

STABILITY OF GOLD STANDARD AND ITS SELECTED CONSEQUENCES: A REPLY TO PROF. HOWDEN

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Since I am naturally biased in favor of the gold standard, I was glad when I found that Prof. Howden (2008) exerted effort to uproot the thesis presented in my paper «Stability of Gold Standard and Its Selected Consequences» (Kvasnička, 2007) that the price level could be very unstable under the gold standard if the overall monetary stock of gold is relatively small, and one of its consequences, that this instability makes an independent restitution of the gold standard in a small country unlikely. No one would be happier than me if he succeeded. However, I will claim here that his critique failed. To show why, I will first summarize major points of my former paper and then comment on Prof. Howden's critique. Since Prof. Howden concentrates only on the feasibility of the restitution of the gold standard in the present world, I will not defend all the propositions made in my former paper, but will confine myself to the question whether a small country adopting the gold standard independently in the present world would or would not suffer from the price level instability and trade cycles caused by such a gold standard.

I

SUMMARY OF MAJOR CLAIMS OF MY FORMER PAPER

My former paper presented a small extension of the standard model of the gold standard (see e.g. Barro, 1979, or White, 1999, ch. 2). While this model deals only with the stationary states, I tried

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to analyze the *speed of the transition* from one equilibrium to a new one after a shock caused by «changes in gold mining, of industrial gold consumption, and of the impetus for holding non-monetary stocks of gold» (Kvasnička, 2007, p. 34). I have shown that the speed of the transition (and hence inflation) after such a shock depends beside others on the size of the monetary stock of gold relative to the size of the shock. I claimed that

1. the price of the gold held for non-monetary purposes (jewelry, investment in gold etc.) must be the same as the purchasing power of the monetary gold (which is the inverse value of the price level) in gold standard countries;
2. the gold market is subject to shocks that are nowadays very strong: the «gold inflation» (what would be inflation of a hypothetical gold currency given the fluctuations of the actual price of gold) ranged since 1982 to 2006 from -20% to more than 30 % with the standard deviation 12.7 % (in the decade before 1982 the price of gold was even more volatile), see p. 46 and fig. 6 in my former paper; for contemporary data look at www.research.gold.org/prices;
3. such instability is undesirable if gold should serve as money—it can cause price level instability and trade cycles;
4. historically, the price level was rather stable in the gold standard countries—it was stabilized by a great monetary stock of gold acting as a «cushion» against the above mentioned shocks (beside it, the shocks could be smaller in the classic gold standard era before the First World War than they are nowadays).

I concluded that a small country independently reinstalling the gold standard could have too small monetary stock of gold relative to the world gold market shocks, and it would not be able to stabilize the price level sufficiently. Its price level would then fluctuate in line with the world gold market: its rate of inflation (both its size and volatility) would be comparable to the calculated hypothetical «gold» inflation presented above. Moreover, the cause of the price level volatility—the swift changes in the stock of money— would cause severe trade cycles too.

II PRICE OF THE MONETARY AND NON-MONETARY GOLD MUST BE THE SAME

Prof. Howden criticizes almost all these claims. First, in section II-1, he tries to refute the claim that the «price» of monetary and non-monetary gold must be the same. (Notice that all models of the gold standard I am aware of are based on this assumption.) Prof. Howden impeaches it claiming that gold coins are different from other gold items, and must be priced separately. He says that «a store would not accept a bracelet or necklace on par with a gold coin», and that «People ... would be more apt to accept this “certified” gold more easily than the random pieces» (Howden, 2008, p. 161). This is true, but irrelevant. What makes the «price» of gold in all of its uses the same is not its acceptability in trade, but *arbitrage*. If the two prices diverge by more than a cost of minting or melting or hoarding as investment in a foreign non-gold-standard country, the arbitrageurs would buy gold in one form and transform it into the other one (free coinage is a part of the true gold standard). Arbitrage goes on until it makes the two prices almost equal. I neglected the transformation cost in my former paper to make the analysis more straightforward (as is the usual practice). The transformation cost is most likely much smaller than the fluctuations of the price of gold we have experienced in last decades: the transformation cost is in percents, or fractions of percents while the «gold» inflation is in tens of percents. Clearly, the transformation cost is too small to insulate the monetary gold in circulation from the non-monetary-gold market. For this reason the prices of the gold used for both monetary and non-monetary purposes must be practically equal. Then the stability of the price of gold is critically important for the users of gold money.

