Why Do Chinese Households Save So Much?

China is a poor but rapidly developing country; its per capita nominal income is about $1,700 (about 1/25 of that of the United States in 2005). Nevertheless, as a fast-growing country with an average growth rate of 9.8 percent a year over the past 25 years, China’s income prospects are bright. Total GDP is predicted to equal that of the United States by 2032.1 Given such rapid growth, economic intuition would indicate that China has little need to save and instead has a strong incentive to consume today because the fundamental purpose of saving is to enable future consumption. In other words, Chinese households may improve their welfare by consuming more now because they can reasonably expect to be much richer in the future. Despite this fact, China’s saving rate is one of the highest in the world. The figure shows that China’s personal saving rate is about 25 percent and national saving is roughly 47 percent of GDP (in 2008, compared with 5 percent personal saving and 12 percent national saving in the United States)—and these savings rates have increased in recent years.

Why do Chinese households save today to consume even more in the future? Several factors may contribute to this behavior. First, the economic reform in China that started in 1978 increased income uncertainty because many jobs were no longer government-paid. People save more because they are more uncertain about their future.

Second, since 1978 the Chinese government has gradually shifted the burden of retirement income to households. Hence, increased savings are needed for retirement, which formerly was essentially free. This change further increased the already high personal saving rate.

Third, China’s financial market and banking system is still underdeveloped and only recently began to reform. As a result, borrowing for housing, education, medical care, and other big expenses is very difficult. Even today, mortgages require at least a 30 percent down payment, assuming a loan can be obtained. In addition, real estate prices are very high compared with incomes. In Beijing and Shanghai, for example, the median price of a 1,000-square-foot apartment is about $100,000 at current exchange rates. If the average annual income per capita in Beijing and Shanghai is about $2,000, then the average Chinese worker needs to save his/her entire annual income (a 100 percent saving rate) for about 50 years to buy an apartment. Even if a borrower can obtain a mortgage, the 30 percent down payment means a one-time payment of $30,000—equivalent to about 15 years’ income (ignoring interest payments). Such high real estate costs have boosted the savings rate.

Economic theory predicts that the development of financial market and social insurance programs may dramatically reduce China’s saving rate (at both household and national levels). Such a decline in the saving rate may slow China’s speed of growth because economic growth is driven partially by domestic investment, which in turn is financed mostly by domestic saving.

—Lukie M. Shimok and Yi Wei

1 The computation assumes that the United States grows at the average post-war rate.

SOURCE: China Statistical Yearbook—2006 and authors’ calculations.
Contents

Page
3 Reference Tables
5 Canada
11 Euro Area
16 France
20 Germany
24 Japan
34 United Kingdom
40 United States
46 Notes and Sources

Conventions used in this publication:

1. Charts and tables contain data that were current through July 2008. Unless otherwise indicated, data are quarterly.
2. The percent change refers to the percent change from the same period in the previous year. For example, the percent change in y between quarter t–1 and the current quarter t is: [(ytyt−1)−1]×100.
3. All data with significant seasonal patterns are adjusted accordingly.

Due to a new earnings statistics law, the German National Statistical Office has not released hourly earnings data since January 1, 2002. For more information see http://www.destatis.de/dtsPEED/portal/cms/Sites/destatis/Internet/EN/Content/Statistics/VerdienstArbeitskosten/ Aktuell__Verdienststatistikgesetz_templateId=renderPrint.psmil.

We welcome your comments addressed to:
Editor, International Economic Trends Research Division Federal Reserve Bank of St. Louis
P.O. Box 442
St. Louis, MO 63166-0442
or to:
sdfsBT@sdfs.frb.org

Notes and Sources

International Economic Trends
浓度 of use 2008

Euro Area
European Central Bank: current account balance and employment. Euroarea capacity utilization, consumer price index, GDP, interest rates, merchandise trade, producer price index, and retail sales.

Haver Analytics: synthetic euro-exchange rate. IMF: real effective exchange rate.
OECD: gross government debt and budget balance.
OECD: hourly earnings, industrial production, M1, M3, stock exchange index, and unemployment.

France
BCE: exchange rate. Eurospheric capacity utilization, consumer price index, and producer price index. IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
OECD: current account balance, GDP, hourly earnings, industrial production, retail sales, interest rates, stock exchange index, and unemployment.

