



TUDOR

INVESTMENT CORPORATION

A TALE OF TWO POLICIES

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Our extraordinary times offer extraordinary opportunities, but as with most opportunities, there will be winners and losers.

Economies in the developed world find themselves with unemployment levels not seen since the Great Depression. The response from respective governments has been massive fiscal stimulus in conjunction with monetary easing. And now many of these governments, having exhausted all fiscal stimulus measures that are politically feasible, are about to embark on another round of quantitative easing. The Bank of England, the Bank of Japan and the US Federal Reserve have implemented, or are considering implementing, significant rounds of government securities purchases.

Will these measures actually succeed in lowering the chronically high levels of unemployment? Or are the unemployment problems of these countries so structural in nature that these policies will have only limited impact?

We've enlisted modeling and forecasting firm Macroeconomic Advisers, LLC to assist with answers to these questions. But, first, a story: About ten years ago I had an acute case of plantar fasciitis in the left foot, a condition in which the fascia, or the covering right beneath the skin, had become highly inflamed. I asked Pete Egoscue (egoscue.com), a renowned postural specialist but one without medical training, to take a look at my foot. Pete had, after all, healed a number of people I knew, including my wife. Because Pete was self-taught, I was a skeptic – as any good trader would be. Pete said that he did not need to look at my foot because my foot was not the problem – a response that suggested I was dealing with a quack. But I was patient and continued to listen. He proceeded to explain that the pain in my left foot was the consequence of a structural, postural deficiency in my hip alignment. My right hip was rotated in such a fashion as to make the left side of my body do all the work and bear all the weight, culminating in the inflammation of my left foot. “The pain you feel in your left foot is just the symptom,” Pete said. “If you treat it symptomatically and ignore the structural issue, you will never solve the problem.” I did not immediately grasp the full meaning of his words, but I followed his prescription,

¹ With contributions from Alberto Musalem, Director of Global Research.

and in a few days the pain was gone. Some time later I realized that those words were probably the wisest I have ever heard from any human being, and that they apply to more than just the human body.

The developed world, and the United States in particular, is suffering an economic malaise the likes of which we've seen only rarely in the last 100 years. Policy makers are searching for solutions, but they are too focused on the painful *symptoms* of unemployment to see the misshapen *structure* causing it. In so doing, they are presenting some of the more wonderful trading opportunities in quite some time: winners and losers.

The root cause of the unemployment woes is quite obvious. In the United States alone, in the last two decades, nearly six million jobs in manufacturing have been lost overseas. This equates to nearly four percentage points of the current 9.7% US unemployment rate. As importantly, the migration of these jobs contributed to the most unsustainable economic imbalance in the world today – China's persistent bilateral trade surplus with the United States. During the last decade, China accumulated almost \$1.4 trillion of US debt and at least \$2.3 trillion in global assets. These figures could grow to \$3.8 trillion and \$7 trillion, respectively, over the next decade if the current renminbi/US dollar (RMB/USD) exchange rate continues to be artificially suppressed from appreciating.

One entity owning this much debt of one debtor, let alone a foreign government, creates too much risk concentration, and has possibly repressed volatility for debtor and creditor alike. The risk may seem manageable now, but who knows what the nature and temperament of the Chinese and American leaders will be in ten years? Isn't it possible that either side could weaponize financial imbalances to the detriment of domestic and global stability?

How did we get here? On January 1, 1994, China devalued its currency by 50% in a single day, and since then has experienced a manufacturing boom. After 15 years of impressive productivity gains relative to its trading partners, though, it now resists the smallest appreciation. (The IMF implies the RMB could be as much as 30% undervalued taking 2000 as a base, but absolute purchasing power parity would argue that undervaluation is even greater – possibly as much as 60%.) Clearly, there is a direct correlation between the six million manufacturing jobs lost in the US and the close to twelve million manufacturing jobs gained in China over the last two decades. Robert E. Scott, a Senior International Economist and Director of International Programs at the Economic Policy Institute, estimates that the growing trade deficit with China, a partial consequence of the undervalued RMB, cost the US 2.4 million jobs between 2001 and 2008 alone, the equivalent of 1.6% of the current unemployment rate.

