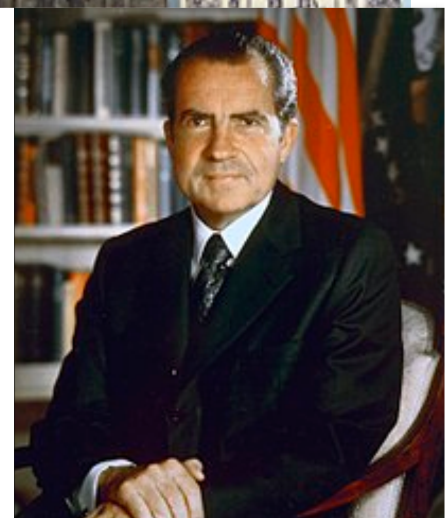
Fiat money

Fiat money is a currency without intrinsic value that has been established as money, often by government regulation. Fiat money does not have use value, and has value only because a government maintains its value, or b… exchange agree on its value.[1] It… alternative to commodity money a… Commodity money is created from … metal such as gold or silver, which … medium of exchange (such a good … Representative money is similar to fi… a claim on a commodity (which can b… lesser extent).[2][3][note 1]

The **Nixon shock** was a series of economic measures undertaken by United States President Richard Nixon in 1971, in response to increasing inflation, the most significant of which were wage and price freezes, surcharges on imports, and the ur…



Government issued banknotes began … used by various countries, usually co… dominate in the 20th century. Since the decoupling of the US dollar from gold by Richard Nixon in 1971, a system of national fiat currencies has been used globally.

Fiat money has been defined variously as:

- Any money declared by a government to be legal tender.[4]
- State-issued money which is neither convertible by law to any other thing, nor fixed in value in terms of any objective standard.[5]
- Intrinsically valueless money used as money because of government decree.[2]
- An intrinsically useless object that serves as a medium of exchange[6] (also known as **fiduciary money**.)[7]

The term *fiat* derives from the Latin *fiat* ("let it be done")[8] used in the sense of an order, decree[2] or resolution.[9]

Contents

Treatment in economics

In monetary economics, fiat money is an intrinsically valueless object or record that is widely accepted as a means of payment.[3] In some micro-founded models of money, fiat money is created internally in a community making feasible trades that would not otherwise be possible, either because producers and consumers may not anonymously write IOUs, or because of physical constraints.[10][11]

Precious metals

Circulating silver coins in the 1960s ceased to be produced containing the precious metal when the face value of the coin was below the cost of the elemental metal. The Coinage Act of 1965 eliminated silver from the circulating dimes and quarter dollars of the United States, and most other countries did the same with their coins.[12]

The Canadian penny was mostly copper until 1996 and was removed from circulation in the fall of 2012 due to the cost of production relative to face value.[13]

In 2007 the Royal Canadian Mint produced a million dollar gold bullion coin and sold five of them. In 2015, the gold in the coins was worth more than 3.5 times the face value.[14]

History

China

China has a long history with paper money, beginning in the 7th century. In the 11th century, the government established a monopoly on its issuance, and around the turn of the 12th century, convertibility was suspended.[15] The use of such money became widespread during the subsequent Yuan and Ming dynasties.[16]

The Song Dynasty in China was the first to issue paper money, *jiaozi*, around the 10th century AD. Although the notes were valued at a certain exchange rate for gold, silver, or silk, conversion was never allowed in practice. The notes were initially to be redeemed after three years' service, to be replaced by new notes for a 3% service charge, but, as more of them were printed without notes being retired, inflation became evident. The government made several attempts to support the paper by demanding taxes partly in currency and making other laws, but the damage had been done, and the notes fell out of favor.[17]

The succeeding Yuan Dynasty was the first dynasty in China to use paper currency as the predominant circulating medium. The founder of the Yuan Dynasty, Kublai Khan, issued paper money known as Jiaochao in his reign. The original notes during the Yuan Dynasty were restricted in area and duration as in the Song Dynasty.

Song Dynasty *Jiaozi,* the world's earliest paper money.

