

# Redesigning Money Systems to Reduce Greenhouse Gas Emissions

Contributed by Hazel Henderson  
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Editor's note: Hazel Henderson is the celebrated, longest running alternative economist. A reader of Culture Change, she endorsed our Alliance for a Paving Moratorium in the 1990s. She famously observed that "Economics is a form of brain damage." Hazel supports "accelerating the growing green economy" and "ethical markets." This may conflict with a vision of sustainability based on simplicity, but this article provides timely insights on financial politics.

Here's some important advice from Hazel for the Obama transition:

Unfortunately, President-elect Obama has too many special-interest, tainted economic advisors. He needs to fire Robert Rubin ("Mr. Leverage," former Goldman-Sachs chief and now presiding over the demise of Citibank and its billions of toxic "assets"); Larry Summers, former Treasury Secretary, who together with Rubin blocked lawyer Brooksley E. Born, head of the Commodity Futures Trading Commission, from regulating credit default swaps. She testified before Congress in the late 1990s that they could blow up the global financial system. Summers, Rubin and Alan Greenspan severely criticized Born, and she resigned.

Why listen to Hazel? Here's a hot historic fact:

The Bank of Sweden Prize in economics (was) pushed on the Nobel committee in the 1960s to trump opposition and legitimize the discipline and profession of economics as a "science." Economists are still trying to use this phoney "Nobel" prize to justify why central bankers should be free of political oversight -- even in democratic societies. The truth that economics was never a science is now revealed.

Hazel Henderson's faith in "information-rich societies" may or may not typify our modern fascination with knowledge rather than wisdom, whereby our command over information and data blinds us to what we've lost in traditions of sustainability. Of greater certainty in our critiques is that a single "green economy" may be a contradiction in terms. World trade may not be green at all, unless it is based on sail boats using just wind. At any rate, this article is a glimpse of the global green economics movement's intentions and dreams.

The following report is in support of her video presentation to the Green Economy Initiative Conference, United Nations Environment Programme, Geneva, Dec. 1, 2008. ("See visuals" must be ignored for this webpage.) - JL

- The financial crisis of 2008 presents the best opportunity in over a century to simultaneously reform money systems and create additional mediums of exchange and financing mechanisms to accelerate the shift from the fossil-fuel/nuclear-Industrial Era to the greener information-rich Solar Age. Today's convergence of global warming, financial crisis and the growing green economy signify a new stage in human awareness and understanding of our place in Nature and are fueling the needed paradigm shift to the Solar Age (The Politics of the Solar Age, Hazel Henderson, Doubleday, 1981).
- Today, all of the proposals for reform of central banking, the history of money and alternative currencies, together with suppressed contemporary work on local currencies, barter and electronic trading systems, as well as ecological economics, such as the global TEEB (The Economics of Eco systems and Biodiversity) study are coming to the fore. Such outside-the-box approaches are now essential (see attached Bibliography).
- All these proposals for fundamental reform are still being pushed aside by incumbent money authorities and private-sector financial players. At the Nov. 15-16, 2008 "Bretton Woods II" conference, demands for reform of financial systems were reduced to demand for fairer representation of developing countries and more transparency at the IMF, World Bank and WTO. These G-20 demands are necessary but not sufficient.
- Even these long-overdue reforms were over-shadowed by the monetary authorities of these countries usual chorus of inside-the-box remedies: lowering interest rates, "injecting capital" into their banking systems, bailing out other companies deemed "too big to fail" and indiscriminate stimulating for faster GDP-growth. Perverse subsidies to fossil fuel and nuclear energy are still stifling the growth of the green economy. All these shopworn policies are rooted in the

laissez-faire Anglo-American, Chicago School economics typified by the "Washington Consensus" which has become the dominant global economic paradigm (see visuals).

