Co-operative Money as a Commons: Convivial Technology for Economic Democracy

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Action to introduce and develop local and interest-free money systems has been seen with every major recession or depression over the past two centuries. The 1820s, 1840s, 1870s, 1930s and 1980s all kicked off monetary reform experiments – sometimes just confined to specific regions but considered during the 1870s and 1930s at the national level with the development of monetary reform parties in North America.

Since the beginning of the global banking and now Euro crisis, there has been a new revival and growing level of interest in local and complementary currencies internationally. In many regions of Europe, North America and South America, both citizen and local business engagement with local currencies is growing. Links with credit unions and local banks are now being seen for the first time since the Great Depression. In Germany and Brazil, social banks and community development banks are involved in the provision of new forms of local and social money.

In the wake of the global financial crisis, a new creative group of thinkers has emerged to propose national and regional models for reforming and restructuring the money and banking systems in root and branch ways. These ambitious proposals build on the work of innovative reforms developed within the co-op and economic democracy movements. The connections between monetary reform, co-operative economics and an economic democracy agenda is being grappled with by these alternative economic thinkers.

Such profound thinking has not been alive since the Great Depression when there were a range of monetary reform advocates who explained how money was created by banks as debt. Unlike the silence by economists on this subject today, Keynes, Schumpeter, Fisher and many other leading economists in the1930s were well aware that banks create money as debt. Indeed Keynes and Fisher developed substantive monetary reform proposals for a democratically accountable system to stabilise the economy, reduce unemployment, and overcome the problems of inflation and deflation. They both drew practical ideas from the co-operative money experimenters and the lessons that could be gleaned from this history.

This report examines this co-operative economic thinking in the field of money and banking within the context of the current applications that are being developed and explores how a number of these can be furthered. The issues are reviewed in relation to the history and practice of monetary reform, the current banking and Euro-crisis and the opportunities for introducing and developing monetary reform and a new money and banking architecture. The report examines a range of specific applications for co-operative money solutions and explores the strategic potential for advancing the economic democracy movement in relation to affordable housing, finance and investment for small business, employee ownership, carbon reduction and the necessary shift to a decentralised and renewable energy based economy.

1. Financialisation and the crisis related to debt based money

Money by economists is recognised as having three main functions. First it acts as a unit of value. Second it functions as a means of exchange. Third it functions as a store of value. Money can and has taken any form imaginable from sea shells to stones, from tobacco to land, from coins to paper, from cheques to credit cards and from smart cards to mobile phones. Today it mainly operates as electronic information – both intrinsically weightless and valueless. This is fiat money, backed by the Government as we have seen since 2007, but essentially underwritten by taxpayers, who pick up the bill in full when the banks go down like bowling pins.

Bankruptcy as a term originated over two centuries ago in an age when borrowing money by households was rare. Nonetheless across Europe the money of savers was regularly lost by banks that had extended credit beyond their means to back up their liabilities with their available assets. To attract investors before government insurance schemes were introduced in the 1930s, bankers had to develop a credible track record as depositors were well aware of the danger of bankruptcy. But why would this happen if bank loans were merely the lending of the savers money? Surely in most circumstances the reserves of the bank and the security taken on loans should cover the risks.

Historically money in the form of coinage was created by local lords, sovereigns and nation states as they emerged. Goldsmiths in the late middle ages noted that their IOU receipts were being used as payments and devised ways to develop paper money. To make a lucrative extra income, goldsmiths began issuing many more promissory notes than they held in assets. Banking as we know it was born by this new practice of relying upon the security of a fractional reserve and by taking the risk of advancing loans as a multiple of precious metals deposited. This process of creating money out of thin air - rather than advancing credit from deposits - expanded during the industrial revolution and was the underlying cause for bank runs leading to bankruptcy.

Today the global pervasiveness of bank created money is at the heart of the Euro crisis. The intractable nature of this crisis is linked to decades of unregulated debt growth initially with credit cards and mortgages from the late 1970s but since the 1990s with a growing plethora of other forms of speculative, debt based money from hedge fund derivatives to credit default swaps.

Geoffrey Ingham has defined debt based money creation as the key characteristic that separates capitalism from earlier forms of society with markets. Along with many leading economists including Keynes in the 1930s, Irving Fisher explained the simple way that banks create money as debt by making loans just as if they were counterfeiters.[i]

'our national circulating medium is now at the mercy of loan transactions of banks; and our thousands of checking banks are, in effect, so many irresponsible private mints.'

The Federal Reserve Bank of Chicago explained succinctly in the 1930s the money creation process by banks.

'[Banks] do not really pay out loans from the money they receive in deposits. If they did this, no additional money would be created. What they do when they make loans is to accept promissory notes in exchange for credits to the borrower's transaction accounts. Loans (assets) and deposits (liabilities) both rise [by the same amount].'

In 1939, the Governor of the Bank of Canada, Graham Towers, also clarified the way banks create money as debt.[ii]

'That is the Banking business, just in the same way that a steel plant makes steel. The manufacturing process consists of making a pen-and-ink or typewriter entry on a card in a book. That is all. Each and every time a bank makes a loan (or purchases securities), new bank credit is created — new deposits — brand new money. Broadly speaking, all new money comes out of a Bank in the form of loans. As loans are debts, then under the present system all money is debt.'

A century ago, Thorstein Veblen and John Hobson were the first to analyse the speculative aspects of finance capitalism. Indeed since 1890 there has been a tension, especially in Anglo-saxon economies, between divergent needs of finance capital and productive capital. Finance capital has become the globally dominant form today and 'financialisation' has been described as the period when finance capitalism has been strongly dominant in the economy. This was the case during the first historic phase of financialisation after the Long Depression from 1890 and leading up to 1929 and during the current second historic phase emerging again since 1979.

Michael Hudson has summarised the adverse income impacts on the real economy of financialisation.[iii]

'Companies are not able to invest in new physical capital equipment or buildings because they are obliged to use their operating revenue to pay their bankers and bondholders, as well as junk-bond holders. This is what I mean when I say that the economy is becoming financialized. Its aim is not to provide tangible capital formation or rising living standards, but to generate interest, financial fees for underwriting mergers and acquisitions, and capital gains that can accrue to insiders headed up by

upper management and large financial institutions. The upshot is that the traditional business cycle has been overshadowed by a secular increase in debt. Instead of labor earning more, hourly earnings have declined in real terms…….This diverts spending away from goods and services.'

The beneficiaries of financialisation over the past three decades have been the top 1% of households who have seen their share of national income rise from 9% in the 1970s to over 20% today. Inequality narrowed significantly during the period of tight bank regulation between 1945 and 1975 in the USA and the UK when financialisation was reined in. Since 1980, in both countries, income for wage earning households has fallen and in the UK by an average loss of £2000 per year per worker. Meanwhile the world's rich have increased their wealth by $39 trillion between 1998 and 2008. This yawning income gap has continued to grow since 2008.

Additionally during periods of financialisation, the average cost of capital in real terms has noticeably increased. Between 1951 and 1979 the mean real rate of interest in the US, the UK, Germany and France ranged from 0.3% to 0.7% but under the second era of financialisation, the mean real rate of interest in these four countries rose to 3.8%.[iv]

The rule of 72 is a financier's ready reckoner for appraising the yield from investments at different compound rates of interest. Dividing the interest rate into 72 provides a good rule of thumb as to the time required to fully recover the loan principal. For example, an interest rate of 26% will double the loan advance in three years – hence the proliferation of credit card finance in this second era of financialisation. In the ten-year lead up to the banking collapse in 2007-2008, a diverse range of sub-prime and predatory lending was brought on to the market. Fees and charges are eye-watering with payday lenders in the USA and the UK funded by private equity investors and charging annualised rates of 2000% to 5000% for one month loans.

It is no wonder that profit and pay levels in the finance sector have soared over the past three decades. From 1973-1985, the finance sector accounted for under 16% of corporate profits, in the 1990s this ranged from to 21-30% and in the 2000s they peaked at 41% in the lead up to 2007. From 1948-1983, pay in the finance sector ranged from 99% to 108% of pay in other industries. Between 1983 and 2008 it grew to 181%.

Margrit Kennedy and Declan Kennedy have examined what proportion of public services are inflated due to the impact of compound interest charges on public debt. They calculate that in Germany close to 35% of he costs can be traced to interest charge compounding ranging from 12% for rubbish collection to 38% to sewage treatment and from 38% for drinking water to 70% for publically supported housing.[v]

Usury laws were first eroded and then abolished in a growing number of countries over the past two hundred years. Apart from the UK, in many European countries including Germany and France there are still ceilings on interest charges that are enforceable through the courts. The social struggle against usury highlights a number of areas for development to frame a new system for money and banking in the twenty-first century. Reviewing the lessons from this history can provide guidance for developing a new money and banking architecture.

2. Economic democracy and co-operative money – lessons from history

Economy democracy focuses on widening access and control over productive property by all citizens.

For almost three centuries enclosure of land has driven urbanisation from the North to the South. The enclosure of land advanced with the commercialisation of agriculture in the eighteenth century and provided a growing supply of low-cost workers for the industrial revolution. Karl Polanyi called this process The Great Transformation of (i) people to dependent wage labour; (ii) nature into privatised land; and (iii) money into debt. This three-fold process fundamentally changed the world order by making society dependent on the market. Cut-off from land for foraging, fishing and food growing, it was increasing hunger that compelled the rapid migration from rural areas of Europe to industrial cities. In England, there were thousands of legal acts of enclosure that fenced off land. In Polanyi's analysis, it was only following the loss of commons that it was possible for land, money and labour to be monetised and emerge as 'fictitious commodities' to structure an unjust 'free market.' With land made scarce, money expensive and labour cheap, those with productive property gained and the property-less lost heavily.

The hunger and dependency caused by enclosure was resisted and through the co-operative movement, innovative economic democracy ideas emerged either for developing inclusive property rights by methods that decommodified land, labour and money or to provide financial compensation. Witnessing the fight in Newcastle upon Type against the enclosure of the ancient commons in the city, Thomas Spence developed in the 1770s the idea of a Parish Land Trust whereby local villages or districts in cities could entrust common land for the community's benefit. Income captured locally and socially from commercial rents could pay for a village hall and local services. Moreover by entrusting the land and keeping it in the commons, housing could be cheaply developed. The Spence Plan for the mutual ownership of land is the forerunner of the community land trust movement for affordable housing that has been developing in the USA and the UK over the past twenty years.

