China’s Macroeconomic Analysis & Forecasting: 2008-2009

China's Macroeconomy in the Course of Profound Downturn

Fourth Quarter 2008

By the School of Economics, Renmin University of China

Overview

In 2008, under the triple pressures of the deteriorating external environment, domestic structural policy adjustments, as well as the economy's inherent cycle, the internal contradictions of China’s “export/investment-driven growth model” intensified across the board. The relationship between aggregate supply and aggregate demand showed signs of reversal. The macro-economy took a sudden turn and then went into a sharp tailspin, manifesting the dramatic change of “fire and ice in one day,” as China’s macro-economy began to enter a descending interval of profound downturn.

In 2009, due to constraints of structural rigidity and structural linkage, as well as the superimposition of the multiple factors of the global economic cycle and China's economic cycle, cycles of entity investment adjustment and financial capital adjustment, the force of structural transformation and cyclical adjustments, and cycles of real estate adjustment and manufacturing industry adjustment, etc., a profound downturn surpassing expectations in China's macro-economy will take place.

The signaling value of the 4 trillion-stimulus program investment is greater than the actual investment kick-start value. Its substantial short-term policy basis determined that in the short-term it will ease the profound decline of the aggregate macro-economy, however, its relatively small-scale and the specific properties of the investment augmentation policy determine that this will not only not change the internal mechanisms of the currently slumping production, but on the contrary in the mid-term will also intensify the internal contradictions as well as the degree of intensity of the collapse of the investment driven growth model, leading to a lengthening of the interval of downward spiral, intensifying fluctuations, recurrent stagnation, and leading to the possibility of a “W-shaped” cyclical adjustment model in China’s macro-economy between 2008-2012. In the latter half of 2009, China’s macro--economy will catch a glimpse of the bottom and rebound. In 2010 the macro-economy will manifest mild recovery. Immediately following this, the macro-economy will once again explore its depths, prolonging the period of China's recovery.

According to the Renmin University’s China Macroeconomic Analysis and Forecast Model—CMAFM model—the estimate is that in 2008 China’s annual GDP growth reached 9.1%, the nominal investment growth rate reached 25.7%, the growth rate of consumption of the whole society reached 20.6%, export growth rate reached 21%, import growth rate 25.5%, the favorable balance of trade reached 265 billion USD, the nominal growth rate reached 1.1%, the narrow money supply M1 grew 11.1%, M2 grew 16%, and the CPI grew 6.1%.

Although the government has adopted a large-scale stimulus plan, the forecast is that China’s macro-economy will go a step further towards downturn, with the annual GDP growth estimated at 8.12%, fixed investments nominal growth rate and real growth rate slowing down in tandem, the extent of the downturn reaching 7.5 and 1.5 percentage points, respectively. Import export growth rates will fall in synchronicity, the extent of nominal growth rate will decline, reaching 5.9 and 6.1 percentage points, respectively. Under the influence of the comprehensive economic deep downturn, prices will continue to drop, but under the effects of the comprehensive relaxation of monetary policy, deflation will not occur, with the annual CPI reaching 2.3%.

On the basis of analysis and forecast, this report puts forth the following policy recommendations:

1) On the basis of implementing the 4 trillion stimulus program, a government expenditure investment program should be put in place in the medium term to substantially improve the strength of transfer payments, and publicly present 5-10 year plan for the rapid construction of a comprehensive social welfare and social security system.

2) Increase the strength of national treasury bond issuance, and put forward a national treasury bond issuance plan, expanding the financial deficit over the next six years to reach the range of 2.5-3.83%.

3) Avoid unveiling any macro-level tax reduction operations too quickly, and instead formulate a middle-term comprehensive plan for carrying out all sorts of taxation reductions, and on a foundation of moderately easing the pressure of enterprises, as much as possible put forth a tax cut policy to promote consumption.

4) Rationally choose the time point for publicly promoting investment in government-ensured housing, refine the detailed rules and regulations for applying for such housing, guard against the serious affect on middle-class real estate purchases that is expected as a result of the investment in ensured housing, and avoid an excessive squeezing-out effect on commercial housing investment and production that could result from this as well.

5) Based on the foundation of raising total domestic demand, there should be full consideration of the goals of structural adjustment, local governments should be encouraged to introduce internal structural adjustment policies, and all levels of government should increase the relaxation of access regulation for education, medical treatment and sanitation, service and other industries, to encourage the entrance of private capital.

6) Owing to the across-the-board fallback in price pressures, in accordance with macroeconomic circumstances, monetary policy should go a step further in interest rate reductions and lower savings reserve fund rates. With respect to 2009, due to the falling prices of goods along with influence of global interest rate reductions, room for savings interest rate reductions should be within 100-150 basic points, room for credit interest rate reductions should be within 150-200 points, and the number of adjustments should not be too frequent; savings reserve funds can be adjusted 300－400 basic points according to the liquidity conditions of the bank. The worsening of the balance of international payments, real estate loans, as well as the problem of deteriorating liquidity brought about by shrinking credit demand, should become a major focal point of the central bank.

7) In view of the impacts that exports will face in the future, the government should not excessively promote cost mitigation policies, so as to avoid excessive costs brought about by structural adjustments. Therefore, export tax rebates should not be adjusted back, and it is not advised to undertake reverse adjustments to the RMB exchange rate.

Part I: General Overall Forecast

In 2008, under the triple pressures of the deteriorating external environment, China's domestic structural policy adjustments and the economy's internal cycle, China's macro-economy went into a tailspin, and a substantial slowdown of the economic growth rate appeared, led by the falling real growth rate of investment in fixed assets and drop in the growth rate of foreign demand, and China's macro-economy began to enter a descending interval of deep downturn.

In comparison to other years, in 2008-2009 the operating mechanism of China's macro-economy could possibly manifest the following characteristics:

1) The overlapping concurrence of multiple factors, including the global economic cycle and China's economic cycle, entity investment adjustment cycle and financial capital adjustment cycle, the force of structural transformation and cyclical adjustment, real estate correction cycle and manufacturing adjustment cycle, determine the depth specificity of the economic downturn during this cycle.

2) The reversal of the "export/investment-driven mode of production" determined the dual pressures of slowdown in aggregate demand and increase in aggregate supply that China's macroeconomy will face successively. Under constraints of structural linkage and rigidity, China will not only experience the dramatic transformation from "fire to ice in one day," but the depth of the downturn will also surpass the level of usual expectations.

3) The shocks to foreign demand that China faces are rapidly shifting the previous supply shocks to demand shocks. This determined that the extent of the downtown has not only advanced a step further, but also that it is difficult to carry out mitigation policies from the supply side.

4) The speed that the foreign demand has fallen reveals the vulnerability of China's economic growth model, however this has not guided the pattern and depth of the macroeconomic steep downturn. The substantial decline in real investment is none other than the core force of China's macroeconomic steep downslide. The internal contradictions of the "export/investment driven growth model" have determined that China's traditional growth mode and production mode are difficult to sustain. China's macro-economy is not only facing

comprehensive, urgent restructuring, more importantly it is facing an “inflection point” transition in its growth model.

5) The downturn in real estate demand and real estate investment is already a foregone conclusion, the profound correction model for real estate not only determines the path of China’s macroeconomic readjustment, but also determines the depth of its adjustment.

6) The stability of the consumption growth rate is the core force obstructing the steep downslide of the macro-economy, but due to the existence of such factors as the difficulty of changing the structure of income distribution, the substantial margin of decline in housing expenditures, as well as the spread of crisis anticipation, the growth rate of consumption will be difficult to sustain in the future.

7) Under the dual effects of the downturn in aggregate demand and continued growth in potential supply levels, various general price levels will manifest a substantial drop, moving the threat of "stagflation" in China's macro-economy into the distance.

8) The forceful intervention by the government during this epicycle will produce short-term mitigation of the aggregate macroeconomic downturn, however, the existing conflicts within this investment-led aid plan and shift in the growth model make it difficult to fundamentally mitigate the internal contradictions of the investment-export oriented growth model. Instead, it may in fact intensify the short-term and mid-term conflict, leading to a prolongation of the descending interval, aggravating fluctuations and recurring sluggishness. Consequently, during the period between 2008-2012, China's macro-economy may exhibit a downward fluctuating "W" pattern.

9) The signal significance of the 4 trillion-stimulus package will be greater than its actual investment significance; its incremental scale is not really sufficient to make up for the declining investment gap.

10) The dramatic downturn of the aggregate macro-economy has brought about the sharp increase in job losses in low-end professions and China will face unprecedented pressure on society. Weighing social problems and macroeconomic problems determined the government's weighting of mid- and short-term interventions in the macroeconomy, thereby determining the weighting and choices of investment promotion policies and consumption promotion policies.

Based on the judgments outlined above, this report establishes the following main exogenous parameters: (1) In 2009, the central government's financial budget deficit rate is 2.5%; (2) In 2009, the average rate of exchange between RMB and USD is 6.82. According to the Renmin University Macroeconomic Analysis and Forecast model (CMAFM model), dividing annual forecasts of the state of China's 2008 and 2009 macroeconomic operations, the main findings are as follows.

China's 2008 annual GDP is estimated to have grown to 9.1%, falling back 3.9 percentage points from 2007. Although the growth rate of primary industry went up, secondary and tertiary industries showed deep declines, with growth rates falling down 3.1 percentage points and 2.5 percentage points, respectively. Although rates of nominal investment grew in 2007, reaching 26.2%, due to the greater growth of fixed asset investment prices of 21.6%, fixed asset investments in fact increased their speed of decline, reaching 4.8 percentage points. Social consumption continued to grow, nominal growth rates reaching 21.6%, higher than 2007 by 4.8 percentage points, and after deducting price factors, its growth rate still reached 2.6 percentage points. Based on USD valuations, export growth reached 21%, 4.7% less than in 2007, imports grew 25.5%, 4.7 % higher than in 2007, the favorable balance of trade reached 265 billion USD, nominal growth rate reaching 1.1%, but after deducting the USD devaluation and price factors, the trade balance actually had a growth rate of -2.3%; currency growth was less than that in 2007, with the narrow money supply M1 reaching 11.1%, and M2 growing to 16%. Under the effects of overall downturn in the growth rate of aggregate demand, the money supply and staple commodity prices, the CPI began to fall from its high, reaching 6.1% for the year.

In 2009, the macro-economy will move deeper into the downturn, although the government is employing a large-scale stimulus program. In estimate, the annual GDP growth will be 8.12%; growth in the three major industries will slow down in synchronicity, falling 2, 1.7, and 1 percentage points, respectively. The nominal growth and real growth of investments in fixed assets will fall in tandem, the extent of decline reaching 7.5 and 1.5 percentage points, respectively. Import-export growth will also fall together, nominal growth falling to 5.9 and 6.1 percentage points, respectively. Under the effect of the overall macroeconomic downturn, prices continue to fall, but under the influence of the overall relaxation of monetary policy, deflation will not occur, and the annual CPI should reach 2.3%. The main forecast results are listed in Table 1 below.

Table 1 2008 Economic Indicator Forecast Across Various Items

Indicators	2007	2008 Forecast	2009 Forecast
1. GDP growth (%)	13.0	9.1	8.1
Among these: Primary Industries (%)	3.7	5.5	3.5
Secondary Industries (%)	14.7	9.3	7.6
Tertiary Industries (%)	13.8	10.1	9.1
2. Social Investment in Fixed Assets	137239 (24.8%)	173195 (26.2%)	205582 (18.7%)
Social Consumer Goods Turnover Rate	89210 (16.8%)	108479 (21.6%)	125836 (16.1%)
3. Exports (100 million USD)	12180 (25.7%)	14617 (21.0%)	16678 (14.1%)
Imports (100 million USD)	9558 (20.8%)	11967 (25.2%)	14174 (19.1%)
4. Quantity of the Narrow Money Supply M1(100 million RMB)	152519 (21.0%)	169296 (11.1%)	189611 (12.0%)
Quantity of the Broad Money Supply M2 (100 million RMB)	403401 (16.7%)	467945 (16.0%)	542138 (15.7%)
5. Consumer Price Index Rate of Increase	4.8%	6.1%	2.3%

Part II: The Internal Mechanism of the 2008 Tailspin

1. China's 2008 Macro-economy in a Tailspin

In 2008, the overall condition of China's macro-economy can be described as "in a tailspin," not only in terms of the intense contrast between its overall state and the overall macroeconomic upsurge in 2007, but also in that over the first and second half of the year all sorts of macroeconomic indicators showed a "night and day" contrast as stark as "fire and ice in one day." The embodiment of this is concentrated in the following eleven aspects:

1) GDP fell quarter after quarter, with the extent of the yearlong decline estimated at 2.3 percentage points, among these the third quarter dropped 3.2 percent compared to the same period of the previous year, with the economic growth rate returning to the level of 2000-2002.
2) Industrial value added rapidly declined, and the annual estimated extent of the decline reached 7 percent, during which in comparison to the same period last year, the greatest decline in quarterly growth rate will surpass 10 percent, and year-end growth rate was comparable to the level of 1999-2000.
3) Although the growth rate of investment in fixed assets experienced some nominal uplift, owing to the rise in the price of fixed assets, the actual investment clearly dropped, with the extent of the yearlong drop reaching 4.7 percentage points. The actual annual growth rate level was comparable to that of 2002.
4) Even as the monthly sum total of the favorable trade balance was repeatedly hitting new highs, each quarter's cumulative growth rate declined precipitously, and the annual growth rate is estimated to slow down 46.6 percent. Because the slowdown of the first two quarters was so large, the pick up during the second two quarters was insufficient to change the

overall yearlong drop. After deducting all sorts of price factors, the decline in real growth rate of the annual favorable trade balance also surpassed 30 percent.

5) The real estate correction is intense, the real estate surface area for sale and the selling price index all experienced an overall downward adjustment, with the growth rate in surface area for sale experiencing a reversal, and the annual sales area is estimated to be 18.1% less than last year, with the growth rate dropping 41.3 percentage points; the real estate price index is also going down, with an overall drop of 9.1 percent, and on the basis of quarterly comparison, the forth quarter prices manifested clear negative growth.

6) Financial revenues have been dropping rapidly since July of 2008, reversing the optimistic attitudes of the first part of the year, with the growth rate from 42.4% in January falling to -0.3% in October. The annual growth rate is estimated at around 21%, down 12.5 percentage points from 2007.

7) The output of main products dropped by a large margin, with excess production capacity appearing during the second half of the year. Among these, the electric energy production capacity has dropped sharply, with monthly growth rate dropping from 16.6% in March to –0.4% in October, and the annual growth rate estimated drop at 20.7%; the auto industry growth rate went from 13.2% in July to -3.3% in August, and decline in annual growth rate is estimated at 11.8 percent; the growth rate of outputs of iron ore has dropped from 27.14% in June to 3.1% in August; the growth rate of chemical fiber output dropped from 18% in 2007 to the negative growth of the second half of 2008, during which the negative growth in August reached -6.8%; the growth rate of electrical generating equipment output in comparison to the same month last year, has dropped from 2007 annual rate of 36.8% down to -37.35% in July of 2008; the growth rate of industrial electric furnace output has declined from 23.19% in August to -20.15% in September; the growth rate of electrical generator output has dropped from 0.7% in June to -37.4% in July.

8) The relationship between supply and demand underwent a comprehensive reversal in the manufacturing industry, and the manufacturing industry Purchasing Manager's Index (PMI) fell substantially. During the first half of 2008, the PMI reached a historical high of 59.2 at one point, but then in the second half of the year experienced rapid decline, starting from July falling to 50, then in October hit a new historical low of 44.6. In comparison with 2007, new order forms for goods have also declined substantially, averaging a fall of 4.7 percent, with the number of export order forms lower than the level of the same period last year, reaching 5 percent, and at the same time, the index of product inventory has continued to rise since July, rising 3.1 percent since 2007 and reaching a historical high (50.5). This amply illustrates that the manufacturing industry widely faced problems of insufficient demand, sales slumps, and overstock.

