Historically, the primary driver of oil prices has been global demand. An expanding global economy demands more raw inputs, including oil, and this increased demand pushes up prices.

However, the past decade has seen a surge in the financialization of commodities—that is, the creation and trading of financial instruments indexed to commodity prices. According to estimates (Masters, 2008), assets allocated to commodity index trading rose from $13 billion in 2004 to $260 billion in March 2008. Many policymakers and economists have observed that this rapid and unprecedented growth in commodity index trading coincided with a boom in commodity prices; some have extended that observation into a conclusion that speculation by financial traders—and not supply and demand—drove the recent bubble in commodities.

This kind of argument is perhaps strongest in oil markets, where large investment banks, hedge funds, and other investment funds have invested billions of dollars in oil futures contracts over the past decade. We investigate these allegations by identifying four components that contribute to the price of oil and assessing each of them individually. Disentangling the true drivers of oil prices over the past decade is a critical first step for allocating resources efficiently and designing good policy.

**Global Supply:** Simply, the availability of oil inversely affects the price of oil. For example, when the Organization of Petroleum Exporting Countries (OPEC) unexpectedly decides to decrease oil production, oil prices increase.

**Global Demand:** A booming world economy demands more industrial commodities, and at the top of that list is oil. Continuous growth in emerging countries such as China and India, for example, increases the aggregate world demand for oil. The same principle that applies to supply also applies to demand—but in the opposite direction: As demand for oil increases, so does its price.

**Oil Inventory Demand:** This concept is related to precautionary demand. Expected future shortfalls in oil supply, relative to demand, motivate people to store oil for future use. The possibility of either a sudden shortage in production or a new source of demand can create an expected shortfall. For example, uncertainty about future oil supply may arise from political instability in key oil-producing countries, such as Nigeria, Iraq, Venezuela, or Iran. Such uncertainty increases demand for storing oil, which drives up the current price.

**Speculation:** Speculation is the act of purchasing something today in anticipation of selling it at a higher price at
a later date. Financial markets allow traders to speculate on oil prices in the following way: Traders buy a contract for oil to be delivered at a later date (a futures contract), sell that contract before the oil is due for delivery, and use the proceeds to purchase other futures contracts for delivery at a more distant date. Investors who expect the price of oil to rise in the future are motivated to take this position in these contracts; moreover, as demand for these futures contracts increases, so does their price, which also raises the current price of oil.

These factors all interact to produce an overall price pattern, but it is instructive to see what their effects would be if they were disentangled from one another. So, we investigated the degree to which each factor individually contributed to oil price trends over the past decade. Our results were not surprising. The past decade adheres to the expected historical pattern: Global demand has been the main driver of oil prices. Our estimation in this scenario shows that global demand explained about 40 percent of the oil price increase within the past decade.

Oil inventory demand played a smaller role in the oil price buildup, though this demand accounted for a large share of the spike from mid-2006 to mid-2008. And oil supply contributed the least to both the boom and bust in oil prices.

On balance, the evidence does not support the claim that a sudden explosion in commodity trading tectonically shifted historical precedent: Global demand remained the primary driver of oil prices from 2000 to 2009. That said, one cannot completely dismiss a role for speculation in the run-up of oil prices of the past decade. Speculative demand can and did exacerbate the boom-bust cycle in commodity prices. Ultimately, however, fundamentals continue to account for the long-run trend in oil prices.

Notes
1 See Kilian (2009).
3 For a discussion of the exact time frames used and the mathematics behind the methodology, see Juvenal and Petrella (2012); also see Fawley, Juvenal, and Petrella (forthcoming).

References
Masters, Michael W. Testimony before the U.S. Senate Committee on Homeland Security and Governmental Affairs, June 4, 2008; www.hsgac.senate.gov/download/062408masters.