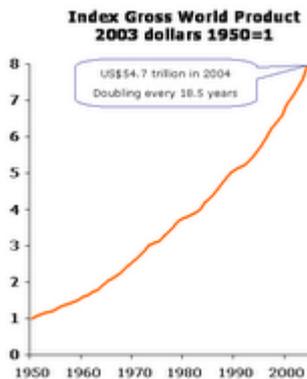


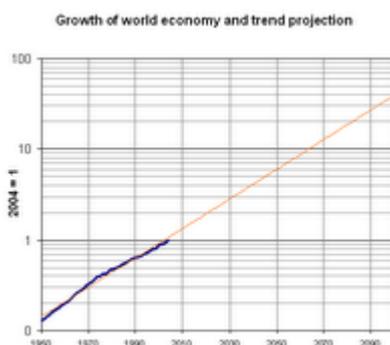
The biggest possible question - growth in the 21st Century



A session with Her Majesty's Treasury yesterday reminded me that one of the most startling things is just how big the world economy has become. It has increased by about 8 times since 1950 - now about \$55 trillion. Growing on average at about 3.74% per year, meaning it doubles in size about every 19 years

You might recall the Hindu legend of Ambalappuzha in which Krishna arrived in the court of the king and challenged him to a game of chess. The prize would be an amount of rice calculated using the chess board - one grain on the first square, two on the second, four on the third, eight on the fourth and so on. The king accepted, lost the game and then found there wasn't enough rice in the world to match the bet. Benevolent Krishna let the king off with a promise that he'd serve free rice pudding to passing pilgrims forever.

It might not be so easy with the world economy...



This proverb of exponential growth is relevant because the world economy consumes a lot of things that are limited like oil, iron ore, copper, river water and land or only renewable at a certain sustainable rate like rice, forests, fish or soils. But if the current rate of growth continues through the 21st Century then we end up with an economy **36 times** the size it is today by 2100 (log-scale chart to the left). Unlike the 20th Century in which growth proceeded unconstrained by natural limits, the 21st Century will be very different... environmental and natural resource

limits will come to matter a great deal and economic growth will be constrained. Basically, we have to find a way to grow while taking much less from the environment and ultimately using only renewable resources at a sustainable rate. That is why the key economic and environmental concepts for the 21st Century are [resource productivity](#) and [sustainability](#).