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THE MONIAC UPDATED FOR THE ERA OF PERMANENT FINANCIAL CRISIS

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1. Introduction[i]

The Moniac was the formal start to a quarter-century-long stabilization project that occupied Alban William Housego 'Bill' Phillips until close to the end of his life. Informally, that research project had its gestation in the macroeconomic malfunctions of the Great Depression and the savagery of the Second World War.

That his final essay (2000 [1972], chapter 52) - a handwritten exposition of a version of what became known as the Lucas Critique – was unread for almost a quarter century is surely a reflection of the discredit and neglect that Phillips and his stabilization project fell into during the Great Recriminations that accompanied the Great Inflation of the late 1960s and 1970s.[ii] Indeed, Phillips (and, subsequently, his widow) kept the sheets of paper on which he made the calculations which led to his famous Curve (together with other significant material) – but apparently, nobody thought to ask if such material existed.

Unsuccessful policies often lead to the hunt for 'Guilty Men'. Politically, the failure of Appeasement in the 1930s produced such a hunt; in the process, those who opposed the prevailing orthodoxy were sanctified. Ironically, the Cassandras of Appeasement (Winston Churchill and Anthony Eden) in turn became the 'Guilty Men' of the early Cold War - responsible for the *Victims of Yalta* (Tolstoy 1986, 25, 26).

In terms of Economics, Phillips' reputation suffered because of his eponymous association with the Curve that broke down: stagflation was supposedly the result of undue faith in the trade-off interpretation of his stabilisation project. In this highly-charged atmosphere, one cold warrior, Richard Deacon (1979, ix), even asserted that "Bill Phillips" and Arthur Cecil Pigou were Bolshevik agents plotting to overthrow capitalism: "the extreme forces which precipitate hyperinflation and encourage low production ... are mainly allies of the USSR." According to Deacon (1979, 7, 11, 64, 81, 184-195), in 1939 Pigou set up in Cambridge a Soviet transmission centre (together with "Bill Phillips", an underground communist, codename "Jack").[iii]

Ordinarily, such accusations would not even be worthy of mention in the scholarly literature. In this instance, however, Deacon's accusations were picked up and highlighted by the winner of the 1974 Nobel Prize for Economic Science, Friedrich Hayek (1994, 121) – who was in Cambridge during the War - and his Austrian School disciple, Mark Skousen (2001, 334-335; 2009, 338-9).

It is instructive to compare the supposedly Keynesian inflation-tolerating Phillips Curve trade-off with what Phillips and John Maynard Keynes actually wrote on the subject (Leeson 1997; 1999). More importantly, however - and more in-keeping with the Phillipsian project - is to extract wisdom from Phillips' mid-twentieth century stabilisation exercise and apply it to the new realities of the twenty-first century. That is the primary objective of this paper.

Section 2 will define the problem to be faced: the current tendency towards permanent financial crises. In the immediate post-war period, the problem was perceived to be that of the potentially large but 'natural' swings of the business cycle – a vastly different problem from the artificially created problems posed by financial engineers. Section 2.1 will provide a brief history of the relentless crises generated of the United States financial sector. One crisis is highlighted - the "Bank War of 1832-36" – because it is an early illustration of the dangers of discretionary financial management. Section 2.2 examines the crises of the post-1973 era and suggests that we may have entered The Era of Permanent Financial Crises. Section 2.3 briefly examines the contributions that financial engineers have made to this Permanent Threat.

Section 3 examines – and disposes of - an imaginary weakness in Phillips' stabilisation project: his supposed neglect of inflationary expectations. Section 4 outlines a genuine weakness: the absence in

Phillips' model of a dysfunctional financial sector. An attempt is made to bring the Moniac into the twenty-first century by explicitly modelling such dysfunction.

Section 5 compares and contrasts the monetary control of the business cycle offered by the Moniac with the fiscal alternative. Section 6 attempts to build a Modern Moniac – with functional intermediation. Phillips' insights are combined with the Consumed Income Tax Structure (CITS) literature outlined by Irving Fisher, Nicholas Kaldor and James Meade (6.1); the optimal savings literature associated with Pigou and Franco Modigliani (6.2); the public sector balance literature, associated with Milton Friedman (6.3); and the rules-based literature, associated with Henry Simons (6.4).

Section 7 examines the implication for stabilisation policy: comparing the benefits of the fiscal control of inflation with the vicious consequences of "monetary discipline." Section 8 examines the implications for debt elimination: comparing the savage notions of "fiscal discipline" with the alternative of using the price mechanism. The concluding section (9) proposes the establishment of a Phillips Club to further examine these proposals.

2. The Era of Permanent Financial Crises?

2.1 The Arterial Dysfunction at the Heart of Capitalism

The U.S. financial sector has generated crises at regular intervals; some of these crises have been policy-induced or policy-exacerbated (Meltzer 2003; 2009). This inherent dysfunction will not be repaired without fundamental re-engineering. Moreover, there is no reason to assume that discretionary policy will be any more successful in dealing with crises than in the past. This section will provide a brief review of some of these past crises and focus on one particular crisis, the "Bank War of 1832-36".

The first central bank, the First Bank of the United States, was established in 1791, shortly after independence; yet, its establishment was followed by crises in 1792-3 and 1796-7. The closing of First Bank of the United States was rapidly followed by the War of 1812, war debt, fiscal crisis and inflation. The Second Bank of the United States was chartered in 1816 in order to assist the process of government financing: however, the Panic of 1819 followed.

In the 1832 Presidential election, the existence of the Second Bank became an intense party political issue. The Bank attempted to defend itself through recession-targeting! The Bank's president, Nicholas Biddle, applied for the Bank's re-charter four years before the charter was due to expire. This initiated the "Bank War" of 1832–36 in which two defining American fears (those relating to government and the moneyed interest) collided.

President Andrew Jackson saw a re-charter as a prelude to a coup: he believed that those pressing for a re-charter "calculate with certainty to put [Henry] Clay or [John C.] Calhoun in the Presidency – and I have no hesitancy to say, if they can recharter the bank, with this hydra of corruption they will rule the nation and its charter will be perpetual, and its corrupting influence destroy the liberty of our country." In January 1934, Calhoun concluded that "the administration will be overthrown. It has already received its death blow" (cited by Catteral 1902, 287, 333).

Biddle saw the Presidential veto as a "manifesto of anarchy, such as Marat or Robespierre might have issued to the mob." Jackson saw his veto as the battle of "democracy against privilege" (cited by Catteral 1902, 241, 240). In early 1833, Jackson decided to withdraw government's funds from the Bank. The subsequent fiasco resembled the constitutional crisis associated with President Richard Nixon's 1973 Saturday Night Massacre. Two 'non-compliant' Treasury Secretaries refused

to withdraw the funds until a third complied. The funds were transferred to seven state-chartered banks in late September 1833: the Second Bank had lost its biggest depositor.

In an attempt to ensure a second term, President Nixon attempted to force the chairman of America's third central bank, Arthur Burns, to create a pre-election boom (or at least to avoid a downturn).[iv] In 1834, Biddle attempted to force President Jackson to accept a re-charter by engineering a Bank-induced recession. Biddle insisted that existing loans were repaid and new loans were not made, thus contracting the money supply. Biddle justified this Bank-induced recession: "the ties of party allegiance can only be broken by the actual conviction, of existing distress in the community. Nothing but the evidence of suffering abroad will produce any effect in Congress … all other Banks and all the merchants may break, but the Bank of the United States shall not break." Jackson retorted that "the government will not bow to the monster … I would rather undergo the tortures of ten Spanish Inquisitions than that the deposits be restored or the monster be recharted" (cited by Catteral 1902, 330-331, 351-352).