- The new opportunity presented by the spectacular failure of this economic paradigm is empowered by the relative decline of the USA and the rise of China, India, Brazil and the other G-20 countries. In addition, the world economy has the countervailing weight of the European Union and the euro as the world's competing reserve currency to the US dollar (now representing some 35% of global currencies, bonds and transactions). While the US dollar has risen relative to other currencies due to its historical role as a "safe haven", the dollar is likely to fall as global investors in US sovereign bonds grasp the true fundamentals in the US economy and the extent of the corruption on Wall Street and levels of government incompetence.
- Until the 2008 financial crisis, the prevailing economic/monetary paradigm and controlling incumbent financial and political, academic interests have dominated all discussions and drowned out alternative paradigms and proposals for reform and innovation. This economic paradigm is based on money and central banking and the global money circuits they create and control. All other valuable assets from human skills, knowledge to ecological productivity and assets are "off the balance sheets" in most corporations, financial firms, and central banks. This is changing due to the innovative initiatives of UNEP-FI, the UN Principles of Responsible Investing and the movement for socially responsible investing, as well as non-profit civic groups, including the Club of Rome, the Rocky Mountain Institute, the Carbon Disclosure Project, the New Economics Foundation, Focus on the Global South and others (see visuals).
- Obsolete economic textbooks still govern in academia and business schools whose graduates sought quick bucks as "financial engineers" on Wall Street. Luckily for humanity, this money paradigm has blown up. The money circuits were too narrow in "bandwidth" to contain the explosion of new knowledge and innovation in today's ecologically aware, information-rich societies. As money circuits blow out, we can see their inadequate design, and we can now read the decades of critiques and reform proposals with new eyes (see Bibliography).

Just as the gold standard broke down due to its inadequate "bandwidth" to carry all the increased innovation, information flows and transactions required by the growth of industrialism, so too, today's money circuits can no longer contain the transition from the fossil-fuel era to the Solar Age. This is why since the late 1990s we have seen the explosion of transactions and commerce move to the internet (see visuals). Alan Greenspan was half-right in thinking about the "New Economy," but he could not extricate himself from his obsolete economics and central banking toolbox. This is the same error that Ben Bernanke, Henry Paulson and the Bush \$700 bailout is making today. They, like Greenspan, think the only way is to expand the money circuits by cutting interest rates and printing more fiat money to provide for and control all the volume of 24/7 electronic markets. Many economists still call for stable money by returning to the gold standard. Clearly monetary policy is part of the problem -- not the solution.

- Today, real-world thinking focuses on "Main Street" where real people create real products and services. Wall Street and other financial sectors have metastasized and become parasitic on the real economy. Reality-focused politicians and reformers have gone beyond the bankers' money illusion and seen that fiscal policy must now be mobilized to invest in creating the new infrastructure, e.g. smart electric grids, preventive public health care and revamping education to grow the green economy. The blindness of bankers, media and the public to the soundness of such productive investments in our human future are also caused by statistical errors, e.g., categorizing investments in education and preventive health care as "consumption" in GDP and national accounts. Furthermore, GDP does not even include an asset account where all public investments can be recorded and amortized over their useful life -- to offset the public debt these investments incurred (see my "Statisticians of the World Unite," InterPress Service, October, 2003).
- The mantras from the old economics paradigm are typified by the cover story in The Economist, November 22nd, which claims that "All You Need is Cash" and the ubiquitous cry "Where is all the money coming from to fund all this new spending in infrastructure, education and health care and the green economy?" Even economists are now calling for massive additional stimulus in spite of raising deficits as the only option left in the old tool kit. The paradox is that

money is not scarce! Money is not a real commodity, as we know, it is a brilliant and useful construct of the human mind, i.e., information. Money is a numeraire, a tracking and scoring system for production and transactions by real people interacting with each other and ecosystems. Money is nothing more than a particular measuring device, like slide rules, abacuses, centimeters, kilometers or inches. If properly overseen and managed, money is an excellent means of exchange and a store of value. (see my The Politics of Money, Vermont Commons, January 2006, downloadable at [www.HazelHenderson.com](http://www.HazelHenderson.com))

But today, money-creation is distorted and out of control. Central bankers are printing money in clear sight on TV, while Wall Street's derivatives, CDOs, and the \$60 trillion in credit default swaps, and the securitization of mortgages, (MBSSs, CMOs), car loans, credit-card debt, student loans, etc., are unofficial forms of money creation by investment banks. They are now disappearing in the meltdown and have been called the USA's "shadow banking system" which grew after 1999 with the repeal of the Glass-Steagal Act and other de-regulation. Both political parties enabled the spree of de-regulation that began with Ronald Reagan and accelerated under George W. Bush. Mr Obama's pick for Treasury Secretary, Timothy Geithner hopefully will introduce some of the reforms I suggested in my "Changing Games in The Global Casino," July, 2008.