During the 13th century, Marco Polo described the fiat money of the Yuan Dynasty in his book *The Travels of Marco Polo*.[18][19]

> All these pieces of paper are issued with as much solemnity and authority as if they were of pure gold or silver... and indeed everybody takes them readily, for wheresoever a person may go throughout the Great Kaan's dominions he shall find these pieces of paper current, and shall be able to transact all sales and purchases of goods by means of them just as well as if they were coins of pure gold.
>
> — Marco Polo, *The Travels of Marco Polo*

Europe

Washington Irving records an emergency use of paper money by the Spanish in a siege during the Conquest of Granada (1482–1492). In 1661, Johan Palmstruch issued the first regular paper money in the West, under royal charter from the Kingdom of Sweden, through a new institution, the Bank of Stockholm. While this private paper currency was largely a failure, the Swedish parliament eventually took over the issue of paper money in the country. By 1745, its paper money was inconvertible to specie, but acceptance was mandated by the government.[20] This fiat currency depreciated so rapidly that by 1776 it returned to a silver standard. Fiat money also has other roots in 17th-century Europe, having been introduced by the Bank of Amsterdam in 1683.[21]

New France 1685–1770

In 17th century New France, now part of Canada, the universally accepted medium of exchange was the beaver pelt. As the colony expanded, coins from France came to be widely used, but there was usually a shortage of French coins. In 1685, the colonial authorities in New France found themselves seriously short of money. A military expedition against the Iroquois had gone badly and tax revenues were down, reducing government money reserves. Typically, when short of funds, the government would simply delay paying merchants for purchases, but it was not safe to delay payment to soldiers due to the risk of mutiny.

Jacques de Meulles, the Intendant of Finance, came up with an ingenious ad hoc solution – the temporary issuance of paper money to pay the soldiers, in the form of playing cards. He confiscated all the playing cards in the colony, cut them up into pieces, wrote denominations on the pieces, signed them, and issued them to the soldiers as pay in lieu of gold and silver. Because of the chronic shortages of money of all types in the colonies, these cards were readily accepted by merchants and the public and circulated freely at face value. It was intended to be purely a temporary expedient, and it was not until years later that its role as a medium of exchange was recognized. The first issue of playing card money occurred in June 1685 and was redeemed three months later. However, the shortages of coinage reoccurred and more issues of card money were made in subsequent years. Because of their wide acceptance as money and the general shortage of money in the colony, many of the playing cards were not redeemed but continued to circulate, acting as a useful substitute for scarce gold and silver coins from France. Eventually, the Governor of New France acknowledged their useful role as a circulating medium of exchange.[22]

As the finances of the French government deteriorated because of European wars, it reduced its financial support for its colonies, so the colonial authorities in Canada relied more and more on card money. By 1757, the government had discontinued all payments in coin and payments were made in paper instead. In an application of Gresham's Law – bad money drives out good – people hoarded gold and silver, and used paper money instead. The costs of the war with the British led to rapid inflation in New France. Following the British conquest in 1760, the paper money became almost worthless, but business did not come to a halt because gold and silver that had been hoarded came back into circulation. Under the Treaty of Paris (1763), the French government agreed to convert the outstanding card money into debentures, but with the French government essentially bankrupt, these bonds fell into default and by 1771 they were worthless.

The Royal Canadian Mint still issues Playing Card Money in commemoration of its history, but now in 92.5% silver form with gold plate on the edge. It therefore has an intrinsic value which considerably exceeds its fiat value.[23] The Bank of Canada and Canadian economists often use this early form of paper currency to illustrate the true nature of money for Canadians.[22]

18th and 19th century

An early form of fiat currency in the American Colonies were "bills of credit."[25] Provincial governments produced notes which were fiat currency, with the promise to allow holders to pay taxes in those notes. The notes were issued to pay current obligations and could be called by levying taxes at a later time.[25] Since the notes were denominated in the local unit of account, they were circulated from person to person in non-tax transactions. These types of notes were issued particularly in Pennsylvania, Virginia and Massachusetts. Such money was sold at a discount of silver, which the government would then spend, and would expire at a fixed point in time later.[25]