Biddle suspected that the government was orchestrating panic runs on the Bank. In January 1834, the administration attempted to remove from the Bank its function of paying pensions to old Revolutionary War veterans. Biddle refused to surrender the pension funds: allowing the Jackson Democrats to assert that the Bank would "not spare the holy remnant of the officers and sires of the revolution … So sweeping and unsparing are they determine to make the distress, that even a solitary soldier of the revolution cannot escape" (cited by Catteral 1902, 299, 307).

Biddle succeeded in creating a brief recession in the first half of 1834. In 1935, the Bank resumed aggressive lending - and contributing to a speculative land bubble. After its national charter expired in April, 1836, it continued to operate as a state-chartered bank. Its banking practices partially caused the Panic of 1837. In 1839, Biddle resigned as Bank President, and in 1841, the Bank finally failed. Biddle was arrested and charged with fraud (he was later acquitted).

Further crises followed: in 1857, 1873, 1884 and 1907. The Panic of 1907 led to the creation of the Federal Reserve System. But as Allan Meltzer (2003; 2009), the historian of the Federal Reserve, had documented, this third central bank has also often contributed to crises.

2.2 Post-1973: Permanent Crises?

The volume of funds slopping around the world's financial centres has increased enormously since the OPEC oil price rises of 1974. Since then, the intensity and frequency of crises appears to have increased. Some have been locally based: the UK secondary banking crisis 1973-5; the U.S. Savings and Loans crisis, 1989-91; the Japanese asset price collapse, 1990; the Scandinavian banking crisis, early 1990s; and the speculative assaults on the European Exchange Rate Mechanism, 1992-3. Others have had much larger international ramifications: the Latin American debt crisis, 1982; the stock market collapse, 1987; crises in Mexico, 1994, Asia, 1997 and Russia, 1998.

It is now clear that the Great Moderation (1982-2007) was built on financially-engineered feet of clay. The onset of the 2008 Global Financial Crisis was immediately followed the Great Policy Panic (2008-). Deficit-financed cash was thrown in the direction of the crisis and will most likely be followed by panic-induced cuts in government expenditure as fiscal budgets deteriorate. These savage fiscal pendulum swings will destabilise many governments and in some countries may undermine the legitimacy of parliamentary democracy.

We may have entered the Era of Permanent Financial Crises, interrupted by episodes in which it may appear that *All is Quiet on the Western Banking Front*. Those entrusted with the task of

regulating the regulation-avoidance industry may sit, like King Canute, demonstrating the futility of their project.

The original Phillipsian stabilization project sought to reduce the swings of the business cycle and to alert policy makers to the unintended consequences of some plausible-looking policy proposals. In 2008, panicked policy makers leaped into debt traps, presumably aware of at least some of the likely consequences. This paper will argue that Phillips' stabilization agenda, and the Moniac in particular, when augmented by wisdom from other mainstream macroeconomic frameworks can provide a permanent solution to the problem of financial crises – or at least can provide macroeconomic protection from these crises.

2.3 The Curse of Destabilising Financial Engineering

The distinguished historian H.A.L. Fisher (1971 [1935], v) reflected that "One intellectual excitement has … been denied me. Men wiser and more learned than I have discovered in history a plot, a rhythm, a predetermined pattern. These harmonies are concealed from me. I can see only one emergency following upon another as wave follows upon wave …" In terms of financial crises, successive waves of macroeconomic externalities are the inevitable consequence of a mal-engineered system.

Alan Greenspan (2009) appeared to shift at least part of the blame for the Global Financial Crisis onto the academic community: "The extraordinary risk-management discipline that developed out of the University of Chicago's Harry Markowitz in the 1950s produced insights that won several Nobel prizes in economics. It was widely embraced not only by academics but also by a large majority of financial professionals and global regulators."

Ironically, in his Nobel Lecture, Markowitz (1990, 286) recalled that in 1955 when he defended his "dissertation as a student in the Economics Department of the University of Chicago, Professor Milton Friedman argued that portfolio theory was not Economics, and that they could not award me a Ph.D. degree in Economics for a dissertation which was not in Economics.". Later Markowitz (2004) recalled: "He kept repeating that for the next hour and a half. My palms began to sweat".

Friedman's demarcation attempt failed. Markowitz (1990, 286) reflected: "As to the merits of [Friedman's] arguments, at this point I am quite willing to concede: at the time I defended my dissertation, portfolio theory was not part of Economics. But now it is".

Some risk management gurus appear to be rather nonchalent about their system. When asked if there were "any weaknesses in the current economic structure to bring about a catastrophe like we saw in 1929?" Markowitz (2004) replied: "You know, we just don't know".

Others were in a celebratory mood. Greenspan received glowing praise from Alan Blinder and Ricardo Reis (2005, 7, 5, 83, 82, 27, 11, 12, 70-71) for his handling of the the dot-com bubble: his "mop up after" strategy following the bursting of "the biggest bubble in history" produced a "tiny" recession and "not a single sizeable bank failure. In fact, and even more amazingly, not a single stock brokerage or investment bank failed either … If the mopping up strategy worked this well after the mega-bubble burst in 2000, shouldn't we assume that it will work well after other, presumably smaller bubbles burst in the future? Our suggested answer is apparent". Greenspan, they concluded, was "awesome".

Greenspan subsequently asserted that "No sensible policy … could have prevented the housing bubble" (cited by Ip 2008). However, before the Global Financial Crisis some economists were warning about the consequencies of the "speculative bubble" in the US housing market: "when the

mania ends and the enormous financial bubble bursts, there will be a synchronized downturn in many affected countries ... financial and economic meltdowns" (Leeson 2005). Moreover, policies were offered which would prevent future bubbles.

In other disciplines (bridge building, aeronautics etc) engineering advances have reduced risk and contributed to better outcomes. After the Great Depression, Philips used engineering tools to help stabilize the business cycle. But subsequently, financial engineers have colonised economics and have misdirected our professional energies. Financial engineering provides negligible social benefits but instead contributes to macroeconomic destabilization. This curse on macroeconomic outcomes must be eliminated by financial re-engineering: the Moniac provides a framework in which to organise such a project.

3. **An Imaginary Weakness: Inflationary Expectations**

Phillips (2000 [1954], 73) discussed extensions of the Moniac: "This simple model could be developed further, in particular by … linking the demand curve for liquid stocks to the rate of change of price through a co-efficient of expectations … [which] would result in an oscillating system".

Milton Friedman admired Phillips' stabilization model and twice tried to recruit him to the University of Chicago. In May 1952, Friedman visited the London School of Economics and mentioned to Phillips that a student, Phillip Cagan, was having trouble modelling adaptive inflationary expectations. Phillips wrote the adaptive inflationary expectations formula on the back of an envelope and handed it to Friedman who gave it to Cagan (2000). Later, in his American Economic Association Presidential Address, Friedman (1968) used adaptive inflationary expectations to demonstrate that the Keynesian Phillips Curve had a fundamental flaw: the neglect of inflationary expectations.

In his 1953 Ph.D and again later, Phillips (2000 [1954], fig 16.11, 152) derived a theoretical Phillips Curve. His concern was to reduce "the difference between the actual production and the desired production … the error in production." He discussed proportional, integral and derivate stabilisation proposals.

Phillips (2000 [1954], 153) also noted that "Demand is also likely to be influenced by the rate at which prices are changing, or have been changing in the recent past, as distinct from the amount by which they have changed, this influence being greater, the greater the rate of change of prices ... The direction of the change in demand will depend on expectations about future price changes. If changing prices induce expectations of further changes in the same direction, as will probably be the case after fairly rapid and prolonged movements, demand will change in the same direction as the changing prices … positive feedback, tending to intensify the error, the response of demand to changing prices thus acting as a perverse or destabilising mechanism of the proportional type. If, on the other hand, there is confidence that any movement of prices away from level in the recent past will soon be reversed, demand is likely to change in the opposite direction to the changing prices … the response of demand to changing prices will act as a normal proportional regulating mechanism."

