HEADLINE

The gold standard vs. fiat money

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→Sisällytä tästä vastaava kohta johdantoon

Tärkeimpiä aiheita ovat nämä tutkimukset jne…

1. Introduction

1.1 Research questions

This study aims to answer these questions:

-How did the world economy end up using fiat money?

- What were the benefits of the Gold Standard?

- Is it realistic to go back to the Gold Standard?

1.2 Motivation

1.21 Why this is relevant?

This paper won't discuss how to implement the gold standard. I believe that from history perspective, it is important to understand how the gold standard worked and it should be at least a benchmark for what to expect from Fed and ECB.

List of advocates: Alan Greenspan, congressman Ron Paul, senator Ted Cruz, some econ professors, Austrian School economists, random investment bankers

1.22 An overview

The gold standard was a currency system that regulates a country's quantity and growth rate of money supply. Government guarantees a convertibility of dollar into gold with fixed exchange rate. So back in the history, the people could actually redeem a physical gold from the central bank, it was even written in the dollar note.

The gold standard was common throughout the world in the end of 19^{th} and early 20^{th} century (Mankiw, 2009). It has had a variety of forms in different countries, including bimetallic system with silver, a classical gold standard, and Bretton Woods system. During the last hundred years, countries rejoined and dropped out from gold standard, but U.S dollar has always been a key currency in it.

Today, the prevailing currency system is fiat money. It means that the paper money is backed by government or central bank, and it does not have any intrinsic value. Compared to gold standard, fiat money system is fully based on trust that the government can keep the value of money. The term fiat comes from Latin, meaning "let it be done". It refers to authoritative decision to set up new policy, for example.
A key point is that fiat money is completely based on trust. If no one bothers to redeem the bills for gold, then banks do not need to have this convertibility at all. From society's perspective, everyone values fiat money because they expect others to value it.

2. The History

2.1 History of Gold

2.11 Commodity money

Gold has a rigorous history. For thousands of years it has been considered as a highly valuable property. Partly, the value of gold is based on its features as a metal. It is beautiful and rare. It fits perfectly to jewelry because it is easy to mold. Gold does not react with oxygen, so it won't rust. Because of these features, gold was used as a commodity money. Commodity money can be used to buy goods and services. Societies have had a large variety of commodity money, including silver, copper, tea, animal skin and others. These commodities also have intrinsic value on their own.

Herbert Hoover, 31st President of the United States, famously said: "We have gold because we cannot trust government." For example, if people would not trust their government or there was a rumor that the banks are failing and paper money is worthless, then people could melt gold coins and use the gold in other forms. Obviously, this is not possible in a fiat currency. The opportunity of melting gold coins is not relevant today, but the gold standard can still tackle the same trust issue from political aspect. In the United States, Senator Ted Cruz among other Republicans believe that gold standard could be a way to limit Federal Reserve's power.

Despite commodity features, mostly the value of gold comes from social aspects. Gold can be understood as a symbol for power and wealth. No other metal has motivated people to extremes of greed like gold. During unstable economic times, the value of gold tends to increase. lisää lähde?? Because of its timeless status, it is considered as a safe haven for money.

2.12 Transition to paper money

Before paper money, exchange happened with different kind of metal coins. Back in the history, having enough gold funds was a prerequisite for successful war, because soldiers were paid with silver and gold. For example, when Roman emperors had once problems to pay their soldiers, they collected vast amount of gold coins, melted them and then added copper to expand their money supply.

Soon, people started to deposit their precious metals to goldsmiths. In return they got bank notes which were easier to carry than metal coins. If a goldsmith had good reputation, he started to get more and more deposits. Reputation allowed goldsmiths to issue more bank notes than they had actual gold in their reserves. Everything worked well if all the depositors wouldn't cause a bank run and demand their savings back at the same time. In the end of 1800's governments and central banks took the official role of issuing paper money. Now the reputation risk was smaller and paper money became more relievable. But the potential oversupply of paper money was still a problem. That is why the gold standard was a convenient solution to this.

If most of the paper money was possible to exchange to gold, then high inflation would be unlikely. To create stable environment and public trust, central banks made money convertible to gold at a fixed exchange rate. The money in circulation was now limited. Hundreds of years ago when banks were smaller, gold was a great anchor for commodity money because it is universally acceptable. The currency holders won't abandon creditors money at the first sign of trouble if it is backed by something relievable.