In compensation for the loss of the customary rights to the commons, Thomas Paine in 1795 argued in his pamphlet Agrarian Justice for the provision of a guaranteed minimum income paid for through an inheritance tax and a land value tax. He estimated that the funds nationally could provide an old age pension, a disability pension and a capital sum to every man and woman at the age of 21. Paine's argument had some impact. Government could not ignore the obvious and growing loss by commoners of the rights to fish, hunt, graze animals and gather firewood. For a period of forty years a means-tested system, the Speenhamland system was introduced that taxed landlords through the property rates to provide income to relieve rural poverty through a wage supplement. This system was abolished in 1834 and replaced by the workhouse. Paine's argument for a universal citizen's income was picked up later by monetary reformers in the 1920s and has been attracting growing interest again today.

Manufacturing first developed in rural areas in the early stages of the industrial revolution with water power as the source of energy. The steam engine enabled industrial cities to emerge. Robert Owen was born in Newtown, a rural mill town in Wales, and later became a successful industrialist in Manchester. Appalled at the slums, pollution and the overcrowding, in 1799 he set out to develop a social economy experiment in Lanarkshire, Scotland for transforming a rural mill town into a model industrial village. The Owen venture developed the first social model for industry, paying better wages, providing education and building decent housing for working people.

Owen's progressive view of humanity, society and economy worked. By 1810 the experiment was both a social and commercial success and Owen sought ways to develop his model nationally and set out for politicians and investors both a vision and a social investment prospectus for funding Villages of Co-operation and Mutual Unity. Owen's Plan was radical as he sought ways to develop social property rights in relation to land, money and industry. The co-operative settlements proposed in the plan for up to 5000 people were designed to integrate farming and industry, provide good housing, schools and common facilities for all. Owen argued that his plan for economic decentralisation could find ways through a federated system of smaller towns for reducing the slum conditions in cities but also if socially owned, for equitably sharing the economic benefits of the productivity of science and industry.

The scale and depth of Owen's vision inspired the development of the grassroots Co-operative movement in Great Britain, Ireland and the USA. Indeed Owen invested his own wealth in a broad number of communitarian experiments in these countries to find a successful way forward. Like the practical economic democracy proposals of Spence and Paine, Owen's plan for integrating rural and urban forms of work continues to resonate today and the Owenite land reform experiments were forerunner of the Chartist Land movement in the mid-nineteenth century and Garden city movement from 1900 to 1930. Community land trust developers are now revisiting the Garden city movement's mission.

Set out in his Report to the County of Lanark in 1820, the key monetary reform element of Owen's plan, was the labour note, an alternative to debt based bank money with an hour as a new standard of value.

To understand the practical potential of this proposal, the historic context of 'free banking' in the early nineteenth century is important to understand.

The promissory note was made legal tender in the Great Britain in 1704. Local currency became increasingly commonplace in the England and Scotland during the eighteenth century and was based upon a growing number of local banks. Forms of 'free banking' developed rapidly in Great Britain with little or no regulation. In Scotland paper money became widespread after a currency war broke out in 1727 between the Bank of Scotland and the Royal Bank of Scotland. The currency war led to the issue of very low denominational notes. In Scotland they also introduced money that was not convertible to precious metal. This currency was backed by land and could not be redeemed for twenty years. This 'land bank' money system was made illegal in Great Britain in 1741 because of the inflation caused but it did develop further in the American colonies.[vi]

The industrial revolution led to a competition for precious metals. Coins became scarce between the late 1780s and 1820. Paper money issued by 'country banks' in Great Britain developed rapidly to fill this gap and some cities introduced their own coins with cheaper metals, like the Lady Godiva half penny in Coventry from 1792. The early nineteenth century 'country banks' were private banks supported and capitalised by industrialists in major cities and towns outside London. Most market towns had a 'country bank' supported by local people and traders.

Local paper money and laissez faire forms of local banking had become widespread by 1815. Their paper money from ten shillings to £1 was based on fractional reserve practices and debt based. Their notes were convertible to Bank of England notes at a discount.

The country banknotes circulated sub-regionally and as branch banking was undeveloped, the currency could only be exchanged outside the market town area at a high level of discount. Therefore the system operated well in general to promote local trade and exchange and to link up local businesses and farmers. While the system was not problem-free at all, local money helped promote the economies of market towns and cities and in many areas was a source of pride.

During the Napoleonic wars the metal shortage became worse; the British mint stopped new coinage completely and did not resume production for 20 years until 1816. The Bank of England also suspended the convertibility of £1 and £2 notes into gold from 1797 to 1815. These notes issued during the war were simply printed and not based on any specie assets or interest-bearing bonds. During this period the local banks were also allowed to issue paper money on this basis.

The trouble arose when the inconvertible notes were withdrawn from circulation after 1815 by the Bank of England and local banks also called in their notes. The deflation caused was severe; money in circulation declined rapidly and was a trigger for the 1816-19 depression. Many businesses failed and farmers were foreclosed. In 1819 the situation became worse when the UK returned completely to the gold standard.

Owen's argument for reforming money through the Labour note was that the problems in 1819 were with the gold standard, with usurious interest rates and with unsound currency not based on a commodity backing that could be trusted and was not rare.

Adam Smith in the Wealth of Nations called for the usury laws of the UK to lower the maximum interest rate to 5%. He argued that charges above this level would be excessive, extract value from enterprise and impact adversely on the market economy. Challenging Adam Smith's clear attack on usury, Jeremy Bentham published his provocative *Defence of Usury* in 1787 and argued for all legal restrictions on interest to be abolished and interest rates to be set freely by the market at whatever rate.[vii]

Inspired by Owen's arguments, the early co-operative movement, known as Owenites, experimented to develop an interest-free and debt free co-operative money. Their monetary reform experiments had several aims. First they aimed to replace precious metals with essential goods as the commodity backing for the currency. Second they sought ways to overcome market pricing with cost pricing for goods based on Adam Smith's Labour theory of value. Third, the Labour note system was designed to replace interest charges with a low-cost administration fee.

Robert Owen worked with Josiah Warren in the USA at New Harmony, in Indiana, one of the largest of the co-operative community projects but an experiment that only lasted four years between 1825-29. Warren early on diagnosed the failure of New Harmony as due to the decision by the community founders to abolish money without devising an efficient system to replace it. Warren was determined to address this defect and after leaving New Harmony he developed the first time based currency linked to the exchange of locally produced goods. The Cincinnati Time Store was opened by Warrren in 1827 and operated successfully until 1830 as a retail shop with a 4% to 7% mark up on goods priced in the labour involved in production. Warren then went on to develop three more Time Stores in other towns in Ohio and Indiana in the years leading up to 1842.

Owen returned to England in the late 1820s and impressed by the work of Warren led the development of the National Equitable Labour Exchanges which were set up and operated from 1832-34 in London and Birmingham. Like with the Cincinnati Time Store, Labour money was denominated in hours of work and the labour exchanges operated as warehouses for goods sold in units of time. The difficulty with time as a unit of value is that it is not a standard measure as the skill level, effort and capacity of people varies with training, age, experience and effort. Additionally the warehouses had high development and transaction costs for storage, insurance and staffing; for this reason the Labour Exchanges did not prove to be viable as co-operative businesses. Disputes regularly arose over the value of the goods and the time required to make them. As a result all the Labour Exchanges closed down by 1834. A decade later this early co-operative shop system was succeeded by the consumer co-op model developed by the Rochdale pioneers in 1844. The ingenious quarterly 'divi' system of this model drove the early development of the consumer co-operative movement internationally.

The depressions of 1816-19, 1825-31 and 1835-42 led to a number of bank panics. These reoccurring bank failures and fears about inflation and ongoing financial system instability led to the Bank Charter Act of 1844. This legislation ended 'free banking' in the UK by removing the production rights of any new issue of local paper money from banks in England and Wales and transferred national currency provision exclusively to the Bank of England. In Scotland and Ireland banks continued to issue their own banknote currency after 1845 but under strict the controls and supervision of the Bank of England.

The vision of a co-operative money system, not based on interest, did not die out after 1844. Indeed there was reason to believe that this vision could be secured as there were indeed a growing number of interest-free lending organisations operating successfully during this period in Great Britain and Ireland. The most successful were the popular terminating building societies for buying land and building houses. By 1870 there were 959 terminating building societies and they had become the core provider of mortgage finance for skilled working class people before being eclipsed by the modern building society in the late nineteenth century that catered for the growing middle class.[viii]

Developed in the industrial revolution region of Birmingham and the West Midlands from 1775, terminating building societies operated as mutually owned rotational savings clubs that ensured that members who continued to save, eventually secured an interest free mortgage to buy a plot and build a house. Loan allocation was by a number draw system organised periodically to distribute the pooled funds. No new terminating building societies were allowed to form in the UK from 1910 but the system had by then spread to many Commonwealth countries and continued to be legal in New Zealand until 1980.

Similarly for both housing and smaller loans, Starr-Bowkett societies were introduced in the depression of the 1840s by Dr. Thomas Bowkett in London. This interest-free system spread fast and operated on a co-operative basis, until they were made illegal in England in the late 19th century because of the lottery prize aspect. Starr-Bowkett societies had by then spread to Australia and remained popular for housing finance loans until the mid-20th century.

The growing regularity of depressions between 1815 and 1845 was associated both with business and bank failures and social strife. The Swiss economist, Jean Charles Sismondi analysed the underlying causes for the severity of the 1815-19 depression and concluded that this was due to underconsumption.[ix] He showed that a combination of 300,000 soldiers returning to Great Britain after the defeat of Napoleon combined with efforts by competitive industrialists to pay lower wages and replace labour with machines, led to a plummeting of aggregate demand. He also showed how the costs of unemployment were externalised to society.