Phillips (2000 [1954], 155, 156) discussed these perverse reactions when "price flexibility is increased beyond a certain point. When price expectations operate in this way, therefore, the system has fairly satisfactory self-regulating properties when prices are moderately flexible; but becomes unstable when there is a high degree of price flexibility … We may conclude that the self-regulating properties of the system will be considerably improved if there is confidence that any movement away from the level ruling in the recent past will soon be reversed, and that if such confidence is

sufficiently great the self-regulating properties will also be better, the higher the degree of price flexibility in the system."

Indeed, in Friedman's (1968) model, inflationary expectations are stabilising – the system returns to the "natural" rate of unemployment and output. Inflationary expectations have much more severe consequences in Phillips' model: the system becomes "unstable."

4. A Modern Moniac with a Dysfunctional Financial Sector

In describing the Moniac, Phillips (2000 [1950], 74-75) stated that "Savings flow into the tank containing idle or surplus balances, M2 … Investment expenditure … is drawn from M2 … when the system is in equilibrium I = S". Although Phillips does not explicitly address this issue, the money supply can contract from M2 into "the small box on the extreme right of the model." Thus the channelling (hoarding) of savings by intermediaries into vault cash and reserves (thus reducing the money supply) could be examined by the Moniac.

However, it is no longer appropriate to model the financial sector as a black box – a neutral transmitter of savings into investment. A Moniac that seeks to clarify policy thinking must represent the financial sector as a value consuming agent. The financial sector's share of U.S. aggregate income has risen from 2.5% of Gross Domestic Product in 1947 to almost 8% of GDP in 2006 (Phillipon 2008); in 2006, almost 3 million people were employed in "credit intermediation and related activities" out of a total U.S. employment figure of just over 150 million (U.S. National Employment Matrix).

To adequately model current finacial arrangements we must therefore introduce a "financial sector value consumption box" into Figure 10.3 of the Moniac (2000 [1950], 84). The financial sector also imposes bail-out costs: a "bail out" channel must therefore be forged from the Government sector into M2.

Some of the flows into M2 flow out into investment. Other flows become toxic AAA rated lemon-backed securities - which then circulate until the entire system freezes (as happened in 2008). Thus another box – representing the injection of macroeconomic 'cholera' - needs to be introduced into Figure 10.3 to capture this financial sector externality.[v]

The Moniac must also allow some of the outflows from M2 to enter a positive feedback loop (into an asset price bubble box) which then self-destructs with adverse consequences for all other flows. The "bail-out" flow must then be augmented by an enlarged debt service burden (interest rate) flow as one component of the financial sector (vigilante bond dealers) punish governments for attempting to deal with the externalities imposed on the system by the financial sector. In this way, the Moniac can address our current dysfunctional arrangements.

5. Fiscal or Monetary Stabilization?

Phillips (2000 [1950], 82) referred to the "equilibrating influence of the rate of interest;" he later concluded that "It is quite likely, therefore, that a monetary policy based on the principles of automatic regulating systems would be adequate to deal with all but the more severe disturbances to the system" (2000 [1954], 157).

Phillips (2000 [1954], 167, n16) also referred to Meade's fiscal fine-tuning proposal. Meade was more responsible than anyone else for Phillips' first academic appointment. Referring to the "large and rich team" of economists at the LSE, Meade (1988, 3) wrote in his autobiographical chapter of his *Collected Papers*: "Of these I will mention only Professor A. W. H. Phillips to whom I owe an immense intellectual debt of gratitude for education in the treatment of dynamic systems."

Meade (1978) proposed that the income taxes should be replaced by a progressive Consumed Income Tax Structure (CITS) so as to increase household savings and establish a more equitable and ethically sound basis for taxation. CITS can be added to the Moniac to assist the macroeconomic stabilization project.

Monetary theory and policy was allocated a central place in classical thought for obvious reasons: the existence of gold standard (with the exception of the Napoleonic War years and its aftermath, 1797-1819). There were disputes over trade policy (protection versus free trade) but for obvious reasons, no parallel dispute over the relative use of fiscal and monetary policy.

In the twentieth century, monetary policy was the natural first choice for stabilization objectives: many exchange rates were fixed prior to 1973 (the creation of a single currency in Europe also requires active, but often counter-productive, monetary interventions).

However, during the twentieth century, the tools of fiscal policy (government spending and taxation) increased as a proportion of national income, whilst simultaneously some components of the money supply – especially notes and coins – have reduced as vehicles for facilitating exchange.

Unfortunately existing tax systems (like existing financial system) have not been "designed" in accordance with socially optimal principles. Tax breaks, for example, to facilitate social stability through the construction of a "property owning democracy" can distort entrepreneurial incentives, exacerbate bubbles and thus undermine economic stability.

The quest for government revenue has an adhoc character. The U.S. government was initially highly dependent on revenue from tariffs; but after the Second World War, tariffs reduced in significance both as a source of government revenue and as a social engineering vehicle.[vi] Thus "the income earner" replaced "the foreigner" as a major source of government funding.

Income taxes were often first introduced as emergency war time measures (1798 in the U.K., 1861 in the U.S.). In the U.S. a constitutional amendment (the Sixteenth, 1913) was required to provided a legal foundation. Many economists, however, oppose the income tax (where income is not defined to exclude savings) and have instead proposed variants of CITS: including Thomas Hobbes (1651, 226), John Stuart Mill (1884), Irving Fisher (1906; 1937; 1939; Fisher and Fisher 1942), Luigi Einaudi (2006 [1928-9], chapters 14, 15 and 16), Friedman (1943), Nicholas Kaldor (1955) and Meade (1978).

In the 1970s, fiscal dysfunction revived interest in CITS - which received largely favourable attention from the 1972 Swedish Government Commission on Taxation (Lodin 1978), the U.S. Treasury's 1977 *Blueprints for Basic Tax Reform*, the Institute of Fiscal Studies' 1978 *Structure and Reform of Direct Taxation* (chaired by Meade)[vii] plus a 1978 Brookings Institution conference (Pechman 1980). The U.S. Treasury's report began from the same starting point as earlier analyses: "There has been increasingly widespread dissatisfaction in the United States with the Federal tax system" (*Blueprints for Basic Tax Reform* 1977, 1).[viii]

The "tax payer's revolt" that fuelled the Thatcher-Reagan revolutions also led to a switch in the tax emphasis away from income towards consumption. Rising inflation, in the absence of indexation, increased the tax burden through bracket creep and created further discontent. In 1979, the Thatcher government lifted the VAT to 15% while making substantial cuts in marginal income tax rates (the highest marginal rate was 40% by 1988).

In the U.S., in only four years of the two decades between 1944-63 was the top marginal federal income tax rate below 91%. The Reagan 1981 Economic Recovery Tax Act was the largest income

tax cut in U.S. history: the top federal income tax bracket fell to to 50% (1982-86) and to 28% for 1988.[ix]

Thus, we have inherited a hybrid income/CITS system. VAT, the GST and sales taxes are CITS-type arrangements – with regressive, or at least non-progressive, features, and numerous tax-privileged savings accounts are now widely available. Singapore has perhaps gone the furthest with the Central Provident Fund (CPF) whereby 34.5% of private sector wages (for workers aged below 50) are channeled into compulsory savings accounts.[x]

Yet the conclusions drawn by an earlier generation retain their validity: these piecemeal components do "not reflect any consistent philosophy about the objectives of the system" (*Blueprints for Basic Tax Reform* 1977, 1); instead we have "an unsystematic mixture of elements" (*Structure and Reform of Direct Taxation* 1978, 499).

6. A Modern Moniac with Functional Intermediation

Philips' optimal control insights – and pedagogical representations – offer an engineering solution to contemporary malfunctions. Simons and Friedman were on one side of the post-1936 divide; Meade and Modigliani on the other; Pigou was the whipping boy for those who created the Keynesian divide; Phillips was the whipping boy for anti-Keynesians; Friedman was a "scourge" for Kaldor (1982). However, by combining their insights with the Moniac, we can derive a method of eliminating the macroeconomic consequences of financial crises.