9) Industrial profit margins have fallen across the board. In 2008, the accumulated industrial profit margin from January through August grew 19.4%, down 17.6 percent from last year. The annual growth is estimated to drop around 20 percent, about the same level as 2001-2002.

10) The fluctuations of the stock index have been violent, with gravely shrinking financial assets. At the end of October, the Shanghai and Shenzhen Stock Exchange Composite Index closed at 1800 and 600 points, respectively, declines from the previous year of 70% and 60% respectively, and the aggregate value of listed stocks shrank over 14 trillion between November 2007 and the present, among which circulation value shrank more than 3.8 trillion. The P/E Index of Shanghai and Shenzhen's A-List stocks was on average 59 times and 72 times at the end of 2007 and 14 times in November.

Table 2 Changes in China's Various Macro Indices (%)

Macro Indices	Annual 2007	1st Quarter 2008	2nd Quarter 2008	3rd Quarter 2008	4th Quarter 2008[1]
Quarterly GDP comparison	13.0	10.6	10.2	9.0	6.8
Quarterly industrial value added comparison	18.5	17.8	16.0	11.4	5.3
Growth rate of aggregate real investment	20	17.3	15.5	16.5	15.3
Growth rate of accumulative favorable balance of trade	47.8	-10.8	-12.3	-2.5	1.2
Growth rate of accumulative real estate sales area	23.2	-1.4	-7.2	-14.9	-18.1
Growth rate of accumulative financial revenues	33.5	35.5	33.8	25.8	19.0
End quarter same month growth rate of electric energy production comparison	14.4	16.6	8.3	3.4	-6.3
PMI	55.3	58.4	52	51.2	-
CPI end quarter same month comparison	4.8	8.3	7.1	4.6	3.0
Housing sales price index	110.2	111	109.2	105.3	101.1

11) The velocity of monetary circulation is slowing, and all sorts of price indices show substantial decline, inflationary pressures naturally disappeared in the midst of sharp fallback in the macroeconomy. In September of 2008, the M0 growth rate was at 9.3%, 3.7 percent lower than last year's, the growth rate of M1 was at 9.4%, 12.7 percent lower than the year before, and at the end of October, the M2 growth rate was at 15.02%, 3.45 percent lower than that of the same period in the previous year. At the same time, the price level fell correspondingly during the second half of 2008. During the first half of 2008, the price level was still high, with the CPI and RPI reaching a peak for the past 10 years in February, at

[1] The data of the 4th Quarter is used as the forecast value.

8.7% and 8.1%, respectively, and the PPI, the purchasing price index for fuel and power, and the industrial price index reached 12 year highs in August, at 10.1%, 30.85%, and 15.01%, respectively. However, since September, both in terms of same time comparison in the previous year and cycle ratios, each and every item on the price index manifested substantial decline. In October, the CPI was 4.0%, RPI was 4.6%, PPI was 6.6%, the purchasing price index for fuel and power was at 24.57%, heavy industry price index at 9.27%, all returning to normal, acceptable levels, eliminating the threat of currency inflation in China.

2. The Internal Mechanisms of the 2008 Tailspin

What causes led to the tailspin that hit China's macroeconomy in 2008 and the situation of "fire and ice in one day?" It is often thought that these misfortunes were wrought by export, however this notion is hardly accurate because the decline in China's export growth rate did not really begin in 2008. In September of 2007, a slowing of the export growth rate had already appeared, and import growth rates had risen, and the situation of import growth rate being higher than that of export became apparent. At the same time, after July 2008, the export growth rate rose again, under the effects of a substantial slowdown in the import growth rate, the favorable trade balance repeatedly hit new highs, surpassing the annual favorable trade balance in 2007. The slowing growth rate of China's foreign demand can only explain 20% of the decline in the GDP growth rate. Thus, export slowdown is only a proximate cause and inducement of the macroeconomic tailspin and not the causal nucleus of the problem.

We believe that the superficial reasons for the 2008 macroeconomic tailspin lie in the reversal of relations between aggregate demand and aggregate supply. The core cause, however, lies in the fact that the "investment for the sake of export," "investment for the sake of investment" traditional mode of production and growth model has reached its limit, and the slowdown in growth rate of export has not only smashed the motive force and mechanism of "export and investment," but more importantly, it burst the self-circulating mechanism that led to the formation of the investment bubble, setting in motion mechanism of investment contraction and adjustment in the opposite direction, pushing fixed investment in manufacturing and real estate into downward landslide, with an overall surplus appearing in production capacity, and latent gaps in output manifesting an "inflection point" transition. Under the dual pressures of potential aggregate supply rapidly rising and real aggregate demand rapidly dissipating, the internal contradictions of the investment driven growth mode became acute, signifying that the intensifying mechanism of China's macroeconomic downturn had been formed. The verdict on this is embodied in the two major aspects below:

1. The rapid rise of potential GDP, and the acceleration of the output gap that expanded its dramatic "inflection point" transition, is concentrated expression of the supply and demand reversal in China's macroeconomy. One aspect of this is that under conditions of slowing growth in real investment and foreign demand aggregate demand fell rapidly. Another aspect is that aggregate supply rose rapidly in 2002-2007 with the push from the continued high speed growth in investment in fixed assets, and the explosion of the inherent internal conflicts of the investment growth model in the short and medium term determined that the macroeconomy would go into a tailspin and correction mode.

From Figure 1, we can quantitatively see the relationship between supply and demand in China's macroeconomy. From the 2007 linear weight function/static forecast situation of 3.509%; cosine weight function/static forecast of 2.9883%; cosine weight function/dynamic forecast situation of 1.54833%, the potential GDP gap suddenly became the -3.1401% of 2008's linear weight function/static forecast; cosine weight function/static forecast of -2.4299%; cosine weight function/dynamic forecast situation of -1.9676%, indicating that the relation between supply and demand in China’s 2008 macroeconomy has not only experienced qualitative change, but moreover has experienced it profoundly. It is under the influence of this kind of output gap “inflection point” transition, that China’s macroeconomy manifested rapid slowdown in GDP growth rate quarter after quarter, with every price index showing simultaneously declines.

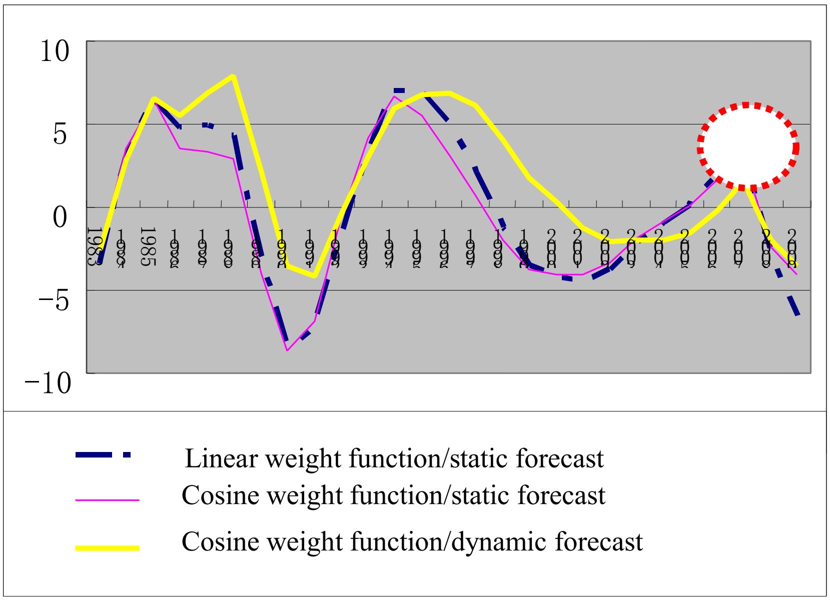

Figure 1 Forecasting China’s GDP output gap (%) using 3 methods

Why did China’s potential GDP output gap undergo the major “inflection point” transition described above in 2008? The core reason lies in the internal conflicts in the investment driven economic growth model, which accumulated to a critical point. The investment driven model of economic growth of “investment for the sake of export,” and “investment for the sake of investment,” was thus accompanied by the reversal in which the growth rate of aggregate demand fell while that of aggregate supply rose.

From 1998-2001, China’s macroeconomy relied on large amounts of infrastructural investment to avoid the depressed state of the last economic cycle. Since 2002, spurred along by major investment in fixed assets, the aggregate demand entered a state of accelerated increase, and in 2005 entered a basic state of balance between aggregate demand and aggregate supply. Yet this balance had a strong element of instability—the newly increased supply created by past large-scale investment required new demand as well, and increased investment in large-scale import-export filled the demand gap, thus evolving into the expanded model of “investment for the sake of export,” “export for the sake of investment,” as well as “investment for the sake of investment.” Although it had no end consumer, investment in basic industry led to the continued expansion of this model, making China’s macroeconomy in the short term face the pressure of inflated aggregate demand, and in the medium term led to the rapid accumulation of capital and the pressure of rising aggregate supply. This kind of “investment for the sake of export,” and “investment for the sake of investment” driven growth model had inherent conflicts that meant it could not be maintained long term. Under the prerequisite premise that no major change would take place in the growth of end consumption, the short-term aggregate demand was inevitably to make up for the inflated expansion of aggregate supply in the medium term, and the macroeconomy inevitably hit the “inflection point” caused by the reversal of the two, and at the same time the mechanism of reverse acceleration, contraction intensification appeared, the acceleration of short-term aggregate demand dissipated and the medium term aggregate supply went up. The latter half of 2008 was just this sort of “inflection point.”

2. The slowing growth of foreign demand and the reversal of the supply and demand relations in the real estate market set in motion the mechanism of contraction in the opposite direction. The slowdown in export growth distribute the balance of “investment for the sake of export,” the downturn in the real estate market put the squeeze on the “investment bubble” and in the process broke down the self-cycling mechanism of “investment for the sake of investment.” The internal contradictions of the investment driven growth model completely exploded, leading to a substantial fall in the real growth rate of investment in fixed assets and in the latter half of 2008 replaced the decline in foreign demand and become the principal

factor in China's macroeconomic sharp downturn, as well as constituting the core element in China's macroeconomic tailspin.

China's economic adjustment did not actually begin in the latter half of 2008, but rather in the latter half of 2007. Its core characteristics were the deterioration and reversal of foreign demand that began in October 2007, as well as the reversal in the supply and demand relations of the real estate market that began in December 2007. From Figure 2 and Figure 3 we can distinctly see the following. 1) In the course of adjusting China's trade policy under conditions of marked rise in all sorts of basic costs, from October 2007, the import growth rate has surpassed that of export. This indicates that China's foreign demand has experienced reversal. 2) Within the real estate bubble, from 2004-2007 maintaining a high rate of investment, since December 2007 the value of completed commercial housing and area for sale grew faster than the area and sales value of commercial housing. This indicates that supply and demand relations in China's real estate have encountered a reversal.

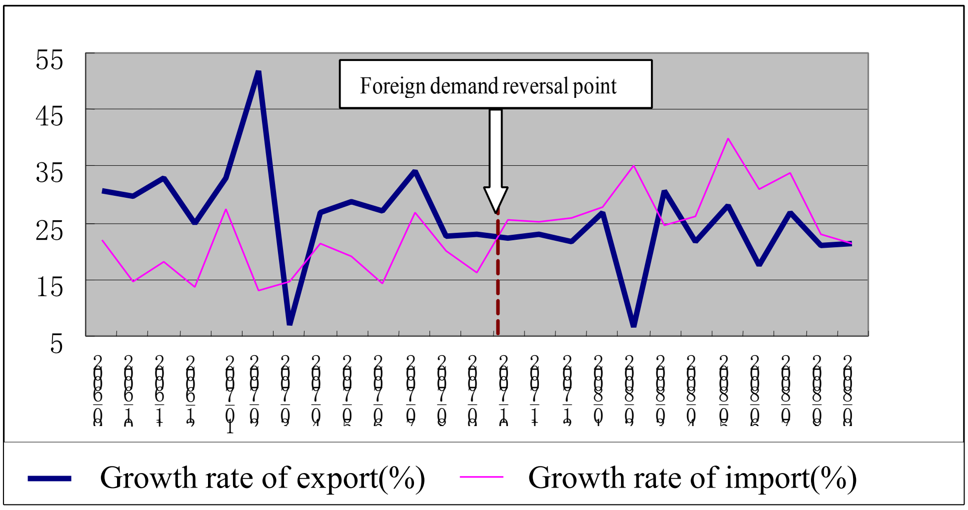

Figure 2 Reversal of foreign demand

These two mechanisms of growth in the current economic epicycle have met reversals through different channels. Based on the sequencing of "the export-orientated model of economics → general manufacturing industry → heavy industry→ other industries" and "real estate→ heavy industry→ general manufacturing industry→other industries," China's real economy suffered a full-on assault, thereby leading to the comprehensive downturn in China’s investment demand (see Figure 2).

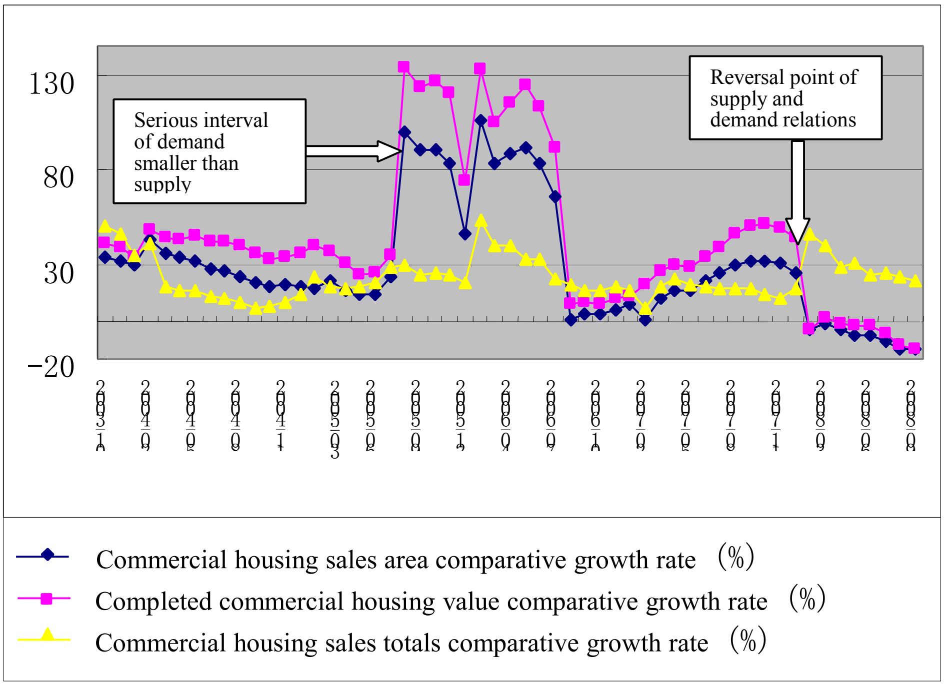

Figure 3 The reversal in the real estate market

From Figures 4, 5, 6, and 7 we can see the following: 1) The time of decline came earliest in the value added industry of foreign, private and joint ventures, which started to appear in May 2007, falling to a large extent. The estimated decline of annual monthly growth rate surpassed 14 percentage points, reaching the lowest point in the past ten years for the same period. 2) In March 2008 the output of the raw materials production for the main industrial products for export and real estate began to undergo comprehensive decline, such as the adjustment of steel output in March that began to decline rapidly in August, and in September and October experience negative growth, its comparative decline reaching more than 30 percentage points. At the same time, electric energy production capacity was also initially adjusted in March 2008, and in September and October began to show signs of deep downturn. 3) Heavy industry underwent obvious adjustments in June 2008, and in September accelerated its decline, its value added growth rate going below that of light industry for the first time in the past decade. 4) Manufacturing industries worsened in September as well, and after the PMI bounced back, it fell back down 50, experiencing deep downturn. The examples described above show successive downturns and the transmission mechanism of this decline in overall demand were identical, namely the decline of exports directly led to a fall in the utilization of capacity of foreign, private and joint enterprises, and furthermore, with real estate investment as the head of the "dragon" from which further declines followed, with fixed investment decline leading directly to a substantial fall in the "investment for the sake of investment" and heavy industry production scale, subsequently leading to the comprehensive decline of manufacturing industry, directly leading to the tailspin taking place in China's macroeconomy.