Adoption of 'Gold Standard' (Paper currency convertible into gold)[24]

Country	Year
United Kingdom	1821
Germany	1871
Sweden	1873
United States (de facto)	1873
France	1874
Belgium	1874
Italy	1874
Switzerland	1874
Netherlands	1875
Austria-Hungary	1892
Japan	1897
Russia	1898
United States (de jure)	1900

Bills of credit have generated some controversy from their inception. Those who have wanted to highlight the dangers of inflation have focused on the colonies where the bills of credit depreciated most dramatically – New England and the Carolinas.[25] Those who have wanted to defend the use of bills of credit in the colonies have focused on the middle colonies, where inflation was practically nonexistent.[25]

Colonial powers consciously introduced fiat currencies backed by taxes, e.g. hut taxes or poll taxes, to mobilise economic resources in their new possessions, at least as a transitional arrangement. The purpose of such taxes was later served by property tax. The repeated cycle of deflationary hard money, followed by inflationary paper money continued through much of the 18th and 19th centuries. Often nations would have dual currencies, with paper trading at some discount to specie-backed money.

Examples include the “Continental” issued by the U.S. Congress before the Constitution; paper versus gold ducats in Napoleonic era Vienna, where paper often traded at 100:1 against gold; the South Sea Bubble, which produced bank notes not backed by sufficient reserves; and the Mississippi Company scheme of John Law.

During the American Civil War, the Federal Government issued United States Notes, a form of paper fiat currency popularly known as 'greenbacks'. Their issue was limited by Congress just slightly over $340 million. During the 1870s, withdrawal of the notes from circulation was opposed by the United States Greenback Party. It was termed as 'fiat money' in an 1878 party convention.[26]

20th century

After World War I, governments and banks generally still promised to convert notes and coins into their underlying nominal commodity (redemption in specie, typically gold) on demand. However, the costs of the war and the required repairs and economic growth based on government borrowing afterward made governments suspend redemption in specie. Some governments were careful of avoiding sovereign default but not wary of the consequences of paying debts by consigning newly printed cash which had no metal-backed standard to their creditors, which led to hyperinflation – for example the hyperinflation in the Weimar Republic.

From 1944 to 1971, the Bretton Woods agreement fixed the value of 35 United States dollars to one troy ounce of gold.[27] Other currencies were pegged to the U.S. dollar at fixed rates. The U.S. promised to redeem dollars in gold to other central banks. Trade imbalances were corrected by gold reserve exchanges or by loans from the International Monetary Fund (IMF).

The Bretton Woods system collapsed in what became known as the Nixon shock. This was a series of economic measures taken by United States President Richard Nixon in 1971, including unilaterally canceling the direct convertibility of the United States dollar to gold. Since then, a system of national fiat monies has been used globally, with freely floating exchange rates between the major currencies.[28]

Money creation and regulation

A central bank introduces new money into the economy by purchasing financial assets or lending money to financial institutions. Commercial banks then redeploy or repurpose this base money by credit creation through fractional reserve banking, which expands the total supply of broad money (cash plus demand deposits).

In modern economies, relatively little of the supply of broad money is in physical currency. For example, in December 2010 in the U.S., of the $8,853.4 billion in broad money supply (M2), only $915.7 billion (about 10%) consisted of physical coins and paper money.[29] The manufacturing of new physical money is usually the responsibility of the central bank, or sometimes, the government's treasury.

The Bank for International Settlements, published a detailed review of payment system developments in the G10 countries in 1985 in the first of a series that has become known as "red books". Currently the red books cover the participating countries on Committee on Payments and

Market Infrastructures (CPMI).[30] A red book summary of the value of banknotes and coins in circulation is shown in the table below where the local currency is converted to US dollars using the end of the year rates.[31] The value of this physical currency as a percentage of GDP ranges from a high of 19.4% in Japan to a low of 1.7% in Sweden with the overall average for all countries in the table being 8.9% (7.9% for the US).

