

## Will China Go Boom or Bust?

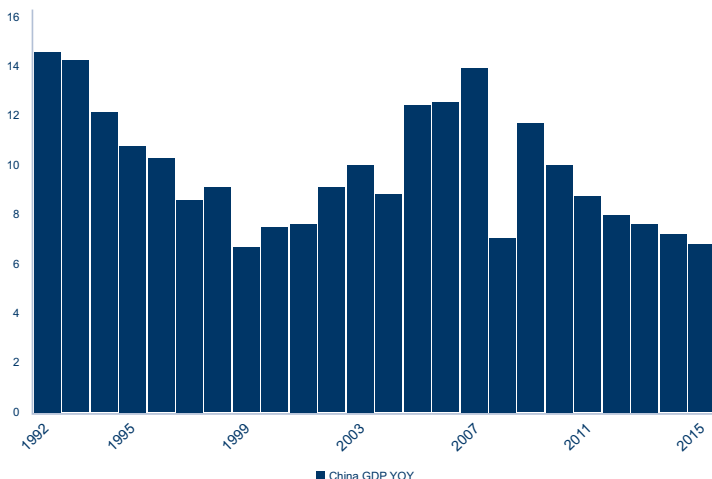
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After a 100-percent increase in the stock market from the end of November 2014 to mid-June 2015, the Chinese stock market dropped more than 40 percent during the following two months. While the extreme rise drew very little attention, news of the imminent collapse of the Chinese economy has been making a splash in the wake of last year's crash. However, it's important to keep in mind that the Chinese stock market is a closed, immature and highly levered retail market (dominated by individual investors as opposed to financial institutions). As a result, the market can often perform very differently from underlying fundamentals. So let's pull the curtains back and take a look at China's economic conditions to determine the actual state of the economy.

We have been accustomed to very high Chinese growth rates, and 2015 was the first calendar year with less than 7-percent growth in 25 years, a fact that has many pundits alerted. The good news is that over the same 25-year period, the Chinese economy has grown to more than 30 times its size at the beginning of the period. So, while growth may be slower today, it is growth from a much higher base (6.9-percent GDP growth today has an equivalent magnitude of more than 100-percent growth in 1992 in terms of absolute economic output).

### China's Path to Becoming a Service Economy

China GDP Growth Year-Over-Year (%)



It is impossible to predict the future. However, China is not the first nation going through the many stages of becoming a service economy, so we can base our predictions on real-life examples. In order to estimate China's future growth, the following factors must be considered: urbanization, demographics and productivity.

A big contributor to growth during the past 25 years has been the massive investments required to support China's urbanization project. According to the World Bank, urbanization in China was 26

percent in 1990 and stands today at 54 percent, resulting in more than 450 million people moving from the countryside to the city<sup>1</sup>. China officials estimated that another 300 million would follow suit from 2010 to 2025 (more than 100 million already did). Part of the reason for China's plan to urbanize is that it desires an economy that is more dependent on service (such as hospitality, health and education) than construction and manufacturing. But the first step of urbanization boosts economic growth, as well. It is estimated that every worker being transferred from agriculture to manufacturing adds \$14,000 to Chinese GDP.

In terms of demographics, China's working age population is expected to decline by approximately 50 million (5 percent) over the next 20 years, but as highlighted above, the urbanization process is still very much in motion and is expected to provide enough labor to sustain growth.

Productivity is not as easy to predict as demographics, but the Solow Growth Model can help us break it down. The model states that economic growth is driven by the accumulation of physical capital until it reaches a steady state of an optimal level of capital per worker, and it predicts more rapid growth when the level of physical capital is low. According to most sources, capital stock per person in China is estimated to be less than 15 percent of that of the U.S., leaving plenty of room for growth in productivity.

### Other Factors to Consider

Much reasonable skepticism about the validity of China's official growth numbers has been voiced, and concerns about rising levels of debt have been discussed, as well. Solow's model is especially good in this respect in that it focuses on economic potential based on measures that are easier to determine, as discussed above. In regard to debt levels in China, the numbers are difficult to verify, but all indications point toward debt levels that have indeed been rising fast. However, they've only risen to levels no worse than what we see in developed economies — and with a government that has ample capacity to support the economy, has already put the brakes on shadow banking and has an economy that is growing much faster.