- Today, government-issued money, coins and banknotes, as required by the US Constitution, only represents an average of 10% of the US and UK money supply. The other 90% is created by banks as loans -- out of thin air (see my "And We All Thought that Banks Had Money," September, 2008). Sensible reforms of this fractional reserve banking system have been ignored for decades and are now summarized in a bill in the US Congress as the Monetary Reform Act of 2008 ([www.monetary.org](http://www.monetary.org)). The current monetary system based on debt (see the video cartoon "Money as Debt" at [www.ethicalmarkets.tv/0005](http://www.ethicalmarkets.tv/0005)) has turned the USA into the world's largest debtor. China has resisted the "Washington Consensus" paradigm and focuses on equity not debt, and is now the world's largest creditor, along with Japan and OPEC. In the USA, the campaign of the Peterson Institute and its leaders, former head of the US General Accounting Office David Walker, and founder of private equity firm Blackstone, Peter Peterson, targets entitlements as the source of US deficits while ignoring military spending, tax policies and other inequitable legislation.

Unfortunately, President-elect Obama has too many special-interest, tainted economic advisors. He needs to fire Robert Rubin ("Mr. Leverage," former Goldman-Sachs chief and now presiding over the demise of Citibank and its billions of toxic "assets"); Larry Summers, former Treasury Secretary, who together with Rubin blocked lawyer Brooksley E. Born, head of the Commodity Futures Trading Commission, from regulating credit default swaps. She testified before Congress in the late 1990s that they could blow up the global financial system. Summers, Rubin and Alan Greenspan severely criticized Born, and she resigned.

- So how can the world's academic, political, governmental and civic society forces who share an ecological understanding of how economies function, embedded as they are within societies and ecosystems, gain the upper hand? These new movements worldwide are about human survival and do not seek power or control for its own sake, as do those self-described "masters of the universe" in London, Wall Street and other financial centers. We seek to foster the new paradigm and expose the errors in financial and economic models, such as Herman Scheer has done in Germany. These include the Bank of Sweden Prize in economics pushed on the Nobel committee in the 1960s to trump opposition and legitimize the discipline and profession of economics as a "science." Economists are still trying to use this phoney "Nobel" prize to justify why central bankers should be free of political oversight -- even in democratic societies. The truth that economics was never a science is now revealed.
- Ecologically literate, socially responsible companies, venture investors and business schools (see visuals) must now join forces with civic society, labor unions, politicians and bureaucrats -- to reform money circuits and expand pure-information based trading systems, e.g., e-Bay, Craigslist, Freecycle, Time Banking, LETS systems, cell phones, radio and new electronic, socially responsible trading systems for growing the green economy, like the soon-to-be-launched Mission Markets/Ethical Markets/Social Markets system, whose board I will chair (see [www.MissionMarkets.com](http://www.MissionMarkets.com) and [www.EthicalMarkets.com](http://www.EthicalMarkets.com)). Together, our companies' vision is to be a new "green Bloomberg" to accelerate the rollout of the green economy worldwide.
- The evolution of human understanding of money and mediums of exchange is the essential basis for completing the

great transition from the fossil fuel era to the Solar Age (see visuals). Incumbent players in the money circuits need not fear that money will no longer be valuable. Indeed, shifting some of the transactional burden from overloaded money circuits will actually restore and retain the value of money. Just as gold is still valuable while no longer backing the world's paper currencies, money will still be valuable when created in more transparent and ecological ways in support of real economies and not for speculative gain. A new kind of economy based on information-sharing and cooperation is growing with the internet, as documented in *Wikinomics*, 2008; *The Wealth of Networks*, 2007; *The Future of Knowledge*, 2003 and earlier studies of gift economies. (see Bibliography)

