CURRENCY WAR BY JAPAN: CAN IT WIN?

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Abstract:

The global economies are facing a war of competitive depreciation of their currencies to further their domestic growth by boosting exports. Among other economies, Japan has also entered this game since 2013. Does such a policy lead to a long term growth or does it just sparks a zero sum game where no one wins? The period under study is post the financial crisis from 2010 to 2014 during which many nations of the developed world including Japan undertook competitive weakening of currency to boost exports. Pearson's Correlation and Johansen's test for Co integration is used to test the long-run relation between currency value and exports in Japan.

Key words: Depreciation, Currency war, Co-integration, zero-sum game

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Introduction

Despite a chronic stagnation in the economy, Japan still accounts for 8% of the global GDP. In order to boost domestic growth, Shinzo Abe has taken up a spate of policies. These include quantitative easing, the latest being on October 31st 2014, fiscal stimulus and structural reforms. Since its latest round of quantitative easing, the yen has by 5% against the dollar and Chinese renminbi. Since 2012, the yen has depreciated by 20% against a trade weighted basket of currencies. Depreciation has thus become a continuous feature of Japanese monetary policy. Depreciation boosts exports of a country and is therefore considered a way to spark growth especially if the domestic consumption is largely stagnant. However, like Japan many other countries have taken up similar monetary policies sparking rounds of the so called beggar thy neighbour devaluation also known as the currency war.

Currency war or competitive devaluation is described as a situation where countries compete against each other to get a bigger slice of international markets by deliberate monetary policies to weaken their currency. Brazil finance minister Guido Mantega introduced the phrase of a "currency war ".The most debated of such deliberate weakening of the currency was by China over the value of Yuan in the period 2010-11. In January 2013, Japan announced measures to revive its economy which led to a weakening of the yen and sparked off a concern of a renewed currency war except now it was no longer China vs US but Japan vs the Euro zone. For a global currency war to evolve, all trading partners will start responding. In fact it is already evident. Bank Of Korea, Reserve Bank of New Zealand and Israel have already opted for policies which will lead to competitive devaluation. ,

However the outcome of such deliberate weakening of yen is no longer certain. Japan is said to have lost its edge in innovation of products. The demographics in Japan with an aging population are unfavourable for productivity as well as domestic consumption. Corporate profits in Japan as a percentage of GDP is much higher than anywhere else thus reducing income flows to the consumers. Devaluation might work in the short run in such circumstances but long run growth of the economy requires structural changes and exports can also be permanently improved by increasing competitiveness not by pricing alone but by greater innovation and higher productivity. This paper seeks to examine the impact of yen devaluation in the short run as well as in the long run.

Devaluation/ Depreciation and impact on exports

When a country is facing a slow down with lack of demand and consequent unemployment, export led growth can be an alternative by reducing the value of the currency by monetary policy or otherwise. A lower value of the domestic currency will make exports cheaper and imports more expensive and thus encourage domestic exports and consequently domestic production. According to the Marshall Lerner condition devaluation will or depreciation will result in a balance of trade improvement if the sum of the absolute elasticity of demand for exports and imports is equal to or greater than one. Since elasticity increases in the long run only, the devaluation might actually worsen the trade balance initially. Only after a period substitute to imports become possible and the balance will actually improve. The graphical exposition of the concept is the "J" curve of international economics. Emerging economies also benefit from devaluation as increasing exports and lower imports albeit after a period of time leads to accumulation of forex reserves.

Literature Review

According to the IMF, 'it is what happens when countries are *"manipulating exchange rates…to gain an unfair competitive advantage over other members…"* To use the language of the 1930s, this manipulation would be a kind of beggar-thy-neighbour policy, with each country seeking to shift net exports toward its own goods at the expense of its neighbours'.

Brazilian finance Minister Guido Mantega in September 2010 highlighted the negative impacts of quantitative easing in the United States. Mantega explained that while the U.S. used unconventional monetary policies to ward off deflation and stimulate a depressed economy it caused pain to the emerging economies where large capital flows led to inflation, currency appreciation, loss of competitiveness and worrisome upward pressure on asset prices (Eichengreen, 2013).

Eichengreen and Sachs (1985, 1986) have explained competitive devaluation or depreciation of currencies with the help of historical evidence and a two-country Mundell Fleming model in the 1930s. The monetary and exchange rate policies helped to raise real asset prices (Tobin's q),

stem deflation, to raise expected future inflation, encouraging households to shift consumption to the present from the future and to stimulate net exports, further increasing the demand for domestic goods (Eichengreen, 2013). In fact Eichengreen and Sachs (1985, 1986) argued that devaluations by economies in the 1930s did not lead to the collapse of economies, but rather contributed to the recovery of nations. They argued that the reflationary policies of the 1930s led to recovery of domestic equity markets and economic growth, leading to positive spill over effects on other countries, helping the global economies recover.

Monetary expansion achieved through conventional or unconventional means can be effective under conditions of near-zero interest rates by creating inflation by keeping interest rates low, expanding supplies of money and credit, and raising the domestic currency price of gold for as long as it took for conditions to normalize. Also by a positive impact on asset prices and therefore on investment with industrial production reacting immediately to the change in asset prices and thirdly by the real exchange rate effect on competitiveness with the expansion of exports taking place at the expense of other countries, worsening the latter's economic difficulties.