III
PROF. HOWDEN'S «STABILIZING POWERS»
ARE NOT SUFFICIENT TO STABILIZE THE GOLD
PRICE LEVEL IN PRACTICE

I claimed that the ability of the gold standard to dampen shocks depends critically on the size of the monetary stock of gold. Prof. Howden questions this claim in sections II-2. His analysis is not altogether incorrect, but the conclusions he draws from it are counterfactual. He claims that the stability of the price level under gold standard depends on the *total* stock of gold, not the *monetary* one. On p. 163, he says: «A confusion arises here between absolute and relative stocks. In an absolute sense, it is true, if the existing supply is quite large relative to the new supply, the shock therefrom will be relatively minimal. The difference here is that Kvasnička compares the new global stock supply to the small existing monetary supply a country may have. However, the new supply does not just enter the country's economy freely, but affects the total global demand for gold. Hence, only a portion of that new supply will affect the country's gold stock.» What Prof. Howden has in mind is this: let us suppose that there is one small country on the gold standard while the rest of the world is not. Let us suppose further that all markets are in equilibrium. Then the gold mining technology improves or new gold deposits are found, and the flow supply of newly mined gold increases, and more gold is mined than is irreversibly consumed at the actual price of gold. The surplus is added to the total stock of gold over the ground. The question is what part of this surplus is added to the non-monetary stock of gold, and which to the monetary one. Prof. Howden presupposes without any proof that major part of the surplus is added to the non-monetary stock of gold. However, it is not so. If there was equilibrium before the shock, then all subjects hold precisely the amount of non-monetary gold they want to hold at the actual price of gold. The price of gold must *change* (decrease in this case) to induce them to increase their holdings. And since the purchasing power of the monetary gold has not changed yet, the gold surplus goes where the price of gold would be higher: to the *monetary* stock

of gold. Only when the price level in the gold standard countries goes up (i.e. the purchasing power of gold decreases), some of the gold would be transferred to the non-monetary stock.

So far I have supposed that the monetary stock of gold is big enough to stabilize the price of gold for a while. If it is too small even for that (in which case the standard model of the gold standard does not apply), then what Prof. Howden expects might happen: the newly mined gold would be added to the non-monetary stock. However, in such a case the price of non-monetary gold must decrease to induce people to hold more of it. The purchasing power of the monetary gold (determined by the demand for money and the supply of it) would not change instantly. However, since the price level in the gold-standard economy is not insulated from the shock, gold will flow into the gold-standard country. If the gold-standard country's foreign exchange rate does not adjust immediately, all foreign importers would stop buying the gold coins on the foreign exchange market, and start to coin the cheaper non-monetary gold. If the exchange rate adjusts, the goods produced in the gold-standard country would get cheaper for the rest of the world (and vice versa), the exports from the gold-standard country would increase, imports into it would decrease, and the difference would be financed with the influx of gold. In any way, gold would flow into the gold-standard country, which would eventually equalize the price of the monetary and the non-monetary gold. The impact on the gold-standard country can be even worse in this case: if its price level adjusts with a lag (which is likely), then there can be an overshooting in its price level since the monetary gold floods into the country unless the purchasing power of the monetary gold is the same as the international price of gold.