- Meanwhile, pure information-based transaction systems will bypass Wall Street and provide the needed "bandwidth", interfacing with honest money. Such alternative trading systems will bring investors together with companies providing all the needed new infrastructure and production facilities to bring wind, solar, geothermal and ocean technologies to scale. For example, one of our Advisory Board members, Dr. Shann Turnbull, building on the work of the late Robert Swann and the Schumacher Society (USA) of which I am a trustee, proposes a simple shift to finance renewable energy: a unit of value based on kilowatt hours of renewably generated electricity. This is similar to the energy-based currency proposed in the 1930s by the Technocrat movement (see Bibliography). The essence of Turnbull's proposal would have governments issue interest-free loans directly to construct the new smart grid and renewable energy facilities in "KWH dollars," to be repaid from the revenues of their electricity sales. Turnbull shows that if usual interest rates of 8% are removed, then wind-generated electricity is cheaper than coal, even without accounting for coal's external costs. Germany's Renewable Energy Act spearheaded by Herman Scheer, Ernst U. von Weizsacker and others employs similar tools.
- Thus, such special interest-free loans from governments would be far more efficient in reducing GHG emissions and growing the green economy than either carbon taxes or cap-and-trade programs (both of which raise prices). Direct interest-free loans actually reduce prices instead. These kind of loans are also proposed for re-building public infrastructure, retro-fitting public buildings for energy efficiency savings, in the Sovereignty plan of Kenneth Bohnsack, now incorporated into the Monetary Reform Act of 2008.
- These are but a few of hundreds of examples how reforming finance can resolve today's financial turmoil while at the same time growing the green economy. Other needed reforms to global finance which have been suppressed include taxing transactions in the \$2 trillion daily currency exchange markets (90% of which is speculation). Currency exchange taxes were taken off the table at such forums as the UN Summit on New Finance for Development in Monterrey, Mexico, in 2002, as well as the UN Social Summit in Copenhagen in 1995 where they were advocated in the report of the Global Commission to Fund the UN, which I co-edited with Harlan Cleveland and Inge Kaul -- *The UN: Policy and Financing Alternatives*, Elsevier Scientific, UK 1995, 1996.
- One proposal for levying a 1% or less tax on currency exchange was the Foreign Exchange Transaction Reporting System (FXTRS). This system operates like an electronic version of Wall Street's venerable "uptick rule," enacted in 1934 but repealed during the Bush II administration. Today's Wall Street traders themselves are calling for its re-instatement to curb naked short-selling. The FXTRS computerized "uptick rule" gradually raises the basic 1% tax whenever a bear raid starts attacking a weak currency. Such bear raids are rarely to "discipline" a country's policies, as traders claim, but rather to make quick profits. In the transparent FXTRS system, traders selling falling currencies begin to see that the rising tax is cascading into the country's currency stabilization fund and cutting into their gains. Seeing no further profit, traders can voluntarily exit the market and search for some other currency or arbitrage opportunity. The funds collected from such currency exchange taxes would raise hundreds of billions of dollars, which could, in turn, be directed to health, education, infrastructure and other public goods. (See [www.HazelHenderson.com](http://www.HazelHenderson.com) click on FXTRS.)

Another proposal was for the United Nations Security Insurance Agency (UNSIA) to reduce the over \$1 trillion annually countries spend on military hardware. Militarism is ever-less useful in resolving today's conflicts in Iraq, Afghanistan and other guerilla insurgencies. This UNSIA proposal, backed by four Nobel laureates, would allow countries which wished to follow Costa Rica's lead in 1947 and abolish their armed forces. Instead, countries could buy the insurance of a peacekeeping force from the UN Security Council (expanded and veto-less). Their premiums would be determined by insurance industry risk assessors contracted to see that the country had no WMD or secret weapons and did not teach militarism and xenophobia. Countries, say those in Central America, that decided to all buy UNSIA insurance would all get lower premiums. The premiums would fund a standing, properly trained UN peace-keeping force and complimentary contingents of NGO peace-making conflict-resolution groups. The UNSIA proposal is taught in many university programs

and was debated in the UN Security Council in 1996 (see UNSIA at [www.hazelhenderson.com](http://www.hazelhenderson.com)).