6.1 The Consumed Income Tax Structure: Fisher, Kaldor and Meade

Income can flow into Consumption (C), Savings (S) or Taxation (T). Household savings can be divided into two flows: Pre-tax Individual Savings Accounts (PISA) and post-tax savings (S); PISA is then deducted from income (Y) to derive taxable income:

1. $Y - PISA = C + S + T$

CITS rates can be progressive or flat.

6.2 Private Sector Balance (Optimal Savings): Pigou and Modigliani

Following Pigou (1924),[xi] an optimal level of PISA (PISA*) can be targeted, with or without a compulsory component:

2. $PISA = PISA^*$

Thus PISA flows into a separate box - not directly into Phillips' M2 box.

By implication, following Franco Modigliani, this is the equivalent of using marginal CITS rates to target the Life Cycle Optimum (LCO) of current consumption, thus reducing the problem of unfunded liabilities of future retirement income streams:

3. $C = C^* = LCO$

6.3 Public Sector Balance: Friedman

Following the fiscalist Friedman (1948), the level of government expenditure should be determined by community (electoral) preferences and only revised after another electoral cycle:

4. $G = G^*$

Fiscal rationality implies that the budget be balanced each year:

5. $T = G = G^*$

Thus:

6. $Y = C^* + I + G^* + (X - IM)$

where X = exports and IM = imports.

6.4 Rules Not Discretion: Simons

The Phillipsian challenge is to find a mechanism by which PISA* can flow into Investment (I) without financial sector interruption thus dampening the swing of the business cycle. Pension funds currently receive PISA-like funds or at least tax-privileged savings flows: one method would be to compel pension funds to use those funds for net investment purposes (not the purchase of second hand assets).

Another method would be to auction PISA funds to intermediaries on a price competition basis. Thus the investment demand schedule would be attached to the PISA* box so that the "enterprise" rate of interest determines the price but not the quantity of the flow into Investment. If savings did not passively flow into M2, intermediaries – stripped of much of their deposit base – would be obliged to participate in these price auctions for the privilege of lending to the private sector for investment purposes.

Intermediaries must also be stripped of the "for what" discretion that they currently enjoy (while retaining the "to whom" discretion). Funds won at auction must be used for specific pre-specified purposes (e.g. Gross Fixed Capital Formation). Thus, following Henry Simons (1936), intermediaries must be rules-constrained: hoarding must be prohibited and the flow of PISA into Investment must be made uninterruptible.

7. Implications for stabilization policy: inflation control

The fiscal control of inflation

Fiscal rationality implies both public balance, $G^* = T$ and private inter-temporal balance, PISA = PISA* and $C = C^* = LCO$ (the Life Cycle Optimum, leaving sufficient resources to finance future consumption).

Targeting PISA* via compulsory savings has two advantages. First, one instrument (CITS rates) has one target ($T = G^*$); second, the inflation-targeting operating characteristics are superior (requiring less macroeconomic discretion).

Alternatively, marginal CITS rates could aim at both public and private balance. Whilst structural levels of G and T should be determined by elected representatives, an inflation-targeting body – such as a central bank, or a Fiscal Policy Council – could annually fine tune T to keep C close to C* (and thus dampen undue rises in the consumer price index).[xii]

With compulsory savings targeting PISA* there would only be random variations around C*. If PISA* is targeted through CITS rates, more deviations are possible. If there is a departure from the LCO component of fiscal rationality and resources shift from savings to current consumption ($C > C^*$), two adverse consequences will follow: consumer prices will tend to rise, and savings will be sub-optimal ($PISA < PISA^*$).

If fiscal rationality is associated with the "enterprise" rate of interest and a relatively stable price level, and if sub-optimality (C > C*) is associated with undue inflation, the policy conclusion is clear: raising end-of-year CITS rates will tend to dampen sub-optimal C (by raising PISA), without adding to the price level.[xiii]

In Wicksellian analysis, the "natural" rate of interest is neutral with respect to price movements;[xiv] any rise in consumer prices when C = C* = LCO could be regarded as the "natural rate of inflation" (not to be tackled by reducing the demand for consumer goods, but by addressing supply issues).

The price level may also rise because of upward pressure on input costs. If policy makers respond by raising CITS rates, PISA will also increase, the "enterprise" rate of interest will fall and the volume of investment funding will increase. In so far as this will increase capital per worker and thus productivity this should, ceteris paribus, tend to exert downward pressure on production costs (a countervailing supply side response). This nexus thus provides a market-based antidote to both demand-side and supply-side consumer price inflation.

In a Wicksellian world, inflation is propagated by monetary authorities lowering the interest rate below the natural level (the appropriate policy response is to raise interest rates). In the Moniac world with functional intermedaition, inflation is propagated by sub-optimal savings (PISA < PISA*): this raises the interest rate. The appropriate policy response is to raise CITS rates (and thus PISA): this will tend to lower the interest rate.

CITS targets consumer spending (and thus consumer prices) directly; this virtuous fiscal-induced anti-inflation spiral will tend to increase savings, wealth, productivity, employment and tax revenue.

Monetary "discipline"

In contrast, the vicious monetary-induced anti-inflation spiral operates through a long and damaging series of adverse shocks (the transmission mechanism) and tends to increase unemployment, bankruptcies, home foreclosures, budget deficits and the exchange rate.

First, an anti-inflation increase in interest rates raises the future cost of funding government debt and thus increases future tax liabilities.

Second, debt-financed firms will face increased borrowing costs.[xv] If some of these firms operate on a mark-up pricing basis, this anti-inflation policy will, at least in the short-run, impart upward momentum to prices.

Third, if average costs in the consumer sector rise above prices, this will tend to cause sectoral exit. This reduction in supply will tend to impart upward pressure on consumer prices.

Fourth, the exit of debt-financed suppliers from the consumer goods sector will tend to reduce competitive pressures. Entrenched equity-financed firms will acquire enhanced concentration ratios and market power.

Fifth, the rise in interest rates will tend to reduce investment and thus future productive capacity.

Sixth, the cost of debt-financed consumer items will rise; apprehensive consumers will also tend to save rather than spend. If household savings are hoarded by apprehensive financial intermediaries, vault cash and bank reserves will increase and the money supply will fall. This may require further

corrective policy action.

Seventh, the rise in interest rates will, ceteris paribus, tend to attract an inflow of hot international money, thus exerting upward pressure on the exchange rate and adverse pressure on the trade-able goods sector (which will tend to shed labor).

Eighth, other interest-sensitive sectors (such as residential housing) will be adversely affected.

Ninth, the general contraction in demand will reduce employment and income and increase unemployment.

Tenth, tax revenues will fall and transfer payments will increase. The government deficit will become larger.

Eleventh, the stock of human and physical capital will fall (at least temporarily).

8. Implications for debt elimination

Fiscal "discipline"
Under current arrangements, financial crises are often followed by deficit-financed fiscal expansions (usually induced by panic). When the consequences of financial crises subside, the fiscal pendulum swings savagely in the other direction. But politically destabilizing fiscal "discipline" (cutting government expenditure and increasing income tax) contract aggregate demand and may be self-defeating.

First, reducing public sector employment will, at least in the short run, transform productive workers into the unemployed. In so far as unemployment benefits are lower than public sector salaries, this will marginally reduce public expenditure.

Second, the loss of public sector employees will reduce the quantity and quality of public services. There may be solid reasons for reducing the size of the public sector, but financial crises are unlikely to produce optimal results in this respect.

Third, public sector infrastructure projects are likely to be postponed thus impairing the future productive capacity of the private sector (such projects should typically be brought forward in a recession, not postponed).

Fourth, the addition of unemployed public sector workers to private sector labor markets will tend to lower the equilibrium real wage.

Fifth, increasing income taxes will widen the divergence between the price paid by employers and the price received by workers and thus reduce labor demand.