Banknotes and coins in circulation (2015-12-31)

Country	Billions of dollars	Per capita
United States	$1,425	$4,433
Eurozone	$1,210	$3,571
Japan	$857	$6,739
India	$251	$195
Russia	$117	$799
United Kingdom	$103	$1,583
Switzerland	$76	$9,213
Korea	$74	$1,460
Mexico	$72	$599
Canada	$59	$1,641
Brazil	$58	$282
Australia	$55	$2,320
Saudi Arabia	$53	$1,708
Hong Kong SAR	$48	$6,550
Turkey	$36	$458
Singapore	$27	$4,911
Sweden	$9	$872
South Africa	$6	$113
Total/Average	**$4,536**	**$1,558**

The most notable currency not included in this table is the Chinese yuan, for which the statistics are listed as "not available".

Inflation

The adoption of fiat currency by many countries, from the 18th century onwards, made much larger variations in the supply of money possible. Since then, huge increases in the supply of paper money have taken place in a number of countries, producing hyperinflations – episodes of extreme inflation rates much higher than those observed in earlier periods of commodity money. The hyperinflation in the Weimar Republic of Germany is a notable example.

Economists generally believe that high rates of inflation and hyperinflation are caused by an excessive growth of the money supply.[32] Today, most economists favor a low and steady rate of inflation.[33] Low (as opposed to zero or negative) inflation reduces the severity of economic recessions by enabling the labor market to adjust more quickly in a downturn, and reduces the risk that a liquidity trap prevents monetary policy from stabilizing the economy.[34] However, money supply growth does not always cause nominal price increases. Money supply growth may instead lead to stable prices at a time in which they would otherwise be falling. Some economists maintain that under the conditions of a liquidity trap, large monetary injections are like "pushing on a string."[35][36]

The task of keeping the rate of inflation low and stable is usually given to monetary authorities. Generally, these monetary authorities are the central banks that control monetary policy through the setting of interest rates, through open market operations, and through the setting of banking reserve requirements.[37]

Loss of backing

A fiat-money currency greatly loses its value should the issuing government or central bank either lose the ability to, or refuse to, further guarantee its value. The usual consequence is hyperinflation. Some examples where this has occurred are the Zimbabwean dollar, China in 1945 and the mark in the Weimar Republic in 1923.

But this need not necessarily occur; for example, the so-called Swiss dinar continued to retain value in Kurdish Iraq even after its legal tender status was withdrawn by the Iraqi central government which issued the notes.[38][39]

See also

- Criticism of the Federal Reserve
- Debasement
- Fractional-reserve banking
- Hard currency
- Money creation
- Money supply
- Network effect
- Seigniorage
- Silver coin
- Silver standard

- Cryptocurrency

Notes

1. See Monetary economics for further discussion.

References

1. Goldberg, Dror (2005). "Famous Myths of "Fiat Money" ". *Journal of Money, Credit and Banking*. **37** (5): 957–967. doi:10.1353/mcb.2005.0052 (https://doi.org/10.1353%2Fmcb.2005.0052). JSTOR 3839155 (https://www.jstor.org/stable/3839155).
2. N. Gregory Mankiw (2014). *Principles of Economics* (https://books.google.com/books?id=3ubKAgAAQBAJ&pg=PA220). p. 220. ISBN 978-1-285-16592-9. "fiat money: money without intrinsic value that is used as money because of government decree"
3. Walsh, Carl E. (2003). *Monetary Theory and Policy* (https://archive.org/details/monetarytheorypo0000wals). The MIT Press. ISBN 978-0-262-23231-9.
4. Montgomery Rollins (1917). *Money and Investments* (https://books.google.com/?id=GqRlvgAACAAJ&dq=Money+and+Investments+Montgomery+Rollins). George Routledge & Sons. ISBN 9781358416323. Archived (https://web.archive.org/web/20161227060423/https://books.google.co.uk/books?id=GqRlvgAACAAJ&dq=Money+and+Investments+Montgomery+Rollins&hl=en&sa=X&redir_esc=y) from the original on December 27, 2016. "Fiat Money. Money which a government declares shall be accepted as legal tender at its face value;"
5. John Maynard Keynes (1965) [1930]. "1. The Classification of Money". *A Treatise on Money*. **1**. Macmillan & Co Ltd. p. 7. "*Fiat Money* is Representative (or token) Money (*i.e* something the intrinsic value of the material substance of which is divorced from its monetary face value) – now generally made of paper except in the case of small denominations – which is created and issued by the State, but is not convertible by law into anything other than itself, and has no fixed value in terms of an objective standard."
6. Blume, Lawrence E; (Firm), Palgrave Macmillan; Durlauf, Steven N (2019). *The new Palgrave dictionary of economics*. Palgrave Macmillan (Firm) (Living Reference Work ed.). United Kingdom. ISBN 9781349951215. OCLC 968345651 (https://www.worldcat.org/oclc/968345651).
7. "The Four Different Types of Money - Quickonomics" (https://quickonomics.com/different-types-of-money/). *Quickonomics*. September 17, 2016. Archived (https://web.archive.org/web/20180213195105/https://quickonomics.com/different-types-of-money/) from the original on February 13, 2018. Retrieved February 12, 2018.
8. *Fiat* is the third-person singular present active subjunctive of *fiō* ("I become", "I am made").
9. Schueffel, Patrick (2017). *The Concise Fintech Compendium* (https://web.archive.org/web/20171024205446/http://www.heg-fr.ch/EN/School-of-Management/Communication-and-Events/events/Pages/EventViewer.aspx?Event=patrick-schuffel.aspx). Fribourg: School of Management Fribourg/Switzerland. Archived from the original (http://www.heg-fr.ch/EN/School-of-Management/Communication-and-Events/events/Pages/EventViewer.aspx?Event=patrick-schuffel.aspx) on October 24, 2017. Retrieved January 8, 2018.
10. Kiyotaki, Nobuhiro & Wright, Randall (1989). "On Money as a Medium of Exchange". *Journal of Political Economy*. **97** (4): 927–54. doi:10.1086/261634 (https://doi.org/10.1086%2F261634)..