As someone who has traded foreign exchange since 1980, I believe the RMB/USD rate is currently the single most important of all exchange rates. It not only drives the largest foreign trade relationship in the world, it also drives virtually every other exchange rate globally. Dozens of other emerging market countries suppress their exchange rate against the US dollar because the RMB is effectively pegged to the dollar. And what is remarkable is the lack of any concrete policy initiative in the US to change this. For several years, the US Treasury has threatened to name China as a currency manipulator² but has always found a basis for avoidance. Even if Treasury cited China, it would just set in motion more negotiations that would likely go nowhere. The lone serious attempt to impose a cost on China's distortion of global financial markets this year was congressional action on the Currency Reform for Fair Trade Act, known as the Ryan Bill, which would allow US companies to file complaints against China's currency policies with the Commerce Department, and would empower the Department to levy tariffs and countervailing duties on imports from China. The Ryan Bill passed in the House of Representatives a few weeks ago by a vote of 348 to 79 but is stalled in the Senate. It drew immediate ire from the Chamber of Commerce as well as from eight former US Trade Representatives to China. But it was the very advocacy of the Chamber of Commerce and those Trade Representatives that led us to our current trade deficit. As Einstein said, "Problems cannot be solved by the same level of thinking that created them."

That so many Americans continue to accept this suppression of a variety of exchange rates against the dollar is probably a function of the fact that for so long this suppression provided benefits such as cheap goods and cheap credit. In addition, for a while, manufacturing jobs seemed to be replaced by jobs in the service economy and construction industry without any economic disruption or any rise in the unemployment rate. However, the bursting of the credit bubble exposed the true structural decay that had occurred in the US economy. Many Americans still cling to the naive belief that we can return to the good times of the 90s and the earlier part of this decade, unable or unwilling to recognize that those high times were a debt-driven anomaly.

This delusion is fueled by a myriad of financial pundits who warn about the dangers of disrupting free trade. They are quick to point out that the Ryan Bill is contrary to rules of the World Trade Organization. Incredibly, in the WTO's rules of governance, there is not one reference in any of its documents to the underlying bilateral exchange rate between two countries when trying to

²The Omnibus Trade and Competitiveness Act of 1988 requires the Secretary of the Treasury to provide reports on "whether countries manipulate the rate of exchange between their currency and the United States dollar for purposes of preventing effective balance of payments adjustments or gaining unfair competitive advantage in international trade."

reconcile trade differences. It is like trying to referee a World Cup match with a soccer ball that only the players can see. In the case of a controlled or manipulated exchange rate, it is patently unfair if the currency of one partner is grossly misaligned, as the RMB/USD rate is.

Any serious attempt to address the structural imbalance is met with a chorus of boos from financial industry pundits who rail against "protectionism." In discussions involving the Ryan Bill, these pundits have few qualms with lobbing into the mix, like grenades, those most dangerous of words: "Trade War." They often invoke the specter of Smoot-Hawley, the infamous US tariff act that triggered a trade war in which American exports and imports were slashed by half, leading a number of economists to argue that its passage contributed significantly to the Great Depression. But what they fail to see, or neglect to acknowledge, is that in modern times there never has been free trade with China; the US has already been in a trade war for nearly two decades; and it is the only time in this nation's history it surrendered without ever firing a shot. The United States lost six million jobs, indebted itself to China by \$1.4 trillion, and received in return a host of consumer goods, many of which now reside in landfills across the country.