Sismondi's analysis highlighted that the free market incentives for industrialists were not only short term but socially and economically perverse for the national economy. He accurately predicted that these economic downturns would repeat themselves at regular intervals unless a fairer distribution of income was introduced. His novel solution was a co-operative partnership model to spread the wealth that the technical productivity of machines was generating. He proposed a 50:50 profit sharing model between capitalists and workers so that each worker 'after a probationary period would come to possess a right of ownership in the business to which he gives his sweat.'

John Stuart Mill in the 1830s was impressed with Sismondi's analysis and became a strong advocate for the growing co-operative movement. For the reasons Sismondi revealed, Mill became a strong proponent of worker co-operatives. In 1844 he developed Sismondi's insights further to explain the cause of bank runs and the credit crunch. He showed that the solution to a business downturn required the freeing up of access to capital at an affordable price to small businesses. Following on from Tom Paine, Mill was also attracted to the proposals by Fourier, the utopian socialist, for a guaranteed income.

From 1844 there were a growing range of advocates for either a public or a mutual banking system that would operate on a low interest or interest-free, fee charging basis. Edward Kellogg, an American economist, developed a model for a new monetary system whereby the government would issue currency backed by land as security and make loans through a public bank at a low rate of interest. After the 1848 revolution, Proudhon argued that the Bank of France should develop an interest-free, fee based lending system and capital should be raised by a tax on interest, rent, debts and salaries. Proudhon's idea attracted widespread support but when the French legislature rejected the proposals, he developed a plan for a People's Bank that would be mutually owned and charge a fee of 2% which could be reduced as the mutual exchange developed. A number of working class people and other investors put up capital but this was insufficient and the bank was closed down in 1849 before it had the chance to trade.

Inspired by the work of Kellogg and co-operative money experiments, the Unitarian minister, William Greene in the USA developed a model for a mutual bank charging a circulation fee rather than interest. He and his supported applied for a banking charter to the state of Massachussetts but were turned down in 1851.

However by the late nineteenth century a mutually owned and interest-free banking vision had not been realised and most of the terminating building societies were either on the decline as their remaining members drew down loans or alternatively seeking to continue and to expand by converting themselves into permanent building societies based on interest charging practices. The Starr-Bowkett societies and their equivalent were being eclipsed in many European countries by credit unions based on the two popular German models or the Trustee savings banks first developed in Scotland in 1810 and expanding fast across Europe as municipal savings banks.

Though either mutually or publically owned, all these social banking systems had begun to conform to the traditional private banking model that paid interest on savings and charged interest on loans. The curtailing from 1845 of a connection between local money and local banking was a factor underlying the steady demise of the local British banking sector and in the early twentieth century a growing number of mergers led to the emergence of a powerful oligopoly of a decreasing number of banks dominating the national UK market.

Nonetheless a few leaders in the co-operative movement in the early twentieth century held out hope for a robust mutual banking model not based on compound interest systems. It is worth noting that free banking operated up to almost World War I in a number of industrialising countries. In Australia, Sweden and Switzerland free banking was widespread until the late nineteenth century and in the USA, state chartered banks operated free banking practices until 1913 when the Federal Reserve Banking system was introduced. In Sweden free banking operated between 1830 and1902. The Swedish system was the most stable and experienced only one bankruptcy during this period. Perhaps due to this rather late free banking practices, it was in the USA, southern Germany, Austria, Switzerland and Scandinavia where some of the most innovative experiments with co-operative money developed in the 1920s and 1930s.

Silvio Gesell, a successful German business owner in Argentina drew inspiration from the mutual banking pioneers in Europe and sought a solution to the impediments faced by the nineteenth century practitioners. He was a student of history and he worked out a design solution from the local 'renovation monetae' practices that were common under the German states of the Holy Roman empire. The local currency in these principalities was known as 'bracteates' or black money.[x]

In the middle ages, long distance trade was based mainly on silver coins while local trade utilised duller metal coins that quickly turned black. These coins were time-limited and re-minted, always when the sovereign died but usually every five to six years - and in some cases, several times a year. The bearer forced to surrender the coins would get back commonly three new coins for every four coins. The medieval bracteates and a similar mereaux coin system in France were common from the 12th century and lasted well into the 15th century. Both are said to be the first demurrage (ie. depreciating) form of metal money. Depreciating money was in any case the historic norm as money based on grain, spices, tea, tobacco and other consumable commodities subject to rot, had been and has been used as common specie forms of currency well into modern times.

To revive and adapt this long-forgotten system, Gesell devised a unique way of overcoming the difficult challenge to secure the financial sustainability of mutual money systems. As a successful businessman oriented to co-operative thinking, he was keenly aware of the social injustice of the interest rate system. His inspiration was economic, not simply moral. He believed interest rates had a negative impact on the economic efficiency of markets, led to instability and credit rationing by banks and that they were unjust because they misallocated capital by making the rich, richer and the poor, poorer.

His theoretical rationale was compelling. He questioned why when everything in life wears out and dies, why money is expected to grow and persist in 'God-like' ways forever. Clearly money based on debt and the charging of interest runs counter to the reality of life forms on the planet. To fix this monetary design flaw and dead weight on local economies, small enterprises and the efficiency of markets, Gesell proposed a money system that mimicked nature.

The first step was to get rid of the idea that money was equivalent to a precious metal. The second step was to separate the unit of money, say a pound or a dollar, from the paper, or scrip, that represents it. Gesell therefore logically proposed that money should 'decay' over time rather than increase, just like everything else does. To achieve this, his proposed 'natural economic' device was a negative interest charge. Thus like other experiments by Warren and Owen, Gesell's co-operative money would be fee-based, but be better designed to sustain its operational costs and overheads.

To put this idea into practice, he recommended a negative interest charge of 0.1% per week being 5.2% per year. If money lost this much value annually, Gesell forecast that it would become a pure medium of exchange. Why hoard it when it is no longer a store of value? Gesell called his idea *Freigeld* (free money): free of interest, stable and democratically accountable, if effectively managed locally. He suggested such a currency would be much less risky in terms of either deflation or inflation and would end both the boom-and-bust cycles of market economies and credit rationing as it could be given away.

In 1929, just a few months before Gesell died and the Wall Street crash, two of his supporters supplied a distressed business owner with a *Freigeld* loan of 50,000 "WÄRA" (the German name of the

Gesellian money) to revive a flooded coal-mine in the small town of Schwanenkirchen, in Bavaria. The owner used the currency to pay 90% of his miners' wages and, importantly, he persuaded the shopkeepers and local service providers to accept the currency; after all, it was backed by coal from the mine.[xi] The fee charge was stated to be a "storage" cost for the coal into which the money could be redeemed.

The effect was dramatic. While the Great Depression began throwing people out of work across Europe and North America, the coalmine was revived. The workers bought and exchanged goods and the town began a rapid revitalization, all fed by the rapid circulation of a currency that would lose 5.2% of its value within a year. Word spread fast and over two thousand corporations across Germany began to deploy similar methods to revive their operations. But to no avail; the central bank felt threatened and, in 1931, it declared all such "emergency currencies" illegal despite a German Court decision that the money was in fact legal as it represented a presale of goods sold by the issuer.

The good news spread and "stamp scrip" currency had by then begun to jump borders to Denmark, Austria and America. Worgl, a small town in Austria introduced a Gesellian currency in 1932. Desperate to rein in an unemployment rate of over 30%, the town mayor issued 40,000 "free schillings", by using them to pay 50% of the salaries of municipal staff .[xii] Fully backed by the Austrian currency, the free schilling was free of interest but not free of charge. Every month, the holder of free schillings had to go to the town hall and get a stamp affixed to the back of each note to revalidate it. The stamp reduced its value by 1% every month, 12% per year, which was more than double the 5.2% Gesell recommended. People in Worgl scrambled to spend their scrip even more quickly than in Schwanenkirchen.

In the first year the Worgl currency changed hands thirteen times more than the Austrian schilling did the year before. Debts declined. Demand for credit fell. To avoid the monthly devaluation, holders of free schillings opted to pay for work in advance, to order goods and supplies, to repay debts, to settle accounts and to pay off taxes. Everyone was a beneficiary. It was a benefit to householders, businesses and the municipality. Only national businesses (the post office and the railway) refused to accept the free schilling.

Within the first year new homes were built, others repaired; municipal buildings were improved and repainted; streets were repaved; a reservoir, bridge, and ski jump were built and forests were replanted. Public works expanded fast and unemployment was dropping fast.
A year later 200 Austrian towns were gearing up to adopt the reform. However, just as in Germany; the central bank declared the free schilling illegal. Over the Worgl experiment of 13.5 months, unemployment had been reduced by 25%, the town's income increased by 35% and public works invesment raised by 220%. Tragically in 1934, the unemployment rate of Worgl soared back up to over 30%.

In the early years of the Great Depression in the USA, local currency and barter exchanges similar to the Cinncinati Time Store of the 1820s developed and used warehouse receipts for money. By late 1932 there were over 400 similar projects across the USA and over one million people involved. The success of the Gesellian money experiments in Europe caught the attention of Arthur Morgan in Ohio and Charles Zylstra in Iowa. They both initiated American models of stamp scrip. Morgan's model followed closely the Worgl system but Zylstra's money had no specified stamp date to renew the money and it relied on users paying the stamp for each transaction. This slowed down the velocity of the currency completely because it did not discourage hoarding.

20 projects were initiated in 1932 but most followed Zylstra's model with the poor design and were not successful. The Morgan approach and a similar one in Reading, Pennsylvania replicated the Worgl model; both worked well. This Gesellian system was strongly supported by Irving Fisher, the renowned American economist and developer of the quantity theory of money, RPI and Net Present Value. He thought Gesell's ideas were an esssential emergency currency remedy for tackling in root and branch ways the deflationary impact of the Great Depression and the credit crunch that was growing because banks were not lending to small and medium enterprises.

In late 1932, local money using Gesell's system was already being used in a number of local American towns. Inspired by Fisher proposals, a bill was prepared for Congress to create $1 trillion of 'stamp scrip' in 1933 as an emergency currency to 'stamp away the depression.' It was proposed that the scrip money be distributed to each US state based upon the population size and that half be used for reducing unemployment and half to finance infrastructure.[xiii]

In Fisher's 'stamp scrip' proposals, each Free-Money note would be good for one year.[xiv] For a $1.00 note to remain valid the holder had to affix to it a two-cent postage stamp every week. After 52 weeks the sale of stamps would have generated for the Post Office $1.04 for each $1.00 note. It would then redeem the "Stamped Scrip" for ordinary money and retain four cents to cover its costs. Such time-limited currency, Fisher argued, would not cause inflation because it was designed to be self-liquidating each year.