In other words, there is some truth in Prof. Howden's claims: if the shock stems from the flow supply of newly mined gold, it is eventually dampened by an increase in non-monetary gold holdings, and by the increase of the irreversible gold consumption too. Moreover, it holds true the other way round too: if the shock stems from a change of preference for holding non-monetary gold, or from a change of the demand for the irreversible consumption of gold, the shock is dampened by the other two

factors. However, it is dampened only *after* the purchasing power of gold changes, i.e. the change of the gold price level is inevitable. How much these factors offset each other depends on their price elasticity. If these factors were highly elastic, then the shocks would (*ceteris paribus*) cause only small fluctuations in the price of gold. This elasticity cannot be guessed from an armchair, but must be estimated empirically. For our present purposes we do not need explicit estimates—we only need to learn what price volatility remains after these forces offset each other. It is easy to ascertain this because these forces (and only them) are at motion today. The actual volatility of the price of gold, which we observe today, is precisely what *is left over* after these three factors offset each other. We have seen in section 1 that the remaining volatility has been *enormous*. Thus Prof. Howden's theory is not incorrect—he only expects from these forces more than they can really deliver. (Prof. Howden's prediction based on calculations on pp. 163-4 that the price of gold will be stable is thus clearly counterfactual.)

I have taken all these supposedly countervailing forces into account in my former paper, and I defined the size of the shock precisely as the «surplus» of what was newly mined over what was irreversibly consumed plus what was immediately added to the non-monetary stock of gold (see the numerator of the term *A* in the equation 7, Kvasnička, 2007, p. 54). I searched for a mechanism that could stabilize the purchasing power of gold *beyond* what the forces considered by Prof. Howden can do. There *is* such a stabilizing element: the monetary stock of gold. If it is huge in comparison to the gold «surplus» mentioned above, its percentage growth (and hence the price inflation) could still be low. However, if only one small country independently reinstalls the gold standard, the resulting monetary stock of gold would be too small to dampen the shock.

Next, in section II-3, p. 165, Prof. Howden tries to defend the stability of the price of gold on still another basis. He says: «Kvasnička (39) seems to confuse, or at least not fully explore, the interworkings of supply/demand conditions, and the price of gold... The relationship that exists between supply, demand and price is quite complex... New supply of gold is determined

by the expected profit one can obtain from it.» However, all these «interworkings» have been already incorporated in the standard model of the gold standard and analyzed explicitly. For instance, the fact that «[n]ew supply of gold is determined by the expected profit one can obtain from it» is expressed in the shape of the «flow» supply curve. It is by no means true that these «interworkings» secure the stability of the price of gold. What they really secure is a) that the price of gold would be stable, if there are no shocks there, b) that some shocks would cause only transitory changes in the price of gold (see Barro, 1979 or White, 1999). To deny the fact that shocks do change the price of gold at least temporarily would mean to forget all we have learned both from the standard model of the gold standard, and from empirical evidence —remember that the actual prices of gold have been enormously volatile in last decades.

IV THE SHOCKS WOULD CAUSE TRADE CYCLES

In my former paper, I claimed that beside the price level volatility the gold standard could also cause trade cycles in a small economy that independently adopts it. In section II-4 Prof. Howden criticizes supposedly my statement that «trade cycles are caused by changes of the aggregate price level» saying that this is not true from the Austrian perspective (p. 166). However, he reads me out of context here. What I have really said is this: «... we may expect ... also more severe trade cycles. This conclusion is obvious to those who believe that trade cycles are caused by changes of the aggregate price level (as for example the Monetarists and other monetary-misperceptionists, or all of Keynesians do)...» (Kvasnička, 2007, pp. 42-3). Notice that I explicitly spoke about other trade cycle theories, not about the Austrian one here. Then I added: «but it holds good even if one sticks to the Austrian trade cycle theory. It is because the change of the price level is just a consequence of the previous *money* expansion or contraction» (Kvasnička, 2007, p. 43). The reasoning is wholly Austrian: when a shock of the kind we have discussed changes the size of the monetary

stock of gold (and hence the stock of money), it eventually leads to a change of the price level; but the change in the stock of money has other consequences too. According to the Austrian trade cycle hypothesis, if the stock of money is expanded, the credit gets artificially cheaper, the capital moves to more roundabout productions, and an artificial boom is invoked to be followed later by a bust. In the opposite case of money contraction, the opposite holds true. I pointed to works of Mises and Hayek for «the reasoning that a change in the stock of money itself causes a trade cycle regardless of a change in the general level of prices» in the footnote 4 (Kvasnička, 2007, p. 43). Prof. Howden clearly missed it.

