Kondratieff Long Waves Unsynchronized---KLUWs--- at Last?

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A "new" hypothesis of Kondratieff long wave(s)

Some simple statistical compilation suddenly wakes me up to a new hypothesis of "Kondratieff Long but Unsynchronized Waves" (KLUWs) for world capitalism, ironically in the era of globalization! We should have known: Japan, if it represented capitalism, has surely been in the downwave and Kondratieff's followers should have already claimed victory. Germany has also been in some kind of troubles, although the political unification and euro-ization processes complicate intelligent analysis. Yet the US seemed to be enjoying life so easily, albeit after some painful actions in the 1980s, until the recent bust of the IT bubble, which now threatens to have much wider repercussions.

Is it true that the pillars of world capitalism enter the downwave one by one, in an unsynchronized manner? If true, has it something to do with globalization, especially in international finance, so that the fluidity in capital flows actually de-synchronizes entry? That is my feeling.

Long wave? Long waves? Synchronized or Unsynchronized? At last? Well, let's go.

Short run optimism and pessimism about the US economy

In the short run, there are both positive and negative factors affecting the prospects of world capitalism. To start with the bad news first (assuming that we are all quite immune to psychological shocks now): the key is of course the economic health of the US after such a long spell of expansion and the euphoria about the "new economy". But then there emerge the falling, indeed plunging, stock indexes and various signs of discomfort.

Optimists have a lot of faith in the almost infallible Fed Chairman Alan Greenspan's ability to fine-tune; and the recent cuts in the US Fed Funds Rate were hailed as a master stroke (except perhaps the 0.5% lowering on 20 March, which was a disappointment to some). They are forecasting something between the "V, U" shapes. Pessimists, fearing an "L" shape scenario, retort by saying that it is not the interest rate that matters. Rather, it is the expectations of poor revenues and profits that have driven down stock prices and led to a frightening phenomenon: credit tightening and rationing by banks and heightened sensitivity in the bond and equity markets. So even large corporations have had to resort to bond issues at incredible costs: prime plus 5 or 6 or 7%! These instruments are resembling junk bonds. Reducing interest rates is like pushing a piece of string: creditors and investors are not concerned about the cost of funds or the rate of returns. They are worried about the prospects of eventually getting their money back!

Don't forget Japan, where near zero interest rates yield no help. Is this the famous Keynesian "liquidity trap", of the 21st century kind? Or is it the more ominous story of "debt trap" that I described in another piece on this web page (Tsang 1999)? Under such a situation, even responsible or irresponsible "inflation targetting", a là Svensson/Krugman, won't work. Debt-trapped investors and consumers couldn't care less whether the CPI is finally rising by a few percentage points. What are needed are financial restructuring and debt rescheduling, and a revival in aggregate demand! Is the US sliding down that slippery path?

A different kind of boom and bust

My "long wave" itch is coming back. In a paper I wrote more than a decade ago (Tsang 1988), I listed four major theories explaining the long wave:

1. Over-accumulation: Self-ordering of capital goods in the upwave causes productive capacities to become unrealistically large.
2. Under-consumption: Distribution of wealth and income shifts in favour of capital in the upwave. Widening inequality consequently puts a brake on the general demand for goods and services produced by capital.
3. Population cycle: A baby boom, because of political and social reasons, brings ample labour supply and a lot of demand. Driven by prosperity, people become increasingly materialistic and pleasure seeking. Fertility drops significantly and a population bust sets in, dragging down aggregate demand with it.

4. Technological cycle: The upwave generates excessive investment in a new mode of technologies, which eventually becomes conventional. Problems in realizing profits and validating debts dampen interest in R&D. Radical technologies find it hard to emerge and be financed. Technological stalemate occurs, adding to the gloom of the downwave.

