The Oil Drum
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

# Revisiting an April 2007 Forecast Regarding The Connection Between Peak Oil and the Collapse of the Monetary System

Posted by Gail the Actuary on October 13, 2008 - 10:25am
Topic: Economics/Finance
Tags: monetary system, original, peak oil [list all tags]

It is not a coincidence that just as we are hitting peak oil, world monetary systems seem to be edging toward collapse. Monetary systems are debt based, and depend on growth to continue. Resources are finite, and we are reaching limitations on them. Many of us have predicted that monetary systems may collapse, either as we approach peak oil, or shortly after peak oil. I have talked about the connection between peak oil and monetary system collapse in a number of posts. In this post, I reprint relevant sections from one of my earliest TOD posts, written in April 2007.

---

Back on April 30, 2007, Prof. Goose posted an article I had written called Our World Is Finite: Is This a Problem? as a guest post. In that article, I talked about the fact that we are reaching limitations on resources of many kinds, and that whenever we try to overcome one kind of resource limitation with a substitute, such as corn ethanol for gasoline, we run into other resource limitations. This is a where I saw things going, back in that early post.

By the way, I do not claim originality in predicting the connection between peak oil and collapse of the monetary system. Collin Campbell also predicted such a collapse as early as 2006. This video by Collin Campbell is from October 2007.

This is the section from my April 2007 post dealing with monetary collapse, and also the conclusion section from the same post:

**What if we don't find technological solutions?**

We can't know for sure what will happen, but these are some hypotheses:

1. Initially, higher prices for energy and food items and a major recession.

If the supply of oil lags behind demand, we can expect rising prices for oil and gasoline and possibly other types of energy. Prices for food may also rise, because oil is used in the production and transportation of food. Recession is likely to follow, because people will cut down on their purchases of discretionary items, so as to be able to afford the necessities. Layoffs will follow. People laid off will find it difficult to pay mortgages and other debt, so banks and other creditors will find themselves in increasing financial difficulty.

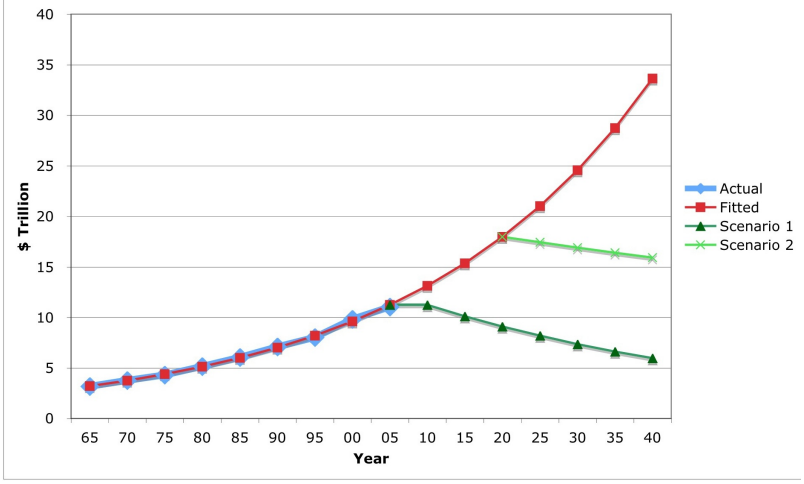
2. Longer term, a decline in economic activity.

With fewer resources, economic activity is likely to decline. We will need to find replacements for

many products in a relatively short time frame — heating fuel, transportation fuel, plastics, synthetic fabrics, fertilizer (currently made from natural gas), and asphalt, among other things. Living standards are likely to drop, because we don't have infinite resources for replacing all the things that are declining in availability.

A graphic representation of how this might happen is shown in Figure 3. Real gross domestic product (GDP) gives a measure of how much goods and services the United States is producing in a year, in constant (year 2000) dollars. The "Fitted" line in Figure 3 shows the expected growth in real GDP, if growth continues as in the past. Scenarios 1 and 2 show two examples of how limitations on oil and natural gas might impact future real GDP. Scenario 1 shows a fairly rapid decline, starting very soon. Scenario 2 shows a slower decline, starting in 2020. If the downturn is still several years away, we have longer to plan, and a better chance that the decline will be more gradual.

**Figure 3: US Real GDP May Decline**




3. Transportation difficulties and electrical outages.

Since transportation generally uses petroleum products for fuel, a reduction in the amount of oil available is likely to cause transportation difficulties. These difficulties may extend to all forms of transportation--automobile, trucks, airplanes, boats, and railroads, to the extent that fuel is unavailable due to shortages, cost, or rationing.

If natural gas supplies decline, electrical outages are likely, especially during high-use times of the year. Electrical outages may also result from interruption of transportation of other fuel, such as coal, to power plants, because of petrolum shortages. Outages may be one time events, or may be planned outages at certain times of the day, to compensate for an inadeqacy in the fuel supply.

4. Possible collapse of the monetary system.

This is perhaps the biggest single issue, and the most difficult to understand.

There is a huge amount of debt in the world today. When loans were made, the expectation of the lenders was that the economy would continue to grow as in the past--that is like the "Fitted" line in Figure 3 above. If this continued growth occurred, people, on average, would be a little better off financially when the time came to pay off their loans than they were when the loans were taken out, so they would have a reasonable chance of paying off the loans with interest. Corporations would continue to grow, and because of this continued growth, most would be able to

pay off their debt with interest.

What happens if a scenario like that shown as Scenario 1 or Scenario 2 on Figure 3 occurs? When it comes time to repay the loans, people and corporations will be on average, worse off, rather than better off, than when they took them out. It is likely that many people will be unemployed, and cannot pay back their debt. Companies manufacturing goods that are no longer in demand are likely to be bankrupt, and thus will be unable to repay their debt. Organizations holding this debt, such as banks, insurance companies, and pension funds will find themselves in financial difficulty, because of the many defaults on the loans that are the assets of these organizations.