2.13 1800-1900

Hundreds of years ago before paper money system, government could expand money supply in very limited ways. Mining technology was developing slowly. If goldmines had negative supply shock, other ways to increase gold reserves were trade, robbery or deflation (value of existing gold increases) (Bernstein 2004).

Before WWI the countries did trade with a physical gold. If some nation had trade surplus from exports, they gathered more gold for their reserve. pari kohtaa puuttuu

England was the first country to adapt gold standard at 1821, when Parliament declared the convertibility of bank notes into gold (Bernstein, 2004). The United States followed them at 1834.

2.14 The 20st Century

By the 1900's, most of the developed countries had adopted gold standard and silver was fading away as an acceptable money (Bernstein, 2004).

Most of the countries abandoned gold standard during World War I, due to massive increase in expenses (Craig, 2011). Governments started to print more paper money, which led to higher inflation. Gold reserves were also in use during war as there was more important use for gold than to act as a deposit for paper money. War was a common reason why a country diverged from gold standard. By 1927, most of the countries were back in gold.

A classical Gold Standard in the U.S ended 1933, few years after the Great Depression. 1934's Gold Reserve Act limited gold transactions from individual citizens, but convertibility of dollar remained. This means that the public couldn't redeem their dollars to gold, but other financial institutions could. The act lifted the price of gold from $20.67 per troy ounce to $35.

In 1944 The Bretton Woods agreement was made to create a new international monetary system. Lord John Maynard Keynes was one of the key figures designing the system. After the new arrangement, the United States Dollar was only currency convertible into gold with fixed exchange rate. Rest of the world would have a par values to dollar (Obstfield, Taylor, 2007)

2.15 The End of Gold Standard

In the 1971, President Nixon's administration makes a choice that the U.S gives up gold standard. After few months, other European countries let their currencies to flow and the gold standard is over. Other currencies lost their connection to gold, and therefore the whole world economy entered to fiat money system. Value of gold is freely defined by supply and demand.
This colorful history shows that the transition from gold to fiat money was not planned, nor it did not happen suddenly. The reason was that the fixed rate was impossible to maintain, which I later illustrate.

3. Theoretical background

3.1 Features of Gold Standard

3.11 Mechanism

The classical gold standard up to 1933 provided a simple monetary rule to follow: maintain the value of currency in terms of a fixed weight of gold. This limits the money supply because central bank has to keep a certain percentage of gold in their reserves (Bordo, Dittmar, Gavin, 2003).

According to Bloomfield (1961), it was 42% of banknotes in the early 20th century in the U.S. Supply and demand of money are connected to each other vice versa.
Without the fixed link between gold and dollar, an oversupply of dollars increases the price of gold. Central bank's reserves begin to drain quickly if value of gold is rising and rising, because people will redeem it with paper money. Otherwise, this cycle would continue. But in fixed exchange rate, central bank is ready to buy and sell gold to keep the exchange rate at its announced level (Mankiw, 2009)

3.2 Advantages

The gold standard should lead to price stability in the long run. Gold mining technology is well known and develops slowly, therefore new production of gold would only add a small amount of gold stock. Because of fixed exchange rate, the price level would not vary much, and it becomes more predictable for investors.

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Self-equilibrating system

-A country with overvalued currency starts to lose its gold reserves. This leads to deflation until the currency returns to equilibrium. selitä loppuun kunnolla

Fixed exchange rates reduce some of the uncertainty in international business transactions. kts kirjasta

Trade off comparison→

paperi (BUSH, FARRANT, WRIGHT, 2011)