All four sets of phenomena are linked and may be mutually reinforcing. Put it in a nutshell, and one can say that the downwave (a prolonged period of economic decline) is a result of over-investment in traditional or outmoded technologies made worse by insufficient consumption of a stagnant labour force. The end result is over-supply of inefficiently produced goods and services which faces a shrinking market. Realization (of profit) crisis (and indeed debt crisis) would emerge. Before that turning point, financial euphoria usually occurs and represents the last agony of "too much paper money chasing too few profitable, productive activities".

In another piece (Tsang 1999), I tried to understand why my prediction was wrong in the 1980s. Apparently the IT revolution and the globalization process have done the trick, and the US, with its downsizing and restructuring, was the first one to emerge from the technological stalemate and to generate a virtuous circle of supply and demand. But was it fluke, an accident or a result of far-sightedness?

In any case, it would be premature to regard the "new economy" as the herald of another worldwide upwave. Over-investment in IT and excessive expectations of demand for IT are now weighing heavily on the US economy and its financial markets. Even *The Asian Wall Street Journal* (2001) said the following a few days ago:

> "The message from corporate America to Silicon Valley: It is more than just the economy, stupid. And that goes a long way toward explaining why the tech slowdown has been sharper than almost anyone expected. It also suggests than even if Tuesday's half-point interest-rate cut by the U.S. Federal Reserve reinvigorates capital spending, a tech-sector comeback could still be a long way off."

I warned about the euphoria in an article "Behind Economic Globalization and the Amazing IT Stock Boom", again downloadable on this web page of mine (Tsang 2000). "Cyberspace nirvana" was contrasted with a probable "internet implosion". Well, the NASDAQ is 60% off its peak just in a year's time!

Should I be glad that my re-interpretation of Kondratieff's famous conjecture and warning about the IT myth find some echoing in unexpected quarters? As I said, over-investment-cum-under-consumption over a stretch of decades is supposed to be the major driving factor behind the long wave, made more complicated by population and technological dynamics. The aggregate phenomenon is very much different from the inflation-deflation cycle of shorter durations. Now even the *Economist* recognizes this difference (*Economist* 2001); so is allegedly Lawrence Summers, the ex-Treasury Secretary of the US and incoming president of Harvard University. Non-inflation is a sign of trouble, signaling over-investment and under-consumption. It is not an expression of economic health. Interestingly, during the Japanese stock market bubble of the late 1980's, for example, inflation was not a problem at all, as shown in Table 1.

Table 1 Stock Market Bubble and Inflation in Japan

	1985	1986	1987	1988	1989	1990	1991
Share Prices	72.2	95.9	141.8	154.4	186.1	158.0	133.4
Wholesale Prices	119.7	108.8	104.7	103.6	106.3	108.5	108.7
Consumer Prices	87.4	88.0	88.1	88.7	90.7	93.4	96.5

Notes**:** *Yearly average indexes; 1995 = 100.*
Source**:** *International Financial Statistics, IMF.*

The drug was, and still is, obsession with star-like heroism: Japan for its alleged super economic model of the 1980's, and the US for the "new economy" and "IT revolution" of the 1990's. Behind them has actually been the fundamental imbalance in global capitalisms---the "narrowing field of profitability". Fund managers rushed to every bright spot on the horizon, over-invested in it, and then hoped to get out soon enough. In the meantime, they would almost forget the previous "miracle", e.g. Japan, and then East Asia. This sort of herd behaviour is, I think, the main reason why long waves in different advanced economies are de-synchronized! In any case, the US financial sector has excelled in doing or over-doing this sort of tricks. The elite has accumulated huge wealth in the "roaring 90's". Now many members of the "club" have to keep their fingers crossed, after the dramatic declines in NASDEQ and other hi-tech stocks.

Over-investment and technological restructuring: how did the US do it?

In Tsang (1988), the crux of my recommendations to "alleviate" the downwave pains and to expedite the exit from the abyss is as follows.