Germany
OECD: gross government debt and budget balance.
OECD: current account balance, GDP, hourly earnings, industrial production, M1, M3, retail sales, interest rates, stock exchange index, and unemployment.

Italy
BCE: exchange rate. Eurospheric capacity utilization, consumer price index, and producer price index. IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
OECD: current account balance, GDP, hourly earnings, industrial production, M1, M3, retail sales, interest rates, stock exchange index, and unemployment.

Japan
Bank of Japan: adjusted monetary base and long-term interest rate. BCE: exchange rate. IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
OECD: gross government debt and budget balance.
OECD: capacity utilization, consumer price index, current account balance, employment, GDP, hourly earnings, industrial production, M1, M2, producer price index, short-term interest rate, stock exchange index, and unemployment.

United Kingdom
OECD: gross government debt and budget balance.
OECD: capacity utilization, consumer price index, current account balance, GDP, hourly earnings, industrial production, M1, M3, producer price index, retail sales, stock exchange index, unemployment, and weekly earnings.


United States
BCE: capacity utilization, exchange rate, industrial production index, M2, and interest rates.
BEA: GDP, current account balance, merchandise and service trade, and retail sales.
OECD: gross government debt and budget balance.
OECD: hourly earnings, stock exchange index, and unemployment.

Research Division
Federal Reserve Bank of St. Louis

Notes and Sources
Notes

Euro Area: The euro area was enlarged to include Greece on January 1, 2001, Slovenia on January 1, 2007, and Cyprus and Malta on January 1, 2008. Historical euro-area series for government bonds and industrial production include Greece. The series for employment, monetary aggregates, and unemployment include Greece and Slovenia for the whole sample. The series for earnings, the retail price index, and the money stock index include Greece starting in 2001. Capacity utilization, the core consumer price index, and the core industrial production index (GDPY) and the producer price index include Greece, Slovenia, Cyprus, and Malta for the whole sample. The series for sales and imports index and imports index starting in January 2003, Slovenia in January 2007, and Cyprus and Malta in January 2008.

Euro-area interest rates prior to December 1998 are calculated on the basis of national government yields weighted by GDP. Starting in 1999, short-term rates are euro interbank offered rates. Long-term rates are calculated on the basis of national government bond yields weighted by the nominal outstanding amounts of government bonds in each maturity band.

The currency exchange rate used in the chart on page 12 is a synthetic rate prior to January 1999. The index consists of calculated a weighted average of the exchange rates of the euro-area countries, excluding Greece and Luxembourg, against the dollar. The weights are the latest available GDP shares.

German Data: As a result of reclassification, data for all of Germany are now incorporated in the statistical series. The starting periods for unified German data listed below are fixed. Changes should be considered when interpreting the data around these break periods.

Third quarter 1999: current account balance, international trade, and unemployment.

First quarter 1991: consumer price index, GDP industrial production, output and labor force index.


First quarter 1993: consumer price index, industrial production.

First quarter 1995: hourly earnings.

Capacity Utilization covers manufacturing sector for Canada, France, Japan, the United Kingdom, the United States, and the euro area; manufacturing excluding food, beverage, and tobacco for Germany; and mining and manufacturing for Italy.

Consumer Price Index is for all items. The current index is based on goods and services consumed by all individuals for Canada, all multi-person household families, and all units mainly engaged in the production of services for Japan, all households except pensioners dependent on state pension and high income households for the United Kingdom; and all urban households for the United States. The data for the euro area, France, Germany, and Italy are based on the harmonized index.

Current Account Balance is the sum of merchandise and service exports and income receipts on domestic assets abroad minus the sum of merchandise and service imports and income payments from foreign assets on the domestic economy plus net unilateral transfers.

Real Earnings are based on hourly earnings in manufacturing for Canada, France, and Italy; hourly earnings in manufacturing for the United States, and the euro area; hourly earnings in manufacturing excluding construction for France, hourly earnings in industry for Italy; monthly earnings in manufacturing for Japan; and weekly earnings in manufacturing for the United Kingdom.

The Exchange Rate for all countries except the United States is expressed as units of local currency per $1 U.S. dollar. For the United States the index-weighted exchange rate, TWIX, is used. This is a weighted average of the exchange values of the U.S. dollar relative to the major international currencies. The index comprises the U.S. dollar, Canadian dollar, Japanese yen, British pound, Swiss franc, Australian dollar, and Swedish krona. Prior to 1999, the currencies of the euro-area countries (with the exception of Greece) are used instead of the euro.