Fisher produced a book to help local communities set up stamp scrip and by early 1933 large cities like St. Paul, Minnesota, the state of Iowa and hundreds of small towns were gearing up to issue their own self-financing, stamp scrip money. President Roosevelt, so willing to try new things, decided not to include Fisher's reform in his New Deal. Advised by Harvard Professor Russell Sprague before his election that the American monetary system was in danger of being democratised rapidly and the government might lose control, Roosevelt heeded this advice and banned the issuance of any new stamp scrip in March 1933. [xv]

3. The monetary policy of Keynes - a period of banking and economic stability from 1945 to 1970

The post war period was stable in western Europe and North America with low real interest rates, high levels of employment and low inflation between 1945 and the late 1960s. The Keynesian policy framed internationally by the 1944 Bretton Woods agreement was on rebuilding and developing national economies with a mixed economy model and a lead role played by Governments. Fixed foreign exchange rates and capital controls limited both foreign and inward investment.

The New Deal policies introduced to tackle the Great Depression in the USA provided the framework. These polices and regulatory practices led to a decline in the power of the banking industry. A number of changes were introduced by President Roosevelt within days of his taking office on 4 March 1933. A foretaste of his resolve to tackle usurious banking practices were set out in his Inaugural Speech.

'Plenty is at our doorstep, but a generous use of it languishes in the very sight of the supply. Primarily this is because rulers of the exchange of mankind's goods have failed through their own stubbornness and their own incompetence, have admitted their failure, and have abdicated. Practices of the unscrupulous money changers stand indicted in the court of public opinion, rejected by the hearts and minds of men. True they have tried, but their efforts have been cast in the patterns of outworn tradition. Faced by the failures of credit they have proposed only the lending of more money…….They know only the rules of a generation of self-seekers. They have no vision, and when there is no vision the people perish.'

Roosevelt acted immediately. His first act of office was to declare a three-day bank holiday. An Emergency Banking Act was passed on 9 March 1933 and four in ten banks in the USA were closed down and liquidated. In June 1933 the Glass Steagall Act was passed to tightly regulate banking like never before and to rigorously separate commercial banking from investment banking. The new legislation gave the Federal Reserve strong powers to set maximum rates of interest. Deposit protection insurance was introduced. Banking was strictly regulated thereafter for almost fifty years.

Unlike what has happened since 2008, banker salaries declined massively and bonuses shrunk. Pay in the industry remained in decline for decades. The major reason for this was because of the strictness of the regulatory regime.

The Roosevelt plan for ending the Great Depression focused on a public banking model. To address the rapidly declining access to lending from banks by US businesses, President Herbert Hoover set up the Reconstruction Finance Corporation (RFC) in 1932. When Roosevelt took office in 1933, bank lending and investment annually had fallen from $59 billion in 1929 to $40 billion.[xvi] Under Roosevelt, the RFC introduced mortgage and small business loan guarantee mechanisms and the Commodity Credit Corporation was set up in 1933 for guaranteeing a minimum price for farm products. Private bank lending continued to decline however until 1938. Roosevelt then approved direct public lending by the RFC to businesses. One particularly successful area of public lending at low-interest was in the field of rural electricity.

In 1934 across the US, nine in ten urban households had electricity compared to only one in ten rural households. Private sector energy companies could make far higher returns on investment to supply cities compared to rural small towns and farms. Roosevelt sent a task force to Scandinavia to study electricity co-ops and was impressed with their rural potential.

The Rural Electricity Administration (REA) was set up and supported with capital by RFC in 1935. Long-term, low-cost capital at a 2% fixed rate was provided through the REA to support the co-op sector to develop a network of rural electricity co-ops. By 1939, 417 rural electricity co-ops had been established and 288,000 households and farms provided with power. Today these rural energy co-ops have grown into a national network of over 900 with a membership of 42 million and an asset base of $97 billion.[xvii] Long-term public banking finance at a low-fixed rate of interest has been critical to their success. Though they have benefited from subsidy, a recent study has shown that the subsidies per consumer to the energy co-op sector from Government have been less than those to private sector utilities.

John Maynard Keynes was a champion of Roosevelt's New Deal. In developing his arguments for monetary reform in his General Theory in 1936, Keynes studied carefully the ideas of the co-operative monetary reforms and was impressed with the ideas of Silvio Gesell, stating 'that the future would learn more from the spirit of Gesell than from that of Marx.'[xviii] Keynes had concluded earlier in 1931 'that interest – or, rather, too high a rate of interest - is the villain in the economic piece.'[xix] As Tily argues, it is wrong to interpret Keynes in relation to fiscal policy innovation alone, his main contribution was his proposals and recommendations for monetary reform and these have been lost sight of.

For Keynes the key to economic stability was a focus on national self-sufficiency that could be achieved by keeping real interest rates extremely low. The Keynes focus on targeting low and non-usurious interest rates echoes the arguments of Adam Smith. The recommendation of Keynes was for Governments to develop and maintain a 'cheap money' policy by setting key performance targets for central bank to cap government bond yields (short, medium and long) between real rates of 0.5% to 2.5%. Tily shows that this policy was widely adopted after World War II and guided by the Bretton Woods agreement which introduced fixed foreign exchange rates, balanced budgets and capital controls to limit bank lending overseas.

These policies as many commentators have noted led to the 'golden age of capitalism' between 1945 and 1970s with low inflation and low unemployment. As Tily emphasises, this was the most stable period of banking in the twentieth century with no banking crisis over this period.

With financial services market heavily regulated. Government policy focused on industrial and productive investment. The market in consumer credit was marginal before 1970 and the level of personal debt was low. Credit was demand led then, not supply driven. The banks in the UK were not operating in the mortgage market and the building societies required members to save significant deposits of 20-25% to qualify for a mortgage.

4. From national financial stability to global financial instability: 1971 to 2012

In the early 1960s before the introduction of the credit card, almost 40% of money in circulation in the UK was Government money, coins and notes. Today coins and notes are only about 3% of national money – the rest is debt-based money created by banks. What accounted for this complete transformation. One thing is clear, household debt has skyrocketed over the past fifty years and this became a growing economic driver.

The rising cost of energy following the Opec Oil crisis in the 1970s led to double-digit inflation and growing industrial unrest. Following the Iranian revolution, Paul Volcker, head of the US Federal Reserve Bank implemented radical monetary policy in October 1979 by massively raising the bank base rate to counter inflation. This policy change also introduced the prevailing international policy of dollar hegemony. The US aim was to stabilise and strengthen the dollar and through the maintenance of high US interest rates to ensure the attraction of foreign capital to Wall Street. Mrs.Thatcher's monetary policy followed the US lead and attracted foreign capital to London. With the introduction of floating exchange rates and the removal of capital controls in 1979, the modern era of financialisation was introduced.

The radical monetary regimes of Thatcher and Reagan triggered a recession and rising unemployment. Price inflation did decline and consumer and mortgage credit liberalisation was released to expand homeownership and stimulate the economy. Deregulation spurred on financial services and mergers and acquisitions in the industry leading to the privatisation of building societies, the takeover by banks of insurance companies and the integration of investment banking and commercial banking. The financial supermarket era thus emerged in the 1990s. Borrowing from Peter to pay Paul, became a habit in the US and the UK. By 2008 there were some nine credit cards in circulation in the US for every adult with an average balance of $5000 on each card.[xx] Total debt (household and national) was in 1973 equal to GDP in the USA. By 2010 total debt had risen to three times GDP in the USA and 4.5 times GDP in the UK. [xxi]

The dominance of global banking since 1980 is confirmed by a dramatic shift in profit shares. In the 1960s, financial organisations accounted for 14% of corporate profits but by 2008 the share had risen to 39%. The current era of financialisation has been marked by significant economic instability and financial market volatility. Between 1982 and 1998 there were twenty different banking crises occurring internationally compared to none between 1940 and 1970.[xxii]

What was characteristic of the first era of financialisation and the second era is that both ended in a crash – 1929 and 2008. Both were also characterised by high costs of capital by stark contrast with the period of low cost capital from 1945 to the early 1970s when banking was strongly regulated and demarcated. Interest rates before 1973 were also targeted by policy makers and in most countries capped by usury laws.

Controls on interest rates have been abandoned in the USA and the UK since the 1970s. In Britain there was a legal ceiling on moneylender loans of 48% until 1974 and in the USA there was a cap of 36% until 1980. This ending of usury restrictions has led to eye-watering levels of charge for low income households by legal moneylenders and payday lenders charging rates from 200% to over 5000% APR. A recent BBC investigation has revealed that bank customers have been kept in the dark on non-transparent overdraft charges as these are exempted from the need to produce an APR.[xxiii] The BBC findings found bank charges for these loans at rates far higher than pay day lenders and ranging from 969% to 819,000%.

A study by the Office of Fair Trading has revealed a growing level of consumer detriment related to the products of the UK finance industry. Since 1990 one overcharging crisis has emerged after another with pension miss-selling costing households a loss of £13.5 billion, precipice bonds leading to a loss of £2 billion, excess overdraft charging an estimated loss of £2.6 billion, lack of competition in banking costing an extra £8 billion and personal payment insurance miss-selling costing an estimated loss of £1 billion. A separate inquiry by Cruikshank revealed in 2000 an overcharging by banks to small business and personal customers of £3 billion to £5 billion a year for payment system services. Hidden charges on bank accounts are estimated to be £152 per customer yearly and earning more than credit cards and savings combined.[xxiv]

By 2007 the soaring tower of debt hit the skids when bank base rates were raised in response to oil price and inflationary pressures. The unprecedented level of overindebtedness and reckless lending collapsed under its own weight. In 1986 the economist Hyman Minsky predicted this outcome in his book *Stabilising an Unstable Economy.* Building on the ideas of Mill, Fisher and Keynes, Minsky showed that unregulated financial systems have an instability that accelerates the upward swing of economic booms and leads to asset bubbles that once punctured trigger credit contraction and financial collapse. Following the speculative collapse of the US savings and loan industry in the late 1980s, Minsky refined his analysis and developed his Financial Instability Hypothesis in 1992.