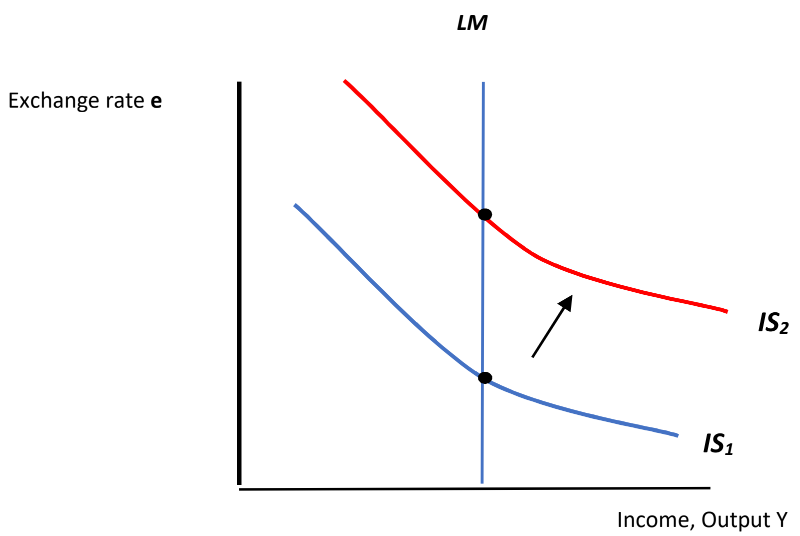
3.3 Disadvantages

3.31 Floating Exchange Rate

Through the gold standard, economies had a currency system of fixed exchange rates. After ending of Bretton Woods in 1971, most of the currencies in the world were set to float freely, meaning that they automatically adjust to changing economic conditions. Floating and fixed exchange rate have a distinct difference, when it comes to trade imbalances. Intuitively, fiat money system is more flexible because central bank can instantly react with monetary policy, such as printing new money.

muista avata IS-LM käyrän sisältö lukijalle!

Let's assume that a country, with floating exchange rate, faces a positive shock in exports. Figure X demonstrates causality effects while all else being equal (Ceteris Paribus). Growing exports increases income Y, which in turn increases money demand. This creates pressure on the interest rate ***r*** to rise. When foreign investors realize this opportunity for higher returns, foreign capital starts to flow into our country, pushing the ***r*** close to the world interest rate ***r****. With increased demand, domestic currency will appreciate in value and returns income Y to its equilibrium. (Mankiw, 2009)



3.32 Losing the Equilibrium

Gold standard limits the expansion of money supply. Thus, the supply becomes more inelastic in the short period. In the early 1900's, banks had problems with checks and bank notes in the U.S. Demand of cash increased periodically, which created bank runs. Sometimes this led to more panic and caused banks to fail (Craig, 2011).

lisää vielä toinen kuvaaja

3.33 Problems of Bretton Woods (spekulointi)

Economic conditions started to be untenable for United States towards 1970s. The U.S. stock declined from $19 billion to $10 billion during 1960-1970 (Bernstein 2004). ….
Central bank may have to buy domestic currency to prevent depreciation of course. The main problem is running out of gold reserves, (which were decreasing fast)

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s.144 Deppreciation: Countries with relatively high inflation tend to have **depreciating currency**, (you can buy more of them with **your dollars over time**). And countries with low inflation have appreciating currencies (you can buy less of them with dollar over time).

3.3 Political tension

Gold-producing nations had an advantage over those that don't have huge reserves or access to produce gold.

4. Literature review

This section will present previous researches about the gold standard and fiat money.