11. Lagos, Ricardo & Wright, Randall (2005). "A Unified Framework for Monetary Theory and Policy Analysis". *Journal of Political Economy*. **113** (3): 463–84. CiteSeerX 10.1.1.563.3199 (https://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.563.3199). doi:10.1086/429804 (https://doi.org/10.1086%2F429804)..
12. Dave (August 22, 2014). "Silver as Money: A History of US Silver Coins" (http://www.silvercoins.com/history-of-silver-as-money/). *Silver Coins*. Retrieved March 7, 2019.
13. Agency, Canada Revenue (June 22, 2017). "ARCHIVED – Eliminating the penny from Canada's coinage system - Canada.ca" (http://www.cra-arc.gc.ca/gncy/bdgt/2012/cngsystm-eng.html). *www.cra-arc.gc.ca*. Archived (https://web.archive.org/web/20170517021557/http://www.cra-arc.gc.ca/gncy/bdgt/2012/cngsystm-eng.html) from the original on May 17, 2017. Retrieved May 8, 2018.
14. "Million Dollar Coin" (http://www.mint.ca/store/mint/about-the-mint/million-dollar-coin-1600006#). *www.mint.ca*. Archived (https://www.webcitation.org/6VqwLId4c?url=http://www.mint.ca/store/mint/about-the-mint/million-dollar-coin-1600006) from the original on January 25, 2015. Retrieved May 8, 2018.
15. Selgin, George (2003), "Adaptive Learning and the Transition to Fiat Money", *The Economic Journal*, **113** (484): 147–65, doi:10.1111/1468-0297.00094 (https://doi.org/10.1111%2F1468-0297.00094).
16. Von Glahn, Richard (1996), *Fountain of Fortune: Money and Monetary Policy in China, 1000–1700*, Berkeley: University of California Press.
17. Ramsden, Dave (2004). "A Very Short History of Chinese Paper Money" (https://web.archive.org/web/20080609220821/http://www.financialsense.com/fsu/editorials/ramsden/2004/0617.html). James J. Puplava Financial Sense. Archived from the original (http://www.financialsense.com/fsu/editorials/ramsden/2004/0617.html) on June 9, 2008.
18. David Miles; Andrew Scott (January 14, 2005). *Macroeconomics: Understanding the Wealth of Nations*. John Wiley & Sons. p. 273. ISBN 978-0-470-01243-7.
19. Marco Polo (1818). *The Travels of Marco Polo, a Venetian, in the Thirteenth Century: Being a Description, by that Early Traveller, of Remarkable Places and Things, in the Eastern Parts of the World* (https://books.google.com/books?id=JetQAAAAcAAJ&pg=PA353). pp. 353–55. Retrieved September 19, 2012.
20. Foster, Ralph T. (2010). *Fiat Paper Money – The History and Evolution of Our Currency*. Berkeley, California: Foster Publishing. pp. 59–60. ISBN 978-0-9643066-1-5.
21. "How Amsterdam Got Fiat Money" (http://www.frbatlanta.org/pubs/wp/working_paper_2010-17.cfm). *www.frbatlanta.org*. Archived (https://web.archive.org/web/20131110233455/http://www.frbatlanta.org/pubs/wp/working_paper_2010-17.cfm) from the original on November 10, 2013. Retrieved May 8, 2018.
22. Bank of Canada (2010). "New France (ca. 1600–1770)" (http://www.bankofcanada.ca/wp-content/uploads/2010/07/1600-1770.pdf) (PDF). *A History of the Canadian Dollar*. Bank of Canada. Archived (https://web.archive.org/web/20131002061441/http://www.bankofcanada.ca/wp-content/uploads/2010/07/1600-1770.pdf) (PDF) from the original on October 2, 2013. Retrieved February 12, 2014.
23. "Playing Card Money Set" (http://www.mint.ca/store/coin/playing-card-money-set-prod220020#.UvvzS_ldV8F). Royal Canadian Mint. 2014. Archived (https://web.archive.org/web/20160815194624/http://www.mint.ca/store/coin/playing-card-money-set-prod220020#.UvvzS_ldV8F) from the original on August 15, 2016. Retrieved July 6, 2016.

