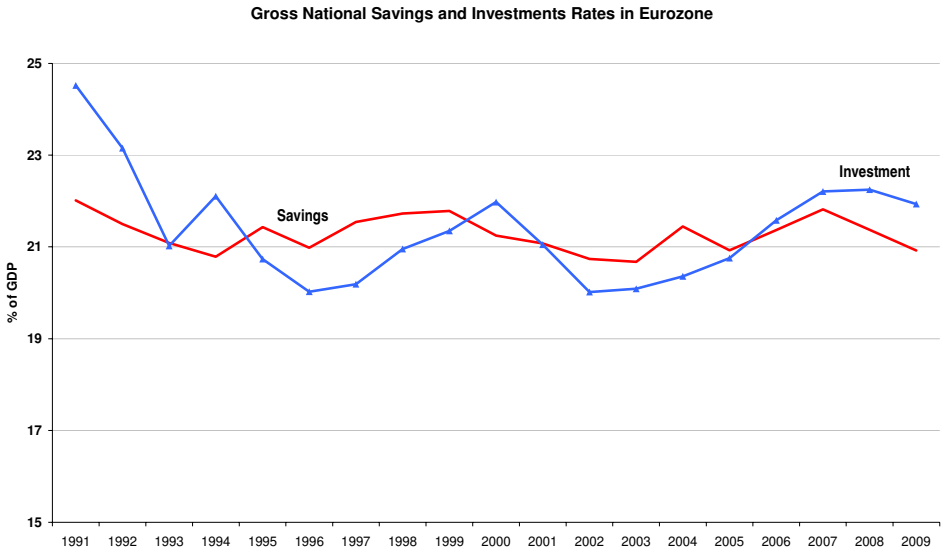


Source: BEA.

In contrast to the situation in the US today, savings (and investment) rates have been roughly constant over the last decade in most of the euro area (the exceptions are mainly Spain and Ireland); and the current account of the euro-zone has remained in rough balance over the last decade. A priori there is thus little reason to expect a lasting change in either savings or investment on aggregate for the euro-zone.

Figure 6 shows that investment in the euro-zone has fluctuated quite regularly between 20 and 22% of GDP over the last decades. The years 2007-08 represented a cyclical peak so that one could have expected in any event a fall in investment (albeit not that rapidly) on a purely cyclical basis.

Figure 6. Savings and investment rates in the euro-zone



Source: World Economic Outlook, IMF.

4. Banking system under stress

Among the monetary policy mistakes of the 1930s that Friedman and Schwartz (1963) list in the Monetary History of the United States, there is the ongoing neglect of the banking system problems. The so-called 'liquidationist' theory, according to which a prerequisite of the banking sector recovery was the elimination of its weak elements, prevented the Fed from interventions in favour of the banks in troubles. Bernanke (2004) emphasises that the lack of action by the Fed was, in facts, dictated by the choice it made to save the gold standard and to defend the dollar from speculative attacks.[10] In this perspective, rather than lending cash to the banks, the Fed increased the interest rate with disastrous effect for the banking system and the lending activity.

The number of bank failures rose from an annual average of about 600 during the 1920s, to 1350 in 1930 and then peaked in 1933 when 4 000 banks were suspended. According to data referred to in the WEO (April 2009), over the entire period 1930-33 one third of all US banks failed.

There is today a general consensus that everything possible must be done to avoid large scale bank failures and that this was not done during the 1930s. However, the impact of the wide scale failures that took place then was much more limited than is generally assumed. Deposit losses remained limited even during this turbulent period at a cumulative 4% (with an annual peak of 2.15% in 1933) of total deposits (of all commercial banks). How can one reconcile these, relatively modest losses, with the large number of bank failures?

[10] The latter were contributing to create panic in the US banking system.

A first reason why losses to depositors were, in the end, quite limited is that depositors got back, on average, about 80 cents on the dollar (the rate of loss was only about 20%).[11]

Another key reason was that back then the degree of concentration in the banking industry was much lower than it is today. In the mid 1930s the top three banks had about 11% of the total assets of the industry whereas in 2008, the equivalent share was about 40%. Although about one-third of all banks failed between 1930 and 1933, they had only about 20% of all deposits.

Table 3. Commercial Bank Suspensions during the Great Depression

Year	Number of Suspensions	Deposits (millions USD)	Losses Borne by Depositors (millions USD)	Losses in %	Losses at % of Deposits of all Commercial Banks
Average 1921-28	631	174	61	35	0.15
1929	659	231	77	33	0.18
1930	1350	837	237	28	0.57
1931	2293	1690	390	23	1.01
1932	1453	706	168	24	0.57
1933	4000	3597	540	15	2.15
Cumulative 1930-33	9096	6830	1337	20	4.3

Source: FDIC.