> "What we should aim at is the restoration of balance in the world economy on a course of sustained growth, rather than down a self-destructive spiral. In principle, the solution is simple enough, given the diagnosis. Since the down-wave is generated mainly by over-investment (in) declining industries coupled with under-investment (in) emerging technologies, insufficient purchasing power due to widening distributional inequity, as well as shrinking new labour supply from an aging population, what are needed are obviously an appropriate restructuring of investment and distribution and suitable policies on population and technological development.
>
> Over-investment in those declining industries in the advanced economies should be channeled to the sunrise industries through appropriate industrial policies including, if necessary, some administrative measures, and, preferably in the context of capitalist economies, fiscal incentives of subsidy and taxation. These policies should also be used at the same time to effect a more equal distribution of wealth and income, and to stimulate aggregate demand for the products of the sunrise industries."

It seems that the US has followed my recommendations rather closely, by design or by default. Downsizing and restructuring of the "old economy" have destroyed quite a bit of the conventional technologies, while the Silicon Valley emerged as the Mecca of the "new economy", touching off the IT and Internet revolution. Stagnating population is never a serious problem for the US, given its liberal immigration policy. Although income distribution worsens, but the fact that the US has almost been alone in being the locomotive of the world economy, and certainly the leader in the drive towards globalization, has resulted in the country earning huge profits from the rest of the world, thus making its own widening income gap tolerable.

The other two pillars of the world economy, Germany and Japan, were far less robust. Vested interests in old technologies seem to have been very strong, and over-investment takes a much longer time to redress. Both countries, in particular Japan, have had very little population growth, if at all. (Germany of course had a sudden, one-off increase because of the political unification.) And their migration policy has been rather inflexible.

Table 2 Average Real Growth Rates of Gross Fixed Capital Formation (GFCF) and GNP/GDP in US, Germany and Japan (unit: %)

	Annual Real GFCF growth			Annual Real GNP/GDP growth		
	US	Germany	Japan	US	Germany	Japan
1950's	2.35	11.51		3.30	8.86	
1960's	3.62	4.98	13.59	3.78	4.48	11.70
1970's	3.62	1.53	3.40	2.81	2.73	4.67
1980's	2.00	1.46	4.17	3.18	2.24	4.12
81-85	(2.38)	(-1.75)	(0.90)	(3.12)	(1.16)	(3.73)
86-90	(1.63)	(4.77)	(7.54)	(3.24)	(3.34)	(4.50)
1990-99	4.40	2.89*	-1.12*	3.13	2.77*	1.33*
91-95	(2.53)	(5.08)	(-0.76)	(2.38)	(3.57)	(1.44)
96-99	(6.78)	(-0.68)*	(-1.81)*	(4.07)	(1.45)*	(1.15)*

***Notes**: *The percentages for Germany and Japan are up to 1998 only. The growth rates for real GFCF are obtained by using GNP/GDP deflators.*
***Sources**: International Financial Statistics, IMF, various issues.*

Table 2, using very rough calculations, still provides interesting data on the differing predicaments of the world's three major capitalist economies. It appears that Germany (West Germany) was the first one to experience the problem of over-investment and under-consumption. Moreover, before the unification, her population growth was one of the lowest in the world, sometimes under the replenishment level. As shown in the table, its investment exploded in the 1950's and

1960's (largely as a result of the Marshall Plan) but shrank miserably in the 1970's and the first half of the 1980's. Then the next decade saw some dramatic increases, partly driven by the political unification with East Germany. For the last few years of the 1990's, the record again turned negative. It is not clear at all that Germany has done the painful but necessary job of downwave cleansing, and gets itself prepared for the next upwave.

Japan was the next of the key capitalist economies to enter the downwave, and its fate seems to have been much more coherently sealed, so to speak. Explosive expansion in investment in the 1950's-1960's and continued activism in the 1970's were tempered by the oil crisis. The came the vision of "Japan as Number One" of the second half of the 1980's, when the core Tokyo metropolitan area was valued as more expensive than the whole of California, in terms of property prices. The slow-motion decline since then has been well documented, and Table 2 is just another testimony. That is the nearest thing we can term as a Kondratieff long wave in a single capitalist economy.