Minsky's scrutiny of the deregulated finance industry lending of the 1980s concluded that borrowers can be divided into three groups: hedge, speculative and ponzi. The first can repay capital and interest on loans from income. The second cannot repay the loan principal from their means but can service the interest. To manage, they periodically need to roll over and refinance their loans. The third are unable to service the loan and rely upon the asset they are financing to increase its value. Once the asset bubble bursts, the ponzi borrowers default and the speculative borrowers are then called upon by the lenders to increase their payments to fill the lenders solvency gap. Credit to new borrowers contracts and the system collapses because of the structural overindebtedness that deregulated financial markets has allowed to escalate.

Minsky's theory was ignored in 1992 and history repeated itself on a global scale in 2007. The US bailout worked to shore up the system nationally after the 1987 stock market crash at an unprecedented cost of $200 billion to US taxpayers and the closure of 1400 savings and loans and the wind up of 1860 banks.[xxv] As Minsky forecast, the international system is overwhelmed today by the global level of speculative debt toxicity and bailout costs that continue to rise in OECD countries. The crisis of debt in the sub-prime and wider household debt sector has spread to the public sector in many EU countries. Refinancing again and again the debt is not working and the cutbacks to service the mounting repayments has led to a fiscal, monetary and banking crisis that has become structural and intractable.

Developing economic democracy and getting to grips with overindebtedness requires access to low-cost and equitable finance. The historic evidence shows that the co-operative sector requires a partnership with Government to achieve their vision of a democratic economy.

5. Economic democracy and proposals for 100% Money

Governments have a range of choices for how they can achieve monetary reform and there are linked changes required from the banking sector. The history of ideas on this topic is rather diffuse and not well understood, so a summary is necessary to see the ways forward.

The recourse to Government issuance of new money has been commonly seen during times of warfare. This was the case with the revolt of the US colonies after the Declaration of Independence, during the Napoleonic wars and during the US civil war. These transparent moves by Government to print money freely during these historic periods stimulated fresh thinking from small businesses, farmers and citizen groups about the scope for monetary reform more widely. Hence the growing interest of the Occupy movement and others in the use of Quantitative Easing for social and economic purposes. The other upshot of a major war is that printing money during conflict times has only been a partial solution. Government debt reached record levels after the above wars and following the Iraq war.

To limit rising Government debt during the Civil War, President Lincoln approved the free issue of more than $450 million Greenback dollars. When contemplating the debts of the US government at the end of the Civil War and the costs of reconstruction that needed to be found, Lincoln indicated not only his intent to retain Greenbacks dollars but to expand their use to develop a stable national currency free of debt.[xxvi]

'The Government should create, issue, and circulate all the currency and credit needed to satisfy the spending power of the Government and the buying power of consumers. The privilege of creating and issuing money is not only the supreme prerogative of Government, but it is the Government's greatest creative opportunity. By adoption of these principles, the long-felt want for a uniform medium will be satisfied. The taxpayers will be saved immense sums of interest, discounts, and exchanges. The financing of public enterprises, the maintenance of stable governments and the ordered progress, and the conduct of the Treasury will become matters of practical administration. The people can and will be

furnished with the currency as safe as their own Government. Money will cease to be master and become servant of humanity. Democracy will rise superior to the money power.'

Following Lincoln's death, the Greenbacks were withdrawn and hard money policies linked to gold were reintroduced. Farm prices fell, foreclosures spread, small business failed and unemployment soared as the deflation was severe. After the Bank Panic of 1873 that triggered a depression, monetary reform became a battle cry and the US Greenback Labor Party was founded in 1874 to promote the reintroduction of Greenbacks. Over the next ten years as the Long Depression continued, the party attracted a growing following of farmers and workers and elected local and state candidates and 22 members to Congress. The Populist Party in the 1890s picked up again the monetary reform agenda.

At the outset of World War I, the Chancellor of the Exchequer, David Lloyd George, was faced with very low reserves in the Bank of England and feared a bank panic. He declared an extended bank holiday, took Britain off the gold standard and issued debt-free Treasury notes to fund the early stage of the war. There was only one issue of these so-called Bradbury notes (after the name of the Secretary of the Treasury) and most of the war was funded through war bonds. But the Bradburys in circulation got reformer minds thinking as the UK national debt grew eight-fold between 1914 to 1918.

At the end of the war, the US, Germany, Italy, France and the UK were saddled with huge levels of public debt and there was an urgent need to fund reconstruction, housing for the troops returning home and to change production over to civil purposes. The war debts and reparations led to hyper-inflation in Germany between 1921 and 1924. In 1920 in the midst of the post war recession, Henry Ford and Thomas Edison suggested a novel solution. For infrastructure projects with an income stream, they proposed to Congress the creating of new money through the issuance of interest-free government bonds whose principal could be repaid from the income yield from a hydro-electric dam or a toll bridge or from general taxation.

The UK Government's ability to freely issue money for World War I stimulated fresh thinking about different forms of universal basic income to provide economic security to all citizens. The philosopher Bertrand Russell advanced this argument at the end of the war in 1918 in his book *Roads to Freedom*.[xxvii] Mabel Milner and Dennis Milner that same year argued similarly for a 'State Bonus' as a percentage of UK national output – a form of social dividend.[xxviii]

Making a direct link between monetary reform and a universal income, Clifford H Douglas, a British engineer, set out this argument in 1919 in his book *Economic Democracy* which was serialised in the New Age, the precursor to the New Statesman. He pointed to the underlying cause of economic instability as due to a gap between aggregate demand and supply caused by an insufficiency of money as the circulating medium. Debt could close this gap but only for a time and the gap would just continue to grow with more and more debt required – household, commercial and government. A clear-cut solution would be for Government to create new money, interest-free as Social Credit through a National Dividend that all citizens would receive.

Other thinkers in the UK began to make the connections. The Nobel Prize chemist, Frederick Soddy, pointed to the cumulative costs of debts in the economy and the instability this creates. In the 1920s he made the first case for an ecological economics free of debt. Drawing ideas from Gesell, he showed that debt-based money runs counter to nature because it violates the laws of thermodynamics.[xxix]

'Debts are subject to the law of mathematics rather than physics. Unlike wealth, which is subject to the laws of thermodynamics, debts do not rot with age and are not consumed in the process of living. On the contrary, they grow at so much per cent per annum, by the well known mathematical laws of simple and compound interest…..For sufficient reason, the process of compound interest is physically impossible, though the process of compound decrement is physically common enough.'

To achieve monetary reform, Soddy advanced the first case for what became known in the 1930s as 100% money. In *Wealth, Virtual Wealth and Debt,* he proposed that fractional reserve banking should be ended so that banks could no longer create money as debt. He proposed that all money should be created debt-free by the Government by progressively increasing the fractional reserve that banks must hold. By moving towards a 100% reserve requirement, debt-based money would be phased out.

As a high profile US economist, Irving Fisher was humbled by an unfortunate remark he made just before the Wall Street crash. Ten days before Black Thursday he was quoted in the New York Times as predicting that 'Stock prices have reached what looks like a permanently high plateau…..I expect to see the stock market a good deal higher within a few months.' Not only did the crash make Fisher look foolish but it also cost him a fortune as his own investments plummeted.

Fisher's fascination and support for Gesell's stamp scrip in the early 1930s was the upshot of a radical revision in his own thinking after 1929. Fisher set out his radial reappraisal in his Debt-Deflation Theory of the Great Depression which was published in 1933.[xxx] Fisher's theory shows that a build up of overindebtedness in an economy can lead to asset inflation and a structural disequilibrium leading to a fall in aggregate demand and a depression. Fisher's theoretical analysis of the Great Depression showed that the downturn was triggered by an overindebtedness saturation point leading to debt liquidation, distress selling, a contraction of bank lending, a lower velocity of money in circulation, business bankruptcies, a reduction in trade and output, a growth in unemployment, market pessimism and a loss of confidence, price falls and deflation and a rise in real rates of interest. As a result of this perverse syndrome, overcoming a depression requires substantive changes to enable markets to recover again.

With the New Deal policies having only limited impact in getting banks to lend again, he made the case in 1935 for 100% Money to remove from banks their potential to create money as debt and to provide them with increased liquidity and stability. This is how Fisher described his proposal.[xxxi]

'The essence of the 100% plan is to make money independent of loans; that is to divorce the process of creating and destroying money from the business of banking……..the most important result would be the prevention of great booms and depressions by ending the chronic inflations and deflations which have ever been the curse of mankind and which have sprung largely from banking.'

Through strict regulation, the Glass Steagall Act separated in 1933 the insurance industry, stock broking, commercial banking and investment banking. The Bank Charter Act 1844 removed from banks the power to create paper money but left them the power to create money through chequing accounts (otherwise known as demand deposits). Fisher proposed that in future banks would have to retain full cash backing for these promissory note accounts to prevent any run on a bank and also to prevent both inflation and deflation in future. The reform would be achieved through the creation of a Government Currency Commission that would have sole powers to create money. The Commission would increase the cash reserves of every bank until they matched the level and amount of demand deposits. The banks would be obliged either to borrow this new money from the Government or exchange bank assets including bonds and securities for the cash.

Fisher argued that 100% money would deliver many benefits including no more runs on banks, price stability, fewer bank failures, a substantial reduction in Government debt, a simplification of banking, a simpler money system and an overcoming of boom and bust. Fisher secured growing support for his plan from economists right across the USA. Following the recession of 1937-38, he worked with five other well known American economists to set out the arguments in A Program for Monetary Reform which was published in July 1939 just before the outbreak of World War II. This broad-based proposal for 100% Money secured the endorsement of 235 economists from 157 universities.[xxxii]

The founder of the Co-operative League of the USA (later to become the National Co-operative Business Association) James Warbasse was a board member of Roosevelt's National Recovery Administration and centrally involved in the development of the rural electricity co-operatives. He also lent his support for the work of E.C. Riegel's co-operative money proposals. Riegel founded the Consumer Guild of America in 1928 to campaign against the development of high cost consumer loans. During the Great Depression he developed a model for a mutual credit system that could operate as a co-operative verson of 100% money and would not depend upon Government action to commence the system.[xxxiii] Riegel named the interest-free money Valuns and under his plan the system would operate as a co-operative checking account for households and business members. Each member would be granted liquidity that would be pre-distributed based on their prospective monthly income. The mutual credit system known as the Valun Exchange would be a non-profit corporation with no private equity and a nominal membership fee. The expenses of the mutual system would be met out of small charge for each check cleared. All members would use Valuns as a common currency when trading with each other and trade with dollars when trading with non-members.