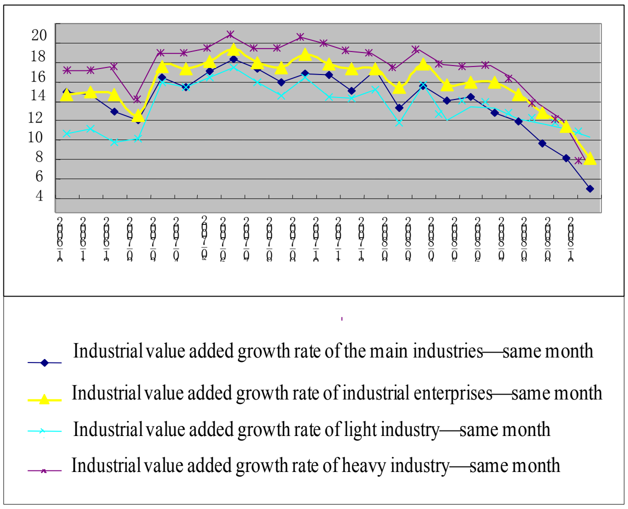

Figure 4 Growth rate of industrial value added

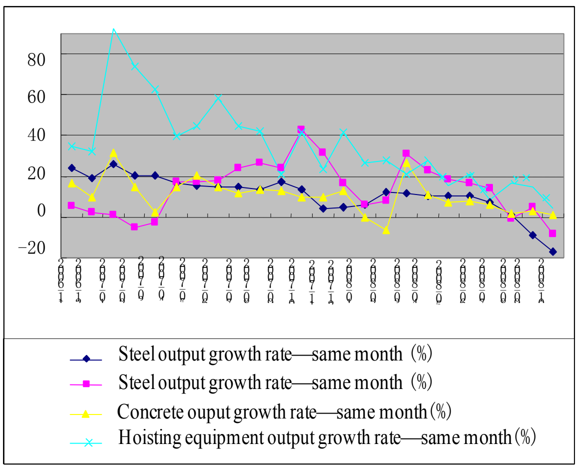

Figure 5 Decline in the output of principal industrial products

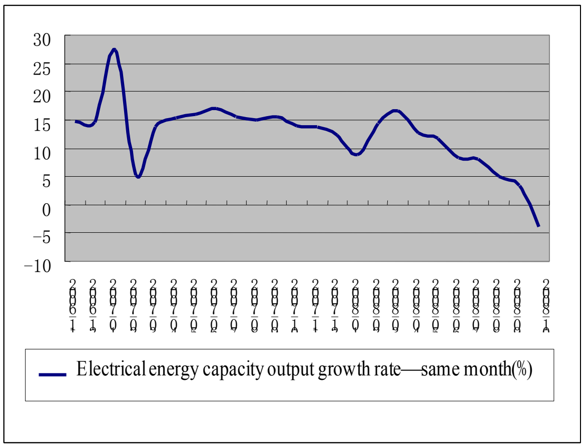

Figure 6 Decline in electrical energy capacity output

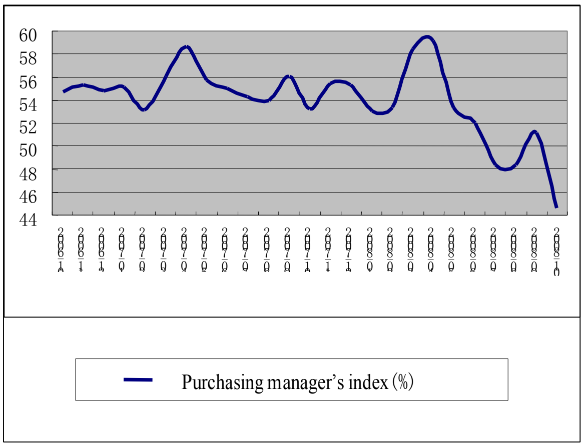

Figure 7 Decline in PMI

With the manufacturing industries and heavy industry as the principal secondary industries, their comprehensive decline led to the sharp downturn in China's macroeconomy in the latter half of the year. From the temporal relations of changing data, we can see the following: 1) the sharp decline of industrial value added in October and the downturn of financial growth in October are identical. 2) The substantial October declines in growth rates of manufacturing industries and heavy industries, electricity consumption, GDP, and social fixed asset investments are also identical, among these the growth rate of fixed asset investment in general-purpose equipment manufacturing and specialized equipment manufacturing in September, in comparison with the same period the year before fell 17.3 percentage points and 15.9 percentage points, respectively. At the same time, moreover, GDP, finance, as well as electrical energy production capacity, and other such synthetic indicators of growth sharply declined during the second half of the year, while export growth rate, conversely, bounced back during the third quarter and the favorable trade balance reached a new high. The real estate industry, owing to changes in the profit model, the reversal of relations between supply and demand, did not immediately respond with a rapid drop in investment growth rate. On the contrary, its investment between January and June reached 39.2%, a 10.6 percent improvement over the same period of the previous year. It was not until the third quarter that a decline of 2.4 percentage points was experienced.

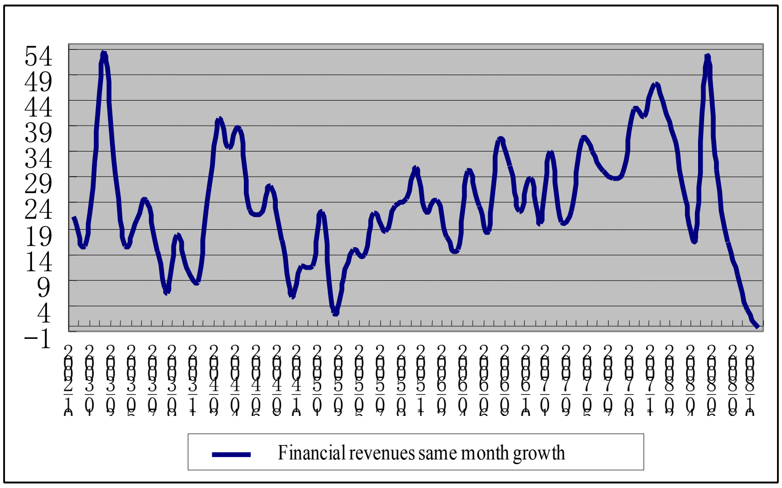

Figure 8 Decline in China's financial growth rate

If we deeply contemplate the core factors in China's economic downturn, we will discover that the export slowdown in the second half of 2008 contributed more than 95% to the slowdown in China's GDP, and starting from the third quarter, moreover, it contributed 20% to the downturn. Its core cause was that the substantial decline in the real growth rate of the investment in fixed assets led to the decline in the growth rate of the economy, contributing at a rate approaching 80%. On the surface it appears that the investment in social fixed assets in China experienced nominal growth in 2008 over that of 2007. If one considers the substantial upward spike of the price index for investment in fixed assets, however, in reality, during the latter part of 2008, fixed assets showed a clear drop. In 2008 the real growth rate of investment in fixed assets was only 15.9%, equivalent to that of 2001-2002, and 4 percentage points lower that in 2007, making the plummeting growth rate of fixed asset investments the core factor in China's macroeconomic downturn. This sort of slowing of the growth rate of investment will fundamentally destroy the previous balancing mechanism of "reliance on the increased investment growth during the last period to satisfy the limits of supply capacity," and the "de-investment" reverse adjustment mechanism has already been fully formed.

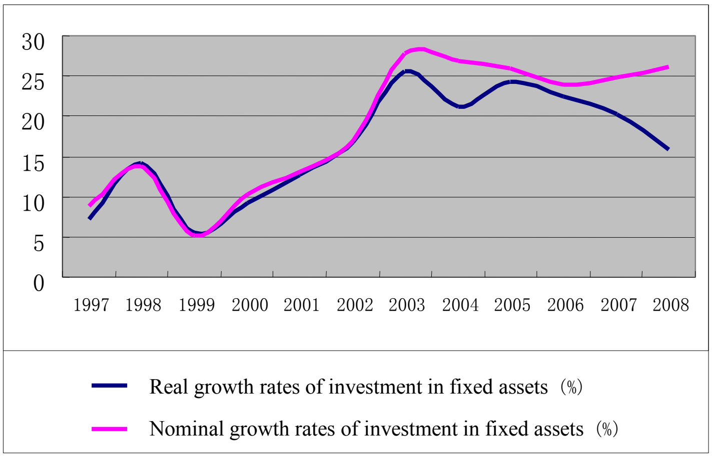

Figure 9 Nominal and real growth rates of China's investment in fixed assets

Consequently, the core causes of China's macroeconomic tailspin lie in the internal conflicts of the investment growth pattern; the trigger elements lie in the drops in foreign demand and deterioration of the real estate market; the mechanism of transmission lies in the influence of the drying up of foreign demand and the real estate market correction period, "export for the sake of investment, breaking the self-cycling mechanism of "investment for the sake of investment," the comprehensive decline in manufacturing and other industries, which subsequently brought on the plummeting real growth rates in social investment in fixed assets. What this expresses most of all is the rapid reversal of aggregate supply and aggregate demand, the slowing of growth in foreign demand, the real estate market correction, the pervasive appearance of manufacturing surplus, financial revenues decreasing rapidly, industrial value added and industrial profit growth rates going down as well as the overall reversal of expectations, and other aspects.

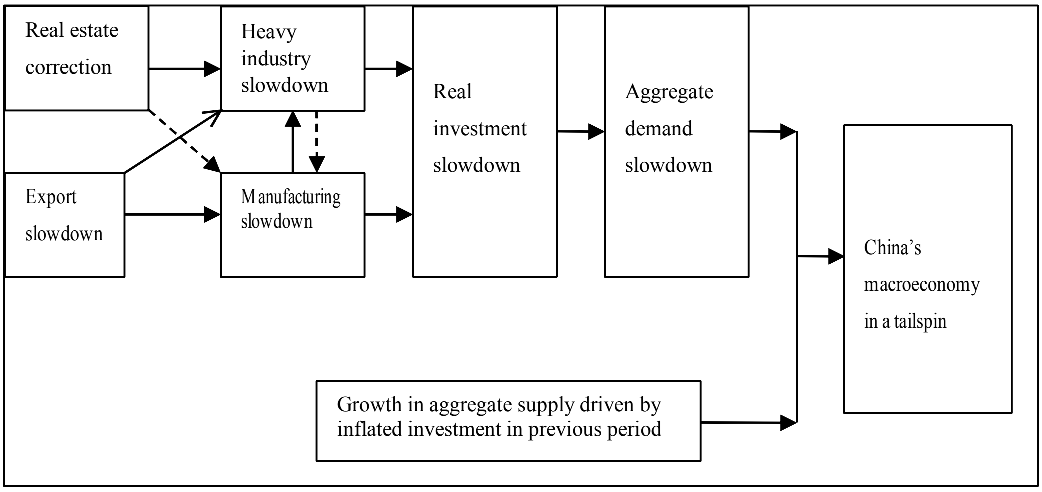

Figure 10 The mechanism of China's macroeconomic tailspin

Part III:Analysis of Factors in the Profound Downturn in 2009

I. The Expression of Profound Downturn in China's Macroeconomy in 2009

In 2009, China's macroeconomy will continue on the path of sharp downturn experienced during the latter half of 2008. The internal contradictions of the investment-driven growth model will intensify all around, and the intensification mechanism of the reverse adjustment of the macroeconomy will accelerate its operation. Without the strong intervention of government policy, in 2009 the deep downslide of the macroeconomy will continue. Even considering the various strong stimulus programs that the government already has, the internal contradictions of the investment-driven pattern of growth can only be lightly alleviated, and the trend toward deep macroeconomic downturn in 2009 will not be changed. The expression of this is concentrated in the following aspects:

(1) GDP growth rate will fall below 9%, and "holding steady at 8%" becomes one of the core objectives of macroeconomic regulation.
(2) Potential GDP gaps will further expand, and the imbalance between aggregate supply and aggregate demand will deterioriate a step further. Three different methods for calculating China's potential GDP gap each estimate -6.531%, -4.0421%, and -3.5738%, respectively, averaging the deterioration at 85.3%
(3) The jobless level will rise, and in 2009 the scale of unemployment will approach 32 million. After adjustment, the rate of unemployment will rise from the 7.1% in 2007 to around 9.3%. This will bring a tremendous amount of social pressure to the country, and restrict the choices available for the government's macroeconomic policy.
(4) An overall correction is appearing in the real estate market, with "price adjustment" superseding "business volume" as the main theme of the 2009 market. Different adjustment models will cause differing extents in the drop in growth rate of real estate investment, with estimates of a 10-20 percent drop in the growth rate of real estate investment, and the possibility of zero growth.
(5) The nominal growth rate and real growth rate of investment in fixed assets for the whole society will substantially decline in tandem. Problems related to excess productive capacity in basic industry will become more prominent. In 2009, estimated nominal growth rate of investment in fixed assets for the

whole society, and real growth rates will fall 7.5 percentage points and 2 percentage points, respectively. The growth rates of energy production and consumption will fall 14 and 13 percentage points, respectively.

(6) The growth rates of both export and import fell further in tandem, and of these, export growth rate slumped even more intensely, with estimates of export growth rate falling 6.9 percentage points, and import growth rate falling 6.1 percentage points. This will lead to the 2009 favorable trade balance increasing 14.6 billion USD less than in 2008. The growth rate of the favorable trade balance was -5.5%.

(7) As household incomes decline and consumer confidence drops, these two fulcrum points of consumption growth disappear and the wealth effect begins to reverse. Under the effects of these and multiple other factors, consumption in 2009 will alter the situation of dual growth in both the nominal and real growth rates in 2008, and "consumption-led macroeconomics" will disappear, with estimated real growth rates falling 1-1.5 %.

(8) Correlations among each part of aggregate demand, correlations of industry, the structural vulnerability of economic growth zones, incompatibility of social structure and economic structural adjustment, synchronicity of capital market adjustment and entity adjustment, discontinuity of the cycle of real estate adjustment and cycle of general industry adjustment, as well as the superimposition of the global economic cycle and China's economic cycle, and the total sum of the adjustment of the other deep level factors described above exceeds the level of ordinary expectations.

II. Analysis of the Core Causes of the Profound Downturn

1) The profound downturn of the global economy has surpassed expectations and is causing the external environment for China's macroeconomy to deteriorate a step further. The shocks facing China's exports will shift from the cost shocks of 2007-2008 to the demand shocks of 2009, and this will lead China's export growth rate to decline to an extent that exceeds that of the important growth rate, and the favorable trade balance will exhibit negative growth for the first time in the past five years.