- Both these proposals and other fundamental reforms and innovations were pooh-poohed by the IMF, World Bank, the US Treasury at the UN Social Summit in 1995 and by US Ambassador to the United Nations John Negroponte during the PrepComs for the Monterrey Summit in 2002. While many reforms need global cooperation and standards, many others can be enacted at national, state and local levels.
- The need today is for all the constituencies supporting green economies to join forces with the weak ministries, Environment, Education, Health and Welfare, to put political pressure on the strong ministries, Finance, Central Banks, Commerce, Business and Trade and force them to adopt the new ecological/information/money paradigm. This will require the help of mass media whose mainstream editors will also need re-education beyond the obsolete economics/money box. Many of you are aware of the power of these strong ministries guarding the dying money/finance/fossil fuel order.
- I saw their influence as one of the co-organizers of the Beyond GDP Conference in the EU Parliament, November 2007. I tried my best to call for correction of errors of GDP in continuing to "externalize" the social and environmental costs of money-dominated economic growth. I was essentially silenced and over-ridden by statisticians and academics who are still invested in the obsolete economics box. Even the survey by GlobeScan, London, in ten countries which my company was persuaded to fund, which found huge majorities favoring inclusion of indicators of health, education and environment in national accounts, was down-played ([www.GlobeScan.com](http://www.GlobeScan.com)). Ever since the UN Earth Summit in 1992 and its Agenda 21 signed by over 170 countries calling for the correction of GNP/GDP - UNSNA national accounts, the politicians, academics and statisticians have preferred to obtain endless grants to research "satellite" accounts, rather than confront the strong ministries dominating national policies.
- This long-standing denial of the changes wrought by globalization of finance and technology has prevented needed reform and innovation since the de-regulation in the 1980s which led to all the recent financial crises. I have been covering these issues in my books, editorials and in mass media through my company, Ethical Markets Media, LLC. I joined forces with the socially responsible investing movement in 1982 as a member of the Advisory Council of the Calvert Group. Today, this movement's success has spawned the UN Global Compact, the UN Principles of Responsible Investing, the CERES Principles, the Equator Principles, the Carbon Disclosure Project and other efforts (see visuals), representing over \$50 trillion of financial assets under management in pension funds worldwide. Gradually, formerly externalized costs are being forced back and internalized on company balance sheets and cost/benefit analyses. Traditional discount rates are being reduced and avoided costs are no longer ignored.
- The old financial sector is waking up to the green economy as confidence in Wall Street (and now even in the monetary authorities) collapses. Why are the companies in wind, solar, geothermal and alternative energy being hammered -- losing as much as 50% of their value along with other DOW and S&P, Wilshire indexes, along with other companies? For three reasons: 1) These small renewable energy companies are often traded over-the-counter and prey to algorithmic short-selling, often naked shorting which can destroy their capital structure. Naked shorting which has been illegal since 1934 in the USA flourished during the past decade of de-regulation, where even the "upick" rule was abolished. 2) The second reason renewable companies have been hard hit is that obsolete asset allocation models are all still based on the industrial categories of the fossil-fueled sectors (see my "Updating Fossilized Asset-Allocation Classes - The Next Big Thing: The Sustainability Sector"). This obscures the emerging green economy from traders' screens, so that they do not see this emerging "sustainability sector." 3) These small companies are in their rapid growth phase and needed dependable sources of working capital and credit, so they are more vulnerable to credit squeezes and market uncertainty. This is why our Mission Markets/Ethical Markets/Social Markets trading platform is so vitally needed, so that these green companies can list their shares in an honest, secure market where they can find the bridge loans and new, patient, socially responsible investors.
- I welcome this important Green Economy Initiative, a fitting follow-up to UNEP-FI, a key social innovation that has educated a new generation of investors and asset managers about ecological and social valuation models. Now, we must pull together all the constituencies and seize the opportunity of the financial crisis to harness mainstream media

and politics in completing the build out of the new green economy worldwide.