The downside of this fragmentation of the banking sector was that few institutions were regarded as systemic. The failure of any one of the numerous 'mini' banks did thus not arouse particular concerns and little was done to prevent it. However, given the absence of a federal deposit insurance system, the continuing latent, even if actuarially relatively small, risk of a bank failure undermined the confidence of the public and the functioning of the banking system largely exposed to the danger of potential withdrawal of deposits (runs). The negative feedback back loop of weak demand leading to more firms failing and hence bank losses was thus amplified by the lack of an effective deposit insurance system and a generally higher willingness to allow banks to fail.

The creation of the Federal Deposit Insurance system, as part of the New Deal, was one key lesson learnt and it certainly contributed to the recovery.

The lesson that confidence of depositors in the banking system is crucial has been amply applied in Europe during the crisis management in 2008, when EU governments extended the existing deposit insurance systems to cover the missing spots that the Northern Rock episode had exposed.

The US authorities had to relearn this lesson after the Lehman debacle. Given the large impact of modest deposit losses during the 1930s; it should not have come as surprise that the failure of this size should have extreme consequences. As an investment bank, Lehman did not have any deposits from the general public.[12] But its assets of about $660 billion were equivalent to about

[11] According to FDIC, between 1908 and 1917, eight states established deposits insurance funds but by end of the 1920s they had all failed.

[12] Uhlig (2009) emphasizes that while the 2008 crisis is reminiscent of a bank run, it is financial institutions withdrawing deposits from some core financial institutions, rather than depositors running on their local bank.

5% of the entire US banking system. Moreover, Lehman constituted by itself an important part of the bank bond market as it had issued about $600 billion of short- and long-term bonds, out of a total of about $1,200 billion emitted by all commercial banks together.

Can banks survive a depression?

The Great Depression led certainly to a collapse in corporate profits. The corporate sector went from profits amounting to over $10 billion (about 10% of GDP) in 1929 to a collective loss of about $1.5 billion (about 2.5 % of GDP) in 1932 (see ***Table 4***).

Table 4. Corporate profits[13] before tax (millions of $)

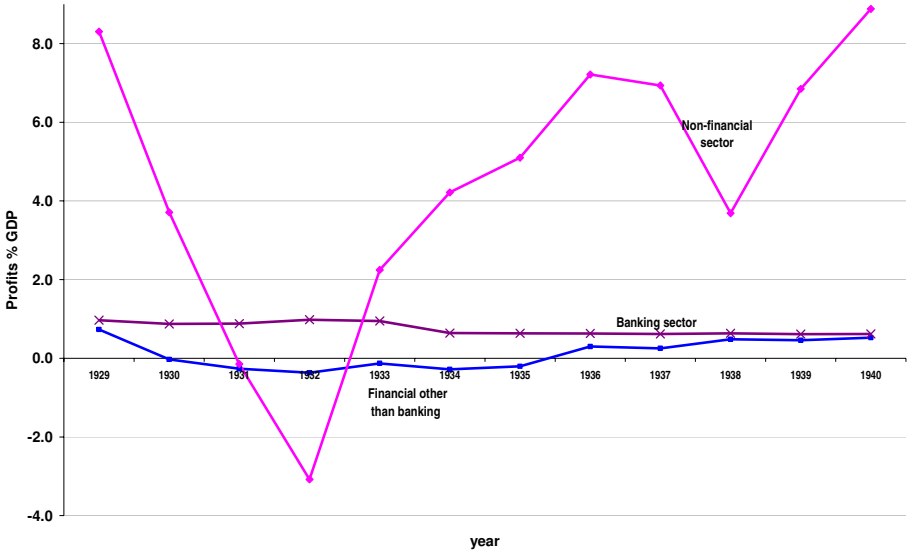
	1929	1930	1931	1932	1933	1934	1935	1936	1937
Total Corporate (domestic & foreign)	10595	4291	357	-1480	1728	3079	4216	6931	7450
Domestic non-financial sector	8603	3383	-112	-1807	1267	2783	3739	6048	6374
Domestic financial sector (finance, insurance & real estate)	1760	771	473	361	463	236	318	779	804
Banking	1003	796	675	576	536	422	466	529	570

Source: BEA.

Oddly enough, while the financial sector outside banking did go into losses, in the banking sector, which is thought to have been the most affected by the crisis, profits stayed positive throughout this period. Bank's profits declined by 'only' a little more than 40%; more or less in line with nominal GDP. *Figure 7* shows that indeed bank's profits were relatively stable as a proportion of GDP (just below 1% of GDP). Banks thus appear to have been an island of relative stability.