"Trade War" is a very dangerous phrase. Clearly, China and the US are commercial competitors and not enemies. There is no reason for "combat" in any sense of the term. The Chinese have set the RMB/USD peg artificially low because they believed it was necessary in order to shift from an agrarian to an industrial-based economy. The United States also protected its nascent industrial sector when it did the same thing in the 19th century. Developing a significant export-oriented manufacturing base was part of an ambitious plan to relocate hundreds of millions of rural Chinese to cities where they could obtain manufacturing jobs and pursue a better life. It worked. China's coasts now burst with export-dependent factories and cities. But now and going forward, China's export strategy is completely unsustainable. In the intermediate term, much less the long term, it is becoming clear that the main buyer of China's exports – the United States – can no longer foot the bill. A much better policy would be finding the right balance between domestic demand and exports through a stronger currency. Brazil did this brilliantly between 2005 and 2007. Their currency appreciated 34% against the dollar yet the economy grew 2% more than the prior three years and above what was thought previously to be the speed limit. The incoming Chinese administration of 2012 will be forced to contend with a population that has been relocated and retrained for jobs that may one day disappear, much as they did in the United States, all because China engaged in a futile attempt to avoid an inevitable re-equilibration of exchange rates. After all, one way or the other, the *real* US and Chinese exchange rate will find equilibrium – either through nominal movement or through relative inflation rates.

Just as the Chinese elite have become dangerously wed to an unsustainable export-driven manufacturing model, the US elite have become indifferent to mercantilist assaults on the global trade framework. In mid-September, when the Bank of Japan intervened to suppress the value of the yen against the dollar, there was no response from America's political, financial and media leaders. While these interventions might have been understandable six years ago, when Japan's economy was relatively less well off than that of the United States, they are far from necessary today: Japan has an unemployment rate that is half that of the United States and it still runs a trade surplus. Nonetheless, Japan intervened to protect its export industry, and the United States, incomprehensibly, responded with not even a whimper, let alone a bang.

The easiest way to illustrate just how critical the exchange rate is to solving the structural unemployment issues facing the United States is to analyze and compare the respective impacts of two policy approaches to rescuing the US economy – a nominal currency adjustment versus massive Fed purchases of assets.

Structural vs. Symptomatic Solutions

We enlisted Macroeconomic Advisers to test two different policy fixes for the unemployment problem in the United States. The first policy option mirrors what the Fed is about to embark upon – large scale asset purchases (LSAPs) in excess of \$1 trillion, also known as quantitative easing. The second option tested is a two-year bilateral 30% revaluation of the Chinese renminbi against the dollar, which, if followed partially by other trading partners such as Brazil, Russia, India, other Asian emerging markets, and Japan, would result in a trade-weighted 8.5% depreciation of the dollar. The results are listed in Table 1 below but the highlights are as follows:

1. The most effective way to attack the unemployment problem in the United States is through a revaluation of the renminbi and the currencies of its associated trading partners. Relative to baseline, this approach is estimated to create three million additional jobs and to reduce the US unemployment rate by 1.4% by 2014.
2. The Fed's LSAPs will have a minimal impact on unemployment that completely fades to zero by 2015.
3. A revaluation of the Chinese renminbi and other Asian currencies, which would result in an 8.5% depreciation of the trade weighted dollar against all trading partners, is almost six times as powerful in

reducing unemployment as the Fed's \$1+ trillion worth of quantitative easing.

Table 1. Civilian Unemployment Rate Relative to Baseline

	2011	2012	2013	2014	2015
LSAPs sized at \$1.0+ trillion over two years	-0.1	-0.2	-0.2	-0.1	0.0
USD NEER 8.5% depreciation over two years	-0.1	-0.4	-1.1	-1.4	-1.2

Source: Macroeconomic Advisers and Tudor Group calculations

We see other benefits of a Chinese revaluation over quantitative easing. First, the rebalancing through revaluation could prevent another series of bubbles that might be created in a variety of assets from precious metals to stock markets. Second, the Fed's balance sheet expansion into Treasury liabilities could also engender or perpetuate a bubble in bonds as higher prices will inevitably draw more people to rationalize their bond investments. This balance sheet expansion does nothing to defuse a potential future bond bubble and, in fact, it doubles down on it.

