

What effect has quantitative easing had on your share price?

The evidence suggests you needn't worry.

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In response to the global financial crisis and recession that began in 2007, the major central banks in a number of advanced economies—the United States, the United Kingdom, the euro-zone, and Japan in particular—embarked upon an unprecedented effort to stabilize and inject liquidity into financial markets. In the immediate aftermath of the crisis, central banks took actions to prevent a catastrophic failure of the financial system. And there is widespread consensus that the decision to implement these monetary policies was an appropriate, and indeed necessary, response.

More than five years later, however, central banks are still using conventional monetary tools to

cut short-term interest rates to near zero and, in tandem, are deploying unconventional tools to provide liquidity and credit-market facilities to banks, undertaking large-scale asset purchases—or quantitative easing (QE)—and attempting to influence market expectations by signaling future policy through forward guidance. These measures, along with a lack of demand for credit given the global recession, have contributed to a decline in real and nominal interest rates to ultra-low levels that have been sustained over the past five years.

In theory and all else being equal, ultra-low rates could boost equity prices in the longer term. By lowering the discount rate that investors use,

for example, they could precipitate an increase in the present value of future cash flows, which should boost the stock-market valuation. A simple dividend pricing model says that today's stock price should be inversely related to the discount rate.¹ They could also lead to portfolio rebalancing. As yields on fixed-income securities decline, investors may shift into equities and other asset classes in search of higher yields, increasing demand for these assets and therefore their prices. Finally, they could affect equity prices by directly increasing corporate profits through lower debt-service payments and stronger economic growth. All else

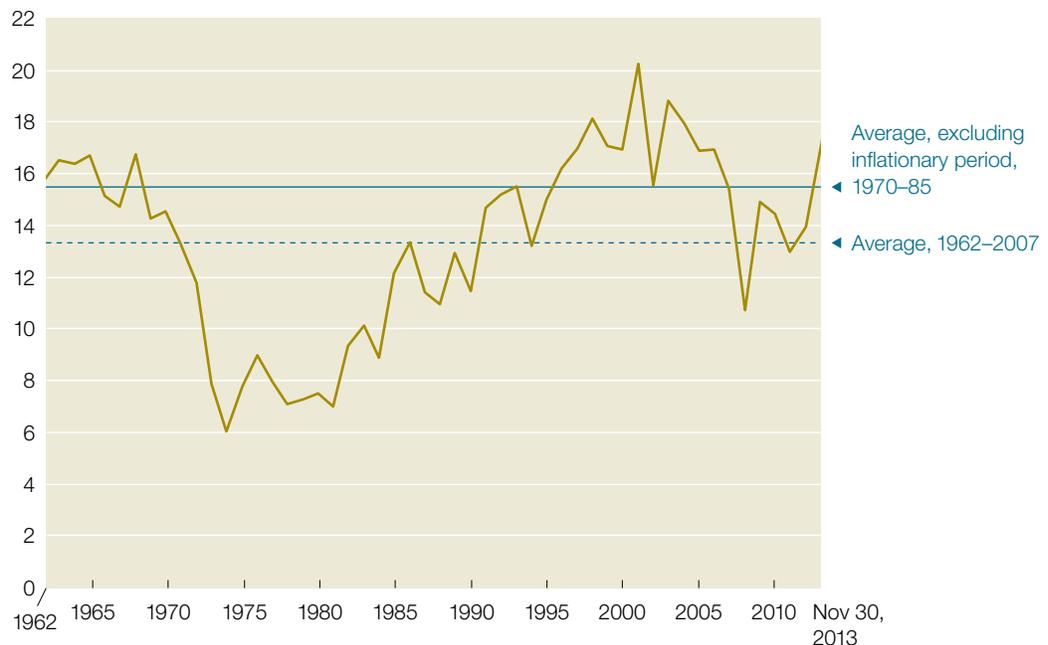
being equal, higher profits today or expected future profits should result in higher equity prices.

However, both conceptual reasons and empirical evidence lead us to believe that all else is not equal and that these effects on equity prices might not be significant. First, a "rational expectations" investor who takes a longer-term view should regard today's ultra-low rates as temporary and therefore likely will not reduce the discount rate used to value future cash flows.² Moreover, such investors may assign a higher risk premium in today's environment. Our conversations with management teams and corporate boards

Exhibit 1

Equity P/E ratios have not moved outside their long-run averages.