Additionally during the Great Depression there were grassroots calls for reform via a system of universal basic income. In England, GDH Cole at Oxford University argued in 1935 for a 'social dividend' as a universal 'basic income.' [xxxiv] The Nobel economist, James Meade, a colleague of both CH Douglas and GDH Cole backed the 'social dividend' argument in a case he made to the Labour party in 1935.[xxxv]

Senator Huey Long's Share our Wealth program in 1934-1935 argued for a guaranteed family income of at least one third the average family income, a thirty hour week, free college education and vocational training, a four week vacation for all workers and old age pensions.[xxxvi] The basic income guarantee would be funded by asset taxes on banks and corporations, a wealth tax on individuals and a cap on personal wealth at $50 million, inheritance at $5 million and annual incomes at $1 million. Before he was assassinated in 1935. Long had recruited 7.5 million members to the Share our Wealth Society, was receiving 60,000 letters a week and 27,000 local Share Our Wealth clubs had been established right across the country.

The CH Douglas reform proposals for Social Credit led to the creation of Social Credit Parties in Alberta and British Colombia in western Canada and grassroots support was strong like for Long's reforms. In 1935 William Aberhart was elected the Social Credit Premier of Alberta in a landslide election. As the province of Alberta did not control banking Aberhart was unable to introduce their proposals for a guaranteed national dividend of $25 a month to everyone but he did introduce a stamp scrip scheme which operated in the province until 1937.[xxxvii]

An enduring legacy from the provincial government of Aberhart is the Alberta Treasury Branches, a public bank that he set up in 1938. Today it is the largest financial institution with a head office in the province. It provides 242 city and towns with a shared credit system and has over 680,000 household and business customers.[xxxviii]

Another notable innovation of public banking in the Great Depression developed when the Bank of Canada was nationalised by the MacKenzie King government in 1938. With the mounting debts from the Great Depression, the first central bank Governor, Graham Towers undertook a programme to directly lend for affordable housing, social programs and for public infrastructure projects.[xxxix] Loans were at a nominal 1% rate and this practice continued until the mid-1970s. Canada as a consequence had a total national debt of only $37 billion in 1975. In 1984 the Brian Mulroney government ended this practice and public debt soared to $585 billion in 2000.

Canada was not alone in this central bank direct lending practice. The New Zealand central bank advanced loans at 1% from 1935 to fund a broad range of infrastructure projects over several decades including hydro-power, the railways and public housing.[xl]

Monetary reform was overtaken from 1939 by World War II. Keynes died in 1946 and Fisher in 1947 and the money and banking reform trail went cold.

6. Economic Democracy: the Socialisation of wealth and Money as a Commons

It is interesting to note that Fisher's calculated sum of $1 trillion of stamp scrip needed to reboot the US economy 80 years ago is indeed the same level of Quantitative Easing (QE) introduced by President Obama in 2008. However unlike QE, the Gesellian system targets precisely, in a decentralised way, the liquidity needs of small businesses and local economies.

Fisher's monetary reforms were two-fold: (i) to introduce stamp scrip to provide regional and sub-regional liquidity on a fee basis to stimulate investment by speeding up the velocity of circulation and (ii) to remove from banks the power to create money as debt by setting up a Currency Commission nationally to provide banks with coin, notes and sufficient cash to maintain 100% reserves. In his proposals, Fisher argued for a partnership between the Currency Commission, the role of the central bank and the delivery system through the national retail banking network.

By stopping the ability of banks to create money 'as their own mints', Fisher aimed to end the speculative, rentier role of banks. He and the proponents of the Program for Monetary Reform in 1939 argued that the impact of 100% money would be to support the local banking sector. They also argued that that 100% money would restrict simultaneously both Government debt and household debt because the circulation medium for exchange would be expanded and contracted interest-free.[xli]

'Under the fractional reserve system, any attempt to pay off the Government debt, whether by decreasing Government expenditures or by increasing taxation, threatens to bring about deflation and depression……the fundamental consideration is that whatever increase in the circulating medium is necessary to accommodate national growth could be accomplished without compelling more and more people to go into debt to the banks, and without increasing Federal interest-bearing debt.'

To implement 100% banking effectively, Fisher drew the important distinction within commercial banks between chequing/payment accounts and saving accounts. The former could and should be operated on the basis of fees for service, not interest. Saving accounts are not part of the means of circulation and they are legally different because they are loans borrowed from banks from savers. To repay any interest offered, the banks needed to invest these funds in productive enterprises. Essentially Fisher's argument was for banking reform that would establish a decentralised system of utility banking that would benefit smaller banks and thereby increase competition.[xlii]

'The smaller banks face an increasing trend towards more concentration of power in the hands of the big banks. Under the 100% system, the demand deposits of the smallest and the largest banks would be absolutely secure. The pressure towards the concentration of banking and the establishment of branch banking would thus be greatly reduced.'

Minsky gained insights from both John Stuart Mill and from Irving Fisher. He saw the way forward as a new form of socialised banking that through tight regulation and oversight would curtail and prevent debt-based lending practices seeking to earn money anti-socially and anti-economically through increasingly extractive economic rents rather than through providing low-cost finance for the needs of enterprise and society.

Finance capitalism that was dominant in the lead up to 1929 was replaced by the mixed economy model where public investment and public borrowing became a key motor and method for shoring up a gap in aggregate demand. But technology and productivity continued to advance from 1945 to 1970 and there was during the period of stagflation in the 1970s another crisis of economic reproduction. The decision taken by Thatcher and Reagan from 1980 was to deregulate banks and allow the free rein expansion of private sector debt – a policy that has been retrospectively described as private sector Keynesianism. This did plug the aggregate demand gap for several decades but has now reached saturation point. Overindebtedness is today pervasive in the USA and in many countries in Western Europe for households, businesses and for government. Morgan Stanley has calculated total UK debt as 950% of GDP which is double the average of Euro-zone countries and three times higher than the US ratio.[xliii] Between 1987 and 2010, UK finance sector debt increased five-fold from 50% to 261% of GDP. The credit card economy has run out of road in the UK and Steve Keen predicts is heading for a future dramatic fall.[xliv] So what can be done?

There was an alternative economic policy proposed in the early 1970s that was not taken up. This was the proposal for wealth sharing through different forms of economic democracy in relation to land, natural resources and corporate ownership – the vision of a progressive 'stationary state' beyond a reliance upon economic growth and indeed first outlined in 1852 by John Stuart Mill in book 4 of his *Principles of Political Economy*.

In 1844 Mill had analysed the bank credit rationing issue in a depression and the critical need for innovative ways to kick start new lending. Mill lived in France during the 1830s and studied Sismondi. Fisher references Mill in his ongoing work to reform the US money and banking system throughout the Great Depression. Fisher points out that in the late 1840s, Mill noted the ways banks were increasing the use of cheques to create money.[xlv]

Mill was a strong supporter of the early Co-operative movement and indeed helped security passage through Parliament of the first co-operative legislation, the Industrial and Provident Society Act of 1852. Mill argued against vestiges of feudalism in political economy – namely unearned income through forms of economic rent.

In his first argument for structural reform, Mill made the case for land to be steadily and progressively transferred into common or public ownership. This reform would reduce housing costs and enable public services to be developed more affordably and could capture economic rents as Spence had argued for community benefit. Inspired by Mill's argument to capture 'the unearned increment' for society through land reform, Henry George proposed the Single Tax (a land valuation tax) as a fiscal policy to incentivise the return of land to forms of common ownership.[xlvi]

Mill's second argument for tackling the mal-distribution of unearned income was for converting progressively and steadily all firms to forms of worker ownership. Financing worker ownership has proven an uneven challenge since Mill's time. Financial capital's dominance both before 1929 and after 1980 has led to a total erosion of individual share ownership. In the UK, personal share ownership comprised 54% of the London stock exchange in 1963, fell to 20% in 1989 and then notwithstanding widespread government privatisation of national industries, fell further to 10% in 2008.[xlvii]

Historically technical progress has been linked to a progressive reduction in working hours. In the nineteenth century the average working week fell from eighty to sixty hours and in the first half of the twentieth century the forty-hour week became the norm. Between 1948 and 1996 productivity has more than doubled and not only has the average working week remained high, for many US and UK workers it has been increasing since 1980 and with rising house prices and levels of debt, requiring two or more wage earners per households to make ends meet.[xlviii]

During the stagflation of the 1970s, there were a diverse range of proposals for widening capital ownership and developing a second source of income for households. Diverse social dividend, social wage and economic democracy ideas were developed. Louis Kelso, the pioneer of Employee Share Ownership, secured the passage of primary legislation in the USA to facilitate worker ownership using both trust and tax laws effectively. ShannTurnbull in Australia also developed Ownership Transfer Corporation models for both democratic worker ownership and other forms of stakeholder ownership including for tenants and other consumers.[xlix]

Several economists came out in favour of a universal income guarantee or a negative income tax including James Tobin, Paul Samuelson, John Kenneth Galbraith and even Milton Friedman.[l] In the 1972 Senator George McGovern campaigned for president calling for a 'demogrant' –a type of basic income. The state of Alaska set up a fund resourced from economic rents secured from oil leases to guarantee each citizen an annual social dividend. Today this guaranteed income provides each person over $2000 yearly.