Haberis and Lipinska (2012) state that domestic country's expansionary monetary policy when interest rates are zero bound, leads worsens the foreign policymaker's trade-off between stabilizing inflation and the output gap when domestic and foreign goods are close substitutes. This can be attributed to the domestic policy leading to appreciation in the foreign currency causing large shifts in spending away from foreign output when goods produced by the two countries are close substitutes.

In the recent episode, when the U.S., the Eurozone, the United Kingdom and Japan once again all experienced broadly similar deflationary pressures, quantitative easing bringing about some currency depreciation. In fact Japan recently went to the extent of stating that yen depreciation as an explicit goal. Dekle and Hamada (2014) argue that if an expansionary monetary policy in Japan actually can have some positive spillovers for the U.S. despite a Japanese monetary expansion induced exchange rate appreciation. They explain this stance putting forth that while a monetary expansion induced currency depreciation in one country can hurt the output of the other country, if a monetary expansion causes a global expansion in GDP, say from an increase

in equity prices, and then both countries can benefit from the monetary expansion in the one country.

Further, McKinnon and Liu (2013) explain that the large quantitative easing by the Bank of Japan (BOJ), weakened the yen close to 25 per cent against the dollar, thereby restoring the purchasing power parity of the yen with the dollar towards the long run equilibrium. Although in the short run, the yen depreciation could adversely affect the smaller East Asian economies. The quantitative easing by the US Federal Reserve, the Bank of England, and the European Central Bank and BOJ after 2008 have led to near-zero interest in these economies causing harm to the countries' financial systems, and to those of emerging markets, which naturally have higher interest rates.

It is the emerging economies that suffer in these currency wars as they are exposed to the ill effects of the introduction and removal of such currency management by central banks of USA, Eurozone, Great Britain, Switzerland, Japan, and China (Włodarczyk, 2014).

Objective of paper

Given the current scenario of 'competitive devaluation' by developed economies, this paper has aims at particularly studying Japan and analyse whether the devaluation of the yen has been boosted growth through increase in exports and secondly whether this export-growth oriented strategy will be beneficial in the long.

Data and Methodology

The two variables under study are currency rates and exports of Japan. Both the data series are from the official website of Bank of Japan. In order to prove whether the devaluation of the yen has boosted growth in Japan through increase in exports in the short-run, the data period is 2013-14. During this period the yen has been steadily depreciating against the US dollar.

Source: tradingeconomics.com

The yen to USD monthly data is juxtaposed with Japanese monthly exports for the period January 2013 to November 2014. In order to study the short-run effects of currency depreciation, the data is tested for Pearson's correlation coefficient.

In order to analyse the long-run impact of currency depreciation, the period under study is January 2010 to November 2014 monthly data series of yen to USD and Japanese exports monthly data. After studying the data for Stationary – the Augmented Dickey Fuller test, the long-run impact of currency on exports is tested through the Johansen test of Co-integration.

Results

Short run:

Correlations

		Yen to US $	Jap exports
Yen to US$	Pearson Correlation	1	.790**
	Sig. (2-tailed)		.000
	N	24	24

japexports	Pearson Correlation	.790**	1
	Sig. (2-tailed)	.000	
	N	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

The above table shows that as the Yen has depreciated against the USD through the period 2013-14, exports in Japan have increased. The Pearson's correlation coefficient is 0.790 and it is statistically significant.

Long Run:

Unit Root: Both the data series are stationary at I (1) according to the data tables

Null Hypothesis: D(YEN) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.585576	0.0001
Test critical values:	1% level	-4.127338	
	5% level	-3.490662	
	10% level	-3.173943	

*MacKinnon (1996) one-sided p-values.

Null Hypothesis: D(JAPANEXPORTS) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.376999	0.0000
Test critical values:	1% level	-4.127338	
	5% level	-3.490662	
	10% level	-3.173943	

*MacKinnon (1996) one-sided p-values.

The results for the Johansen test of Cointegration:

Date: 02/03/15 Time: 21:59

Sample (adjusted): 2010M03 2014M11

Included observations: 57 after adjustments
Trend assumption: Linear deterministic trend

Series: YEN JAPANEXPORTS
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.184683	11.91213	15.49471	0.1612
At most 1	0.004795	0.273975	3.841466	0.6007

Trace test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

The analysis shows that although depreciation of the yen has proven beneficial to Japan in an increase in exports, in the long run this strategy will not work as exchange rate and exports in Japan are not related to each other.

Why Japan cannot benefit in the long run?

Since the end of 2012, Japanese yen fell by 22% but export volumes actually fell by 1.5% in 2013 and 0.45 between January and august 2013. Currency wars have been described as a zero sum game as no country can benefit from a weaker currency if its competitors also follow a similar policy. In spite of the weakening yen, Japan failed to gain significantly as the yen weakened as its trading partners were still recovering from the global crisis. Another reason cited

is auto exporters have absorbed the gains from exchange rate by increasing their profits. This perhaps is justifiable as the same industry had made losses in the years of the strong yen. Japanese industry has also slowed down in product competitiveness as compared to its rivals especially in the electronics industry. More Japanese manufacturing firms are shifting their base overseas and have less exposure to the yen. For all these reasons, Japan might not benefit from a deliberate weakening of the yen. Instead the country already battling with the return of " the lost decade" might face domestic cost push inflation due to imports becoming more costly especially oil. In short it is the market fundamentals that determine the level of foreign exchange. Deliberate devaluation of currency through monetary policy can only work if it is not copied by other trading partners. In absence of that all competing economies will fall into a vortex of weakening currencies without any real gain to their economies.

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