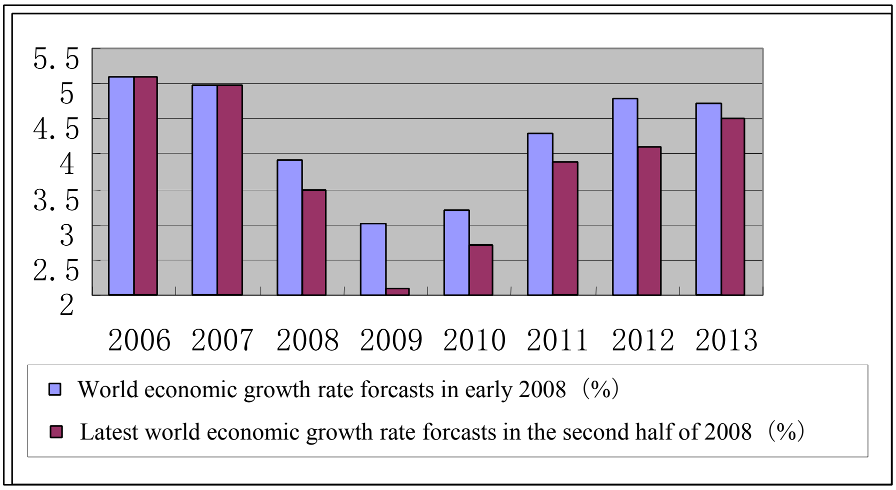

Figure 12 Fourteen international organizations adjusted forecasts of global growth rates

Just as the 2008 second quarter analysis of this report suggested, what the global economy faces is not a short-term adjustment, but rather a deep cyclical downturn. The three major forces of "progressive decrease in the speed of new technology diffusion," the "disappearance of the dividends of globalization," as well as the "the reversal towards global disequilibrium," will cause the scope and timeframe of global economic adjustment to surpass expectations. The above-mentioned research in this report has been confirmed by the adjusted forecasts of fourteen international organizations, including IMP, WB, OECD, ECB, UN and others. As Figure 12 indicates, various kinds of organizations made adjustments to the 2008-2013 global economic growth rate, and among these the 2008 average was adjusted downward 0.41 percentage points, and the average for 2009 was lowered .92%. Among all these organizations, the most prominent are the World Bank and the UN, which adjust the global growth rate to 1% and 1.6%, respectively. To a certain extent, this confirms the real possibility of a profound global downturn surpassing expectations.

Why will the global economy manifest a deep downturn surpassing expectations in 2009? We can analyze this question in terms of six aspects:

1. The global aggregate demand and aggregate supply in 2008-2009 experience complete reversals, especially the three main economic blocs directly interrelated with China's trade will experience deep downturn. As Figure 13 shows, the output gap in the global economy will expand from the -0.7% of 2008 to -1.1%, and the output gap of developed countries and the Euro-zone will each decline from the 0.005% and 0.163% of 2008 to -1.568% and -1.097% in 2009. This indicates that the global economy will face a situation of excess supply.

2. Under preconditions of the substantial contraction in the growth rate of global trade flows, the foreign demand that sustained the developed countries' maintenance of positive growth in 2008 will decline substantially in 2009, and the deep decline in the real economy as a foregone conclusion. As Figure 14 shows, in 2008 the core reason for the positive economic growth of the G7 countries lies in that since 2008, the contribution of exports to GDP has shifted from negative to positive, propping up the growth rate of the macroeconomies of the G7 countries. For example, the first two quarters of export growth in the US in 2008 directly pushed the US GDP growth up 3%, while the contributions to economic growth by investment and consumption were negative. The macroeconomic pull of Japan's yearlong exports amounted to GDP 1%, while its demand section was at -0.2%.

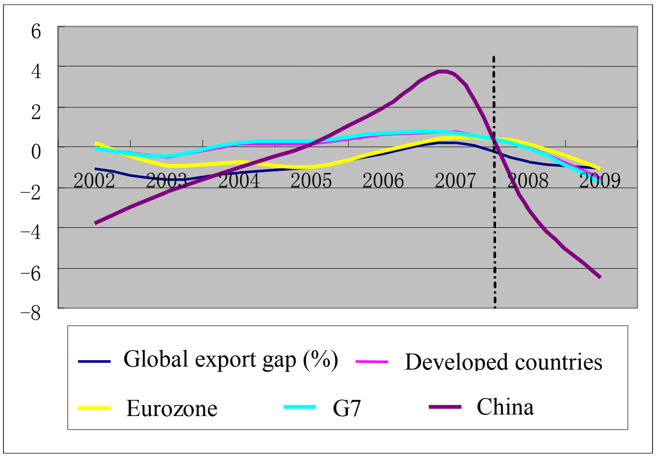

Figure 13 Output gaps of varying world regions (%)

However, the increased export growth rate in developed countries was only short-lived, and in 2008-2009 global trade showed substantial decline, and this directly impacted the fragile foundations of developed countries' growth.

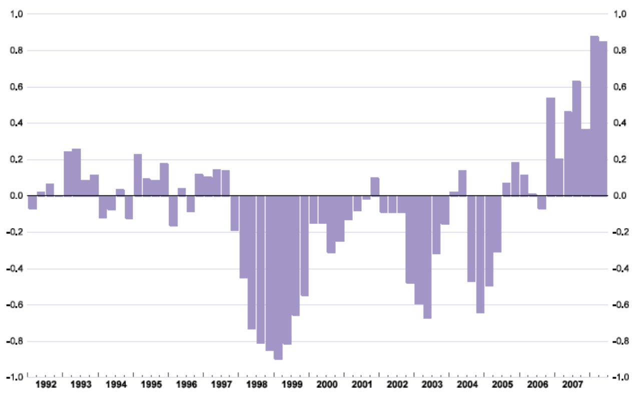

Figure 14 Diagram of the G7 countries' export contributions to economic growth (%)

3. What differs in this case from the economic adjustments of the '80s and '90s is that this time the adjustment takes the form of an overall crisis of the world economy, the economic downturn of the three major blocs of the developed nations, countries with new emerging market economies, as well as other developing countries, will produce the effect of an intense, synchronized overlap and superimposition. As Table 3 shows, on the whole, developed countries will shift to negative growth, sinking into an economic slump. Moreover, emerging

market economies and other developing countries will also fall into recession, the reverberations of the global recession in each economic region will intensify substantially.

Table 3 Forecasts for the three main economic blocs by major organizations (%)

Forecast organization	Region	2008	2009
IMF	USA	1.4	-0.7
	Euro-zone	1.2	-0.5
	Japan	0.8	-1.3
OECD	USA	1.8	-0.6
	Euro-zone	1.3	-0.4
	Japan	1.2	-1.0
UN	USA	-0.1	-0.9
	Euro-zone	1.0	-0.2
	Japan	0.7	-1.2

4. Beckoned along by the subprime mortage crisis, the financial crisis caused a global banking liquidity reversal. In September 2008, financial markets entered a vicious cycle of "declining asset leverage→falling prices→investor redemptions→drying up of liquidity." Due to the resumption of credit shrinkage, leveraging financial derivatives became a long process, making the depth and length of the financial crisis of this epicycle surpass the previous several crises. From Figure 15 we can see that the interest differential between various kinds of bond interest rates and prime interest rates went up significantly in October 2008, indicating that risk in financial markets was still spreading and that the bottom of financial crisis was no where near in sight. From Table 4 we can see that the global financial upheaval began to intensify in September 2008, shaping a credit shrinkage that reverberated from countries at the center, with capital markets contracting by a wide margin in peripheral countries. Consequently, it is not possible for the financial storm of this epicycle to calm down in the latter half of 2009.

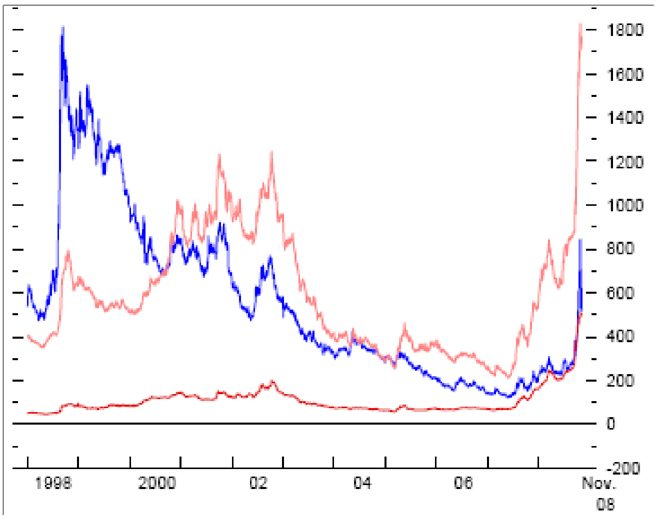

Figure 15 The differential interest margins of various bonds

——Developing market economies' government bonds

——developed nations' corporate bonds (high grade)

——developed nations; corporate bonds (low grade)

Table 4 Index of main financial indicators

Market indicators	End of December 2007	End of September 2008	End of October 2008	Recent changes over the past 10 months
Dow Jones Industrial Average	13, 264. 82	10, 850. 66	8, 378. 95	-36. 83%
NASDAQ Composite Index	2, 652. 28	2, 082. 33	1, 552. 03	-41. 48%
S&P 500	1, 468. 36	1, 164. 74	876. 77	-40. 29%
Russell 2000	766. 03	679. 58	471. 12	-38. 50%
Federal Funds Interest Rate	4. 25%	2. 0%	1. 50%	-275 bps
10-Year National Treasury Bond Yields	4. 04%	3. 83%	3. 70%	-34bps

5. This cycle of economic crisis is a crisis of a slump in the real economy and financial deflation that emerged in tandem. In 2009, the mutual influences of the slumping real economy and substantially deflation in finance will cause the downslide in the real economy and financial downturn to surpass usual expectations.

6. In essence, the correction of this cycle is the coincidence of the real estate cycle and the cycle of the real economy as its distinctive characteristic. This will make the recovery of the real economy much slower. From the perspective of the Kuznets cycle, 2008 just happened to be a period of decline in American real estate. This cycle and the cycle of the real economy in the US also coincided. At the same time, from the perspective of global real estate, we find that all over the world, 2007-2008 was an "inflection point" for real estate. This kind of deep decline in global real estate, along with the simultaneous downturn in the real economy, caused each and every nation to sink into deep recession (see Figure 14 and 15).

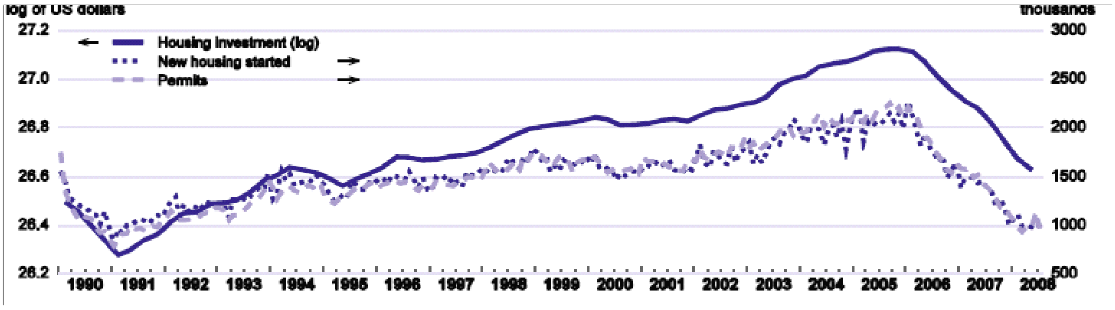

Figure 15 US real estate cycle—Kuznets cycle

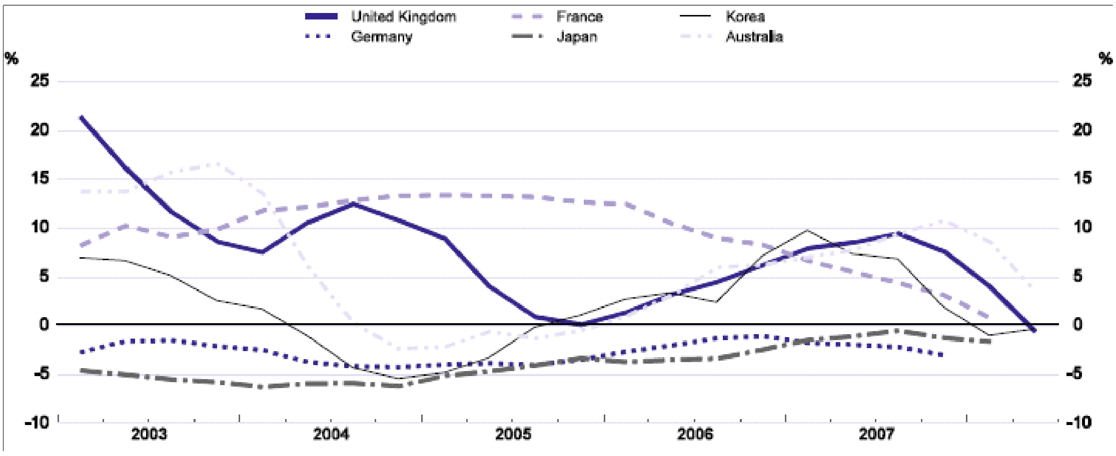

Figure 16 World real estate prices falling in synchronicity

The world economy, as described above, has surpassed expectations in the depth of its downturn. What sort of impacts had this had on China's real economy? In terms of the big picture, this had been an unexpectedly heavy blow to China's exports, and China's foreign demand had slumped to an extent much greater than that of 2008. The core causes of this lie in the following:

(1) Contrary to the common perceptions, the elasticity of China's export revenues is very high. Exports are rather susceptible to the national income growth of major trading countries. The simultaneous downturn of the three big economic blocs, Europe, the US, and Japan, will cause direct, deep shocks to China's exports. Research reports indicate that with regard to the income elasticity of American and European exports, China's income elasticity is far greater than 1, respectively reaching 7.18% and 13%. This illustrates that in 2009, European and the American economic downturn will lead to a 5.1%. decline Chinese exports.

(2) In contrast with 2008, in 2009 Chinese exports face shocks not from internal costs but rather from external demand. Since 2007, the slowing growth rate of Chinese exports was not actually caused the US financial crisis, because during this period American import demand did not substantively drop. The drop in China's trade with America is mainly due to the rise in various costs of export goods, leading to a fall in competitiveness. Consequently, with the practical impact of the financial crisis on the real economies of the US, Europe, Japan and other blocs, the drop in their import demands will manifest itself fully in 2009. And this kind of demand shock will be difficult for us to use revaluation and appreciation of the RMB to cushion, or raising export rebate rates, as well as export subsidies and other supply side stimulus policies, to mitigate the drop in foreign demand. Consequently, from the perspective of total revenues, the impact of the slowing of the global economy in 2009 on China's exports will be far greater than that of 2008.