Sixth, the fall in income will tend to reduce tax revenue and the rise in unemployment benefits will tend to increase government expenditure, thus worsening the budget deficit.

Seventh, bond dealers will tend to raise the cost of financing this deficit – adding still further to the debt problem.

Eight, international bodies may intervene and impose further "discipline."

Ninth, human and physical capital will be destroyed; some human capital will be diverted into political campaigns to resist the fiscal "discipline."

Using the price mechanism to eliminate public debt
In contrast, the Moniac system with functional intermediation, eliminates the adverse consequences of balanced budget legislation (or aspiration); eliminating debt also becomes relatively benign. Deficit-financed stimulus packages become redundant.

The debt legacy can be eliminated by increasing marginal CITS rates: offering the alternative of increasing PISA deposits or paying more tax.[xvi] Either way, the price mechanism is being used to enable each individual to make an optimizing decision to consume or to postpone consumption. Both actions contribute to tax revenue: consumption (via CITS), savings (via the stimulus provided by increasing investment). This system provides an unusual correspondence between private and social optimality in the pursuit of debt elimination.

9. The Phillips Club?

Pigou (1877-1959) and Phillips (1914-1975) shared a birthday (18 November) and almost a date of death (7 and 4 March respectively). More significantly, there are similarities between the whipping boy role allocated to Phillips and the multiple whipping boy roles allocated to Pigou.

Pigou was a whipping boy for four revolutions. First, the 1936 Keynesian revolution (which nudged him into business cycle obscurity); second, the Chicago counter-revolution (specifically, the Coase Theorem, which after 1958, tended to nudge him towards externality-redundancy); third, in the 1970s, the Public Choice revolution (in which he is characterised as having a naive view of bureaucratic motivations); and fourth, the Austrian free market revolution (Hayek planned to write an essay for *Encounte*r on 'The Suppression of Information' 'outing' Pigou as a long-time Bolshevik spy).

Recently, Greg Mankiw established the Pigou Club to highlight the insights that Pigou's work can yield with respect to numerous public policy issues (protecting environmental quality etc.). 'Members' of the Pigou Club are invited to accept "higher Pigovian taxes such as gasoline taxes or carbon taxes."[xvii] Likewise, Phillips Club 'members' should be devoted to finding methods of stabilising the macroeconomy. This paper proposes one extension of the Moniac – there are surely other possibilities which may assist us in our project of stabilising the macroeconomy and minimising the macroeconomic externalities inflicted by financial engineers.

Appendix 1

Assessing the Effect of Taxes on the Economy: Deflate housing bubble with targeted taxes

Robert Leeson August 19, 2005

San Francisco Chronicle

The unsustainable increase in the value of residential property can only be explained by the existence of a speculative bubble. In the last year, house prices increased nationally by 12.5 percent; the median Bay Area house, figures from real-estate information firm DataQuick show, is now more than $600,000 (a one-year increase of almost $100,000). A large proportion of this recent (2004) momentum was driven, according to the National Association of Realtors, by not-for-owner-occupation investment properties (23 percent) and second homes (13 percent).

This pyramid scheme is a movable feast for those with a roof, but it conjures up the prospect of increasing intergenerational poverty for those "below stairs." Unless this issue is tackled, many Americans may never become first-time buyers -- undermining the legitimacy of the property-owning democracy.

Moreover, when the mania ends and the enormous financial bubble bursts, there will be a synchronized downturn in many affected countries. As other places have discovered (Japan and Hong Kong in the 1990s, the Netherlands in 2003), a quick de-escalating of housing prices can lead to financial and economic meltdowns.

What can be done to reduce the probability that this type of mania will recur?
There are no ideal instruments -- we are searching for the least-worst alternative. First, we could continue to rely on "perspective and good sense on the part of borrowers" as recommended in a speech last month to the American Enterprise Institute by Ben Bernanke, chairman of President Bush's Council of Economic Advisers (and a possible candidate for the next chairman of the Federal Reserve). Thus, monetary policy could continue to target price inflation, while informally leaning against bubbles (bubble talk counteracted by piercing Fed talk). But apart from jawboning, central banks have only one crude and blunt instrument -- interest rates -- to target or influence two objectives.

Monetary chemotherapy fails to discriminate between asset purchases for residency and for resale (or speculation). Raising interest rates to take some steam out of property prices will also tend to take the wind from the sails of economic growth. Using monetary policy to influence a bubble involving a limited number of people will also harm a wider group by slowing growth, cutting tax revenues and thus worsening the federal budget deficit. Alternatively, fiscal policy could target bubbles, freeing central banks to focus on inflation.

Fiscal policy can alter incentives. The emotional black hole that surrounds a bubble compresses all time horizons, encouraging investors to think short term and seek speculative profits rather than about long-term business development. Increasing taxes on short-term capital gains while reducing taxes on long-term capital gains would thus exert a gravitational pull in the right direction.

Speculation always co-exists with genuine enterprise -- but public policy must ensure that the first does not dominate or declass the second. How can entrepreneurs be persuaded to direct their energies and their capital into socially useful channels rather than throwing scarce resources at bubbles?

Entrepreneurs are attracted by the excess capital gains, which characterize all but the final stages of a bubble. Economists usually advocate taxation to tackle negative "externalities" (or spillover costs): If entrepreneurs were faced with a speculation tax on "flipping" (rapid buying and selling), this would alter their private calculation and might nip a bubble in the bud.

Central banks impose marginal increments on interest rates when price pressures are perceived to be rising unduly. Marginal increases in capital- gains tax should also become an apolitical tool of such macroeconomic management.

Californians can tackle this issue at a state level. The governor should appoint an asset-price monitoring committee to "out" sectors that display upward price movements inconsistent with market fundamentals by recommending a temporary excess capital-gains tax that is proportional to the size of the bubble.

To ease asset-price inflation in a particular location, the committee could formulate a proposition: for example, a 20 percent excess capital-gains tax on all property sales in that area. (This could apply to property purchased after a certain date or on all property transactions regardless of the date of initial purchase). This would tend to discourage the flood of speculative funds into the targeted sector and would exert "outward" pressure on the bubble. Raising interest rates to achieve the same objective would hurt a wide section of people who had in no way benefited from the bubble. An excess capital-gains tax might also divert investment toward less "hot" regions.

Taxation has two advantages over monetary policy. The first rests on equity grounds: It targets only those who had made excess capital gains from the bubble. The second rests on macroeconomic stability grounds. Tightening monetary policy from fear of the future instability associated with allowing a bubble to run its course tends to induce current macroeconomic instability. A quantifiable cost is thus imposed on the economy: lower growth, lost output and reduced tax revenue. As unemployment increases, so, too, will the number of interest-sensitive borrowers (those with repayments exceeding 20 percent of their gross income) leading to distress sales and bankruptcies. In contrast, fiscal policy provides a temporary capital-gains tax windfall -- which must be returned dollar-for-dollar as temporary tax cuts in the same year.

Relevant overseas experiments should be monitored (such as the 5 percent capital-gains tax recently imposed on any Shanghai house resold within two years and the variable Beijing housing tax, determined by how long the property is held). Temporary excess capital-gains taxes on commercial and investment property are a superior alternative to either doing nothing or dragging monetary policy into bubbling buildings in the hope of boring a hole small enough to expel steam, but not large enough to expel recessionary forces of typhoon proportions.

Appendix 2
Private banks need public rival to cut costs

Robert Leeson | September 22, 2009

The Australian

AFTER the Great Depression, our central bank (then the Commonwealth Bank) competed vigorously for banking business.

In 1945, the Commonwealth Savings Bank and the state savings banks held almost half of total deposits.

Today , a national savings agency could offer a variety of competitive financial instruments including most, if not all, banking services at low cost and with neighbourhood access via Australia Post.

Britain has had such an agency since 1861 (a public-private partnership that manages about 9 per cent of the domestic savings market). At its peak, the US Postal Savings System was the country's largest single savings bank. This competition for funds would force banks to cut costs and improve services.