It is understandable why the Fed is pursuing LSAPs. The US economy might currently need the equivalent of a 100- to 300-basis point cut in the federal funds rate, which is impossible to effect with the federal funds rate already close zero. The only way to mimic such "cuts" is through the LSAPs program by flattening the yield curve and purchasing intermediate-term Treasuries, as the Fed probably will propose. Additionally, this also puts pressure on a variety of our trading partners to revalue their currencies. But again, it is the sub-optimal and constrained policy response, and one wonders why the United States has not been more demonstrative in pursuing exchange rate normalization.

Over the last decade, the US economy has become more open and hence, more sensitive to currency moves. The effects of a 30% renminbi revaluation would likely be more powerful than stated above. And not all 8.5% effective dollar depreciations are created equal. If they are prompted by bilateral depreciation against countries which are large trading partners and which run substantial trade surpluses, then such effective dollar depreciation is likely to be more powerful than otherwise.

But fundamentals are about more than labor markets, and this is demonstrated in Table 2. These policy options yield similar effects and conclusions when considering GDP growth and inflation. Over 2011-13, a depreciation would yield on average 0.4% more growth annually, compared to

0.1% from LSAPs. It would also yield 0.3% more core CPI inflation compared to 0.0% from LSAPs.

Table 2. Growth and Inflation Relative to Baseline

	2011	2012	2013	2014	2015
Real gross domestic product*					
LSAPs sized at \$1.0+ trillion over two years	0.3	0.1	0.0	-0.1	-0.3
USD NEER 8.5% depreciation over two years	0.3	0.8	0.6	-0.3	-0.2
CPI excl food & energy (all urban)*					
LSAPs sized at \$1.0+ trillion over two years	0.0	0.1	0.0	0.1	0.1
USD NEER 8.5% depreciation over two years	0.1	0.4	0.5	0.5	0.7

* Percent change at annual rate

Source: Macroeconomic Advisers and Tudor Group calculations

And finally, for those who are concerned about the potential long-term negative impact of zero rates, there is no quicker way to achieve escape velocity, at least from an inflation standpoint, than through a 30% Chinese renminbi revaluation. One of the reasons that GDP growth contribution begins to tail off in years four and five in the simulation is because interest rates actually begin to rise in response to inflation; this should allow interest rates to once again function as an efficient allocator of resources and should be a boon to savers.

These simulations by Macroeconomic Advisers make clear that the most effective way for the United States to contend with its domestic employment issues is to address the misaligned RMB/USD exchange rate. What will be the result if it does not? If we maintain the status quo, what will be the probable outcome a decade from now? Look no further than Greece for the answer. In 2002, Greece entered into a trading arrangement with its largest partner, the European Union (EU), with a fixed, overvalued exchange rate – much like the US has with China. The EU umbrella allowed for cheap financing, which sparked a boom in credit for consumers, businesses and the government itself. In the ensuing years, Greece's fiscal and current account deficits expanded beyond what the free market would have allowed had the country not been under the EU umbrella, as all signaling mechanisms were short-circuited by the fixed exchange rate. This worked well until interest rates jumped from 2% to 18% over the past year as investors realized that Greece had overindulged. The result has not been pleasant for Greece.

The US could achieve similar public debt levels between 2020 and 2025, or sooner, under a broad definition of government debt. As long as the RMB peg stays in place, many of the market's signaling mechanisms, which would short-circuit such a fiasco, will not function. China, and every other nation that follows

it, will continue recycling trade surpluses into US Treasuries, and all will live under the illusion of serenity. That illusion will encourage unsustainable misallocation of resources, primarily by our government and, one day, the many trillions of US Treasuries that China will have amassed will suffer significant collapse in nominal value, if not default and restructuring.

From the past decade, I can recall two instances of enormous imbalances that authorities chose to ignore because the status quo felt good and intervention appeared too draconian. The NASDAQ bubble of 1999 and the more recent US housing bubble of this century are examples of times when prudent and demonstrative action could have prevented trillions of dollars from being lost or misallocated. But, like then, authorities on both sides of the Pacific now appear more concerned with avoiding a potential double-dip in 2011 than Armageddon in 2021.