[13] These are profits from national accounts, therefore financial transactions, such as loans and purchases or sales of financial securities are not recorded in the GDP accounts. These financial transactions are not directly counted in GDP because they involve the exchange of financial claims and liabilities rather than current income or production. Capital gains or losses related to transactions involving financial securities are also outside the scope of the GDP accounts because they represent a change in the value of an existing asset rather than income from current production. However, the holding of financial securities banks results in the receipt of interest and dividends, which are included in their net earnings.

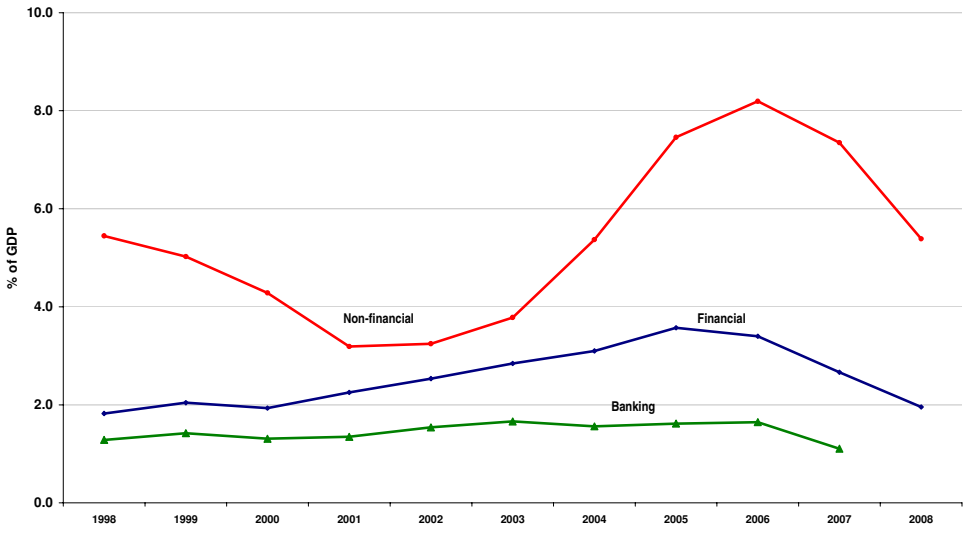
Figure 7. Profits before tax as % of GDP in the US during the 1930s



Source: BEA

The run up, and aftermath, of the current crisis shows similar features with corporate profits buoyant before the crisis but collapsing with the onset of the bust. This boom bust patterns is also pronounced in the financial sector outside banking.

Figure 8. US profits (before tax) as % of GDP between 1998 and 2008



Source: BEA for non-financial and financial profits; OECD for the banking sector. Bank profitability statistics are based on financial statements of banks.

The data in *Figure 8* show that in general banking profits exhibit little correlation with the profits of the financial sector as whole, or the non-financial domestic sector, which, by contrast, tend to be highly correlated to the GDP growth.

As most observers tend to lump banks and the larger financial sector together, it is widely assumed that bank's profits also increase during the last boom. However, this is not the case. The profits of (commercial) banks have not noticeably increased up to 2007 (See *Figure 8*). Combined with the data from the Great Depression, this suggests that they might also be more resilient than that of the wider financial sector.

Another reason for the widespread impression of large profits in banking might be the confusion between the national income accounting concept and the numbers reported in financial statements. The national income accounts do not 'mark to market'. Financial transaction and capital gains and losses related to transactions of financial securities are thus not included in the national accounts. During the boom phase national income accounting profits tend thus to be lower than those reported to financial markets (and vice versa during the bust). Profits as measured by the national accounts should thus give a better picture of underlying, operating profitability of the sector.

The recent batch of relatively reassuring profits reported by many US banks can thus be understood also in the light of switch away from mark to market. That most banks can report positive profits resembles the experience of the Great Depression.

