Wilf Csaplar Jr. Economics 302 Homework #3 Due 02/10

Do not write your name on the assignment. Write your name only on the back of this sheet of paper and staple your answers on the front of this sheet of paper. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to follow these directions will cost you 1 point on the assignment.

1) (25 points) Explain why the tax-adjusted user cost of capital = $(r+d)p_k/(1+\tau)$.

2) (35 points) The article below came from The Economist's web page. (The link on the title will take you to the article.) Explain the problem with overinvestment, i.e., why should China be concerned about it? Why is China having a problem trying to control investment? Given Table 4.2 on page 134, do you expect any other country(ies) that might have had a similar problem in 1990? Explain your logic for all parts.

3) (20 points) What happens to the amount of consumption this year and in the future, when the real interest rate increases? Explain your logic, including, justifying all assumptions you make.

4) (20 points) Illustrate an increase in the depreciation rate of capital on the MPK/uc diagram. Explain why the curve(s) moved as drawn.

Ah, there's the brake pedal

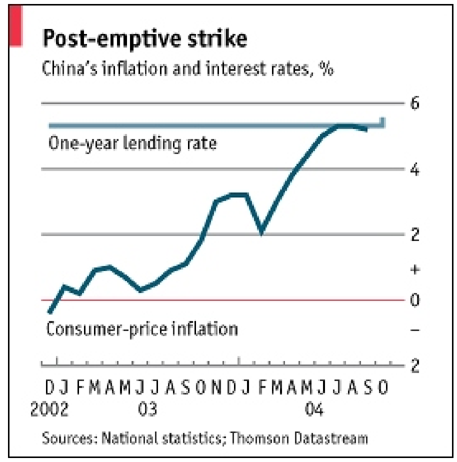
Oct 29th 2004
>From The Economist Global Agenda

China's central bank has raised interest rates for the first time in nine years. Can overinvestment be curbed without the economy slowing too sharply?

AS EVERY disciple of Milton Friedman knows, the effects of monetary policy are felt only after a "long and variable" lag. Central bankers cannot wait for inflationary threats to materialise; they must pre-empt them, by raising interest rates at the first hint of price pressure. China's central bankers follow different rules. Consumer-price inflation has been rising for a year or more. By July, it all but matched the rate of interest: borrowing was, in effect, free. But the central bank, the People's Bank of China, has been slow to react. Finally, on Thursday October 28th, the People's Bank raised interest rates for the first time since July 1995, lifting its benchmark lending rate from 5.31% to 5.58%. The lags in Chinese central banking, it seems, are invariably long.

In the past nine years, China's economy has doubled in size. In 1995, China bought 5% of Japan's exports and 7% of South Korea's. Now Japan sells over 13% of its exports to its giant neighbour and South Korea sells more than 20%. In 1995, China consumed about 3.3m barrels of oil per day. Now it guzzles about 6.3m. The men at the helm of this economic juggernaut remain inscrutable, but they no longer labour in obscurity. Their decision on Thursday had a worldwide effect on commodity markets. The price of oil and metals fell back on the announcement. Australia, a big exporter of iron and other commodities, saw its currency wobble.

Nine years on, however, the Middle Kingdom is still caught betwixt plan and market. The price of capital plays a relatively small role in how it is allocated. China has no corporate-bond market to speak of and its stockmarkets, in Shenzhen and Shanghai, are still thin and patchy. Most capital is thus provided by banks, and the most important banks are still owned by the state. Some of their customers bid for capital at the prevailing rate of interest. Others, the least enterprising and best connected, hustle for it, by pulling strings or calling in favours. But perhaps two-thirds of the banks' loans serve to prop up state-owned enterprises. The best way to get capital in China is to be too big to fail.



Stuck between plan and market, China is also caught between overinvestment and underemployment. With borrowing cheap and loans easy to come by, investment has flowed blindly into industries, such as construction, cement and steel, which must have long since passed the point of diminishing returns. The Chinese authorities need to curb this overinvestment, but they cannot afford to slow the economy too sharply. Jobs need to be found for the 150m peasants who, according to the International Monetary Fund (IMF), are underemployed in the fields, and the 10m-11m surplus workers in state enterprises, which specialise in disguising unemployment. Even at the high rates of growth China has maintained in recent years, unemployment is likely to get worse before it gets better, the IMF predicts.

China's dilemma is complicated by its exchange-rate regime. The yuan, pegged at 8.28 to the dollar since 1995, is considered cheap in many quarters and ripe for revaluation. Speculators are thus anxious to pile into it. To maintain its peg, the People's Bank has to meet this demand by printing yuan (it spent 536 billion yuan, or $65 billion, in the foreign-exchange markets in the first half of this year). But this only adds to the money supply. To compensate, the bank sells its own bills, thus taking yuan out of circulation. But these "sterilisation" efforts are often fruitless. The capped rates the central bank can offer on its bills are not very attractive to commercial banks, which often fail to bid for them. Thursday's rate hike will put further upward pressure on the yuan.

Slow to raise interest rates, China's authorities have clamped down on investment by more direct means. They have lifted reserve requirements for banks, hectored speculators and ordered lending to the steel, cement and car industries, among others, to be cut. What has this fussing, fiddling and fulminating achieved? The economy has slowed, growing by 9.1% (year-on-year) in the third quarter, compared with 9.6% in the quarter before. Inflation has also stabilised, edging downwards from 5.3% in August to 5.2% in September.

But these administrative ploys have also created distortions. They have starved the most enterprising firms of capital—black-market interest rates are 20% or more—while the well-established and best-connected firms still find a way to raise the money they want. As Diana Choyleva of Lombard Street Research puts it, "dirigisme tends to favour the status quo."

Dirigisme is no longer enough, China's policymakers seem to have concluded. Their first rate hike in nine years was a small one. But they have also lifted the cap they had imposed on the rates banks could charge on their loans. Thus banks, which could previously lend at no more than 1.7 times the benchmark lending rate, will now be free to practise usury as they please. This will help to bring down the 20% rates prevailing in the black market for capital. It is also a welcome sign that China's authorities are willing to let prices, not politics, allocate capital.