Thank you.

Note: for full disclosure, I am a private investor across the full range of green and renewable energy companies, some publicly traded, e.g., Suntech (China) and Clipper Windpower (US and UK), Ormat (Israel and US) and many more privately held.

Hazel Henderson has been an active environmentalist since she co-founded Citizens for Clean Air in New York City in 1964 and The Center For Growth Alternatives in 1972. She is president of Ethical Markets Media, LLC (US and Brazil), author of Ethical Markets: Growing the Green Economy (2006) and other books and co-creator of the Calvert Henderson Quality of Life Indicators with the Calvert Group, updated regularly at Calvert-Henderson.com. She can be reached at [hazel.henderson@ethicalmarkets.com](mailto:hazel.henderson@ethicalmarkets.com).

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Culture Change note: the above report's content has been developed in editorials in greater depth at [EthicalMarkets.com](http://EthicalMarkets.com).

## Bibliography

Allee, Verna, *The Future of Knowledge*, Butterworth-Heinemann, 2003

Benello, C.G., Swann, R. and Turnbull, S. 1997, *Building Sustainable Communities: Tools and Concepts for Self-reliant Economic Change*, Ed. Ward Morehouse, A TOES Book, Revised Second Edition, Bootstrap Press, New York, available from: <http://ssrn.com/abstract=1128862>.

Benkler, Yoichi, *The Wealth of Networks*, Yale University Press, 2008

Bookstaber, Richard, *A Demon of Our Own Design*, John Wiley, N.Y, 2007

Boyle, D. 2002, *The Money Changers: Currency Reform from Aristotle to E-Cash*, Earthscan, London.

Davies, G. 1996, *A History of money from ancient times to the present day*. rev. ed. Cardiff: University of Wales Press, UK. <http://www.ex.ac.uk/~RDavies/arian/llyfr.html>.

Douglas, C.H. 1924, *Social Credit*, Eyre & Spottiswoode (Publishers) Ltd. London, available from: [http://douglassocialcredit.com/resources/resources/social\\_credit\\_by\\_ch\\_douglas.pdf](http://douglassocialcredit.com/resources/resources/social_credit_by_ch_douglas.pdf).

Dowd, K. 1992, The Experience of Free Banking, Routledge, London.

Ehrlich, E.E. 1957, Review of Economics and Statistics, 39:4, Nov., pp. 469-471.

Eisler, Riane, The Real Wealth of Nations, Berrett-Koehler, CA. 2007

Ethical Markets Media, International Financial Reform, 5-part TV series moderated by Hazel Henderson, with Kenneth Rogoff, Sakiko Fukuda-Parr and John Perkins. on demand at [www.EthicalMarkets.tv](http://www.EthicalMarkets.tv)

The Money Fix, 9 min. interview of Hazel Henderson, [www.EthicalMarkets.tv](http://www.EthicalMarkets.tv)

Money As Debt, 45 min. video cartoon by Paul Grignon, at [www.EthicalMarkets.tv](http://www.EthicalMarkets.tv)

Fisher, I. 1911, The Purchasing Power of Money: Its Determination and Relation to Credit, Interest, and Crises, The MacMillan Co, New York.

Friedman, M. and Schwartz, A.J. 1971, A Monetary History of the United States, 1867-1960, Princeton University Press.

Galbraith, J.K. 1976, Money: Whence it came, where it went, Pelican Books, UK.

Gesell, S. 1916, The Natural Economic Order, translated by Philip Pye, 2002, available at <http://www.appropriate-economics.org/ebooks/neo/neo2.htm>.

Griffin, G.E. 2002, The Creature from Jekyll Island: A second look at the Federal Reserve, American Media, California.