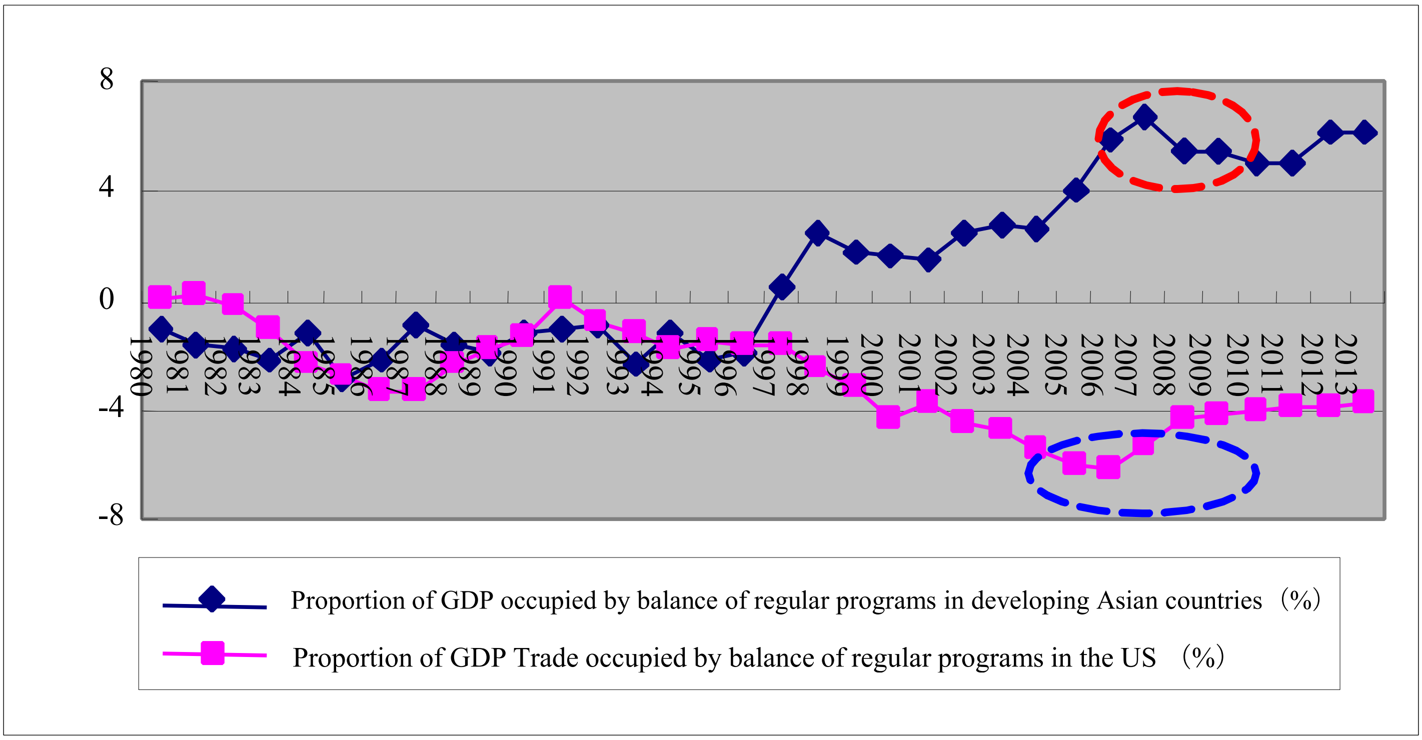

Figure 17 Adjustment of the Bipolar Trade Volume Imbalance

Proportion of GDP occupied by balance of regular programs in developing Asian countries

Proportion of GDP Trade occupied by balance of regular programs in the US

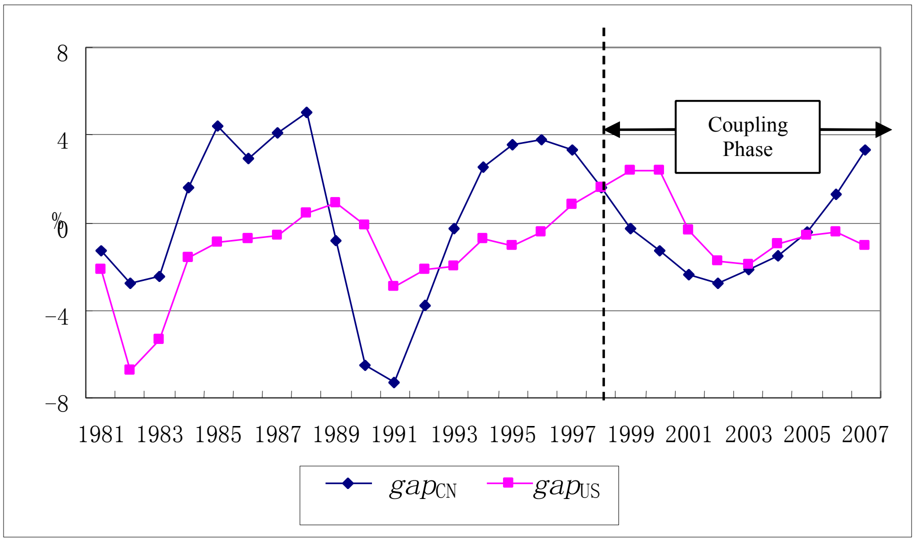

Figure 18 Phase comparison of China's economic cycle and the US economic cycle

(3) From a different perspective, in essence, the profound downturn in the global economy is the necessary product of the model of global disequilibrium that has reached its culmination. The collapse of the American model of excessive

consumption means, to a large extent, the collapse of China's models of excessive saving and excessive export. In the bipolar interaction with the US economy, China's exports underwent structural and aggregate simultaneous downslide. According to the research indications of reports, in the past ten years China's economic cycle and that of the US have undergone a process of gradual coupling (see Figure 17 and 18). For this reason, from the perspective of cycle of correcting the disequilibrium, the adjustment of the US unfavorable balance of trade and China's favorable balance has only just begun.

2) The structural linkages and structural rigidity that exists between China's aggregate demand and aggregate supply will make the downturn in China's macroeconomy substantially surpass the expected level.

China's aggregate demand has two mechanisms of linkage. The first is the "export-investment linkage mechanism," the second is "export-income-consumption." Just as the analysis of this research group in the 2006 and 2007 reports suggested, the functioning mechanism of China's macroeconomy is not just a simple case of investment-driven exports, and even more so, it is not excess productive capacity that led to the passive increase in exports. Rather it was that the increase of exports led to the growth in export profits, which led, in turn, to increased investment, and the growth of investment once again added support for export through supply. Consequently, export and investment share linkages. In 2008, exports growth rate decline 4.7 percentage points. In 2009, it is estimated to drop 6.9 percent, and will certainly pass through the "export expectations," and the "lag effect" will hit 2009 investment with a massive impact. Most clearly manifested in 2008 is the decline in the investment patterns of foreign, private and joint ventures and industrial value added. The "export-income-consumption linkage mechanism" is mainly embodied in falling profits for large numbers of enterprises, causing workers to lose their jobs, which leads to falling income levels, brought about by the export-oriented economy's substantial decline. Because huge numbers of migrant peasant laborers are employed in export-oriented jobs, the fall of exports has the most obvious influence on this group, and this group's marginal propensity to consume is highest. As a result, declining exports will bring about obvious changes to consumption.

Within aggregate supply are problems of rigidity in industrial supply. Due to the magnitude of asset-specific investments and the relatively high cost of equipment maintenance, these industries cannot really make flexible adjustments according to changes in foreign demand. Because investment in heavy industry is at the core of the economic growth in this cycle, the problems of excess productive capacity that 2009 will consequently face are much more severe than that of the service industry-driven or light industry-driven economic patterns.

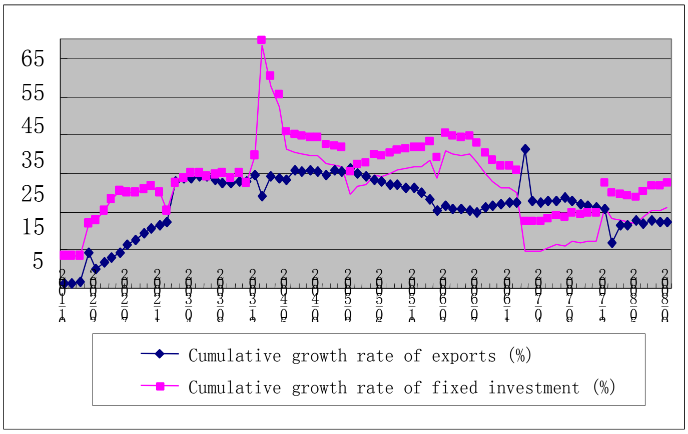

Figure 19 Import-investment growth rate relationship chart

Table 5　Causal relations between investment and export

Null Hypothesis:	Obs	F-Statistic	Probability
Investment is not the Granger Cause of export	13	4.05272	0.02815
Export is not the Granger Cause of investment		6.08574	0.01492

3) In 2008, the regional specificities of China's economic growth determined that it would be difficult to sustain. The financial constraints and investment miscalculations that China's western region will in encounter in the future, along with other problems, will cause China's economic growth to lose this regional center of support.

China's 2008 macroeconomic growth was still about to reach 9.6% growth rate even caught in a tailspin, and the critical factor in this was that the central and part of the western regions maintained a forceful growth trend. The reason that theses regions were able to maintain a forceful growth posture in recent years is primarily because: 1) with the push of soaring financial revenues, these regions' governments on all levels immediately started numerous engineering projects, thus cities and townships' investment in fixed assets rose rapidly; 2) under conditions of rapid growth in the costs of industry in the eastern region, many export-oriented low-end industries began to undertake gradient transfers to the western regions; as resource prices climbed, resource exploitation and production increased on a large scale. In 2007, the nominal growth rate in the central and westerns regions reached 20.1%, surpassing the eastern regions by around 3 percent. During the first half of 2008, the national average growth rate was 10.4%, and the eastern region's was only 8%, but the middle region's six provinces reached 13.3%. If we analyze deeply the growth specificities of the western regions we will discover that the western region's growth was a classic case of investment-driven growth, 70% of which relied on investment to propel it along. From Figure 20 we can see that since 2003, the investment growth rate of the central region has surpassed that of the eastern region, and from 2005, investment growth rate in the western region has surpassed that of the eastern region as well.

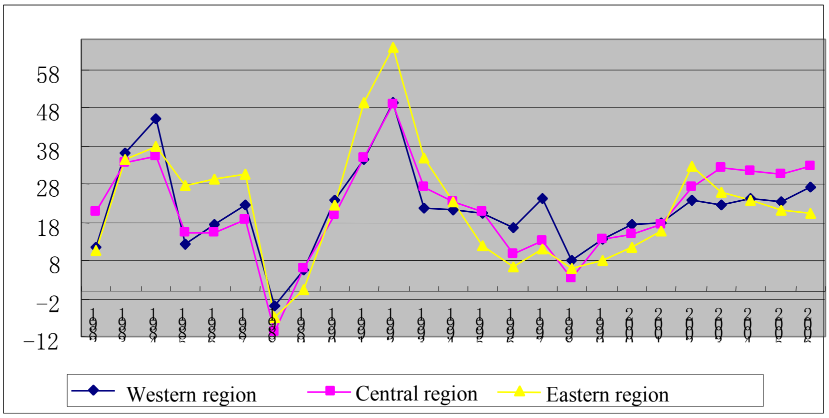

Figure 20 Proportion of investment in fixed assets by region (%)

In 2008, the data discrepancy in the first three quarters grew larger, as the eastern, central and western regions' city and township investment grew 22.7%, 35.4% and 29.5%, respectively, and the western region's investment clearly grew faster than that of the eastern region. At the same time, the proportion of consumption in the central region, however, had been falling each year by 0.2% since 2003.

In 2009, this pattern of investment-reliant economic growth faces the severe tests laid out below: 1) Because of the decline in real estate prices and resource prices, the scale of land sales will rapidly fall, and the financial problems of the central and western regions will appear on a large scale. The local government-dominated investment projects all over these regions will face the drying up of capital. 2) In the course of substantial decline in exports, the shift from export-oriented economics will take a heavy hit because these new construction projects have no risk-resisting capacity, and so the downslide will be more severe than in the eastern region. 3) The large-scale migration home of central and western region rural peasant laborers will cause the region's income to substantially decline, and consumption to fall even lower.

For this reason, in 2009, the central and western regions cannot sustain the condition of high-speed growth rates, and will experience a more severe and profound downturn than in the eastern region.

4. In 2009, the phenomenon of "dual-rising" will disappear from China's nominal consumption growth rate and real consumption growth rate. As incomes decline, consumption confidence shrinks and the mainstay of consumption vanishes, along with multiple other factors, and the fall back of the consumption growth rate will become a foregone conclusion.

In 2008 real consumption growth reached 4 percent, contributing over 60% to China's economic growth rate, becoming the core force supporting the excessive decline of China's economic growth rate. However, in 2009 this core force supporting China's economic growth rate could experience a reversal. The main reasons for this are as follows below:

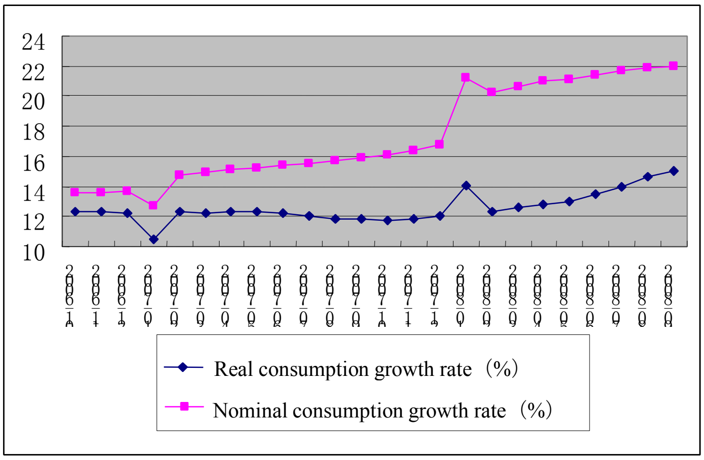

Figure 21 Real growth rate and nominal growth rate of China's consumption

(1) As the economy enters a downward interval, consumer confidence declines to a substantial degree and consumers will make large-scale behavioral adjustments. As Figure 22 shows, in 2006-2007, consumers sustained a high position, but in January of 2008 began to enter an interval of sustained downward movement, an important factor behind which is apprehension about the future economic situation.

(2) It is difficult for income growth during a depressed period to sustain high-speed growth of consumption. Research on economic history shows that during any period of depressed economics, household incomes will fall by a substantial margin. From Figure 23 we can see that in 2008 the real income of city and town households entered an interval of downward movement and slowing growth rate. Although cash income in villages is in a period of increased growth, medium and small businesses are going bankrupt, migrant peasant laborers are losing their jobs, and the price drops in future agricultural products, will all constrain this trend in the future. Of course, just as this research team's mid-2008 and 2007 Fourth Quarter report analysis suggested, the overall arrangement of current income distribution did not really support the continued rising of consumption. In 2008, the proportion of GDP occupied by labor remuneration was still in the range wavering between 11-12%. In addition, due to this economic downturn being manifested mainly in export-oriented economics and labor-intensive low-end industries, the impact on the incomes of relatively higher marginal propensity to consume of mid-low income groups is the greatest, making the impact on 2009 consumption even heavier.

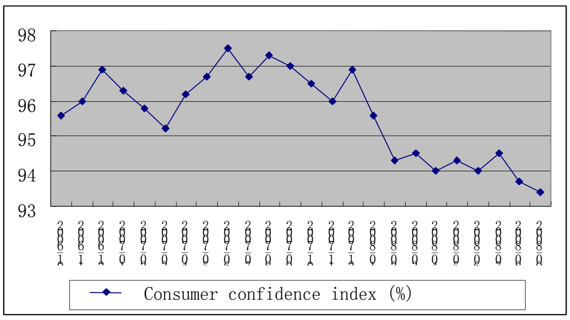

Figure 22 China's consumer confidence index

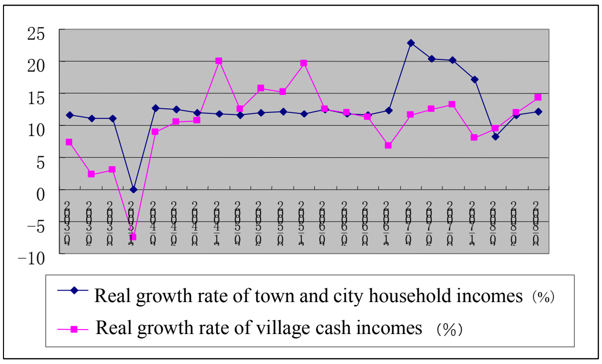

Figure 23 State of Household Incomes

(3) The two main pillars of consumption in China's current economic epicycle, automobile consumption and housing consumption, will experience substantial decline in 2009. Between 2002-2007, housing consumption was one of the core factors behind China's consumption growth, because this period was a time of the highest surging growth in housing purchases in China. The purchase of apartments correspondingly fueled residential consumption. Since January of 2008, however, real estate has begun to correct, and by 2009 the business volume of real estate will have fallen by a large margin, thereby leading to the large-scale disappearance of housing consumption, and relatively high negative growth will appear. In addition, the wave of household automobile purchases already reached its peak during the high point of this period of strong economic growth. By the end of 2007 in China's cities and towns, the number of cars had already reached 6.06 cars per one hundred households, and by the third quarter of 2008 that number had reached 8.67 cars, surpassing the high level of car ownership per 100 households in other nations of similar income levels. For this reason, in the next few years, auto consumption growth will enter an interval of downward movement. From Figure 24 we can see that already in 2008 that due to a decline in orders, the production of cars in China has fallen to a large extent.

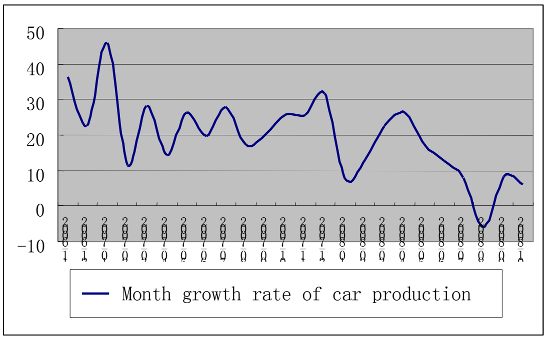

Figure 24 The growth rate of China's automobile production

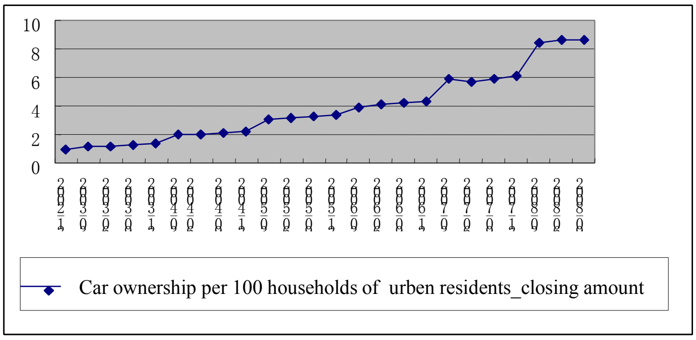

Figure 25 The quantity of cars per 100 households in China's cities and towns

(4) The huge contraction in residential real estate as well as financial asset prices in 2008 will produce a forceful wealth effect, causing consumption to decline. Quantitative studies show that since 2002, a wealth effect has gradually appeared in China. Although its coefficient is relatively small, during the period between 2005 and 2008, for every 10% reduction in household wealth, with an effect of 2% on consumption expenditures. Between 2008 and 2009, the degree of contraction in China's stock market reached over 60%, losing 13 trillion, and at the same time real estate value estimates shrank around 15%, making households total wealth shrink in the range of 12-18%. This will mean that consumption will lose 2.4-2.6% of its expenditures as a result.

5) A substantial correction in the real estate industry will comprehensively break out. In 2008, demand in the real estate market dropped and supply reached the limits of capacity, inevitably leading, in 2009, to multiple deep corrections in the structure of the real estate

market, scale of investment, as well as business volume, and these adjustments have pushed the growth rate of the manufacturing industry down further, and will cause the scale of investment in fixed assets to experience a downturn that surpasses expectations.

The housing market began to correct at the beginning of 2008, and the traditional market state of supply exceeding demand was reversed. However, during the initial period, this correction was only embodied in the volume of transactions. The scale of real estate not only investment did not immediately fall because of the adjustment in the relationship between supply and demand, but on the contrary, the limits of capacity were being reached because the profit-making model of the real estate developers had changed. Since 2008, large numbers of real estate developers were forced to change their investment strategies, and such strategies as "cordoned-off land profits" and "cordoned-off building speculation," [*Translator's note:* these are recent speculative business practices whereby developers would keep land or finished buildings off the market until prices had grown sufficiently to increase profits] were replaced by the "cash is king" strategy. Because of the pressure to recoup investment money many building construction projects were hastily undertaken. As a result, real estate development investments during the first half of 2008 didn't actually exhibit signs of downturn, and it was only after June that a 5-6% slump appeared. However this kind of reversal in development behavior will speed up the real estate correction, and in 2009 the real estate market faces the dual pressures of an increase in supply and substantial decline in demand.

In 2009, real estate faces severe liquidity constraints and the risk of capital chain ruptures, thus the acceleration of change in real estate prices and marketing models. Figure 27 shows that since December of 2007, due to the expansion of construction area, substantial increase in the stockpiling and cordoning-off of land, and soaring development costs, the real estate market prices began to rise in order to cope with the growth rate of accounts payable. Furthermore, in February of 2008, due to the slowing of enterprise profits' growth rate, the shrinkage of bank credit, as well as the rising costs of private lending, along with other factors, the source of funds began to dwindle. By March of 2008, the funding source accumulative growth rate was lower than the accounts payable accumulative growth rate, and funds situation began to worsen. In addition, this kind of state continued to expand, and the gap between the accumulative growth rate of funding sources and accounts payable became larger and larger.

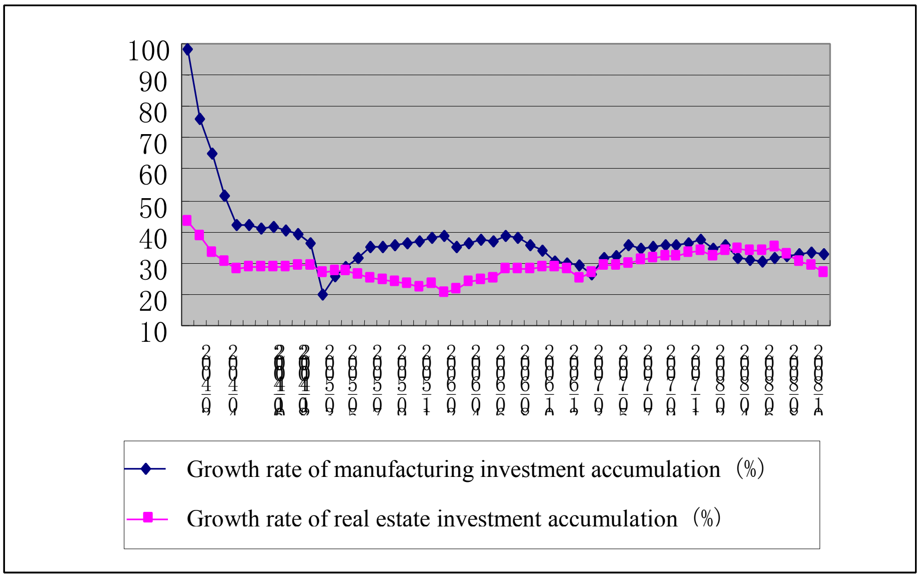

Figure 26 Real estate investment growth rates and manufacturing investment growth rates

From Figure 28 we can see the dynamic relations of change between real estate prices and real estate funding sources even more clearly. The rise in housing priced causes the source of funds to grow, and the drop in prices caused funding sources to dwindle, so that once the trend towards falling prices was formed past a critical point, source of funds would dwindle at increasing speeds. In December of 2007, the growth rate of funding source accumulation was at 37.9%, however by September of 2008 this accumulation growth rate was only 10.7%, falling 27.2%. This directly pushed real estate developers to rely heavily on their own funds.

In 2007, self-raised funds occupied only 32% of real estate fund sources, but by September of 2008, this proportion had reached 103%. This means that real estate funding has reached the drying-up stage. For this reason, if no exogenous shock intervenes, by early 2009, the gap between the growth rate of funding source accumulation and accounts payable accumulation will inevitably expand causing a large part of the real estate industry's capital chain to break. This kind of rupture in the capital chain means a "hard landing" for China's real estate. It also means that 21% of China's investment in fixed assets will disappear, 25% of all loans across society will become bad loans, and around 1.4 trillion of financial windfall income outside of local budgets will disappear. Although this extreme picture is not going to happen, the appearance of severe deficits for real estate in 2009 is inevitable, and this will certainly lead to substantial decline in the investment capacity for real estate.

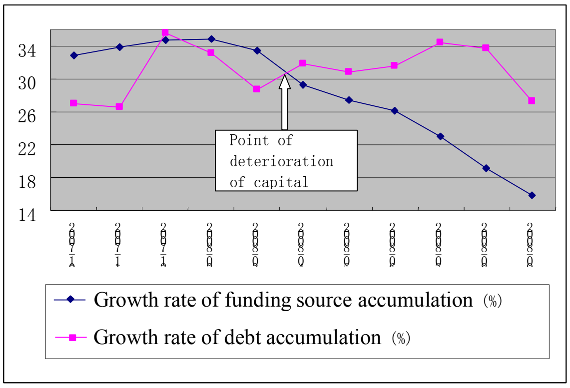

Figure 27 Graph of real estate funds reversal

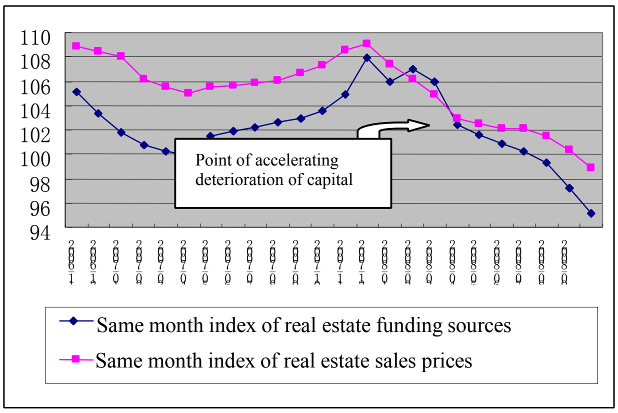

Figure 28 Graph of the acceleration of the deterioration of real estate funds

Looking at the pattern of correction in the real estate market, it appears that the whole year of 2009 will undergo price and investment adjustments. New projects as well as planned investment quotas can forecast next year's pattern of investment. Compared with the same period last year, the growth rates of the planned investment quotas of the third quarter of 2008 were down to 1.7%, enormously lower than the 24%; last year's level during the corresponding period.

Corresponding to the depressed situation of real estate, the manufacturing industry, in which investment in fixed assets occupies the largest proportion, will also inevitably experience a severe downturn. Beginning in June of 2008, manufacturing began to experience a reversal of supply and demand, and this reversal could well be further expanded by the compound effects of depressed real estate and export downturn, which could cause comprehensive declines in investments in fixed assets across society

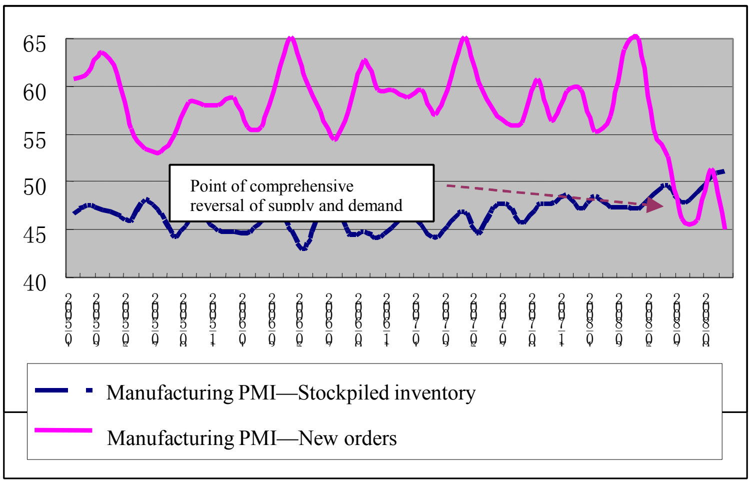

Figure 29 Graph of the reversal of supply and demand in manufacturing

Table 6 shows our calculations of the industry distribution of contribution to GDP of investment in fixed assets and other industries. We can see that the proportion of investment in fixed assets across society occupied by manufacturing and real estate investment in 2007 and 2008 reached 49% and 51%, respectively, making up 21% and 23.1% of GDP, in turn.

Thus, in 2009 the continued decline of these two industries will directly lead to a decline in GDP of between 1-3 percentage points. The variation in scope of decline will be determined by different models of adjustment.

Table 6 Final investment and its contribution to GDP

	2007			2008		
	Portion of GDP occupied	Real growth of final investment	Contribution to GDP	Portion of GDP occupied	Real growth of final investment	Contribution to GDP
GDP		11.9	11.9		9.6	9.6
Investment in Fixed Assets	43	10.9	4.69	45	7.9	3.9
1) Mining industry	2	12.8	0.26	2	9.1	0.18
2) Manufacturing	13	17.0	2.21	14	12	1.56
3) Real estate industry	8	14.2	1.14	9	11.1	0.92
4) Infrastructure	8	6.8	0.54	7	5	0.35
5）Other	12	4.6	0.55	11	3.0	0.35

Part IV: Specific Properties of the Profound Downturn in this Epicycle

Just as the analysis above suggests, the special characteristic of China's macroeconomy in 2008 was the "tailspin," and in 2009, "profound downturn." So what are the specific characteristics of the downward interval of this epicycle from the perspective of the mid-point period? That is, when will the economic downslide catch sight of the bottom? What is the extent of the economic downturn? And can the existing macroeconomic policies fundamentally change the pattern of cyclical adjustment? The core conclusions of this report are the following:

The depth of the downslide during the economic downturn period of this epicycle is situated between that of the "1989-1991 downturn period" and the "1997-1999 downturn period." The time of downturn and recovery will be longer than that of the last two downturns. Current macroeconomic policy mitigated the depth of the downturn to a great extent, changing the cyclical adjustment pattern, and making the downturn interval exhibit a "W" correction pattern. That is, although during the latter half of 2009 the macroeconomic downslide will see the bottom and rebound, because the current policies do not ameliorate the internal contradictions and conflicts of the economic downturn, closely following the mild rebound of the macroeconomy in 2010, China's macroeconomy will once again explore its depths, thus protracting the period of economic recovery.

Why is it that the degree of downslide in the downturn period of this epicycle is situated between the "1989-1991 downturn period" and the "1997-1999 downturn period," and why will that the period of downturn and recovery will be longer than these past two? The reason for this is the close relationship between the economic downturn of this epicycle and the following features that characterize it.

1. The period of downturn in this epicycle is the first formation of economic slump/depression under conditions of a relatively whole system of market economy. The responsive capacity of economic actors now in place, in comparison with previous State-owned economic entities, is more sensitive to both prosperity and recession. Market expectations have a more intense influence, and the regulation and control capacity of the State with regards to the behavior of the economic corpus is poor. Thus, during times of prosperity investment entities are relatively optimistic, and in depressed times investment could be more conservative, possessing marked characteristics of conformity to the cycle. The corresponding impetus of economic entities in response to the counter-cyclical policy adjustments of the government is relatively weak. In contrast to this, the systemic foundations of the "1989-1991 downturn period" was a planned commodity economy, with State-owned economics as the principal actor. The regulatory capacity of the State was quite robust. The factors leading to downturn during that period included the mistakes on the part of State policy as well as social upheaval that lead to a vacuum of government regulatory control.

The "1997-1999 downturn period" took place during a time of transition as China turned fully towards a market economic system. External influences and systemic transformation were the core forces behind the economic downturn during this period. The response of economic entities towards the government's counter-cyclical adjustments was rather strong. The difference between these kinds of systemic foundations determined the channel through which the government could produce regulatory effects as well as the effects themselves. For this reason, the period of depression in this epicycle will last longer than in the past two.

2. The downturn of this epicycle is the first to face the depressed economics of dual shocks of aggregate demand and aggregate supply. The comprehensive explosion of internal contradictions of its investment-driven economic growth is in essence the continuously accumulated product of production pattern/model of the past twenty years.

What differs from this cycle is that the "1989-1991 downturn period" was the product of blunders of the planned commodity economy and social unrest, and the "1997-1999 downturn period" was the product of the Asian Flu Economic Crisis. For this reason, the essential characteristics of the "1989-1991 downturn period" was economic stagnation under conditions of the collapse of the social system, and the "1997-1999 downturn period" was a slow adjustment under conditions of gradual reform. In this respect, the depth of decline in the current downturn is situated between these two.

3. The current epicycle of downturn is the first period of economic depression that took place during the overlap of a cycle of capital market correction and commercial housing market correction.

The substantial corrections in the stock market and commercial housing market will lead to the substantial shrinkage in household assets, thereby causing the extent of the contraction of the economy in the depressed period to be quite pronounced. From Figure 30 we can see that in the "1997-1999 downturn period" the stock market was in an upward interval, and in 2001-2005, as China's macroeconomy was in a time of upswing, the stock market was in a downward interval, and only after 2008 were the two operating in a synchronized state. If we examine the relationship between real estate and the macroeconomy we find that real estate investment growth rates and the growth rate of the macroeconomy possess a high degree of continuity. At odds with the past two downward periods is that real estate in this epicycle is primarily focused on commercial housing as the mainstay, and the investment model and the original government welfare benefits model are entirely different. Consequently, the depressed period during this epicycle faces the impacts of shocks in the financial markets and real economy, mutually contracting effects of the real estate economy and the economies of other sectors. These sorts of feedback shocks will relatively prolong the depressed period.

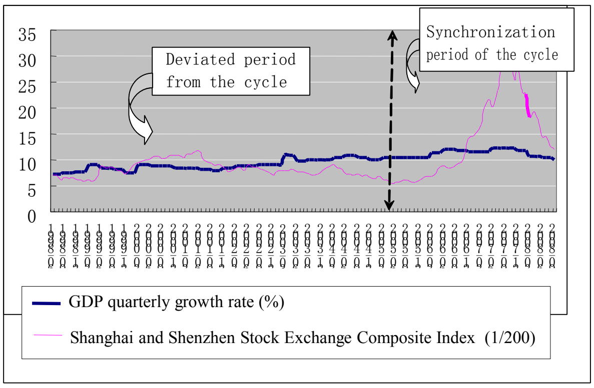

Figure 30 Relationship between capital markets and cycles of the real economy

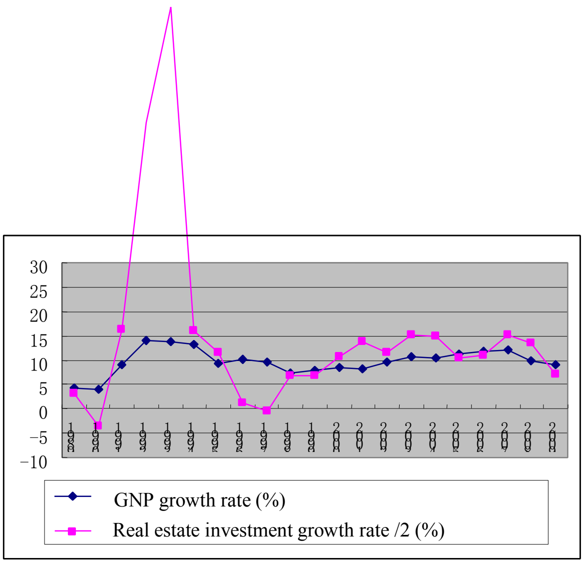

Figure 31 Real estate investment and economic growth

4. The downturn of this epicycle is the first to face a depressed period of large-scale cyclical unemployment under conditions of market economics, and the scale of unemployment exceeds that of previous patterns.

The sociopolitical pressures brought about by unemployment compel the government to lay particular stress on short-term socio-political goals while adopting economic adjustment measures, thereby leading to unsuitable macroeconomic effects in the short and mid-term, and thus causing the downturn period of the current epicycle to exhibit a "W" shaped adjustment pattern. Figure 32 shows an unemployment figure based on the economically active population minus the number of employed. During the past two periods of downturn the unemployed population was 5.47 million and 14.33 million, respectively. As Table 7 shows, according to the calculations of the six big sectors, that at present the 2008-2009 town and city labor force demand is estimated at 11.2 million, but the economically active population of needs 43 million jobs. This means that in 2008-2009 China faces an unemployment scale of 32 million. The unemployment rate will also climb from the 7.1% of 2007 to around 9.3%. To a certain extent, unemployment of this scale overwhelms the current capacity of the social system, bringing an additional burden to the functioning of the macroeconomy. To a large extent, employment strategies become a chief starting point for macroeconomic adjustment and control, and the short-term solution to the steep decline currently facing the economy becomes the core objective of the macroeconomic policy unveiled by the government. This will lead to deep conflicts in all kinds of policies between social objectives and economic goals, and between short term and mid-term priorities. These conflicts will prolong the downturn of this epicycle and will alter the usual "V" shaped pattern of cyclical adjustment.

Table 7 Employment elasticity and new employment forecast for Non-Agricultural industries in the Eastern, Central and Western regions

		Salary groupings				Estimates Growth rate	New Employment
		Group 1	Group 2	Group 3	Group 4		
Eastern Region	Secondary Industries				0.173	0.138	2,650,000
	Tertiary Industries				0.150	0.143	2,290,000
Central Region	Secondary Industries			0.136		0.183	1,500,000
	Tertiary Industries		0.217			0.133	2,230,000
Western Region	Secondary Industries				0.111	0.218	850,000
	Tertiary Industries			0.202		0.128	1,670,000
Newly added employment demand							11,200,000

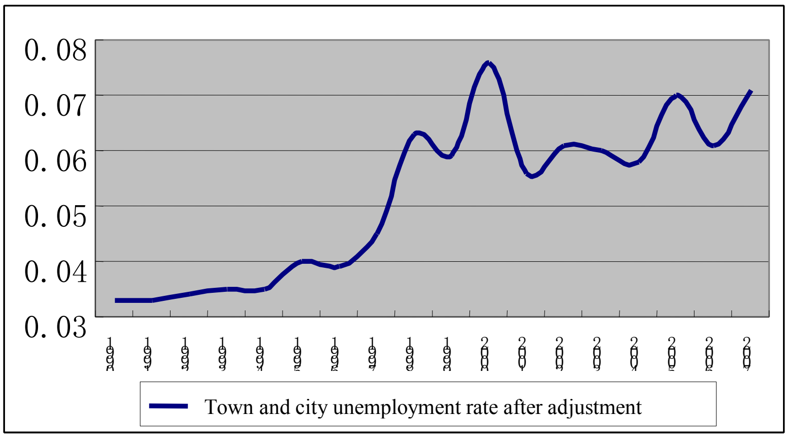

Figure 32 Using the economically active population to calculate China's unemployment rate

5. The downturn of this epicycle is the first that takes place in tandem with the downward period in the global economic cyclical adjustment. The depth and length of the global economic cyclical adjustment will have a direct influence on the depth and length of the epicycle of China's economic downturn.

The "1989-1991 downturn period" and the external economy were essentially unrelated, because China's trade still only occupied a relatively small proportion of GDP. The "1997-1999 downturn period" was directly related to the South East Asian financial crisis, however that crisis was essentially the economic crisis of a global region, and the whole economic bloc of the developed world that had a close relationship to China's foreign demand did not experience any problems, but rather was in a golden age of economic growth. Just as the analysis here earlier suggested, the global economic downturn of this epicycle is the first all out crisis in the age of financial globalization and the globalization of trade. It is a crisis in which the three economically developed blocs, newly emerging markets as well as other developing countries are experiencing the reverberations of simultaneous downturn, and it is a crisis of the mutual effects on the real economy and the virtual economy, a crisis of reversal/deterioration of the global economic disequilibrium, and the explosion of the general crisis of accumulated problems with the globalized monetary system since the collapse of the Bretton Woods system. Thus the depth and length of this current crisis is unprecedented in the past 80 years. And the depth and length of the crisis directly determines the specific character of China's economic downturn interval, because China is an organic part of this crisis, and the process of correction of the disequilibrium of the global economy inevitably signifies the bankruptcy of the excessive consumption model of the US and the excessive savings model of China. For this reason, China's economic downturn and the economic crisis in the US, as well as the global economic adjustment are fundamentally the various parts of the same thing.

If we look at this from the quantitative perspective, the contents of Table 8 further confirm the above-stated viewpoint.

1) From the perspective of calculated potential GDP gap, this current cycle of economic downturn surpasses the "1997-1999 downturn period," but is less severe than the "1989-1991 downturn period." The potential GDP gap of the "1989-1991 downturn" slid down 12.2 percentage points, while during the "1997-1999 downturn" it fell 6.5 percent, and in the downturn period of this epicycle it could reach 7.3 percent.
2) In terms of the change in the growth rates of industrial value added and real estate value added, this current cycle is also situated in between these two periods of economic downturn. The "1989-1991 downturn" adjusted downward 11.9 percent, the "1997-199 downturn" corrected downward 2.7%, and this cycle is estimated to reach 4.5%.
3) In terms of the methods and patterns of adjustment, "1989-1991" and "1997-1999" both essentially belonged to the "V" shaped adjustment model, " but that the former was a "hard landing," with sharp decline and sharp growth, and formed a "big V-shape," while the latter was a "soft landing, and formed a "small V-shape." The unique characteristics of the economic downturn of this epicycle, however, along with the government's adjustment methods, have determined that the current adjustment model will be "W-shaped." In essence, the downturn of this epicycle is the product of the investment-driven growth model reaching its culmination. In the short-term it faces the shocks of insufficient demand, but in the mid-term it will face shocks of inflated supply brought about by investment accumulation. Moreover, the previous two downturns were essentially declines of demand in a shortage economy, and the core method of managing these crises was investment

to solve in the short-term problems of insufficient effective demand through increased investment, and in the mid-term, problems of insufficient supply capacity and economic shortage. Consequently, the strategy of utilizing expanded residential housing construction, capital construction, and other investment was very effective. However, if this kind of method is used in the management of the current economic downturn, it can only ameliorate the predicament of declining demand in the short-term, but cannot solve the internal conflicts and contradictions of investment-drive economic growth, and bringing instead the danger of increased economic slowdown in the mid-term. This is because current investment will evolve into the capital and supply for the next period, confronting the macroeconomy with the problems of an even larger scale of surplus productive capacity and economic downturn. Since the fourth quarter of 2008, the various macroeconomic policies unveiled thus far have been, in essence, investment-driven regulation policies that will raise demand in 2009, alleviating the degree of downturn in the macroeconomy, but incapable of altering the internal mechanism of the macroeconomic downturn, and instead causing even greater problems of surplus productive capacity in China's economy in 2010 or 2011. It is precisely for this reason that the length of time that China's macroeconomy will spend in a "W" adjustment model will be essentially in line with the length of the global economic adjustment—three years of downturn and three years of recovery.

Table 8 Comparison between the downturn in this epicycle and downturns in history

	Length	Method of adjustment/correction	Relevant years	Core macroeconomic indicators							
				CPI	GDP growth rate (%)	Potential growth rate (%)	Industrial value added growth rate (%)	Real estate value added growth rate (%)	Stock Change Range (%)	Average number of unemployed	Systemic foundation
1980s downturn period	The two-year downturn in the 80s ; One-year recovery	Big V-shaped pattern	1988	18.8	11.3	7.97	15.3	12.7	0	5,740,000	Planned commodity economy
			1989	18.0	4.1	2.23	5.1	15.9			
			1990	3.1	3.8	-3.49	3.4	6.2			
			1991	3.4	9.2	-4.22	14.4	12			
1990s downturn period	Three-year downturn period ; Two-year adjustment period	Small V-shaped pattern	1996	11.4	10	6.83	12.5	4	126%	14,330,000	Interim in transition to full market economy
			1997	8.3	9.3	6.13	11.3	4.1			
			1998	1.7	7.8	4.03	8.9	7.7			
			1999	1.7	7.6	1.79	8.5	5.9			
			2000	4.8	8.4	0.32	9.8	7.1			
The current downturn epicycle	Three years of downturn ; Three years of adjustment	W-shaped pattern	2007	4.5	13	1.55	13.5	13.6	-40%- to 60%	32,000,000	Relatively complete market economic system
			2008	6.1	9.1	-1.976	13.1	12			
			2009	2.3	8.1	-3.57	9.0	5.1			
			2010	2.0	8.6	-3.86	-	-			
			2011	1.7	7.5	-5.73	-	-			

Part V: Policy discussion and recommendations

1. The substance of the 4 trillion stimulus plan

How should we deal with the profound economic downturn that has already arrived? During the latter half of 2008, the government began to undertake a comprehensive adjustment of macroeconomic policy. Since the "double protection" adjustment of 2007 [*Translator's Note*: "Double protection" entailed the central government mandate to prevent the overheating of the economy through excessively rapid growth, and to prevent structural expansion from creating price inflation, as two core imperative of macroeconomic policy] and the current priority of "ensuring growth to the best of our abilities," went from tight fiscal policy and monetary policy adjustment to loose fiscal policy and moderately relaxed monetary policy. On 9 November, the State Council put forth a set of more than ten policies aimed at expanding internal demand, including "accelerate the construction of engineering projects with safeguards," "accelerate rural infrastructure construction, railroads, public highways and airports as well as other major infrastructure," and "comprehensively implement value-added transitional reform."

Realizing these policies through the end of 2010 requires approximately 4 trillion of investment, of which the central government financial administration will contribute 1.18 trillion, with the remainder coming from local and regional government investment and non-governmental investment, and this is calculated to boost the economy 2 percentage points.

How to make sense of and evaluate the policies described above?

1) The current stimulus has a solid short-term foundation. It is timely and necessary. And it is the product of thorough consideration of how to manage the macroeconomy and the society.

Along the lines of the analysis above, the adjustment of this epicycle is a deep economic downturn taking place all at once under the effects of three kinds of forces. Moreover, the principal of this decline is the slump in investment in fixed assets and the general surplus production capacity led by reversals in foreign demand and real estate. Consequently, short-term management is the most efficacious, most direct method to remedy the investment gap, and put excess productive capacity to use. Against the backdrop of falling foreign demand and fatigued consumption, these policy measures are also short-term emergency moves, because in 2009-2010, in the process of this deep downturn, China faces an unemployment scale of 32 million, and this will be a severe shock to China's fragile social structure. With an extremely imperfect system of social security, and under constraints of low short-term effectiveness of the expansion of social security, this undertaking of large-scale government-led investment is the measure for stabilizing the macroeconomy and the society.

2) This current stimulus plan lacks a mid-term management foundation, and this could lead to the intensification of the internal contradictions and conflicts shaped by the current depressed economy, causing the macroeconomy to face the danger of mid-term fluctuations.