Next, a quick introduction

After that…

Finally…

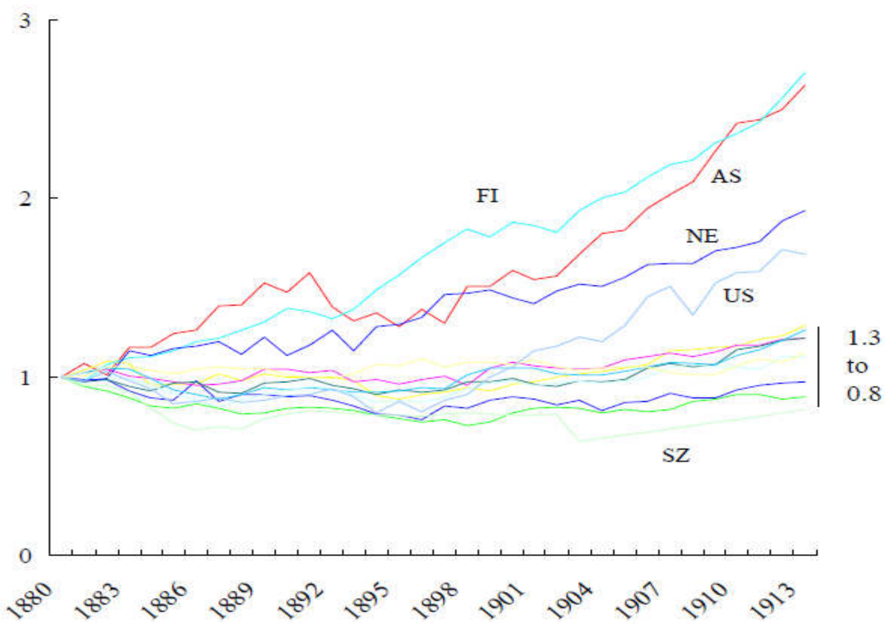
4.1 Inflation

4.11 Gold Standard

One of the statements that gold standard advocates make, is that inflation was lower during the gold standard. Today, low and stable rate of inflation is the main objective for central banks. Most central banks use the 2% as a target. When comparing these two currency systems, it is important to note that when the final link to gold convertibility was cut in 1971, the world was in high inflationary environment. This has an impact when we compare average results.

Figure 1 shows inflation percentages until World War I, when countries largely abandoned gold standard (Bordo, Dittmar, Gavin, 2003). The lines consist of annual values of the Gross Domestic Product (GDP) for 13 countries. Price levels are indexed to 1 in 1880.

Figure 1 GDP Price Levels During the Gold Standard (1880 to 1913)

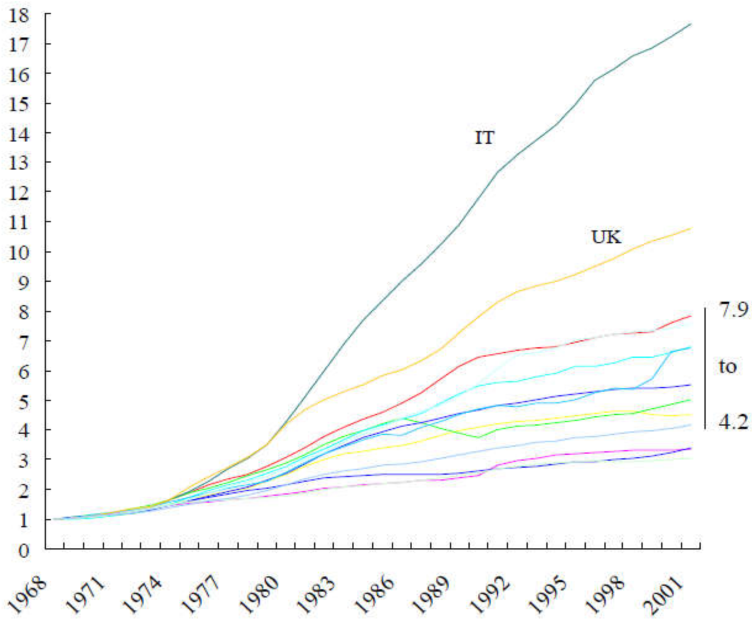


13 countries on the gold standard:
Australia, Canada, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Sweden (SW), Switzerland (SZ), United Kingdom, and the USA.

4.12 Fiat money

Figure 2 shows inflation percentages for the same 13 countries in fiat currency. There is a huge difference in a scaling of Y-axis between graphs. It is clear that gold standard provided better price stability in the long run, averaging 0.1 percent per year in 1880-1914. According to Bordo, short-run predictability of price level was lower in the gold standard, despite higher inflation.

Figure 2: GDP Price Levels During the Post-WWII Era (1968 to 2001)



Italy and the UK had the biggest increases in price levels. Germany, the Netherlands, and Switzerland had the lowest. The other eight countries, Australia, Canada, Denmark, Finland, France, Norway, Sweden, and the USA, had price levels that rose by factors between 4.2 and 7.9 over these 34 years.

If the goal is low inflation, then one could argue that we have achieved that finally at 21st century, when it has been low for many years.

Overall, the economic conditions were so different between the two figures, that comparing inflation rates is only small part of the bigger picture.

4.2 Effect of Shocks

4.21 Negative shocks

Deflationary environment →This **deflation** is linked to high unemployment.
If we would return to Gold standard and there would be massive, worldwide shock that increases demand for Gold, it could be **deflationary for the world economy.**

lisää kuvaajat shokeista jne vaikutukset

5. Conclusions

6. References

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Muut Lähteet: