

Is the Gold Standard Still the Gold Standard among Monetary Systems?

by Lawrence H. White

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Executive Summary

Critics have raised a number of theoretical and historical objections to the gold standard. Some have called the gold standard a “crazy” idea.

The gold standard is not a flawless monetary system. Neither is the fiat money alternative. In light of historical evidence about the comparative magnitude of these flaws, however, the gold standard is a policy option that deserves serious consideration.

In a study covering many decades in a large sample of countries, Federal Reserve Bank economists found that “money growth and inflation are higher” under fiat standards than under gold and silver standards. Nor is the gold standard a source of harmful deflation. Alan Greenspan has testified before Congress that “a central bank properly functioning will endeavor to, in many cases, replicate what a gold standard would itself generate.”

This study addresses the leading criticisms of the gold standard, relating to the costs of gold, the costs of transition, the dangers of speculation, and the need for a lender of last resort. One criticism is found to have some merit. The United States would not enjoy the benefits of being on an *international* gold standard if it were the first and only country whose currency was linked to gold.

A gold standard does not guarantee perfect steadiness in the growth of the money supply, but historical comparison shows that it has provided more moderate and steadier money growth in practice than the present-day alternative, politically empowering a central banking committee to determine growth in the stock of fiat money.

From the perspective of limiting money growth appropriately, the gold standard is far from a crazy idea.

Lawrence H. White is the F. A. Hayek Professor of Economic History at the University of Missouri–St. Louis and an adjunct scholar of the Cato Institute. He is the author of Competition and Currency, Free Banking in Britain, and The Theory of Monetary Institutions.

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Introduction

For the first time in many years, the monetary arrangements of the United States have become an issue in the 2008 presidential race. The subprime crisis and the decline in the foreign exchange value of the dollar have raised questions about the performance of the Federal Reserve Board. One candidate has proposed ending the post-1971 experiment with an unanchored fiat dollar issued by the Federal Reserve and returning to a gold standard with private money issue. Critics have raised a number of theoretical and historical objections to the gold standard. Some have called the gold standard a “crazy” idea. In what follows I consider the leading objections and find all but one of them weak.

The overall intent of this paper is to make practical institutional comparisons, warts and all. The gold standard is not a flawless monetary system. Neither is the fiat money alternative. The gold standard is most certainly not a crazy idea. It is a policy option that deserves serious consideration.

“The gold standard” generically means a monetary system in which a certain mass of gold defines the monetary unit (e.g., the dollar) and serves as the ultimate medium of redemption. For example, during the “classical” gold standard period (1879–1914), the U.S. dollar was defined as 0.048 troy oz. of pure gold. Inverting the defined ratio, one ounce of pure gold was equivalent to US\$20.67. Gold coins need not, and historically did not, form the predominant medium of exchange. Issuers of paper currency and checkable deposits, normally private commercial banks but also a government central bank if one exists, make their notes redeemable for gold and hold gold coins and bullion as reserves for meeting redemption demands. Because of the banks’ contractual obligation to redeem in gold, the volume of paper currency and deposits—the everyday means of payment—is geared to the volume of gold.

Key Objections

“A gold standard leaves the quantity of money to be determined by accidental forces.” There is a germ of truth to this concern. A gold standard does leave the quantity and purchasing power of money to be determined by the forces of supply and demand in the market for gold. There can be “accidental” shifts in the supply and demand curves to which the quantity and purchasing power of money will respond. Our current fiat standard, by contrast, leaves the supply of money to the decisions of a committee (namely, the Federal Open Market Committee of the Federal Reserve System). The practical question is: under which system are the quantity and purchasing power of money better behaved?

As is well known, the stock of gold did not grow at a perfectly steady rate during the era of the historical gold standard. Some increases in gold output—such as the Yukon discoveries and the development of the cyanide process—were responses to previous increases in demand and the purchasing power of gold, and thus helped to stabilize the purchasing power of gold over the long run.¹ Other increases resulted from accidental discoveries.

The largest such “supply shock” in the 19th century was the 1848 discovery of gold in California. The California gold rush meant that more ounces would be mined at any given purchasing power of gold. The outpouring of gold from California reduced the purchasing power of gold around the world, or in other words, generated an inflation of the price level. But how large an inflation? The magnitude was surprisingly small. Even over the most inflationary interval, the general price index (the GDP deflator) for the United States rose from 5.71 in 1849 (year 2000 = 100) to 6.42 in 1857, an increase of 12.4 percent spread over eight years. The compound annual price inflation rate over those eight years was slightly less than 1.5 percent. Twenty-two years later, when the gold standard was finally restored following its suspension during the Civil War, the pur-

chasing power of gold had actually risen slightly (the price level was slightly lower).²

The economic historian Hugh Rockoff, in an examination of the output of gold, concluded that “it is fair to describe the fluctuations in the supply of gold under the classical standard as small and well-timed.”³ He found that supply of fiat money in the postwar period (1949–79), by contrast to the behavior of gold under the classical gold standard, had both higher annual rates of growth and a higher standard deviation of annual growth rates around decade averages.

In a study covering many decades in a large sample of countries, the Federal Reserve Bank of Minneapolis economists Arthur Rolnick and Warren Weber⁴ similarly found that “money growth and inflation are higher” under fiat standards than under gold and silver standards. Specifically, they reported that

the average inflation rate for the fiat standard observations is 9.17 percent per year; the average inflation rate for the commodity standard observations is 1.75 percent per year.⁵

This result was not driven by a few extreme cases; in fact, in computing the average rates of inflation Rolnick and Weber deliberately omitted cases of hyperinflation (which occurred only under fiat money). Still, they noted,

every country in our sample experienced a higher rate of inflation in the period during which it was operating under a fiat standard than in the period during which it was operating under a commodity standard.⁶

The evidence thus indicates that growth in the stock of gold has been slower and steadier in practice than growth in the stock of fiat money. Of course, U.S. inflation is thankfully not as high as 9 percent today, but at 4.3 percent (consumer price index, year-over-year) it is currently more than twice as high as Rolnick and Weber’s figure for commodity standards.

Correspondingly, the purchasing power of money under the gold standard was steadier and more predictable. The greater reliability of the purchasing power of the monetary unit under the gold standard was reflected in a thicker market for long-term corporate bonds than exists today. Under a gold standard, the price level can be trusted not to wander far over the next 30 years because it is constrained by impersonal market forces. Any sizable price level increase (fall in the purchasing power of gold) caused by a reduced demand to hold gold would reduce the quantity of gold mined, thereby reversing the price level movement. Conversely, any sizable price level decrease (rise in the purchasing power of gold) caused by an increased demand to hold gold would increase the quantity mined, thereby reversing that price level movement. Under a fiat standard, the future price level depends on the personalities of yet-to-be-appointed monetary authorities and thus is anybody’s guess.

The blogger Megan McArdle thus gets things almost exactly backward when she writes: “The gold standard cannot do what a well-run fiat currency can do, which is to tailor the money supply to the economy’s demand for money.”⁷ Under the gold standard, market forces do in fact automatically tailor the money supply to the economy’s demand for money. The economics of gold mining operates to match world supply with world demand at the stable price level (though admittedly large demand shocks can take years to be accommodated), while the “Price-specie-Flow mechanism” quickly brings gold from the rest of the world into any single country where demand for money has grown. We can only imagine a well-run fiat-currency-issuing central bank trying to match these properties. We cannot observe any central bank that has actually managed it. Peter Bernholz, for example, tells us that “a study of about 30 currencies shows that there has not been a single case of a currency freely manipulated by its government or central bank since 1700 which enjoyed price stability for at least 30 years running.”⁸

Some critics have posed absurd-case scenarios, such as “What if some alchemist turns

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lead into gold?” and “What if a golden meteorite hit the earth?” But these are of no more actual relevance than “What if the Federal Reserve chairman becomes insane?”

“A gold standard would be a source of harmful deflation.” The inflation rate under the gold standard averaged close to zero over generations, sometimes slightly positive and sometimes slightly negative over individual decades. Rolnick and Weber, as quoted above, found an average inflation rate of 1.75 percent over the sample of gold and silver episodes reported in the published version of their paper; an earlier version using a different sample arrived at an average rate of -0.5 percent. In 1879 the United States resumed gold redemption for the U.S. dollar, which had been suspended since the Civil War. Between 1880 and 1900 the United States experienced one of the most prolonged periods of deflation on record. The price level trended more or less steadily downward, beginning at 6.10 and ending at 5.49 (GDP deflator, base year 2000 = 100). That works out to a total decline of 10 percent stretched over 20 years. The deflationary period was no disaster for the real economy. Real output per capita began the period at \$3,379 and ended it at \$4,943 (both in 2000 dollars). Total real per capita growth was thus a more-than-healthy 46 percent. (Real GDP itself more than doubled.)⁹

Monetary economists distinguish a *benign* deflation (due to the output of goods growing rapidly while the stock of money grows slowly, as in the 1880-1900 period) from a *harmful* deflation (due to unanticipated shrinkage in the money stock). The gold standard was a source of mild benign deflation in periods when the output of goods grew faster than the stock of gold. Prices particularly fell for those goods whose production enjoyed great technological improvement (for example oil and steel after 1880). Strong growth of real output, for particular goods or in general, cannot be considered harmful.

It would be possible for the central bank under a fiat money standard to offset productivity-driven declines in some prices by expand-

ing the quantity of money in order to drive others prices upward, thus eliminating deflation “on average.” But there is no social benefit in doing so. Falling costs of production in steel (i.e. productivity gains) do not discourage investment in steel. A gradual anticipated deflation does not discourage investment, especially not when productivity gains are driving growth in the first place.¹⁰

Nor does a deflation penalize debtors once it comes to be anticipated, because nominal interest rates adjust downward to reflect anticipated repayment in dollars of higher purchasing power.

“The gold standard was responsible for the U.S. banking panics of the late 19th century and for the monetary contraction of 1929–33 and, thereby, for the Great Depression.” The U.S. monetary contraction of 1929–33 is the prime example of a harmful deflation. It should be noted that it happened on the Federal Reserve’s watch. The episode should not be blamed on the gold standard, but on the combination of a weak banking system and a befuddled central bank. The U.S. banking system was prone to runs and panics in the late 19th century and continued to be so through the 1929–33 episode in which the Fed stood by and did not supply replacement reserves to keep the money stock from contracting. Other countries on the gold standard—Canada, for example—had no banking panic in 1929–33 (nor did Canada have panics in the late 19th century), so the gold standard couldn’t have been responsible for the panics. Rather the panics were due to completely avoidable legal restrictions (namely the ban on branch banking and compulsory bond collateral requirements that make the supply of banknotes “inelastic”) that weakened the U.S. banking system.

“The benefit of a gold standard (restraining inflation) is attainable at less cost by properly controlling the supply of fiat money.” Although growth in the stock of fiat money *could in principle* be as slow (or slower) than growth in the stock of gold under a gold standard, it has not been so in practice, as already noted.

Alan Greenspan actually used to recommend controlling the fiat money supply to mimic the price-level behavior of a gold standard. In response to questioning at a 2001 congressional hearing, Greenspan said: “Mr. Chairman, so long as you have fiat currency, which is a statutory issue, a central bank properly functioning will endeavor to, in many cases, replicate what a gold standard would itself generate.” Two years later he added that central banks had created the inflation of the 1970s because the gold standard no longer constrained them, but they had been able to bring inflation back down by belatedly learning to emulate the restrained money growth that was characteristic of the gold standard:

The general wisdom during the period subsequent to the 1930s was that as we moved to an essentially fiat money standard, that there was no anchor to the general price level. And indeed, what we subsequently observed is, as you point out, a very marked increase in general price levels, indeed, around the world as we removed ourselves from commodity standards, and specifically gold.

I had always thought that the fiat money system was chronically and inevitably an inflation vehicle, and indeed, said so repeatedly. I have been quite surprised, and I must say pleased, by the fact that central bankers have been able to effectively simulate many of the characteristics of the gold standard by constraining the degree of finance in a manner which effectively has brought down general price levels.¹¹

Fiat money regimes have not, however, accomplished price stability as fully as did the gold standard. Although inflation is less severe today than it was 30 years ago, experienced inflation rates, and the expectations of future inflation rates embodied in long-term interest rates, have remained higher than corresponding rates under the classical gold standard.

