Why are real interest rates so low? Secular stagnation and the relative price of investment goods

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The financial crisis that began in 2007 pushed the interest rates set by central banks in much of the industrialised world close to zero. But 'real' interest rates - interest rates minus expected inflation - had been trending down across the industrialised world for at least twenty years before this, and had already reached historic lows on the eve of the crisis.

There have been many explanations for this fall in industrialised-world interest rates, among which are three leading candidates. The first is demographics - in particular a rise in the share in the population of middle-aged people who tend to save a lot, as baby-boomers have entered late middle age. The second is inequality, whereby a rise in the share of income or wealth going to rich people, who tend to save more, has raised total saving. And the third is emerging markets, which in some cases save a lot and have lent these savings to the rich world.

Each of these explanations has merit. But what they all have in common is a rise in domestic or foreign saving as a cause of the fall in interest rates. Interest rates are the price of savings, so an increase in the supply of them reduces the price.

But all savings must ultimately fund investment. So these theories all predict a rise in investment in the industrialised world. But in contrast, the share of investment in total expenditure has fallen across the industrialised world over the past thirty years, a fall which again long predates the recent financial crisis. Furthermore, alongside the fall in interest rates, much of the industrialised world saw house prices and household debt rise to historic highs before the crisis.

This paper fleshes out a new, complementary explanation for the falls in real interest rates, rises in household debt and falling investment rates across the industrialised world. The story is based on the widespread fall in the price of investment goods - the machines, equipment and buildings that firms buy - relative to the prices of other things the economy produces. This fall has reduced the demand for savings, rather than the supply.

I present a simple model in which households need to save for retirement. As the price of investment goods falls, a given quantity of retirement saving buys more of them. If it is hard for firms to use more machines in place of workers, the increase in the number of machines will mean the extra production each new machine generates will fall a lot. Firms will want to spend less on investment, reducing the competition for households' savings and therefore the price that households receive for them, which is the interest rate.

Lower interest rates make it cheaper to buy houses. If houses are in fixed supply, the price of housing gets bid up and, given that housing is bought on credit early in life, household debt increases too. Housing naturally becomes an alternative destination for retirement savings as machines get cheaper. So does the debt of the young, which prospective retirees invest in (implicitly through banks and pension funds) and then live off when older. This means that preventing a rise in household debt could lower interest rates further.

I test the model by comparing movements across countries in the price of investment goods, the share of investment in the economy, household debt and house prices, and find support for its assumptions and predictions. If the model is right, real interest rates may stay low in the future, even if investment goods have stopped getting cheaper.