But our job is not to make policy. Our job is to anticipate the outcome of various policy initiatives and to deduce their results in the market. Our current situation is highly reminiscent of 1999, when the fear of a Y2K computer meltdown led central banks to deliver global liquidity pulses in an effort to cushion any possible negative fallout from the failure of systems and the Internet. Once again, policy leaders symptomatically attacked a structural deficiency. Most of that excess liquidity ended up in a very narrow list of approximately 100 NASDAQ stocks, as \$20 billion a month poured into margin accounts to purchase technology stocks. Between October 1999 and March 2000, the NASDAQ nearly doubled.

With the Federal Reserve Board about to embark upon a LSAP program of over \$1 trillion dollars, it is certainly important to understand exactly where much of this liquidity will roost. And the similarities between 1999 and today bear heeding. Below is a chart of the NASDAQ in '99 and the India's Nifty Stock Index today. This analog would argue for increasing volatility and substantially higher prices, at least into early 2011.

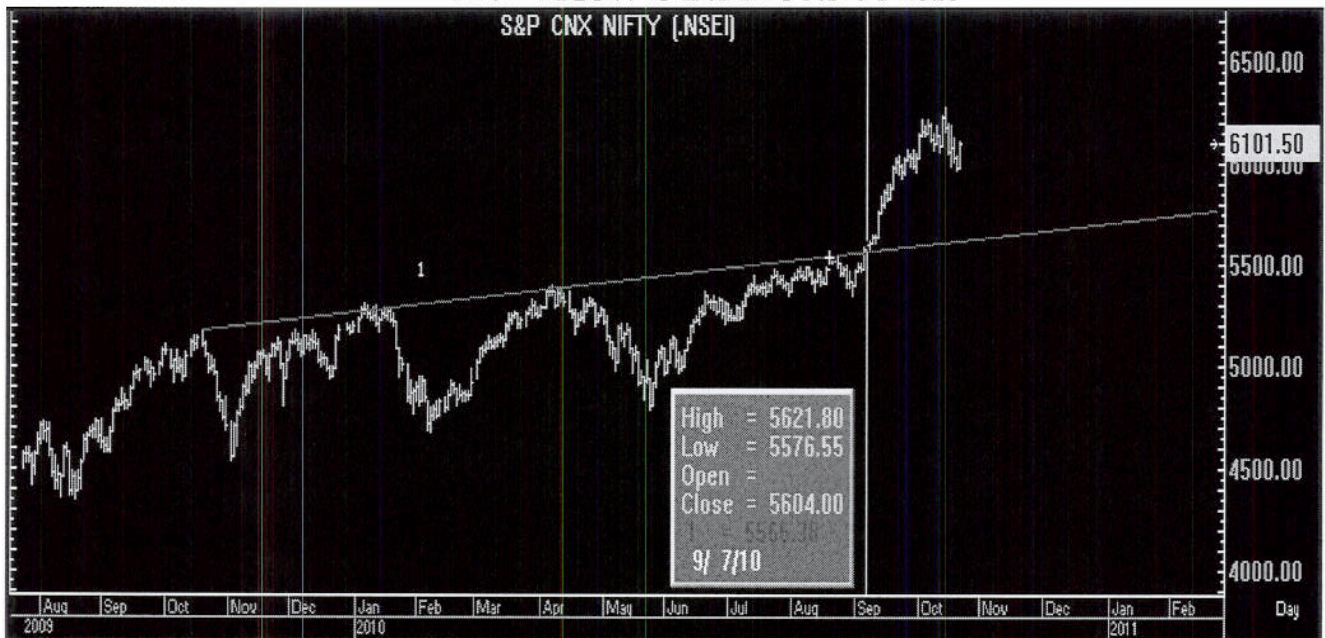
NASDAQ 1999-2000 vs. INDIA NIFTY 2010

BELOW IS NASDAQ 1999-2000



Source: Reuters

AND BELOW IS INDIA'S NIFTY 2010



Source: Reuters

The year 1999 was also a period of highly correlated markets with an increasing concentration of parallel market activity. Table 3 below illustrates the top ten and bottom ten performing assets in percentage price appreciation for the first nine months of 1999 and the subsequent price action of those assets for the fourth quarter of 1999. Table 4 lists the top ten and bottom ten performing assets in just the fourth quarter of 1999 and the overlap from Table 3. Notice how the winners extended their lead in the fourth quarter and the losers continued their bout of under performance. Additionally, half of the winners in the first nine months made it into the top ten list of the last quarter, and 70% of the losers in the first three quarters found themselves among the ten worst performers of the fourth quarter. There is no better example of how the trend is your friend and how mistaken policy moves exacerbate this phenomenon. Winners and losers.