It is true that a commodity money standard entails a resource cost (sometimes described as

“digging up gold just to bury it in bank vaults”). So does the production of bicycle locks from metal rather than paper. The resource cost of a gold standard has often been exaggerated by estimates that assume 100 percent gold backing for all forms of money. The preeminent monetary economist Milton Friedman, during the 1950s and 1960s, relied on such an estimate in judging a well-run fiat standard more efficient than a commodity standard.¹² Friedman overestimated the resource costs of a gold standard by assuming—although such a system has no advocates and no historical precedent—100 percent reserves against all components of M2 (that is, against even time deposits). With a historically more reasonable fractional reserve ratio of 2 percent, the amount of gold needed in vaults and thus the resource cost of a gold standard shrinks by a factor of 50.¹³

Friedman wanted to substitute for gold a less costly paper money standard bound by a strict money growth rule. But in the 1980s he changed his mind about the feasibility of getting the Fed to commit to anything of the sort, reconsidered the costs of inflation in the absence of a strict rule,¹⁴ and began to call for abolishing the Federal Reserve System (though not replacing it with a gold standard, because he thought no government would any longer consent to be constrained by a gold standard).¹⁵ Abolishing the Fed may be a pipe dream, but for those who have that dream a gold standard may be the most plausible way of abolishing the Fed. As Greenspan recently explained to *Daily Show* host Jon Stewart, under a gold standard a central bank is unnecessary.¹⁶

“A gold standard is no restraint at all, because government can devalue or suspend gold redemption whenever it wants.”

A similar claim could be made about any (other) restraint in the Constitution. And yet constitutional rules are useful. By authorizing only a limited set of government activities, ruling others simply out of bounds, they save the public the trouble of trying to weigh every potential activity on a cost-benefit basis.

An important problem in fiat money regimes, as famously identified by Finn Kydland and Edward C. Prescott, is the lack of

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an enforceable commitment not to use surprise monetary expansion and resulting inflation as a temporary stimulus to the economy.¹⁷ When the public knows that the central bank would be tempted to use surprise inflation, the public rationally expects higher-than-optimal inflation. The central bank has to deliver higher-than-optimal inflation to avoid a negative surprise. An unfortunate standoff is reached at a higher-than-optimal inflation rate (which, being fully anticipated, provides no economic stimulus). A gold standard avoids that trap.¹⁸ Like tying Ulysses to the mast, it achieves better results by removing the option (to use surprise inflation) that leads to ruin. Of course, a gold standard is not the only possible rule for constraining the creation of money. Alternatives include a Friedman-type money-growth rule, or an inflation targeting rule. But the gold standard has a longer history, and is the only historically tested rule that does not presuppose a central bank.

Leaving money issue in the hands of private banks rather than a government institution, as the United States did before 1913, removes the option to use surprise monetary expansion one step further. It remains true that government can suspend the gold standard in an emergency, as both sides did during the Civil War, but the spirit of the gold standard calls for returning to the parity afterward, as did the United States.¹⁹ Judging by long-term interest rates and the thick market for long-term bonds under the post-bellum classical gold standard, the risk of permanent devaluation or suspension was considered small.

“A gold standard, like any fixed exchange-rate system, is vulnerable to speculative attacks.” What opens the door to speculative attacks is a weak commitment to the existing parity, whether in gold or any other reserve currency. A central bank’s commitment can be weak, and that is indeed a problem when combining a gold standard with central banking. Fortunately, a gold standard doesn’t require a central bank. With decentralized private money issue, there is no institution capable of devaluing, so there is no danger of speculative attacks on the parity. A gold standard

free of a central bank provides a commitment to non-inflation made good by the impersonal economics of gold mining (for gold itself) and by enforceable redemption contracts and the competitive market value of reputation (for bank-issued money).²⁰

“Fiat money is necessary so that a lender of last resort can meet the liquidity needs of the banking system.” History shows that a lender of last resort would hardly be needed, given a stable monetary regime and a sound banking system (again it is instructive to contrast the United States with Canada in the 19th century). In the rare cases such a lender might be needed, bank clearinghouses could play the role.²¹

“Switching to a gold standard would involve massive transition costs.” The transition cost involved in reestablishing a gold definition for the dollar would be small. Unlike with Europe’s transition to the euro, price tags and bank accounts would not need to be redenominated because the name “dollar” would be retained. At the right reentry rate, dollar prices would not need to jump.