The US story, however, is quite different. The upwave was not as spectacular, nor was the downward adjustment, compared with Germany and Japan, as yet. This may mean that the necessary cleansing has not been properly done.

Uneven world developments and choosy eyes of financial globalization?

Back to the Wall Street, we'll soon know whether the optimists or the pessimists are correct. In the past decade, the US economy has had almost exclusive fun of its own. Europe was so absorbed in its efforts of nurturing the EMU, and Japan was and is in such a sorry state, so sorry that an increasing number of commentators would call it "terminal". That was why the world of fund managers got so excited about the "East Asian Miracle", as an alternative to investments in the US. But that "miracle" went bust, which further fuelled the "new economy" bubble. The latter itself has now also gone bust, hurting even its elder counterpart. In any case, given the continuous drop in private savings (household debt is now over 100% of personal disposable income), the debt ratios, built up over the roaring 90's in the hope of an unprecedented era, which are mirror images of ill-judged over-investment and over-spending, are frightening, as Table 3 testifies. It would have been even more frightening if not for the improvement in government finance.

Table 3 Rising Debt Ratios in the US

Unit: billions of US dollars

	Domestic credit Claims on Private Sector		Total debt Seasonally adjusted
1950	57.1 (19.9)		
1960	213.8 (45.3)		
1970	564.4 (56.0)	790.7 (76.1)	1416.8 (136.3)
1980		2174.5 (77.8)	3934.2 (140.7)
1985		3578.8 (84.9)	7068.4 (167.8)
1990		5343.9 (92.1)	10825.0 (186.5)
1995		7528.5 (101.7)	13705.9 (185.2)
1999		13167.7 (142.3)	17381.1 (187.8)

Notes: *The bracketed numbers are debt-to-GDP ratios in percentages. For domestic credit-claims on private sector (including both businesses and consumers), the pre-1970 figures are taken form the "monetary survey", while the post-1970 statistics are adopted from the "financial survey", which covers a wide range of non-bank financial institutions. Total debt uses "national definitions".*
Sources: *International Financial Statistics, IMF, various issues.*

It appears that the long wave may have been segmented into "regional" parts: Germany, Japan, and the US. This multi-polar phenomenon is an irony in the era of globalization. But the irony seems less incomprehensible if we look at the dynamics of technological dominance and the global supply-demand imbalance. Surely, a leading country with economic and technological superiority can seemingly do whatever it likes in the short run, until its finds its own environmental constraints and biting limits! That may well be the fate befalling the US.

On the other hand, worldwide fluid flows of hot money and warm funds would tend to segregate more brutally winners from losers on the international scene. In the calmer times of the 19th century and early 20th century, all the four factors of the long wave (i.e. investment, consumption, population and technology) played out without the over-zealous attention of international fund managers, not to say that of powerful speculators of the Soros kind. In other words, capitalist economies then moved more in tandem under less choosy eyes. Who then could have transferred millions of pounds across the Atlantic to speculate against the relative prospects of the UK and the US as the leader in the upwave or the main loser in the downwave? Kondratieff was presumably observing and theorizing about the capitalist world in such a "less impulsive" (T plus n-years) environment.

Now with the choosy eyes finally turned on the US economy, is it possible that the last pillar of the world economy has also entered the downwave?

References

Economist (2001) "What a peculiar cycle", 8 March.

The Asian Wall Street Journal (2001), "Broader Slowdown Isn't Only Problem For Tech Industry", 22 March.

Tsang Shu-ki (1988) "My Views on the Present Maladies of the World Economy and Recommendations to the Economic Summit of the Developed Countries", in The Asian NIEs and the Economies of the Developed Countries: The Views from the Asian NIEs, Tokyo Club Foundation for Global Studies, October, pp.133-158.

Tsang Shu-ki (1999) "Long Wave, Globalization and Technological Salvation", article posted on www.hkbu.hk/~sktsang.

Tsang Shu-ki (2000) "Behind Economic Globalization and the Amazing IT Stock Boom", article posted on www.hkbu.edu.hk/~sktsang.