Equally, the deposits attracted could (for the duration of the current crisis) cut debt-servicing costs and then provide a permanent crisis-proof flow from savings to capital formation.

Public banking offers eight identifiable benefits:

* First, private banks are a magnet for scarce capital (skilled labour, shopfront real estate plus resources held as insurance against risk-weighted assets). Moreover, banks that fail in their core activity (risk assessment and management) are required by regulators to increase their capital-asset ratio. In contrast, public banks that transform deposits into risk-free assets have no such requirements: thus capital can be released for more socially productive purposes.

* Second, in addition to holding capital to cover their assets (loans), private banks hold a fraction of their deposits as reserves to cover their liabilities (deposits). This "fractional-reserve" private banking allows a series of loans to piggyback on each deposit (a fraction of each deposit is held in reserve, the remainder is lent out, to reappear elsewhere in the banking system as another deposit, part of which is held, the remainder lent out etc).

When depositors panic, banks scramble to liquefy loans and lending becomes scarce.

In contrast, fractional-reserve public banking incurs no deposit-guarantee expenses and eliminates the prospect of bank runs and loan-to-liquidity panic attacks.

* Third, if the non-reserve part of these deposits were dedicated to financing the forthcoming federal deficits, the cost to the taxpayer of servicing the debt would fall (interest rates on deposits are typically less than rates on Treasury securities).

* Fourth, any initial reduction in the money supply (as funds migrate from banks to higher-interest national savings deposits) would need to be reversed by a compensatory increase in the money supply by the Reserve Bank. This process, facilitated by the RBA buying Treasury securities, would lower still further the cost of debt repayments. The coupon and maturity payments would accrue to the RBA, who return much of their revenue to the Treasury.

* Fifth, reducing the federal debt would exert downward pressure on interest rates, making borrowing cheaper and assisting the process of capital formation.

* Sixth, some federal debt would be held by overseas residents who receive coupon payments from the Treasury. In contrast, interest paid on national savings deposits would accrue locally, providing a stimulus to domestic aggregate demand and income that would otherwise be forgone.

* Seventh, this competition for funds would advance the cause of financial literacy. The bond market has a default-free base (Treasury bonds) against which to evaluate risk (all the way to junk bond status). Having a run-free benchmark allows savers to evaluate risk (all the way to junk deposit status).

* Eighth, globally the "too big to fail" doctrine has led to mergers and acquisitions -- some funded by bailout handouts.
But reducing the size of the financial sector produces a sounder system at lower cost. In the short run, this would increase the loss of financial sector jobs -- but structural efficiency requires that lower-valued jobs be replaced by higher-value employment opportunities.

Incentive-conflicted banks (which are currently hoarding rather than lending) may complain that the loss of deposits will hinder their ability to lend -- but they can still compete by accessing wholesale, non-deposit, sources of funding.

Perhaps "angels" and venture capitalists can best serve the business start-up market through their more clearly aligned interests. Moreover, technology (almost costless electronic banking etc) and the advance of peer-to-peer lending may already be transforming financial intermediation in ways currently difficult to envisage.

When the current crisis subsides and budgets return to balance, the non-reserve part of these deposits could be auctioned by the Australian Office of Financial Management to financial intermediaries (banks etc) on a contractual basis (every dollar borrowed must be lent to a designated sector or returned).

The spread between the cost of the funds (the interest paid on deposits) and the return (the interest rate paid by the auction-successful intermediaries) can fund tax cuts.

The transitional costs of reconstruction are smallest when a system is broken. Improved regulation might shed light on the murky toxic paper that floats menacingly around the global financial system, but shrinking institutions that are too big and too toxic to fail reduces both their size and their toxicity.

Having been financially engineered into crisis, we must now engineer our way out.

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http://www.theaustralian.news.com.au/business/story/0,,26105894-16425,00.html

Appendix 3 Back to the Drawing Board

Australian Financial Review 17th October 2008

The emergence of money was as significant a step in human evolution as was the emergence of language, property rights and permanent settlements. Indeed, the hieroglyphics of elementary commercial accounting evolved into written language. But now it is clear that we have allowed sophisticated equations, derived from those early hieroglyphics and applied to financial instruments (supposedly backed by housing property), to freeze both money and capital markets.

Adam Smith, the father of modern economics, described the “judicious operations of banking” in almost miraculous terms: “a sort of waggon-way through the air” - that is, an almost costless infrastructure underpinning our economic system. The opponents and critics of our system see this miraculous invention as an Achilles’ heel. Lenin reputedly declared that “the best way to destroy the Capitalist System was to debauch the currency … all permanent relations between debtors and creditors, which form the ultimate foundation of capitalism, become so utterly disordered as to be almost meaningless; and the process of wealth-getting degenerates into a gamble and a lottery”.

Lenin was supposedly referring to price inflation; but allowing un-resisted asset price booms to turn inevitably to bust has proved just as potent as a “Financial Weapon of Mass Destruction”. Neither President Khrushchev nor Osama Bin Laden was able to “bury” us; but the current Masters of the Universe have financially engineered us to the verge of a virtual ice age.

Banking in Smith’s time could be injudicious: in 1771, the Ayr Bank fell victim to “schemes of chimerical projectors”. In 2008, moralistic posturing about “greed” and injudicious behaviour will not suffice (is the seller of 900 liar loans morally superior to the seller of 1000 liar loans?). Instead,

we must reconsider the incentive structure that unites the private optimality of financial players with social disaster.

The United States has a long and inglorious history of financial crisis (1819, 1837, 1857, 1873, 1884, 1893, 1907, 1930-33, 1984, 1987, 1989, 1998 and now 2007-): serial bubbles followed by "Minsky moments" (named after Hyman Minsky, the radical Keynesian who analysed bubbles and their prickings). It is, therefore, not surprising that the latest Minsky moment was detected by at least some of those whose careers have been devoted to social, and not necessarily private, optimality.

One perceptive Cassandra was Bill White, retiring Head of Monetary and Economic Department at the Bank for International Settlements (located in Basle, Switzerland). BIS, the most active international body in the pursuit of adequate regulatory supervision of trans-national banks, promoted the 1988 Basle Capital Accord and Basle11 (a twenty first century update). It is reputedly the oldest international financial organization, founded in May 1930, just prior to the meltdown that turned a Wall Street price collapse into the prelude to World War 11.

White analysed the inherent procyclicality of liberalized financial systems: credit expansion fuelling growth and asset price inflation, resulting in hubris (undue optimism and receding perceptions of risk) followed by nemesis (financial collapse with dangerously unpredictable real-financial interactions). He detected three sources of irresponsible laxity: internal governance, external oversight and monetary policy.

Central banks, White argued, misinterpreted the temporary contribution made to inflation targeting by low cost Chinese exports as a new paradigm (an essential delusionary ingredient of most bubbles). His fundamental solution: "a new macro financial stability framework to resist actively the inherent procyclicality of the financial system".

When Oedipus realized the extent of the curse inflicted by his actions, he ripped out his eyes; in contrast, many of the actors in this current tragedy have walked away with millions. To address this iniquity, White proposes that both dividends and bonuses should be cut in order to increase capital cushions.

Others, such as Allan Meltzer, have suggested that bail-outs are little better than bail-ups: money injected into tipsy banks should come as loans, with interest rate strings attached. Certainly, we do the public relations cause of our system no good by appearing to subsidise those whose topic paper has jammed up our engines.

The "Okun gap" measures the lost income associated with an economy operating below full employment. It would be also be possible to estimate the "Minsky gap", the "externalities" (third party costs) caused by the dysfunctions that the financial services sector inflicts on the real economy (lower growth and income, taxpayer funds injected etc).

As we struggle to find ways of unfreezing the system, it is possible to argue that every injected taxpayer dollar has a reverse multiplier withdrawal effect on the overall size of the Minsky gap, and therefore pays for itself (a macroeconomic bargain). But there is a strong ethical and public relations case for arguing that these taxpayer rescue funds should originate from the externality-producing sector.