“We must have gone off the gold standard in the first place for good reasons.” In 1933, President Franklin D. Roosevelt devalued from \$20.67 to \$35 per troy ounce of gold as a means to re-inflate the dollar price level. But the (harmful) money stock shrinkage and price deflation of 1929–33 hadn’t been due to a loss of gold. It had been due to a collapse of weak U.S. banks. The deflation could have been remedied by better monetary policy and banking reform without going off gold. In 1971, Nixon shut the gold window because the Federal Reserve had expanded the stock of dollars too much to maintain the \$35 per ounce parity. Nixon’s action could have been avoided had the Fed not expanded the stock of dollars so much in the 1960s. It was not the rules of the gold standard that had failed. It was, rather, the Fed that had failed to abide by the rules of the gold standard.

“The gold standard is an example of price-fixing by government.” The gold standard doesn’t fix a price between dollars and gold any more than the traditional British mea-

surement system fixes a price between pints and quarts. The fixed relationship is a matter of definition. A gold standard defines the dollar (or whatever the name of the monetary unit) as a specified mass of gold. Dollars are not separate goods from gold.

“A gold standard would allow Putin to buy the United States.” Any Russian autocrat’s ability to use the proceeds from Russian gold mines to buy American assets would be no greater under a gold standard than it is today, unless the purchasing power of gold were to rise. And there is no good reason to think that would happen. The real purchasing power of gold today, under fiat money, is higher than it was before 1971, in large part because people are hoarding gold as a hedge against fiat money inflation. The current fiat system is enriching Putin more than a gold standard would.

“There isn’t enough gold.” There is necessarily enough gold to support enough dollars to support today’s dollar price level (or whatever price level is desired), at the right gold definition of the dollar.

“The United States can’t recreate the classical international gold standard by itself.” I have saved for last what I think is the strongest objection to unilateral return to gold on the part of the United States. The nation would not enjoy the benefits of being on an *international* gold standard if it were the first and only country whose currency was linked to gold. At least two major benefits would be missing: (1) the United States would not enjoy fixed exchange rates with the rest of the world, and (2) the purchasing power of gold would not be as stable. The purchasing power (or relative price) of today’s demonetized gold has been much less stable than that of gold under the 19th century’s global gold standard, because demand to hold gold today is largely a speculative rather than a transactions demand. With only one economy on gold—albeit a large economy—monetary use of gold would likely remain the tail rather than the dog. Thus even in the unlikely event that the United States were to elect a president committed to a pro-gold policy, that president would be prudent to try to cultivate similar commitments from the gov-

ernments of the other leading economies of the world before taking us down the yellow brick road alone.

Conclusion

Under the gold standard the issue of common money by banks is restrained by the cost of acquiring gold, which is determined by impersonal supply and demand forces in the gold-mining market. Because of the issuers’ contractual obligations to redeem in gold, and corresponding prudential need to hold gold reserves, the dollar volume of paper currency and deposits—the stock of money—is geared to the volume of gold. Growth in the stock of money is governed by market forces rather than by government fiat. A gold standard does not guarantee *perfect* steadiness in the growth of the money supply, but historical comparison shows that it has provided more moderate and steadier money growth in practice than the present-day alternative, politically empowering a central banking committee to determine growth in the stock of fiat money. From the perspective of limiting money growth appropriately, the gold standard is far from a crazy idea.

Historical problems of U.S. banking instability, sometimes blamed on the gold standard, turn out on closer inspection to have had been rooted in banking regulations that inadvertently weakened U.S. banks. Gold standard countries like Canada that avoided the peculiar banking restrictions of the United States (namely the ban on branch banking and compulsory bond collateral requirements that make the supply of banknotes “inelastic”) also avoided the instability. As we discovered in the greatest banking panic, that of 1929–33, having a Federal Reserve System capable of overriding the gold standard did not eliminate the problem of weakness in the U.S. banking system.

Other supposed historical problems, like price deflation due to goods production outgrowing gold production, turn out not to have been actual problems.