Median 1-year forward P/E ratio, excluding financials, for S&P 500 index, end-of-year values

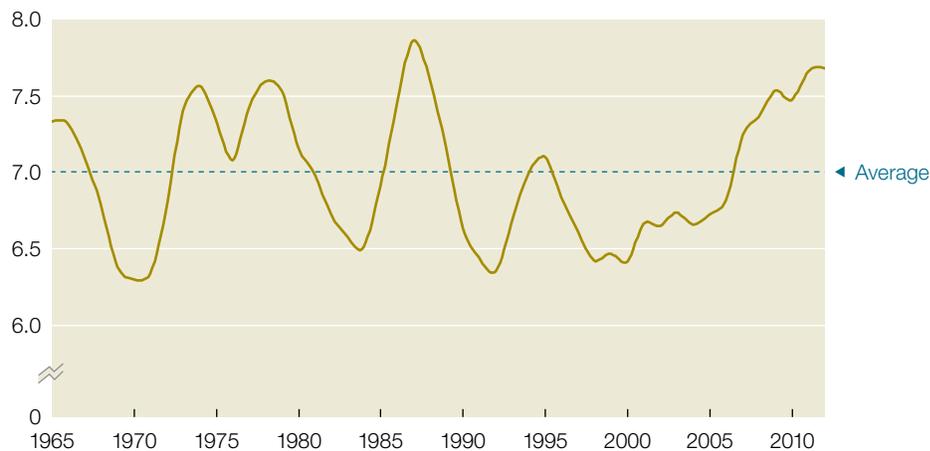


Source: Bloomberg; McKinsey Global Institute analysis

Exhibit 2

The implied real cost of equity in the United States has remained within the historical norms.

Implied real cost of equity, 3-year moving average, %



suggest that they take a similar approach when they consider investment hurdle rates. None of those with whom we spoke have lowered the hurdle rates they use to assess potential investment projects, reflecting their view that low rates will not persist indefinitely and dampening the effect of central-bank actions.

Second, the discount-rate argument assumes that lower government-bond rates translate into a lower cost of equity.³ In reality, investors may not view the government-bond rate as the “risk-free rate.” We observed this in action in some Southern European countries during the eurozone crisis, and it may also hold true during a prolonged period of unconventional monetary policies and ultra-low rates. Empirically, if investors did reduce their discount rate on future corporate-earning streams, we would expect to see P/E ratios rise. Over the last several years of QE, however, P/E ratios have remained within their long-term average range (Exhibit 1). It is possible, of course, that

P/E ratios would be even lower today without ultra-low interest rates, but we cannot know this counterfactual.

Third, it is also possible to use current stock prices and other fundamentals such as long-term growth rates and inflation rates to build a model that derives the implied cost of equity in the market. If ultra-low rates were boosting equity prices, we might expect to see the cost of equity fall substantially below long-term averages. Using this model over the past 50 years, we find that the real cost of equity in the United States has hovered in a narrow range between 6.1 and 8.2 percent; small fluctuations outside this range could be due to measurement errors. Since 2000, this implied real cost of equity has been rising steadily, but it has remained well within the historical range since the start of the crisis (Exhibit 2).⁴ This implies that even if investors believe the risk-free rate has fallen, reflecting a decline in government-bond

yields, they have offset this with a higher equity risk premium. Or it may be that investors do not view current government-bond yields as the risk-free rate of return.

The portfolio-rebalancing effect works only if investors see equity investment as a true substitute for fixed-income investment. There are reasons to believe that this is not the case. For example, equity markets have been highly volatile since the start of the crisis, which in all likelihood should persuade many fixed-income investors to avoid investing in these markets. Evidence from recent years shows that US retail investors have been pulling money out of equity mutual funds and exchange-traded funds. Other institutional investors—including foreign investors—may be buying shares. After a steep decline in share repurchases and dividends in 2008 and 2009, companies have increased their payout to shareholders in recent years.

The final means by which ultra-low interest rates may have raised equity prices is by increasing corporate profits. As we have discussed, our research suggests that corporate profits were boosted by about 5 percent as a result of lower interest expenses. All else being equal, this should increase equity-market valuations. If the market assumes that the interest-rate impact on corporate profitability is temporary, expectations of long-term future earnings will not change. We therefore

estimate that if interest rates rise to normal long-term levels after five years, equity prices should be about 1 percent higher today than they otherwise would have been, assuming that the earnings boost persists until rates rise again.



Regardless of the effect of ultra-low interest rates on share prices, tapering of quantitative easing and related increases in rates may still be associated with declines in share prices. The timing and manner of increases, for example, could raise investor anxiety about economic growth and corporate profit levels—or high levels of government debt may increase investor concern about inflation. But taking everything into consideration, the theoretical and empirical evidence on the impact of ultra-low interest rates by themselves does not point conclusively to an increase in equity prices over time. ○

¹ Here we refer to the dividend-discount model. In this model, prices would also increase with a lower risk premium or higher growth rates.

² Any argument relying on rational expectations must, of course, be taken with a grain of salt—in a model based strictly on rational-expectations investors, the entire crisis would not take place.

³ The cost of equity is calculated as the risk-free interest rate plus an equity risk premium. It is also sometimes called the equity discount rate.

⁴ Marc Goedhart, Tim Koller, and Zane Williams, “The real cost of equity,” *McKinsey on Finance*, Autumn 2002.