The current stimulus plan is essentially an investment-driven plan. It can only postpone the contradictions of the investment-driven economic growth model, and cannot eliminate these contradictions at the root. It is incapable of fundamentally solving the shift in demand structure and internal demand related problems of maintaining growth. In the past 1-2 years, the acceleration of investment was transformed into accelerating supply, thereby intensifying the danger of a renewed reversal in relations of supply and demand. Consequently, this current stimulus plan is essentially only postponing the final explosion of the internal contradictions of the investment-driven growth model of the past 20 years, substituting an even more violent explosion for the current one. For example, the more than 2 trillion of investment in railroad construction can produce the demand for 5.4 million, 8 million, and 14 million tons of iron and steel in each of the coming three years, respectively, alleviating the current environment of downturn that the iron and steel production industry is facing. However, the steel used in railroad construction is produced primarily for heavy rails. Moreover, in 2007, heavy rail production occupied 1% of output of steel products manufacture. Thus, in the future, the production capacity for heavy rails in the iron and steel industry will increase 7-8 fold. When the scale of railroad construction declines, we will discover that the productive capacity of heavy rails and the usual steel belts of medium thickness, sheet metal, wide steel belts, steel plated boards as well as steel for use in architectural construction, will together constitute a much more immense productive excess than before.

3) Although this current stimulus plan gives prominence to key points, it has no substantial solutions to the key problem of the danger of a "hard landing" for China.

There are two areas in which the danger of China facing a "hard landing" is especially crucial. One is the "hard landing" in real estate, with its core indicator being the scale of the real estate industry under conditions of the breakdown of the capital chain amidst sharp drops in price. The second is the soaring social impacts of large-scale of short-term unemployment. Existing polices are likely to have the following major influence in these two areas:

(1) The expansion of investment in government-ensured housing could accelerate the rapid correction of the largely commercial housing real estate market, thereby intensifying the danger of a hard landing for the real estate market. During the beginning stages of the rapid correction of real estate, if the government promulgates a large-scale investment in government-ensured housing, while simultaneously raising the standards of such housing, this government-ensured housing will have an

excessive impact on the commercial housing market by prolonging homebuyers' willingness to wait for lower-cost housing, as well as transitional expense effect. There are two core problems caused by this sort of impact. The first is that the downturn in commercial housing investment far surpasses the investment scale of low-income housing and the renovation of shanty quarters, thereby leading to downturn nearing collapse for real estate investment.

The second is that this impact will bring about a substantial decline in the financial revenues of regional and local government from land transfer fees, real estate deed taxes, etc., thus worsening the financial expenditures disbursement capacity of regional and local government, lessening the investment strength behind government-ensured housing. For these reasons, the expansion and enlargement of government-ensured housing investment in the mid-term is a strategy that benefits both the State and people, but if the timing of the promulgation of this policy is not opportune, and if the implementation standards as well as the dynamics of control are not appropriate, its effects will be greatly watered down.

(2) None of the policies are employment-oriented, and at the same time no emergency measures are being specially promoted to address unemployment. The nucleus of the current stimulus plan is the stimulation of investment in heavy industry and alleviation in manufacturing, and most of these industries are capital intensive. They do not have the capacity to absorb large-scale employment. At the same time, under constraints of a deficient social security system and difficulties in putting one into full play in the short-term, the government must establish special emergency measures against unemployment. Large-scale problems of unemployment was hard to avoid, even if the above-described policies are easy to quickly implement

4) 4 trillion of investment is not, in essence, a whole increment. Its signaling significance is far greater than its actual stimulating effects on spurring investment.

The 4 trillion investment comprises 29% of the investment in fixed assets of the whole society in 2007, and in 2008 it was 23%, with a scale slightly smaller than the 700 billion dollar bailout package in the US. But is it enough to remedy the gap of declined 2008 investment? This requires us to undertake an in depth dissection of the 4 trillion.

(1) With regards to the projects for which the 4 trillion is allocated, only 40% of this total is a new increment, while 60% are previously planned regular projects. For example, of the 2 trillion for railroad construction, 1.2 trillion was already allocated in "the Eleventh Five Year Plan." Now in 2008 and 2009 the scale is 600 billion per year, but the construction expenditure in the previous plan for 2009-2010 was actually 700 billion, with a new increase of 250 billion or so every year. Again, for example, with the environmental stimulus plan, during the "Tenth Five Year Plan" environmental investment reached 1. 375 trillion, making up 1.6% of GDP each year investing an average of 277 billion. In 2008 environmental investment estimates reached 300 billion, and if calculations are based on the current three-year environmental investment of 1 trillion, then new environmental investments in 2090-2010 will grow 30 billion per year. Another example, using government-ensured housing, in 2007 the total State investment in low-cost housing was 83.38 billion RMB, the construction of cheap rental housing was 5.1 billion, and the estimate of investment in government-ensured housing construction for the full year or 2008 should be about 130 billion RMB. If based on the previous 20% growth, the original estimated investment scale should be

around 567.8 billion RMB, that is, the increment/al part/portion of the planning is only around 320 billion RMB, growing an average of 110 billion each year.

(2) An increment of 1.6 trillion averages out to an increment of 800 billion RMB investment per year, and will be hard pressed to fill the gap brought about by the normal amount of decline in investment in fixed assets. Therefore, if the signaling value of investment plans cannot be thoroughly put into play, it will have difficulty performing the real, practical function of changing the deep downturn trend in the economy. According to normal calculations, 2009 should guarantee China's economic growth at 9%, and the nominal growth rate of investment in fixed assets should be around 21-25%. In other words, the new increment of investment in fixed assets must reach 3.637095 trillion – 4.329875 trillion RMB. Thus, if manufacturing and real estate investment growth totals do not reach 2 trillion, the current government stimulus plan will only be able to maintain a growth rate of 8-8.2%. But in reality, the declines in growth of non-government, non-planned investment in manufacturing and real estate could surpass expectations, with an especially "hard landing" in the case of real estate. The total investment gap for China to guarantee an 8% growth rate exceeds 2 trillion.

(3) From the perspective of the source of funds, 3.82 trillion of the 4 trillion need to be put in place by regional and local government as well as non-governmental investment, and there are many questions as to the feasibility of this. How is this funding allocation plan derived? Its core basis lies in the previous increase coefficient of government investment at around 3. But this kind of calculation is problematic, because during a depressed period, ordinary

market entities will undergo substantial investment contractions and the coefficent increase of government investment is much smaller than the coefficient of such investment during times of prosperity. From the perspective of the change in source of funding for investment in fixed assets in the third quarter of 2008, enterprises manifested signs of a severe deficit of funds due to falling profits and the excessively large scale of previous investments. Inter-enterprise short-term loans and other commercial credit fell sharply, and funds coming from real estate are 103% of the source of total funding resources, illustrating that inter-enterprise lending and other informal, non-standard financial capital circulations has essentially come to a halt. Consequently, in 2009 the willingness of ordinary market entities to coordinate all kinds of large-sized program investments will surpass expected lows. As a result, the actual source of funding for programs will mainly rely on the local and regional government financial administration and large-sized State-owned enterprises, and this will face problems due to the constraints of local government and fallbacks in institutional reform.

(4) We cannot simply believe the investment plans of local and regional governments. The majority of local and regional governments' investment plans look good "on paper," but in terms of actual feasibility all have numerous problems. One is a problem of sustainability of local and regional financial administrations. Another is the lack of targeted transformation for social investment in all sorts of investment policies, and under conditions of tight funds this could be smaller than estimated levels. The investment plans that have been announced in local and regional government have already surpassed 10 trillion, in Shanghai 500 billion, Jilin 400 billion, Hainan 207

billion, Anhui 389 billion, Zhejiang 350 billion, Hebei 588.9 billion, Henan 1.2 trillion, Liaoning 1.3 trillion, Chongqing 1.3 trillion, Guangzhou 2.3 trillion, and Jiangsu plans to complete 300 billion, by the end of 2009, and another 650 billion by the end of 2010, and Yunnan plans 3 trillion over 3 years. Among these Yunnan and Liaoning, as well as other regions could run into trouble.

From the above we can see that the signaling value of the 4 trillion investment scale is greater than the actual investment stimulating value. Although its regulation and controlling behavior has a thoroughly solid short-term policy foundation, its scale is nevertheless inadequate to remedy the investment gap brought about by profound economic downturn, and its character does not change the internal mechanism of depressed production, so instead in the mid-term it will intensify the degree of acuteness in the explosion of the internal contradictions of the investment-driven growth model, causing repeated fluctuations to arise in China's macroeconomy during the mid-term.

2. Further recommendations to supplement policy

Through the analysis described above, we can conclude that the 4 trillion stimulus plan is necessary, and is extremely valuable in addressing the crisis, however it is insufficient to solve the internal contradictions of China's economic downturn in this epicycle. Its scale is in adequate to fill the gap caused by declining investment, and it is incapable of changing the fundamental downward trend of China's macroeconomy at the root. Consequently, we recommend making some adjustments and supplements to policy along lines laid out below:

(1) On the basis of implementation of the current 4 trillion stimulus plan, there should be some arrangement made for non-investment-oriented government

expenditure plans in the mid-term. By raising the strength of transfer payments by a wide margin, a 5-10 year plan to speed up the construction of a comprehensive, across-the-board system of social services, public welfare and social security should be promulgated.

In concrete terms this means: 1) There should be an increased in financial expenditures for bereavement compensation, and increased spending on social welfare relief, making its growth rate hold at the rate of 2004-2005. 2) Every year issue 150-200 billion in special national treasury bonds accelerate the construction of a social security system, and at the same time gradually increase the scale of urban retirement pensions.

(2) Step up national treasury bond issuance, and make a plan for the issuance of mid-term national treasury bonds. In concrete terms this means an accelerated treasury bond issuance plan can be formulated for 2009-2010. Making the average scale of bonds issued maintain around 2.8% of GDP. According to the calculations of this report, if China can maintain an 8% growth rate, then the annual deficit can be 3.83%. The proportion of debt from national treasury bonds will continually rise, and by the tenth year, the dept incurred with be 36.9%, interest payments will occupy 0.73% of GDP, finally nearing 60%, interest payments at 1.2%, for fiscal policy that is sustainable and furthermore relatively safe. For this reason, within a fairly long time period, a suitable range of financial deficit for China is 2.5-3.83%. For example, in 2009, with an inflation rate at 3%, if an economic growth rate of 8.4% is to be realized, then it is necessary to decrease the macroeconomic tax burden to 19%, at the same time financial expenditure reach 8.38255 trillion, the scale of the deficit will reach around 850 billion RMB. Table 9 shows that the deficit scale in this epicycle and the scope of the economic stimulus are not really very high. Because based on the

extent of 1998-2002 financial expansion, the 2009 financial deficit should be around 650 billion, the scale of treasury bond issuance should be around 1.24 trillion, the scale of infrastructure construction should be around 660 billion, the scale for use in economic construction should be around 1.65 trillion.

(3) A variety of macro-level tax cuts should not be unveiled too quickly, but rather a mid-term comprehensive, across-the-board package should carry out a plan for all sorts of tax cuts. On a foundation that moderately alleviates the pressure of the crisis on enterprises, a consumption stimulating tax cut policy should be promulgated as much as possible.

On the basis of our calculations, the optimal macro-level tax burden should be 16.47%. In contrast to the 2008 third quarter tax burden levels, China needs to cut 28% of the tax burden. But should these tax cuts be put into practice right away? The answer is negative, because of the current constraints on the existing tax structure, the entities benefiting from macro-level tax burden reductions are enterprises, unlike in developed countries where the beneficiaries are mainly residents. Therefore, China's macro-level tax burden reductions are in essence supply-stimulating policies. They have a strong significance to enterprises under pressure during this time of crisis, but with regard to demand, there is no direct stimulation effect. Therefore, at present, the large-scale introduction of tax cut plans will not only not improve the situation of reversed supply and demand at the root, but in fact will worsen the current situation. For this reason we cannot promote all sorts of macro-level tax cut operations too quickly, and should make a mid-term, comprehensive package to carry various kinds of tax cut plans. From a foundation of alleviating pressure of the crisis on enterprises, we should, as much as possible, also promulgate tax cut policies that will stimulate consumption. For example, income tax adjustment could be promoted at the same time as a mid-term tax cut plan, to perform the function of stabilizing expectations and restoring confidence.

(4) The forcefulness of government spending should be further increased, but the its employment and consumption orientations of financial increment investment must also be strengthened. For example, each year we should invest 20 – 40 billion RMB to carry out large-scale social training plans, further increase investments in education, medicine and medical treatment, health and sanitation as well as culture.

(5) We should rationally choose the appropriate time to promote government-ensured housing, and finesse the detailed rules and regulations controlling applications for government guaranteed housing to prevent the investment in such housing from impacting to the purchasing expectations of the middle class, and avoid having the effect of excessively squeezing investment in commercial housing out of the market.

In this regard, it is important to pay attention to the following: 1) In order to avoid excessively squeezing commercial housing out of the market, it is not suitable to promote the investment and construction of government-ensured housing all at once or on a large-scale too soon. 2) The standards for low-income housing as well as cheap rental housing must not have the strong effect of replacing commercial housing. 3) In order to guarantee that the commercial housing market does not undergo a collapsing downward spiral, the government can establish a housing equalization fund and take other such measures, but must also put forth rational and reasonable detailed rules and regulations for its use at the same time. 4) There should be a coordination of the local and regional operations undertaken to save the real estate market in order to prevent local governments from acting rashly and blindly and leaking too much information to the market, which would conversely serve to shape the expectations of market downturn.

(6) On a foundation of raising the aggregate domestic demand, structural adjustment goals should be thoroughly considered, and local and regional governments should be encouraged to put forth structural adjustment policies to stimulate internal demand. Government at all levels should increase the relaxation of access control in education, medicine, health and sanitation, serve and other industries, encouraging the entry of investment from people in society.

(7) Owing to the pressure of all-around falling prices, monetary policy should undertake a reduction of interest rates in accordance with the particular conditions of the macroeconomy, as well as lowering savings deposit interest rates. With regards to 2009, as well as the influence of falling interest rates, room for a reduction in savings interest rates is in the range of 100-150 basic points, and room for a reduction in loan interest rates in the in the range of 150-200 basic points. Adjustments should not be too frequent. Bank savings reserves can be adjusted downward 300-400 basic points according to liquidity. However, problems of reversed liquidity brought about by the deterioration of the international balance of payments, bad real estate debts, as well as shrinking credit demand, should become a major focal point of the central bank's attention.

(8) At a time when strategic natural resource prices are all falling, the management of such resource production and strategic stockpiling should be intensified. For example, we must not engage in large-scale export of cheap petroleum and diesel oil just because of falling prices.

(9) In light of the fact that exports are facing demand shocks, the government should not promulgate too many cost mitigation policies, so as to avoid excessive costs

brought about by future structural adjustment. Therefore, export tax rebate should not come back on a large scale, and the RMB exchange rate should not be adjusted in reverse.

Table 9 The forcefulness of the last two economic adjustments

	The scale of finance used in infrastructural construction		The scale of national bond issuance		Financial deficits		Expenditures used in economic construction costs	
	Absolute quotas	Absolute quotas Proportion of GDP	Absolute quotas	Absolute quotas Proportion of GDP	Absolute quotas	Absolute quotas Proportion of GDP	Absolute quotas	Absolute quotas Proportion of GDP
1989-1991	1588.7	2.76	742.42	1.29	-542.51	0.94	4087.7	7.10
1998-2002	11252.8	2.27	21263.33	4.28	-10823.14	2.18	28135.6	5.67