### What the Future Holds

We have seen examples of misallocation of capital in China (ghost towns and excess industrial capacity), but this does not equate to overinvestment for the economy as a whole. Considering the continued urbanization and the associated infrastructure investments, the low level of capital stock per worker, manageable debt levels, and the increasing share of the economy driven by consumption, the evidence points toward average growth rates greater than 5 percent for a foreseeable future and some potential bad years to correct for misallocated capital.

<sup>1</sup> <http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS>

# Interest Rate Risk: Why Duration Matters

By Invesco

During times of interest rate uncertainty, investors are often left to wonder what will happen to the prices of their bond holdings if interest rates rise or fall.

The answer may lie in a measurement called **duration**.

## What is duration?

Duration is the time it takes for an investor to be repaid the price for a bond by the bond's total cash flows. This is considered to be the bond's true cost. The longer the repayment period (or duration), the greater the chances that the bond will be exposed to interest rate risk.

Knowing your bond's exposure to interest rate risk is critical because bond prices generally fall when interest rates rise and rise when interest rates fall.

## What does duration tell you?

Although stated in years, duration is not just a measure of time. Instead, duration indicates how much the price of your bond investment is likely to fluctuate when there is an up or down movement in interest rates. Generally, a 1-percent rise in interest rates would cause about a 1-percent fall in a bond's price for every year of duration, and vice versa.

For example, if a 10-year Treasury bond has a duration of nine years, and the interest rate increases by 1 percent, its price would be expected to fall by about 9 percent. Conversely, if the rate fell by 1 percent, the bond's price would be expected to increase by approximately 9 percent.

## What affects a bond's duration?

- **Time to maturity:** the amount of time in years before a bond matures. The bond that matures in one year would repay its true cost sooner than a bond that matures in 10 years. Therefore, all else being equal, bonds with shorter maturities would have lower duration and lower interest rate risk.

- **Coupon rate:** the interest rate that a bond pays to the bond holder. If two identical bonds pay different coupons, the bond with the higher coupon will pay back its principal more quickly than the lower-yielding bond. So, all else being equal, the higher the coupon, the lower the duration.

## Why should investors care about duration?

By being aware of a bond's duration, you can be prepared for:

- **Interest rate changes.** Based on your view of interest rates, you may choose to increase or decrease the average duration in your bond portfolio. For instance, if you expect the U.S. Federal Reserve to raise interest rates, you might talk to your financial advisor about lowering your bond portfolio's average duration.
- **Measuring risk.** Duration allows you to determine which bonds are more sensitive to interest rate changes, enabling you to align the holdings in your bond portfolio to your risk tolerance.

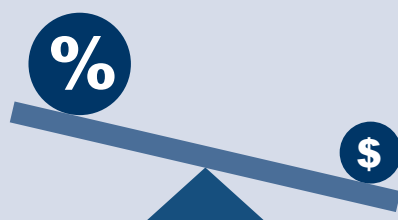
## Talk to your advisor.

While no one knows for sure when and how much interest rates will fluctuate, it's good to be prepared by knowing all of the risks. That's what Invesco calls being an intentional investor.

When and if interest rates begin to rise, being knowledgeable about duration will become all the more important. Talk to your financial advisor about the duration of your bond portfolio, and discuss creating a diversified portfolio of short-term, intermediate-term and long-term bonds that may help in mitigating rising interest rate risk.

## Duration is a measure of the price sensitivity of a bond to interest rate changes.

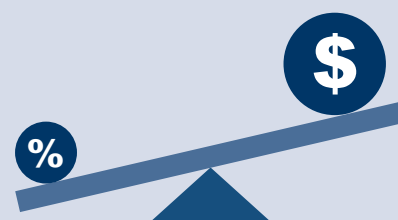
The relationship between interest rates and bond prices



If interest rates rise, the price of the bond decreases.



If interest rates remain unchanged, so does the bond price.



If interest rates decline, the price of the bond increases.

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