Indeed, providing tax-based subsidies to toxic paper producers is the reverse of what economic theory suggests. Instead, a Financial Services Emergency Tax (FSET) could be imposed either on all non-modest financial sector incomes or on a "fencer's fingerprint" basis (those who deal with toxic paper should be held responsible, either individually or institutionally).

Any long term anti-freeze remedy must address the incentive structure that so blatantly fails to align private with social objectives. The Masters of the Universe in the 1960s and early 1970s were the "stateless princes" who jetted about the world's financial centres trying, unsuccessfully, to preserve a doomed mechanism: the Bretton Woods system of fixed exchange rates. They failed to adequately understand their own system and the forces they confronted (including Milton Friedman and his ally, U.S. Treasury Secretary George Shultz).

Institutionally captured minds rarely escape the captivity of the system they serve. Friedman suggested that the Bretton Woods whiz kids should give up the ghost and (rather insultingly, perhaps) be released to perform useful and productive work. Yet since the 1970s, unit costs of financial products have fallen while the proportion of National Income consumed by the financial sector has almost doubled. But the net "value added" by the financial sector (minus the Minsky gap, that is) is likely to be negative after a major Minsky moment. Shultz's solution to the current problem of financial institutions that are "too big to fail" is to let them shrink.

But his successor at Treasury, Hank Paulson, is an inveterate Wall Street insider, and appears to be a mental captive of the system he serves. The chair of the Federal Reserve, Ben Bernanke, made his academic living by analysing the inactivity and ineffectiveness of central bankers during the Great Depression: he too shows little sign of having thought beyond the unfreezing period. This mental captivity allows banks that are too big to fail to enlarge themselves through mergers and acquisitions: a sub-prime policy response that will do nothing to address the serial bubble problem.

How can Shultz's suggestion be operationalised? How can we create a leaner financial system that consumes a smaller proportion of national income, is less prone to breakdown and generates smaller externalities? What competitive forces could unleash the winds of creative destruction in the financial services sector whilst putting its essential functions on firmer grounds?

First, we need a progressive consumption tax that either replaces or supplements the income tax. Economists have long seen such a system as providing an incentive mechanism that boosts savings: the current emergency may weaken politically-driven anxiety about such schemes. Any incentives (such as negative gearing) that direct entrepreneurial endeavours towards bubble prone activities (such as property) should be swept away as part of the rubble of a discredited and broken system.

Second, we need robust vehicles to channel and preserve these savings. In the long run, households as surplus agents require financial assets capable of transforming their savings into retirement income. In the shorter term, households as deficit agents need to access resources to finance human capital formation (education), residential purchases and lumpy expenditures (car loans etc). Businesses as deficit agents require financial capital to purchase physical capital (workplaces, equipment and inventories).

At least some of these functions can be competed for by non-profit organisations. The Reserve Bank of Australia used to be part of an institution (the Commonwealth Bank) that combined commercial with central banking activities. The Federal Reserve System was set up as a bankers' bank (although Fed employees are allowed to bank with the Fed). We should now consider allowing central banks to become depository institutions. Simple banking services (clearing checks, electronic transfers, cash withdrawals and deposits etc) can all be transacted through central banks accounts, with high street access through post offices. Governments can use average balances to reduce taxation (by, for example, funding deficits in a less expensive manner).

Central banks such as the Fed allow consumers to buy Treasury securities directly. Clearly, this a complicated and controversial issue but we also must consider allowing central banks to offer a wider range of savings vehicles and find non-political ways of transforming these funds into productive capital.

With respect to business investment, we cannot trust politicians to pick winners – but there is no reason to believe that a non-partisan Fiscal Policy Council could not follow general parliamentary guidelines and fund, for example, infrastructure projects, in accordance with the needs of macroeconomic stability and guided by social cost benefit analysis.

We also need a systematic financial literacy campaign (dealing with credit cards, mobile phones etc) to reduce the numbers who fall victim to the poverty exploitation industry. (It is also tempting to suggest that those who stand for public office should be obliged to sit examinations that test their ability to resist illiterate assertions about petrol tax holidays etc).

Trial-and-error unfreezing should ultimately flush the toxic paper out of the system (although those who issue cave-backed jihad edicts must have noticed with "shock and awe" what a security-threatening opportunity the mortgage-backed security activists have provided them with).

Anti-freezing is far more challenging: this project must recognise that $60,000 a year regulators are pitted against $60,000 a week whiz kids whose function is to financially engineer their way around regulations. How tragic that such talent has been directed into such anti-social activities.

With the demise of communism, capitalism appeared to become hegemonic and history appeared - to some - to have come to an end. But financial instability has driven capital into bear-like hibernation. Casino capitalism has been a disaster: a fundamental reconstruction of our financial architecture is required to put an end to the bubble-based merry-go-round.

Bibliography

Abrams, B.A. 2006. How Richard Nixon Pressured Arthur Burns: Evidence from the Nixon Tapes. Journal of Economic Perspectives 20.4 Fall, 177-88.

Blinder, A. S. and Reis, R. 2005. Understanding the Greenspan Standard. Princeton University CEPS Working Paper No. 114 September.

Blueprints for Basic Tax Reform. 1977. Washington: United States Treasury Department. http://www.ustreas.gov/offices/tax-policy/library/blueprints/

Cagan, P. 2000. Phillips' Adaptive Expectations Formula. In Leeson ed.

Catterall, R. C. H., 1902. The Second Bank of the United States. Chicago: University of Chicago Press.

Deacon, R. 1979. The British Connection: Russia's Manipulation of British Individuals and Institutions. Hamish Hamilton: London.

Einaudi, L. 2006. Luigi Einaudi Selected Economic Essays. New York: Palgrave Macmillan. Edited by Einaudi, L. Faucci, R. and Marchohionatti, R.

Federer, W. 2004. The Interesting History of Income Tax. Syracuse, NY: Syracuse University Press.

Fisher, I. 1906. The Nature of Capital and Income. London: Macmillan.

Fisher, I. 1937. Income in Theory and Income Taxation in Practice. Econometrica January, 5. 1: 1-55.

Fisher, I. 1939. The Double Taxation of Savings. American Economic Review March 29.1: 16-33.

Fisher, I. and Fisher H. 1942. Constructive Income Tax: A Proposal for Reform. New York. Harper and Brothers.

Fisher, H.A.L. 1971. A History of Europe. Volume 1. London: Fontana.

Friedman, M. 1943. The Spending Tax as a War Time Fiscal Measure. American Economic Review March 33.1: 50-62

Friedman, M. 1948. A Monetary and Fiscal Framework for Economic Stability. American Economic Review XXXVII, 3, June: 245-264.

Friedman, M. 1968. The Role of Monetary Policy. American Economic Review: March

Greenspan, A. 2009. We need a better cushion against risk. Financial Times March 28.

Hayek, F. 1994. Hayek on Hayek: An Autobiographical Dialogue. Edited by Steven Kresge and Leif Wenar. London: Routledge.

Hobbes, T. 1651. Leviathan. http://oregonstate.edu/instruct/phl302/texts/hobbes/leviathan-a.html

Ip, G. 2008. His Legacy Tarnished, Greenspan Goes on Defensive. Wall Street Journal April 8.

Kaldor, N. 1955. An Expenditure Tax. London: George Allen and Unwin.

Kaldor, N. 1982. The Scourge of Monetarism. Oxford: OUP.

Leeson, R. 2000. A.W.H. Phillips: Collected Works in Contemporary Perspective. Ed. Cambridge: Cambridge University Press. 2000.

Leeson, R. 1997. The Trade Off Interpretation of Phillips' Dynamic Stabilisation Exercise. Economica February, 1997, 64.253: 155-173.

Leeson, R. 1999. Keynes and the Keynesian Phillips Curve. History of Political Economy 31.3, Fall, 1999: 494-509.