EF Schumacher argued in 1973 for a 'socialisation' plan for corporate ownership to share the wealth and to achieve income security by avoiding growing levels of economic growth.[li] Schumacher's proposal for capital ownership distribution echoed the plan set out by Sismondi in 1819. His proposal is both simple and ingenious. For firms above a particular size, Schumacher called for corporation tax to be replaced by a free issue of matching corporate shares to create 50% social ownership. These new shares would be dispersed and held socially at the district level where the firm has employees. The social ownership shares would be non-voting and non-transferable and held for the public good in trust. At district level, Social Councils would be established to allocate income and investment for regional needs. Private investors in corporations would benefit from the demise of corporation tax, with citizens securing through the reform a 50% ownership of corporations. Financial transparency and democratic accountability would be achieved as social ownership of banks would be secured.

In 1976, Rudolf Meidner, an economist and architect of the Swedish welfare state proposed a similar reform. Inspired by Karl Polanyi and James Meade, the Meidner Plan called for all companies above 50 employees to use 20% of their profits each year to issue new shares to their workers.[lii] Like with Schumacher's proposal, these shares could not be sold but would be held in a growing national network of 'wage earner funds'. The regional funds would include in their governance representatives from the corporate workers, the public workers, other workers and the local authority. The funds would be invested regionally and increase annually as the proportion of worker ownership in corporations grew. As these changes evolved, as the 'wage earner funds' expanded, employees and regional stakeholders would be able to influence the social direction of corporate policy and practices.

Support for the Meidner Plan was secured from the Social Democrats in the late 1970s. Private sector resistance grew and a more modest version of the plan was implemented with no facility for the wage earner funds to influence corporate policy. Nonetheless by 1992 the scaled down funds had evolved to a 7% ownership of the Swedish stock market. To prevent them getting larger, the funds were wound up by the Conservatives that year, the shares sold and the proceeds used to fund a network of scientific institutes across the country.

The unfortunate setback to the Meidner Plan and the present marginality of co-operative banking organisations and employee share ownership has stimulated new approaches over the past ten years for developing economic democracy. The work of Kelso and Turnbull highlighted that debt based growth is socially unjust and by widening democratic asset ownership, secondary sources of income can be generated to supplement wages and salaries and limiting the need for borrowing, income taxation or welfare.

The Centre for Economic and Social Justice has continued to develop the work of Louis Kelso and has devised a diversity of ways for the Federal Reserve Bank to provide interest-free loans and credit guarantees to enable democratic ownership of productive assets to be distributed and transferred to all citizens. They describe their innovation as binary income as these reforms address the issue of declining aggregate demand.

The Polanyi thesis was that the Great Transformation was built on a system of enclosed property rights that created wage labour, land and capital as fictitious commodities. This liberated capital growth on the one hand, while on the other hand establishing a structured set of institutional barriers that impeded the development of a co-operative economy, economic self-governance and social wealth sharing. In 2005 Herman Daly suggested how these barriers could be overcome by reversing enclosure through the development of an inclusive approach to commonwealth.[liii] The three key components in Daly's argument that define commonwealth are: natural resources, human know how (both culturally inherited and current) and money. In Daly's analysis, all three are generative of income and wealth but money is a man-made institution and needs to be redesigned to secure an ecological and socially just economy.

The problem we face is that industrial society treats all three elements wrongly and perversely. Natural resources are treated as non-scarce when they are scarce. Knowledge is treated as scarce and private when it should be non-scarce and open to all as a common cultural inheritance. Money has been privatised and captured by banks and because it is no longer commodity backed it is abundant and should be freely available. The stocks of all three need to be stewarded and maintained as commonwealth. The crucial way forward in Daly's analysis is to develop money as a commons. For Daly the arguments by both Soddy and Fisher for 100% money was the crucial reform to begin with.

There are different ways of introducing debt free money into the system. As we saw with the Worgl experiment, a proportion of stamp scrip was spent by the local authority on infrastructure procurement and another proportion paid out as public sector wages. A number of more recent arguments for spending debt free money into the economy highlight the possibilities.

Peter Barnes argues for a social dividend as a pre-distribution of income by the state rather than a redistribution. The goal would be a reform of capitalism by universalising income from productive property. He refers to the Alaska Permanent Fund Divident as a model. The guaranteed income in future would come from resource rents that all corporations would need to pay for the use of the commons (natural and other public resources including land).

Richard Cook of the American Monetary Institute and a former US Treasury department civil servant has developed a model that refines the Social Credit system of CH Douglas as an efficient and effective way to spend a national dividend of interest-free money into the economy by paying everyone a Basic Income Guarantee. In his analysis, the deficit of aggregate demand is due to retained earnings by corporations that are not paid out, savings not invested, the interest costs embedded in prices and a lack of bank credit. Cook estimated in 2008 that the US gap in aggregate demand as $3.77 trillion annually.[liv] This amounts to a social credit requirement of $12,000 per person. He proposes two methods to spend his modern form of social credit into the economy. One would be by providing a proportion as a non-taxable Basic Income Guarantee to all citizens. The second would be as a pricing guarantee for all purchases so that a designated proportion would be rebated to households. Together both methods would provide a universal and average social credit of about $12,000 per person.

Cook estimates that this model would eliminate up to 90% of all taxes. The remaining tax gap would be covered by user fees for infrastructure operations and maintenance and for taxes that would need to be levied for dire emergencies. Drawing upon lessons from the success of the Reconstruction Finance Corporation under the New Deal, a national infrastructure bank would finance ongoing infrastructure construction needs. However unlike in the 1930s, these loans would be interest-free along the lines of the proposals of Henry Ford to Congress in 1920.

David Schwieckart proposes a worker self-management market that treats capital and the means of production as common social property.[lv] In his model workers would democratically manage firms but not own the means of production. Capital would become a commons and interest and taxes would be replaced by a flat-rate capital assets tax. Banks would be public investment bodies operating locally and regionally that make grants not loans to democratic enterprises. Each bank would have an Entrepreneurial Division to develop good market intelligence of the needs of each regional economy and these would operate similarly to those developed by the Caja Laboral Popular Bank within the Mondragon Co-operative system in Spain. The regional and local banks would receive their funds from a public national investment institution.

As the capital funds invested in firms are commonly owned, no principal payments would be required from the firms but a capital asset tax would be due. These payments would be the return to the national investment fund managed by the public banks. The capital assets tax would replace corporation tax and all other business taxes. So there are similarities here with the Meidner Plan's regional funds. Firms would be obliged to maintain the capital stock that they are stewarding through repair and depreciation funds. The taxes would also fund public sector and other employment not operating in the market economy. Worker run firms would be the residual claimant of surpluses once depreciation, capital assets tax, and other operational costs have been paid.

7. Fair Trade banking – Public Social Partnerships

Since November 2011 the UK Coalition Government has signalled the beginning of the second credit crunch. New bank lending in 2011 to small businesses was less than loans repaid. The cost of working capital and investment finance is high with a large margin between base rates and commercial loan rates. The latest Quantitative Easing by the Bank of England injected a further £50 billion into the economy in July 2012 but the previous four bouts of QE have not filtered down to meet the needs of small businesses. As the method for injecting this central bank created money into the economy has been through purchasing Government gilts, this new money has largely provided new liquidity for the dominant UK banks who have sold their bonds for the new money. The three tranches of QE by the Bank of England have together injected £375 billion of new money but has thus far not provided a noticeable stimulus to the UK economy, though the recapitalisation benefits to the banks has clearly been considerable.

With rising levels of unemployment in the USA in 1932 and the pervasive disappearance of liquidity in American towns and cities, Fisher's backing for stamp scrip as an emergency currency was to tackle a similar structural crisis. Another structural debt and currency crisis arose over a decade ago in South America. In the wake of the national debt crisis of Argentina in 1999 when the banks froze the funds of depositors, a grassroots social currency system, Red de Trueque, developed and expanded fast provincially. Following the collapse of the national currency, the social currency operated as a broad-based emergency currency, providing a third of the country with a means of exchange.[lvi]

There is significant difference today from the 1930s. Small private banks were major providers of finance during the Great Depression in the USA and in other industrial countries. Today a growing alternative to the big international banks include Co-operative banks, municipal savings banks in many countries and a significant global sector of smaller credit unions, community development finance institutions and micro-finance organisations. The international co-operative banking sector accounts for $2.5 trillion in assets and the global credit union movement accounts for $1.2 trillion in assets.[lvii] In some countries a linkage between co-operative forms of money and co-operative banking is developing.

Below the policy radar screen, there is an evident revival internationally today of a diverse range of strands of co-operative money innovation, interest-free lending for housing, public banking lending at low-interest for carbon reduction and a shift beginning to happen to modern forms of stamp scrip. These co-operative money and mutual banking innovations offers real hope for a paradigm shift. Some of the best practice has roots going back to the 1930s and has not died out.

Inspired by the Red de Trueque in Argentina, more than 50 community banks in Brazil have developed their own local social currency based on the original Banco Palmas system established in 1998.[lviii] The Palmas money is issued into circulation to fund community infrastructure. The community development banks make loans to small business and to households with a mixture of social currency and co-operative microloans. The aim of the currency is to alleviate unemployment and poverty in different local areas. These currencies have now secured support from the national government and the central bank of Brazil.

Additionally in Brazil, CoopHab, a major regional co-operative housing federation has established an popular, interest-free housing finance system using rotational savings methods like the terminating building society model. Members who join are guaranteed an interest-free loan over a ten-year repayment term. Each co-operative savings society is organised to sign up 1000 members who commit to save an agreed percentage of their household income for 10 years and through this build up of liquidity the system allocates 100 interest-free mortgages a year until every member in the society is housed in the tenth year (or slightly later), whereupon the society terminates. Growing numbers of these co-op building societies are being organised through the promotional model:

'Homes at cost with no interest and no surprises.'

In the USA, The Fund for Humanity was established in 1968 by Millard and Linda Fuller as a non-profit revolving loan fund to support initially low-income African American groups in Georgia to build their own homes with 'sweat equity.'[lix] Under the umbrella of Habitat for Humanity, it has grown now over four decades and today operates in more than 90 countries and some 3000 communities worldwide. Essentially it operates as an organically growing, social investment liquidity fund which recycles interest-free gifts and grants, charges a small administration charge for secured loans. It has provided interest-free loans to construct over 500,000 homes and to house over 2.5 million low-income people.