V OTHER NOTES

Beside this, two more points must be clarified. First, Prof. Howden says «Kvasnička further seems to opine that one quantity of money in the economy is more optimal than any other» (p. 160). I have never said this obvious fallacy. The problem is that Prof. Howden wrongly identifies the empiric monetary stock of gold with the theoretic concept of money. Obviously, any nominal stock of money is as good as any other (if it is properly divisible). But the monetary stock of gold officiates two functions: it serves as money (or more precisely, part of it serves as money, while the rest serves as bank reserves), and it serves as a buffer against shocks. In its role of money, its quantity is irrelevant (though its changes are not); in its role of the buffer its quantity relative to the size of a shock is substantial for the *stability* of the monetary system. This has nothing to do with the fallacy that «one quantity of money is more optimal than any other».

Second, I said that an independent restitution of the gold standard in a single small country would cause its inhabitants troubles, and that to avoid these problems the gold standard would have to be reinstalled simultaneously in many countries, which could be achieved only by «the collective action of many countries of great economic power». However, I have never said

that I view such a collective action as desirable as Prof. Howden claims (Howden, 2008, pp. 173-4). I only said that the need for the collective action makes the return of the gold standard rather *improbable* in the near future.

VI SUMMARY

Let me summarize the above stated arguments. First, the price of gold has been extremely volatile in the last decades. Its volatility was caused by shocks affecting gold mining, irreversible consumption of gold, and desire to hold the non-monetary stock of gold. If a country reinstalls the gold standard, it would suffer from this volatility: it would suffer swift changes of the stock of money, erratic changes of its price level, and of trade cycles—unless there is a mechanism stabilizing the price of gold. Prof. Howden attempted to identify such mechanism: first, he claimed that the price of monetary and of non-monetary gold could be independent. However, it is a fallacy—arbitrage makes them the same. Second, he claimed that changes in the flow supply of newly mined gold, in the flow demand for it irreversible consumption, and in the stock demand for the non-monetary gold offset each other. He is right in principle, but we have seen that there has been enormous volatility remaining after they offset each other. Third, he claimed that some «interworkings» among supply and demand could eliminate the instability. I cannot see any theoretic reason for this (Prof. Howden provided none) and empirical data clearly disproved this statement. The only stabilizing power remaining is the monetary stock of gold, which might be insufficient to do that if the gold standard is adopted only by a small country (what is «small» remains an unresolved empirical question; I offered some tentative calculation in Kvasnička, 2007, p. 47-51).

I do agree with Prof. Howden (pp. 169-170) that «[w]hen viewing a currency's stability, this must be done in two way, reflecting the two functions money serves. First is the monetary function as a medium of exchange. Stability in this case is short-term focused.

Second, money must serve as a long-term store of value.» So far, I have focused on the time horizon of months or several years. In this horizon, the «gold money» (if adopted only in a small country) would fulfill both these function extremely poorly —much worse than fiat money issued by central banks of developed nations (compare their rates of inflation, both their values and volatilities, with the hypothetical «gold inflation» mentioned in section 1). In the very long run (centuries), the purchasing power of gold is much more stable than that one of any fiat money. Perhaps, this might be a good feature for long run investment, though people do not invest in gold because of its stability, nor because of its high return—it does not have any of these features—but because this very risky commodity is a very good portfolio diversifier since it is negatively correlated with most assets, see studies at www.gold.org. However, this very long run stability is practically irrelevant for money. Most people, if given an opportunity to choose, would adopt money which have a relatively stable and predictable purchasing power within a horizon of years. This condition is nowadays better fulfilled by governmental fiat money than by gold, the price of which changes quickly and erratically nowadays. My personal guess is that if the gold standard was indeed reinstalled independently in a small country, it would be abandoned again very soon because of the cost it would impose on its users.

VII

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