Leeson, R. 2005. Assessing the effect of taxes on the economy: deflate housing bubble with targeted taxes. San Francisco Chronicle 19 August.

Leeson, R. 2008. Back to the drawing board. Australian Financial Review October 17.

Lodin, S-O. 1978. Progressive Expenditure Tax – An Alternative? A Report of the 1972 Government Commission on Taxation. LiberForlag: Stockholm

Markowitz, H. 1990. Foundations of Portfolio Theory. Nobel Lecture, December 7.

Markowitz, H. 2004. Interview. American Finance Association. http://www.afajof.org/association/historyfinance.asp

Meade, J. 1978. Preface. In The Structure and Reform of Direct Taxation. 1978. London: Institute of Fiscal Studies. George Allen and Unwin.

Meade, J. 1988. The Collected Papers of James Meade. London: Unwin. Volume I. Edited by Susan Howson.

Meltzer, A. 2003. A History of the Federal Reserve Volume 1: 1913-1951. Chicago: University of Chicago Press.

Meltzer, A. 2009. A History of the Federal Reserve Volume 2: 1951-1980. Chicago: University of Chicago Press.

Mill, J. S. 1884. Principles of Political Economy with some of their Applications to Social Philosophy. London: Parker, Son and Bourne.

Pechman, J. 1980 ed. What Should be Taxed Income or Expenditure: a Report of a Conference. Fund for Public Policy Research. Brookings Institution.

Pigou, A.C. 1924. The Economics of Welfare. London: Macmillan.

Philippon, T. 2008. The Evolution of the US Financial Industry from 1860 to 2007: Theory and Evidence. New York University, NBER, CEPR November.

Ramsey, F. 1928. A Mathematical Theory of Taxation. Economic Journal 38.152, December: 543-559.

Seidman, L. S. 1997. The USA Tax: A Progressive Consumption Tax. MIT Press.

Simons, H.C. 1936. Rules versus Authorities in Monetary Policy. Journal of Political Economy, 44.1, Feb: 1-30.

Simons, H. C.1938. Personal Income Taxation the Definition of Income as a Problem of Fiscal Policy. Chicago: University of Chicago Press.

Skousen, M. 2001. The Making of Modern Economics: The Lives and Ideas of the Great Thinkers. New York: M.E. Sharpe.

Skousen, M. 2009. The Making of Modern Economics: The Lives and Ideas of the Great Thinkers. New York: M.E. Sharpe. Revised edition.

The Structure and Reform of Direct Taxation. 1978. London: Institute of Fiscal Studies. George Allen and Unwin.

Tolstoy, N. 1986. Victims of Yalta. London: Corgi.

Wicksell, K. 1936 [1898]. Interest and Prices. London: Macmillan (translated by Richard F. Kahn).

NOTES

[i] I am extremely grateful to Vela Velupillai, Stefano Zambelli and their colleagues at the University of Trento for organizing such a splendid conference to celebrate and reflect upon the 60th anniversary of the Moniac. I am also grateful to the conference participants for their insightful comments.

[ii] All references to Phillips are to be found in Leeson 2000.

[iii] Deacon's accusations will be examined in a volume in the Palgrave Macmillan series *Archival Insights into the Evolution of Economics*.

[iv] World War Two ended the Great Depression; the Vietnam War initiated the Great Inflation. The Vietnam War period and its aftermath was a low point for both fiscal and monetary policy outcomes (both of which became highly politicized and thus sub-optimal). With respect to monetary policy, Fed Chair Arthur Burns was in danger of joining Richard Nixon's "enemies list". According to the White House transcripts, Nixon, was concerned that Burns was not stoking up the economy sufficiently to assist his 1972 re-election chances. Amid references to Burns' religion (he is "talking to the Jewish press"), Nixon threatened that "war is going to be declared if he doesn't come round some" (cited by Abrams 2006). Burns responded to these pressures in conversations with Nixon captured on the White House tapes: "I am a dedicated man to serve the health and strength of our national economy and I have done everything in my power, as I see it, to help you as president, your reputation and standing in American life and history. I've never seen a conflict between the two, but I want you to know this … the moment a conflict arises, I'm going to be right here. I'll tell you about it, and we'll talk about it and try to decide where to go next" (March 1971). The pressure continued, forcing Burns to protest: "No one has tried harder to help you" (June 1971). In December 1971, Nixon continued to hector Burns about money supply growth: "get it up!" (cited by Meltzer 2009, 635, 793, 796). In January 1972, Nixon supplemented these conversations with a letter to the Fed Chair referring to Burns' "absolute assurance that the money supply will move adequately to fuel an expanding economy in 1972 … What could happen out of all of this is that a major attack on the independence of the Fed will eventually develop" (cited by Meltzer 2009, 800).

[v] It is tempting to describe this box as the Talibank Cholera Transmission Mechanism.

[vi] Nomenclature reflected this intellectual revolution. In the 1970s, the U.S. Tariff Commission (established 1916) became the International Trade Commission. In 1974, the Australian Tariff Board became the Industries Assistance Commission; then the Industry Commission in the 1980s and then the Productivity Commission in April 1998.

[vii] The IFS was established in 1969 to counter balance what was regarded as the prevailing ad hoc approach to tax policy. Dick Taverne (Financial Secretary to the Treasury, 1969-70) was appointed Director and two ex-Chancellors of the Exchequer served as Vice Presidents: Selwyn Lloyd (1960-62) and Roy Jenkins (1967-70). The Meade Report took two years to prepare and was finished in June 1977. J. R. M Willis (ex-Deputy Chair of the Inland Revenue) and Tony Atkinson served on the Committee; Mervyn King served as a research secretary. In addition to Kaldor, the committee was advised by Sven-Olof Lodin (who devised an expenditure tax for the Swedish Royal Commission on Taxation and who later became President of the Netherlands-based International Fiscal Association) and David Bradford, President Ford's Deputy Assistant Secretary of the Treasury for Tax Policy (1975-1976), who co-produced the US Treasury's *Blueprints for Basic Tax Reform* (1977), which was considered influential on the tax policy of the Reagan administration.

[viii] In his 1976 Democratic Party acceptance speech, Jimmy Carter bluntly stated: "It is time for a complete overhaul of our tax system. It is a disgrace to the human race" (cited by Federer 2004).

[ix] But in the U.S. the policy pendulum swung to-and-fro with respect to consumption taxes. First, tax-privileged Individual Retirement Accounts (IRAs) were established (shifting the tax emphasis towards consumption and away from income); but in 1986 significant new restrictions were placed on their use. In 1993, more purpose-specific saving vehicles were offered (Medical Savings Accounts, the Roth IRA, an Education IRA and the Section 529 Qualified Tuition Program).

[x] Attempts at reform have continued elsewhere: in the U.S., for example, in the 1990s, Senators Sam Nunn (R- New Mexico) and Pete Domenici (D- Georgia) proposed the Unlimited Savings Account (USA) Tax bill (Seidman 1997).

[xi] See also Ramsey 1928.

[xii] Having two targets and one instrument may require a lexicographic ordering of targets. Alternatively, if marginal CITS rates produced T = G* but PISA > PISA* a one-off end of year tax-free consumption allocation could raise C towards C*.

[xiii] In Keynesian multiplier analysis, savings are a leakage from the domestic multiplier process; with fiscal rationality, inflationary consumption is replaced by the injection of savings and capital formation.

[xiv] "There is a certain rate of interest on loans which is neutral in respect to commodity prices, and tends neither to raise nor to lower them" (Wicksell 1936 [1898], 102).

[xv] Larger and more established firms with access to equity financing often hold retained earnings as a buffer and can reduce dividend payments if necessary.

[xvi] CITS is consistent with a tax-free threshold to minimize the need to compensate tax-paying consumers with transfer payments.

[xvii] http://gregmankiw.blogspot.com/2006/10/pigou-club-manifesto.html