A gold standard does entail resource costs of mining the gold that is lodged in bank

The costs of a gold standard are reasonably small in relation to its benefits.

vaults. But so too does a fiat standard entail resource costs, primarily in the form of the deadweight costs of inflation. All in all, because the costs of a gold standard are reasonably small in relation to its benefits, the gold standard is not a crazy idea.

Notes

1. See Hugh Rockoff, "Some Evidence on the Real Price of Gold, Its Cost of Production, and Commodity Prices," in *A Retrospective on the Classical Gold Standard, 1821–1931*, ed. Michael D. Bordo and Anna Jacobson Schwartz (Chicago: University of Chicago Press, 1983). In economists' jargon, these were movements along the (relatively flat) long-run supply curve, not shifts of the curve.
2. Louis D. Johnston and Samuel H. Williamson, "The Annual Real and Nominal GDP for the United States, 1790–Present." Economic History Services, October 2005, www.eh.net/hmit/gdp/.
3. Rockoff, p. 614.
4. Arthur J. Rolnick and Warren E. Weber, "Money, Inflation, and Output under Fiat and Commodity Standards," *Journal of Political Economy* 105 (December 1997): 1308–1321.
5. *Ibid.*, p. 1317.
6. *Ibid.*, p. 1318
7. Megan McArdle, "There's Gold in Them Thar Standards!" Asymmetrical Information blog, September 4, 2007, http://meganmcardle.theatlantic.com/archives/2007/09/theres_gold_in_them_thar_stand.php.
8. Peter Bernholz, "The Importance of Reorganizing Money, Credit, and Banking When Decentralizing Economic Decisionmaking," *Economic Reform in China*, ed. James A. Dorn and Wang Xi (Chicago: University of Chicago Press, 1990), p. 104, citing Michael Parkin and Robin Bade, "Central Bank Laws and Monetary Policy. A Preliminary Investigation," *The Australian Monetary System in the 1970s*, ed. M. A. Porter (Melbourne: Monash University, 1978), pp. 24–39.
9. Johnston and Williamson.
10. For a thorough account of the benefits of allowing a productivity-driven deflation, see George Selgin, *Less Than Zero: The Case for a Falling Price Level in a Growing Economy* (London: Institute of Economic Affairs, 1997).
11. Greenspan must have meant inflation rates rather than price levels. His testimony is available at www.usagold.com/gildedopinion/greenspan-gold.html.
12. Milton Friedman, "Commodity-Reserve Currency," *Journal of Political Economy* 59 (June 1951): 203–32, reprinted in Milton Friedman, *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953); Milton Friedman, *A Program for Monetary Stability* (New York: Fordham University Press, 1960).
13. See Lawrence H. White, *The Theory of Monetary Institutions* (Oxford: Blackwell, 1999), p. 47.
14. Milton Friedman, "The Resource Cost of Irredeemable Paper Money," *Journal of Political Economy* 94 (June 1986): 642–47.
15. Milton Friedman, "Monetary Policy for the 1980s" in *To Promote Prosperity: U.S. Domestic Policy in the Mid-1980s*, ed. John H. Moore (Stanford, CA: Hoover Institution Press, 1984). Reprinted in Kurt Leube, ed., *The Essence of Friedman* (Stanford, CA: Hoover Institution Press, 1987).
16. Transcript at <http://divisionoflabour.com/archives/004047.php>.
17. Finn Kydland and Edward C. Prescott, "Rules Rather than Discretion: The Inconsistency of Optimal Plans," *Journal of Political Economy* 85 (June 1977): 473–92.
18. Thus it is no surprise that inflation rose after gold was abandoned. See Robert Barro and David B. Gordon, "A Positive Theory of Monetary Policy in a Natural Rate Model," *Journal of Political Economy* 91 (August 1983): 589–610.
19. Michael D. Bordo and Finn E. Kydland, "The Gold Standard as a Rule: An Essay in Exploration," *Explorations in Economic History* 32 (October 1995): 423–64.
20. See George Selgin and Lawrence H. White, "Credible Currency: A Constitutional Perspective," *Constitutional Political Economy* 16 (March 2005): 71–83.
21. Richard H. Timberlake, "The Central Banking Role of Clearinghouse Associations," *Journal of Money, Credit, and Banking* 16 (February 1984): 1–15.

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