How can one explain the relative stability of bank's profits in general and in particular during the Great Depression? Simply put, it seems that banks are on average able to charge enough of a risk premium to cover the increase in non performing loans during downturns. The present crisis confirms this tendency. Much has been made of the headline estimate of over $4,000 billion, published recently by the IMF of the aggregate losses to the financial sector expected from the present crisis. However, this figure is an estimate of the total over four years (2007-10) and banks account for only about 60% of the overall amount. Moreover, about one half of the losses expected by banks ($2,400 billion) derive from the markdown of securities (which would not be included in national income accounts). [15]

The global average overall loss rate on loans for banks is estimated to be around 5.1%. Given that this is assumed to be the cumulated loss rate over four years, banks should be able to absorb it with a commensurate increase in their spreads. If the losses accrue mostly towards the end of this period an increase in the spread applied by banks of less than 2 %, on average on all loans, should be sufficient to keep banks (on average at least) from making large losses. This should be the case at present as well. For example, the ECB reports that the rates charged by euro area banks to corporate customers at the end of the second quarter 2009 were around 4.8, about 2.5-3 percentage points higher than marginal funding costs as measured by Euribor rates or the rates paid on savings deposits. In the US the 'prime rate' (the rate charged by banks to their best customers) was, at 3.25%, about 3 percentage points above marginal funding costs embodied in federal funds or commercial paper rates. This should be sufficient to deal with the losses that can be expected even under the current economic conditions.

Despite its much greater severity, the Great Depression did not actually lead to much higher loss rates. According to the IMF, commercial bank loan charge-offs rates peaked for only one year at a bit above 5%,[16] but the average for the early 1930s remained between 2 and 3%.

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[15] For details see Table 1.3 of the Global Financial Stability Report, April 2009.

[16] For details see Figure 1.30 of Global Financial Stability Report, April 2009.

5. Concluding Remarks

The analysis of monetary policy and the banking system in the 1930s has led to two important lessons from the Great Depression: deflation as well as massive bank failure must be avoided. The lesson for fiscal policy is less unambiguous. There is widespread consensus on the fact that the fiscal expansion during the 1930s was too limited to yield a sensible impact on economic growth. This seems to be the case. Yet, some considerations about Government debt sustainability seem to suggest that fiscal policy failed to generate recovery because Government could not do more than it did.[17]

This analysis has also pointed out differences between the 1930s and the current crisis in terms of starting point and possible adjusting mechanisms. In this regard, as shown above, during the Great Depression output was largely driven by a strong cycle in investment and until 1937 the saving rate did not increase. Conversely, the current crisis started with insufficient household savings in the US.

Another potential difference lies in the size of private sector balance sheets. As shown in *Table 5*, the debt burden of the financial and non-financial sector has increased by almost 70 percentage points between 2001 and 2007. In addition, this raise in debt has been accompanied by huge leverage largely based, as shown in chart 9, on a house price bubble.

Table 5. Debt burden as a proportion of GDP in the US (1 = 100 %)

		2001	2007	Change 2007-2001
Non-financial sector		1.91	2.29	0.39
Households total		0.76	1.00	0.24
Of which:	**Mortgages**	0.53	0.76	0.23
	Consumer credit	0.19	0.19	0.00
Business		0.69	0.77	0.08
Government	**Local & state**	0.13	0.16	0.03
	Local & state + federal	0.46	0.52	0.06
Financial sector (domestic)		0.90	1.17	0.27

Source: Federal Reserve, flow of funds (Z1)

By contrast, housing prices do not seem to have played a crucial role in the development of the crisis in the 1930s, at least not as much as today (See *Figure 9*)[18]. Although house prices started to fall at the end of the 1920s there is no evidence of a bubble on the pre-Depression period.

The fall in the house prices in 2007 has represented an important factor in triggering the financial crisis and in making this recession a balance-sheet recession.

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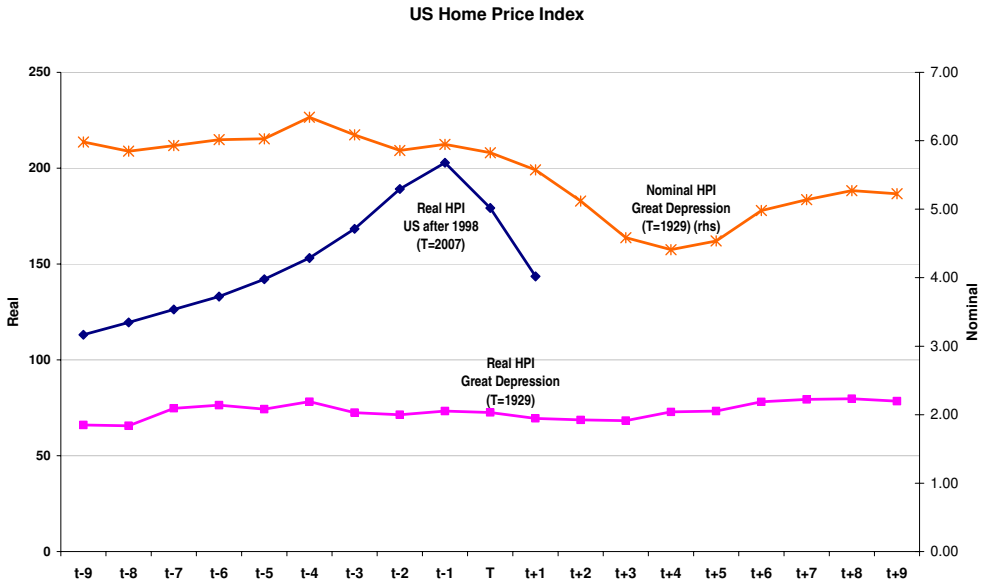
[17] In line with this thesis, W. Buiter talks of US *de facto* default during the 1930s: "In the case of the US, the sovereign default took the form of the abrogation of the gold clause when the US went off the gold standard (except for foreign exchange) in 1933. In 1933, Congress passed a joint resolution cancelling all gold clauses in public and private contracts (including existing contracts). The Gold Reserve Act of 1934 abrogated the gold clause in government and private contracts and changed the value of the dollar in gold from $20.67 to $35 per ounce. These actions were upheld (by a 5 to 4 majority) by the Supreme Court in 1935".