In the USA and the UK a growing number of municipalities are involved with local money from Washington DC and Detroit to London and Bristol. Local currencies based on paper scrip have developed like the Ithaca Hour and the Bristol pound. The Ithaca money is supported and promoted by the Alternatives Federal Credit Union in Ithaca, New York and a broad spectrum of local high street businesses and service providers are active members. In Massachussetts, Berkshares is the local scrip money for the Berkshire county and is promoted by both local banks and business traders.

In the USA, the use of debit cards to support local currency reduce transaction costs and to help small business traders is growing. There are several projects like this in northern California including the Sonoma Go Local card and the Oakland Acorn backed by the city government.

In 1919 a group of farmers and small businesses in North Dakota persuaded the state to set up a public bank to provide them affordable credit.[lx] Any profit from the public Bank of North Dakota are returned to the state and over $300 million in dividends has been repaid to the state over the past ten years. Loans are made to farmers, small businesses and to students. Today North Dakota has the lowest level of public debt and unemployment of any US state. In recent years a campaign led by Ellen Brown and the Public Banking Institute has secured local action from citizens and politicians in 18 other states to move to legislate to set up a US network of public banks.

A group of small business traders in California fed up with the new bank charges announced by Bank of America in September 2011 supported the movement under development by Community Development Finance Coalition organisations since 2010 to offer an alternative banking option to local people and local small businesses. During October 2011, over 650,000 Americans opened up new credit union accounts in just one month. The movement has continued to snowball with an estimated shift of 10 million accounts since 2010.[lxi] A Move Your Money Campaign has started up this year in the UK in 2012.

Emergency currencies are springing up in southern Europe. In the midst of its debt crisis, a LETS (Local Exchange Trading Scheme) network in Greece is developing called TEM. Recent developments in Germany are seeking to develop regional money systems and they are drawing in the support of social and co-operative banks to help expand the service provision and enable the move to be made from the local to the regional level.

This effort began in 2003 with an attempt to revive stamp scrip in southern Germany, in the towns of Rosenheim and Traunstein – only 30 miles across the border from Worgl in Austria. The currency called Chiemgauer (named after the local region of 500,000 people) is denominated in 1 to 50 units like the Euro and promoted by four co-operative banks and 40 issuing offices.[lxii] It has a two-year life and is renewable four times a year for a 2% charge. The development process of the currency was slow but it is now gaining growing support and is accepted by 600 businesses (including eight supermarkets) and used regularly by 3000 people. Annual turnover is over □5.1 million a year and it has now become the world's most successful local currency with a velocity 2.5 faster than the Euro.

The Chiemgauer currency developer, Christian Gelleri, has followed closely the Worgl design features. A key difference is that the currency is available both as stamp scrip notes and as electronic debit card money. The pre-loaded debit card facility has been provided by a group of four co-operative and social banks in the region including Triodos. An additional feature introduced are micro-credit, interest-free loans to local businesses that has been co-developed with the GLS co-operative bank. The success of Chiemgauer is now spreading to other areas of Germany and there are 36 similar projects under development through the national Regiogeld network.

Two key legacy projects inspired by Gesell in the Great Depression and still expanding are both interest-free co-operative banking systems, one in Scandinavia and the other in Switzerland. The Jord, Arbejde and Kapital (Land, Labour and Capital) co-operative society was established by farmers in Denmark in 1931 and developed a popular currency system that was shut down by the Danish government in 1933. Known as JAK, the co-operative society then set up an interest-free checking account system to allow businesses and other members to trade goods and services without cash. They also set up an interest free savings and loan system similar to a terminating building society. The innovations worked well, spread fast but both were shut down by the Danish government in 1935.

In 1944 the interest free savings and loan system was re-established in Denmark and it continues to operate and it has been expanding with a network of 14 co-operative banks. JAK co-operative finance has also developed in Sweden from 1965. Today the JAK Bank in Sweden has over 35,000 members nationally and assets of $163 million. They operate with a paid staff of 25 at their head office and a volunteer staff of over 400 who operate some 30 local branches across the country. Unlike a terminating building society, the JAK interest-free bank is a permanent lending organisation. Members save like in a credit union and can borrow a significant multiple of their savings in Denmark. in Sweden they can borrow without a pre-saving period.

JAK loans are based on a current average fee of 3.2% of the loan value to cover the administration charge and a loan risk premium. There is also a co-op member's fee of $37 to pay for the educational services of the Co-op and the training and support for the volunteers. JAK requires a refundable deposit of at least 6% of the loan principal and members under the contract agree to repay both the capital and to continue to save during the loan period to enable the lending pool to be replenished so that other members can borrow. JAK loans cover a full range of needs – but with an emphasis on housing, the refinancing of other loans and for social and ecological enterprises. JAK co-op banking innovation has developed the interest-free service of a terminating building society without the need to limit the membership to a specific group size. It also is able now to pre-distribute loans to new members so long as they sign up to a post-loan savings contract. It therefore has similarities to the evolving interest-free social lending system of Habitat for Humanity. It fulfils the money as a commonwealth service advocated by Daly.

JAK's innovation in Denmark in 1931 inspired a group in Switzerland almost eighty years ago and this interest-free working capital system lives on in Zurich and operates now nationally. The WIR (the ring) complementary currency system set up in 1934 by Werner Zimmerman and Paul Enz, drew upon ideas from Silvio Gesell and from JAK to work out creative ways to provides low-cost inter-trading and mutual credit. Today this economic trading circle of members provide finance of $2 billion annually for over 75,000 small businesses. Now a full co-operative bank, the WIR's success has proved to be enduring as an interest-free savings-and-loan system aimed at helping its members secure mutual credit at fee rates of 1.5% to 2.5%.

More recently the WIR mutual credit model has been replicated with some adaptations in Belgium. Walter Smets set up RES in Leuven in 1995.[lxiii] After a number of years of experimentation and a few false starts it has in recent years been expanding fast as a co-operatively owned model with a mutual credit currency. Unlike WIR, members includes both businesses, voluntary organisations and consumers. In this way RES resembles the Valun system proposed by E.C. Riegel in the 1930s. In 2009 the Belgium banking commission was impressed with the robust design of the RES model and a banking authorisation was secured. This has provided a solid platform for rapid expansion and RES today has 5000 business members and 100,000 plus consumer members in the co-operative money system which operates as both a co-operative bank and a co-operative marketplace. The co-operative currency is only electronic, based on debit cards/mobile phones, linked to the Euro and turnover in 2011 reached 35 million Euro equivalent.

The German public bank, KfW was established after World War II to act as a development bank for reconstruction. It continues to operate today and has been playing a strategic role in the implementation of German's carbon reduction and green economy transformation. After Fukushima, the German government decided to phase out its nuclear power completely. This decision has concentrated the national policy mind on energy conservation and renewable energy. Germany has been an EU leader in green energy since the 1990s and KfW has been at the core of its implementation practice.

KfW provides very low-cost capital to the German retail banks for on-lending. The German municipal savings banks and the co-operative banks cover the majority of this market. Loans at 2.65% are provided through this system for both homeowners and small businesses to retrofit housing and commercial premises with tailored packages of energy conservation and renewable energy measures to achieve rigorous carbon reduction savings.[lxiv] Borrowers are incentivised to achieve the targeted savings by a bonus that reduces the capital sum advanced if the carbon reduction levels are met. KfW has provided finance to provide green retrofit measures for 282,000 homes in 2011. This work created and sustained 247,000 jobs.

A Green New Deal for Europe would provide a positive long-term framework for reforming money and banking systems by decoupling systems from compound interest charges and debt-based products. The examples in this paper, past and present, highlight how micro-economic co-operative finance providers and macro-economic institutions backed by public banks and the central bank could be brought together to develop 'money as a commons.' As a fiscal complement, the economist Robert Skidelsky and the philosopher Edward Skidelsky have called for a progressive consumption tax to replace income tax and the complete abolition of tax relief for advertising costs to incentivise a new economy that would cease to be growth driven and re-focused instead on social well-being and planetary stewardship.[lxv] Their proposals links this radical reform of the tax system to the need to provide a universal basic income for all citizens.

Given the success of the Bank of Canada to provide low-cost capital for public infrastructure for forty years successfully, there is a clear-cut argument for Quantitative Easing to provide 100% money for a Green New Deal. Richard Werner, who developed QE in Japan in the 1990s has proposed for the UK a Green QE system for public investment in higher education to replace student loans, to invest in the knowledge economy and to fund green, sustainable infrastructure. An initial Green QE programme of £70 billion targeted on solar energy could fund 200,000 jobs.[lxvi]

John Stuart Mill and John Maynard Keynes both forecast that a steady-state economy beyond growth could be achieved in the future. Moreover they indicated that this was a necessity to enable human development to concentrate on well-being and less work for all because the technological development of the society's productivity could meet everyday needs. At the outset of the Great Depresssion, Keynes projected that this time would come in the early twenty-first century. Usury could then become a pathological mentality of the past.[lxvii]

'The love of money as a possession – as distinguished from the love of money as a means to the enjoyments and the realities of life – will be recognised for what it is, a somewhat disgusting morbidity, one of those semi-criminal, semi-pathological propensities which one hands over with a shudder to the specialists in mental disease.'

If Werner's 'green money' macro-economic policy could be linked up with the growing international network of co-operative, mutual, municipal and state banking and finance organisations, finance could begin to become a democratic servant rather than a perverse master.

This review of some of the history of monetary reform practice shows that grassroots projects soon run into structural impediments to progress. The Worgl experiment worked so well because of the active partnership of the local government, the small business community and the local bank. Engendering similar public-social partnerships are therefore a sine qua non for moving regional co-operative money innovation into gear. Once up and running, a growing number of decentralised practices can walk the talk and thereby underpin a compelling case for policy changes that diverse political parties can mobilise for to secure a practical step-change. What is crucial is to persuade a few national governments to first see and then engage with what can and must be done. Those countries in the firing line under the Euro-crisis should find different strands of monetary reform set out in this review appealing as was the case for politicians and central bankers in Canada and New Zealand during the 1930s.

A move then could be made by active citizens, social bankers and enlightened politicians to implement fair trade practices right at the heart of political economy and begin to moves us away from chronic financial instability and towards the vision of a co-operative commonwealth that Robert Owen set out and John Stuart Mill endorsed as a future progressive stationary state.

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