Real Effective Exchange Rate uses nominal labor costs in manufacturing. The weighting scheme used to construct the index, for all except the euro area, uses the weights relating to the trade of the euro area with the other countries. The weights reflect the relative importance of a country’s trading partners in its direct bilateral trade relations and competition in third markets. Normalized net labor costs in manufacturing are calculated by dividing an index of actual labor compensation per worker by a five-year moving average index of output per man-hour.

Employment data refer to civilian employment for Canada, Italy, Japan, and the United States, industrial employment for France, and total employment for the euro area and the United Kingdom.

Foreign Exchange Reserves are end of period stock of foreign exchange holdings and/or changes in the value of the currencies held vis-a-vis the U.S. dollar.

Government Budget Balance is the difference between general government current budget revenues and expenditures. Total outflow consists of current expenditures and net capital expenditures. Gross Government Debt incorporates all financial liabilities of the general government sector. The general government sector consolidates the accounts of the central, state, local, and social security sectors.

Cumulative Inflation Differential is the cumulative change in the foreign currency consumer price index (TCPI) over the change in the U.S. CPI, in percentage terms. The base period for the cumulative rate of change is taken to be the first period of the chart. For Canada, if the base period was 2002Q2, the cumulative inflation differential for Japan for 2006Q3 is as follows:

Consistency Notes:

* Figures for the United Kingdom were revised in 2006.

Nominal Gross Domestic Product

Reference Tables

Real Gross Domestic Product

Reference change from year ago

Nominal Gross Domestic Product

Reference change from year ago

Consumer Price Index

Reference change from year ago

Employment

Reference change from year ago

Unemployment Rate

Reference change from year ago

Notes and Sources

International Economic Trends

Research Division
Federal Reserve Bank of St. Louis

International Economic Trends

Research Division
Federal Reserve Bank of St. Louis
International Economic Trends

United States

GDP
Percent change from year ago

Industrial Production
Percent change from year ago

Retail Sales
Percent change from year ago

Capacity Utilization
Percent

Canada

GDP
Percent change from year ago

Industrial Production
Percent change from year ago

Retail Sales
Percent change from year ago

Capacity Utilization
Percent

*Data prior to 1990 may not be strictly comparable with later figures (see Notes).
International Economic Trends

France

Real GDP
Percent change from year ago

Employment
Percent change from year ago

Consumer Price Index
Percent change from year ago

Unemployment Rate
Percent

Real Hourly Earnings
Percent change from year ago

Current Account Balance
Percent of GDP

Japan

Adjusted Monetary Base
Percent change from year ago

Monetary Aggregates
Percent change from year ago

Interest Rates
Percent

Stock Exchange Index - Tokyo Stock Exchange
2000 = 100

Research Division
Federal Reserve Bank of St. Louis
International Economic Trends

France

Real Hourly Earnings and Output per Worker
Percent change from year ago

Hourly Earnings

Output per Worker

Labor Force Indicators
Percent change from year ago

Employment (left scale)
Unemployment Rate (right scale)

Inflation
Percent change from year ago

Producer Price Index

Gross Government Debt and Budget Balance
Percent of GDP, annual data

Budget Balance (left scale)
Gross Debt (right scale)

Japan

Real Monthly Earnings and Output per Worker
Percent change from year ago

Monthly Earnings
Output per Worker

Labor Force Indicators
Percent change from year ago

Employment (left scale)
Unemployment Rate (right scale)

Inflation
Percent change from year ago

Consumer Price Index

Gross Government Debt and Budget Balance
Percent of GDP, annual data

Budget Balance (left scale)
Gross Debt (right scale)
* Please see the important note on the table of contents page.
**International Economic Trends**

**Italy**

**Real Hourly Earnings and Output per Worker**
Percent change from year ago

**Labor Force Indicators**
Percent change from year ago
- Employment (left scale)
- Unemployment Rate (right scale)

**Inflation**
Percent change from year ago
- Consumer Price Index
- Producer Price Index

**Gross Government Debt and Budget Balance**
Percent of GDP, annual data

**Germany**

**International Trade - Goods and Services**
Percent of GDP
- Exports
- Imports

**Current Account Balance**
Percent of GDP

**Foreign Exchange Reserves**
Billions of US$