[18] Reasonably, during the 1930s stock prices played a role similar to the one played by house prices today. The difference is that the current housing bubble has emerged from the hashes of a previous stock bubble busted in 2001.

Figure 9. US housing prices



Source: R. Shiller "Irrational Exuberance" (2005) and author's update.

Surprisingly, the good news comes from the banking sector. The resilience of 'normal' banking operations to a recession or even a depression strengthens the case for a separation of commercial and investment banking activities.

The classic banking operations of deposit taking and lending tend to remain profitable even under stressed conditions. But his classic function of banking would not be such a cause of concern today if the investment banking arms of banks had not gotten into trouble by investing in 'toxic' assets. At present the authorities, in both the US and Europe, have little choice but to make up for the losses on 'legacy' assets and wait for banks to earn back their capital. But to prevent future crisis of this type one should make sure that losses from the investment banking arms cannot impair commercial banking operations.

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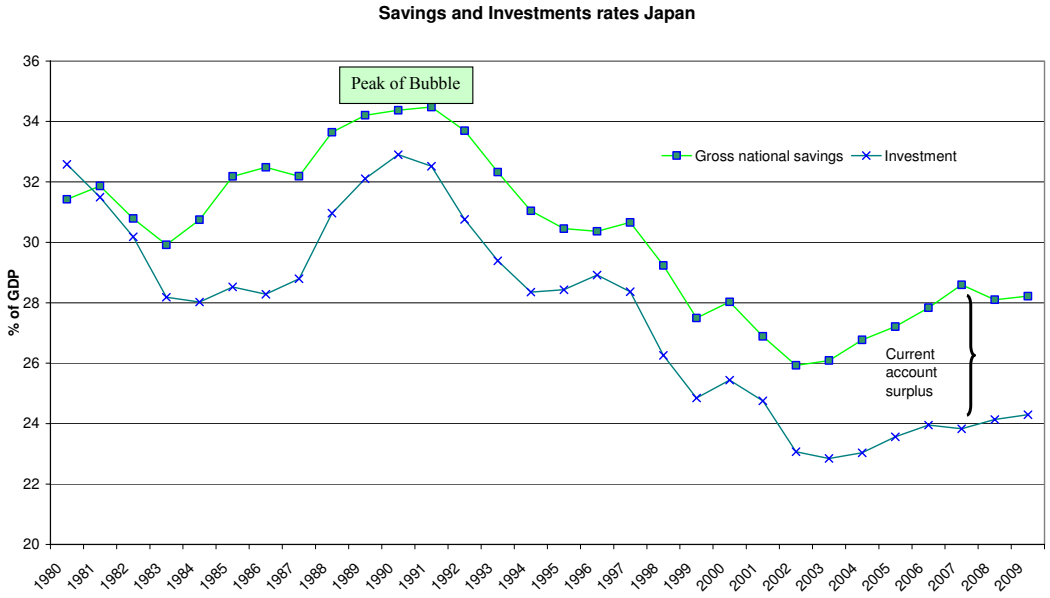
Annex I: Savings and investment balances in Japan

Japan represents a typical case of a capital overhang. The investment rate was very high during the entire 1980s and reached a peak of 34% of GDP during 1991. It then declined continuously by about 10 percentage points of GDP. The capital overhang also explains the large amounts of bad loans on the balance sheets of Japanese banks: much of the investment they had financed during the boom phase turned out to have been worthless.

Figure A1. Savings and investment rates in Japan



Source: AMECO.