24. "Rise and fall of the Gold Standard" (http://www.news24.com/MyNews24/Rise-and-fall-of-the-Gold-Standard-20140530). *news24.com*. May 30, 2014. Archived (https://web.archive.org/web/20170504121408/http://www.news24.com/MyNews24/Rise-and-fall-of-the-Gold-Standard-20140530) from the original on May 4, 2017. Retrieved May 8, 2018.
25. Michener, Ron (2003). "Money in the American Colonies (http://eh.net/encyclopedia/money-in-the-american-colonies/) Archived (https://web.archive.org/web/20150221072516/http://eh.net/encyclopedia/money-in-the-american-colonies/) February 21, 2015, at the Wayback Machine." EH.Net Encyclopedia, edited by Robert Whaples.
26. "Fiat Money". *Chicago Daily Tribune*. May 24, 1878.
27. " "Bretton Woods" Federal Research Division Country Studies (Austria)" (http://lcweb2.loc.gov/frd/cs/austria/at_glos.html). Library of Congress. Archived (https://web.archive.org/web/20101202070528/http://lcweb2.loc.gov/frd/cs/austria/at_glos.html) from the original on December 2, 2010.
28. Jeffrey D. Sachs, Felipe Larrain (1992). *Macroeconomics for Global Economies*. Prentice-Hall. ISBN 978-0745006086. "The Bretton Woods arrangement collapsed in 1971 when U.S. President Richard Nixon suspended the convertibility of the dollar into gold. Since then, the world has lived in a system of national fiat monies, with flexible exchange rates between the major currencies"
29. "FRB: H.6 Release--Money Stock and Debt Measures--January 27, 2011" (https://www.federalreserve.gov/releases/h6/20110127/). *www.federalreserve.gov*. Archived (https://web.archive.org/web/20170710091626/https://www.federalreserve.gov/releases/h6/20110127/) from the original on July 10, 2017. Retrieved May 8, 2018.
30. "About the CPMI" (http://www.bis.org/cpmi/info.htm?m=3%7C16%7C29). *www.bis.org*. February 2, 2016. Archived (https://web.archive.org/web/20171004051401/https://www.bis.org/cpmi/info.htm?m=3%7C16%7C29) from the original on October 4, 2017. Retrieved May 8, 2018.
31. "CPMI - BIS - Red Book: CPMI countries" (http://www.bis.org/list/cpmi/tid_57/). *www.bis.org*. Archived (https://web.archive.org/web/20171020070317/http://www.bis.org/list/cpmi/tid_57/) from the original on October 20, 2017. Retrieved May 8, 2018.
32. Robert Barro and Vittorio Grilli (1994), *European Macroeconomics*, Ch. 8, p. 139, Fig. 8.1. Macmillan, ISBN 0-333-57764-7.
33. Hummel, Jeffrey Rogers. "Death and Taxes, Including Inflation: the Public versus Economists" (January 2007). "Death and Taxes, Including Inflation: The Public versus Economists · Econ Journal Watch : Inflation, deadweight loss, deficit, money, national debt, seigniorage, taxation, velocity" (http://econjwatch.org/articles/death-and-taxes-including-inflation-the-public-versus-economists). Archived (https://web.archive.org/web/20131225042059/http://econjwatch.org/articles/death-and-taxes-including-inflation-the-public-versus-economists) from the original on December 25, 2013. Retrieved March 30, 2014. p. 56
34. "Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others (http://www.aeaweb.org/articles.php?doi=10.1257/089533003772034934) Archived (https://web.archive.org/web/20140226234952/http://www.aeaweb.org/articles.php?doi=10.1257%2F089533003772034934) February 26, 2014, at the Wayback Machine" Lars E.O. Svensson, *Journal of Economic Perspectives*, Volume 17, Issue 4 Fall 2003, pp. 145–66
35. John Makin (November 2010). "Bernanke Battles U.S. Deflation Threat" (https://www.webcitation.org/6M1re5gZu?url=http://67.208.89.102/files/2010/11/01/11-Nov-2010-EO-g.pdf) (PDF). AEI. Archived from the original (http://67.208.89.102/files/2010/11/01/11-Nov-2010-EO-g.pdf) (PDF) on December 21, 2013.
36. Paul Krugman; Gauti Eggertsson. "Debt, Deleveraging, and the liquidity trap: A Fisher-Minsky

36. Paul Krugman, Gauti Eggertsson. "Debt, Deleveraging, and the liquidity trap: A Fisher-Minsky-Koo approach" (http://www.frbsf.org/economic-research/conferences/1102/eggertsson.pdf) (PDF). Archived (https://web.archive.org/web/20131217041416/http://www.frbsf.org/economic-research/conferences/1102/eggertsson.pdf) (PDF) from the original on December 17, 2013.
37. Taylor, Timothy (2008). *Principles of Economics*. Freeload Press. ISBN 978-1-930789-05-0.
38. Foote, Christopher; Block, William; Crane, Keith & Gray, Simon (2004). "Economic Policy and Prospects in Iraq" (https://www.econstor.eu/bitstream/10419/23447/1/ppdp0401.pdf) (PDF). *The Journal of Economic Perspectives*. **18** (3): 47–70. doi:10.1257/0895330042162395 (https://doi.org/10.1257%2F0895330042162395)..
39. Budget and Finance (2003). "Iraq Currency Exchange" (https://web.archive.org/web/20070515093736/http://www.cpa-iraq.org/budget/IraqCurrencyExchange.html). The Coalition Provisional Authority. Archived from the original (http://www.cpa-iraq.org/budget/IraqCurrencyExchange.html) on May 15, 2007.