Two possible outcomes of widespread defaults come to mind. One is that there is so much debt that cannot be repaid that banks, insurance companies, and in fact the whole monetary system fails. The other alternative is that the government guarantees all the debt, so that the institutions do not fail. The latter approach would likely lead to hyper-inflation.

In either event, people and businesses would lose their savings, because money either wouid either be no longer available (first approach), or would be worth very little due to inflation (second approach). In either event, foreign countries would be unlikely to accept our currency in trade. Simple transactions, such as purchasing food or paying an employee, would become very difficult. Eventually, some approach would likely be found to circumvent these difficulties--perhaps a more barter-based approach--but this would be a huge change from our current system.

5. Failure of economic assumptions to hold.

We have been raised in a world where supply and demand are generally in balance. An increase in demand results in a greater price, which in turn leads to a greater supply. If the particular item isn't available, substitution is generally available.

Once we reach geological limits, these basic principles seem much less likely to hold. An increase in energy demand isn't likely to translate into greater supply. Distribution of the limited available supply seems likely to reflect considerations other than price, such as rationing and long-term alliances. There may also be military conflict over available supplies.

6. Changed emphasis to more local production.

Two factors are likely to encourage local production and discourage international trade. One is the higher cost and/or unavailability of fuels used for transportation. The other is difficulty with the monetary system--either hyper-inflation or complete failure of the system. If there are monetary system problems, other countries are likely to want actual goods in trade, rather than IOUs or money. This requirement is likely to greatly reduce the amount of trade with foreign countries.

Food production is likely to be more localized, since this insures a continuous supply, and reduces the amount of fuel needed for transportation. If there are problems with shortages, people may choose to have gardens, so as to grow a few of the foods they need themselves.

7. Reduced emphasis on debt.

Once it is clear that future production is likely to be less than current production, as in either Scenario 1 or Scenario 2 of Figure 3, it will be very difficult to find any lender willing to provide long term loans, since if the loan is paid back at all, it is likely to be paid back in money that is worth very much less than it was at the time the loan was taken out.

If governments still have debt at this point, they will find it difficult to sell new bonds to replace the ones that mature. Businesses desiring to build new plants may find it necessary to accumulate resources for new plants in advance of their construction. Mortgages may not be available for prospective home owners, either.

8. Reduced emphasis on insurance and pensions.

If there are difficulties with the monetary system, insurance companies and pension plans will be among the hardest hit, since thy take in funds and invest them, and pay benefits later.

It is possible that a limited form of Social Security coverage may continue, but this is by no means certain. If a high level of inflation occurs (see point 4 above), benefits that have been promised to date will be worth very little. If a new monetary system is in place, it will be up to the government at that time to determine the level of benefits. Because total goods and services will be lower in the future (Figure 3 above), benefits to retirees will almost certainly be lower as well.

9. More people will perform manual labor.

As the amount of oil and natural gas becomes less available, more work will need to be done by hand, since the fuels to run machines will be less available. In order to encourage people to take jobs involving manual labor, manual labor will pay better in relationship to desk jobs. Because food is such ain important commodity, farming may be particularly highly valued, and may pay especially well.

10. Resource wars and migration conflicts.

If there is is an inadequate amount of a resource (water, oil, natural gas, or food), countries may fight over the limited supplies that are available. Conflicts are likely to spring up regarding areas where resources are plentiful.

Alternatively, people may choose to migrate from an area if resources become less abundant--for example, migration may occur if water supplies dry up, or if land is flooded due to global warming, or if declining oil supplies limit transportation. Receiving areas may not welcome the newcomers, leading to more conflict.

11. Changes in family relationships.

Families are likely to see more of each other, because of reduced transportation availability. Families may work more closely together, tending gardens and running small family businesses. Co-operation may be more highly valued by society. Divorce rates may decline.

12. Eventual population decline.

The food supply produced in the world today is many times greater than the food supply 100 years ago, before oil and natural gas were used in tilling crops, pumping water for irrigation, making fertilizer and pesticides, and transporting food to market. As oil and natural gas become less available, the food supply is likely to decline. Eventually, world population is also likely to decline, reflecting the lower food supply.

## Conclusion

We cannot know exactly what the future will hold, if technology is not able to overcome the many issues associated with a finite world, including declining oil and natural gas supply, decreasing

fresh water supply, and climate change. Whatever changes occur are likely to differ from location to location, as the world activity becomes more localized.

We tend to think of governments as fairly stable, but these too may change. Countries may subdivide into smaller units. Some have even suggested that groups of states may break away from the United States.

Educational institutions will most likely change. Fewer students will probably attend colleges and universities, and the subjects of interest will likely change. The sciences and agriculture or permaculture are likely to be topics of interest. More students may want to live on campus, if transportation is a problem. Adult education may become more important, as people seek to develop skills for a changing world.

Businesses will also change. Local businesses will become more important, while multinational companies recede in importance. Manufacturing will become less important, and recycling will become more important. Providing necessities will get top priority, while nice-to-have items will not sell well. Barter, or a new monetary system that substitutes for barter, may be the way business is done.

People may choose to live closer to work, or may work at home, so as to minimize costs associated with commuting. Some people may choose to live with relatives or friends, so as to save on utility costs. Eventually, many homes in undesirable locations may be left empty, and the parts of these unoccupied homes that can be used elsewhere will be recycled.

The next 50 years will certainly be interesting ones. Perhaps, with technological advances, some of the potential problems can be avoided. But we will need to work hard, starting now, to develop ways to work around the problems which seem to be ahead.