Ha-joon Chang, Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism, Bloomsbury Press, New York, 2008

Hayek, F. A. 1976a, Choice in Currency: A Way to Stop Inflation, Occasional Paper 48, The Institute of Economic Affairs, London.

Hayek, F. A. 1976b, Denationalization of Money: An Analysis of the Theory and Practice of Concurrent Currencies, Hobart Paper Special 70, The Institute of Economic Affairs, London.

Henderson, Hazel. 1981, 1998, The Politics of the Solar Age, Doubleday, 1981. TOES Books, 1998.

Henderson, Hazel, Ethical Markets: Growing The Green Economy, Chelsea Green, Vermont, 2006 with companion TV series at [www.EthicalMarkets.tv](http://www.EthicalMarkets.tv)

Henderson, Hazel, Beyond Globalization, New Economics Foundation,  
Focus on the Global South, Kumarian Press, London, 1999

Henderson, Hazel, Building A Win-Win World, Berrett-Koehler, CA, 1996

Huber, J, and Robertson, J. 2000, Creating New Money: A monetary reform for the information age, New Economics Foundation, London available from: <http://www.neweconomics.org/gen/uploads/CreatingNewMoney.pdf>

Hyde, Lewis, The Gift, Vintage, NY, 1979

Jacobs, Jane, 1985, Cities and Wealth of Nations: Principles of Economic Life, Vintage Books, New York.

Kennedy, M. 1988, Interest and Inflation Free Money: How to create an exchange medium that works for everybody, Permakultur Institut e.v., Steyerberg, West Germany.

Lessig, Laurence, Re-Mix, 2008

Lietaer, B.A. 2001, The Future of Money: Creating New Wealth, Work and a Wiser World, Century, London.

Loye, David, Bankrolling Evolution, Benjamin Franklin Press, CA, 2007

Loye, Measuring Evolution, Benjamin Franklin Press, CA, 2007

Macleod, Jordan, New Currency, forthcoming 2009 (pdf available)

Mitchell, Ralph A. and Shafer, Neil, Standard Catalog of Depression Scrip in the United States in the 1930s, Krause Publications, Iola, WI, 54990, 1984 (out of print)

Monetary Reform Act, 2008, available from <http://www.themoneymasters.com/mra.htm>.

Muolo, Paul and Padilla, Matthew, *Chain of Blame: how Wall Street Caused the Mortgage and Credit Crisis*, John Wiley, New York, 2008

Patman, J.W.W. 1941, *Congressional Record of the House of Representatives*, September 29, pps 7582–3, Washington D.C.

Pieterse , Jan Nederveen, *Is There Hope for Uncle Sam ?; Beyond the American Bubble*, Zed Books, London, 2008

Phillips, Kevin, *Bad Money*, Viking, New York, 2008

Rawi, Abdelal. 2008, *Capital Rules: the Construction of Global Finance*, Harvard University Press, 2008

Sahtouris, Elisabet, *The Biology of Business*, World Business Academy Perspectives, Ojai, CA, Sept-Oct, 2005

Schauf, T.D. 1998, *The Federal Reserve is Privately Owned*, available at [http://www.apfn.org/APFN/fed\\_reserve.htm](http://www.apfn.org/APFN/fed_reserve.htm).

Soros, George, *The New Paradigm for Financial Markets*, Public Affairs, New York, 2008

Speth, James Gustave, *The Bridge to the End of the World*, Yale University Press, 2008

Stern, N. 2006, *The Economics of Climate Change: The Stern Review*, Cabinet Office, HM Treasury, London, available from: <http://www.sternreview.org.uk>.

Taleb, Nassim Nicholas , *The Black Swan*, 2007

White, L.H., 1987, *Accounting for Non-Interest-Bearing Currency: A Critique of the Legal Restrictions of Money*, *Journal of Money, Credit and Banking*, Vol 19. pp. 448–56.

Yunus, Muhammad, *Creating A World Without Poverty*, Public Affairs, New York, 2008

Vaughn, Genevieve, *For Giving*, Plain View Press, Austin, TX 1997

Zarlenga, Stephen, *The Lost Science of Money*, American Monetary Institute, 2007

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