Table 3
Top and bottom performers Q1-3 1999, with Q4 performance

Market	Pct. Q1-3	Pct. Q4
Crude	99.8	7.2
Bovespa	63.7	53.9
Nifty	59.8	4.9
Kospi	55.1	29.1
GSCI	43.6	1.8
Topix	38.6	14.3
Nasdaq	31.1	54.0
Nikkei	27.2	7.5
Hang Seng	26.7	33.2
Aluminum	22.0	9.0
Sterling/Yen	-6.4	-5.6
Euro/Sterling	-7.6	-3.9
Euro (trade-weighted)	-8.5	-4.8
Euro/Dollar	-8.9	-5.7
US bonds	-9.8	-3.6
Gilts	-10.5	0.0
Beans	-12.7	-8.3
Corn	-13.0	-7.3
Euro/Yen	-14.0	-9.3
Wheat	-17.1	-15.6

Source: Reuters

Table 4
Top and bottom performers Q4 1999, with Q1-3 performance
(Repeat markets in bold.)

Market	Pct. Q1-3	Pct. Q4
Nasdaq	31.3	54.0
Bovespa	63.7	53.9
EuroStoxx	9.8	33.6
Hang Seng	26.7	33.2
Kospi	55.1	29.1
FTSE	2.5	14.9
S&P Cash	4.4	14.5
Topix	38.6	14.3
Dow Industrials	12.6	11.2
Aussie stocks	2.4	9.4
Euro (trade-weighted)	-8.5	-4.8
Sterling/Yen	-6.4	-5.6
Euro/Dollar	-8.9	-5.7
Dollar/Korea	1.3	-6.7
Corn	-13.0	-7.3
Beans	-12.7	-8.3
Euro/Yen	-14.0	-9.3
Wheat	-17.1	-15.6
Dollar/Indonesia	6.1	-15.7
Natural Gas	18.3	-23.6

Source: Reuters

Using the above methodology as a road map for how to trade the coming liquidity avalanche, we've listed the ten best and ten worst performing assets year-to-date of 2010 in Table 5. My personal favorite for potential price appreciation well into 2011 would be a portfolio comprised of India's Nifty, an emerging markets consumer stock basket, gold, copper, grains, and US 10-year notes. The fixed income part of this portfolio would be an excellent hedge against the inevitable down drafts that one is going to experience in stocks and metals.

Table 5
Top and bottom performers Q1-3 2010

Market	Pct. Q1-3
Silver	28.6
EM consumer basket	21.9
US bonds	18.7
Gold	18.7
India Nifty	15.9
Yen (trade-weighted)	12.7
Gilts	12.3
Bunds	11.2
Wheat	11.2
Krone (trade-weighted)	10.3
Euro (trade-weighted)	-6.5
EuroStoxx	-7.4
Topix	-8.6
Euro/Swiss	-9.7
Dollar/Yen	-10.1
Crude	-10.3
Nikkei	-11.2
Sterling/Yen	-12.6
Euro/Yen	-14.5
Natural Gas	-39.4

Source: Reuters

In summary, these are unusual and historic times under which central banks and governments are employing unorthodox measures. And this provides great investment opportunities which we hope to capture. Winners and losers.

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