

CAMBRIDGE ASSOCIATES LLC

INVESTMENT PUBLICATIONS HIGHLIGHTS

March 2011

Copyright © 2011 by Cambridge Associates LLC. All rights reserved. Confidential.

This report may not be displayed, reproduced, distributed, transmitted, or used to create derivative works in any form, in whole or in portion, by any means, without written permission from Cambridge Associates LLC ("CA"). Copying of this publication is a violation of U.S. and international copyright laws (17 U.S.C. 101 et seq.). Violators of this copyright may be subject to liability for substantial monetary damages. The information and material published in this report are confidential and non-transferable. Therefore, clients may not disclose any information or material derived from this report to third parties, or use information or material from this report, without prior written authorization. An authorized client may download this report and make one archival print copy. The information or material contained in this report may only be shared with those directors, officers, staff, and investment committee members or trustees having a need to know and with the understanding that these individuals will treat it confidentially. Violators of these confidentiality provisions may be subject to liability for substantial monetary damages, injunctive action, and all other remedies available at law or equity. Additionally, information from this report may be disclosed if disclosure is required by law or court order, but clients are required to provide notice to CA reasonably in advance of such disclosure.

This report is provided for informational purposes only. It is not intended to constitute an offer of securities of any of the issuers that may be described in the report. This report is provided only to persons that CA believes are: (i) "Accredited Investors" as that term is defined in Regulation D under the U.S. Securities Act of 1933; (ii) "Qualified Purchasers," as defined in Section 2(a)(51) of the U.S. Investment Company Act of 1940; (iii) of a kind described in Article 19 or Article 49 of the Financial Services and Markets Act 2000; and (iv) able to meet the requirements for investors as defined in the offering documents. Potential investors should completely review all Fund offering materials before considering an investment. No part of this report is intended as a recommendation of any firm or any security. Nothing contained in this report should be construed as the provision of tax or legal advice. Information contained herein may have been provided by third parties, including investment firms providing information on returns and assets under management, and may not have been independently verified. CA can neither assure nor accept responsibility for accuracy, but substantial legal liability may apply to misrepresentations of results made by a manager that are delivered to CA electronically, by wire or through the mail. Managers may report returns to CA gross (before the deduction of management fees), net (after the deduction of management fees) or both. Past performance is not indicative of future performance. Any information or opinions provided in this report are as of the date of the report and CA is under no obligation to update the information or communicate that any updates have been made.

Where referenced, the CA manager universe statistics, including medians, are derived from CA's proprietary database covering investment managers. These universe statistics and rankings exclude managers that exclude cash from their reported total returns, and for calculations including any years from 1998 to the present, those managers with less than US\$50 million in product assets. Returns for inactive (discontinued) managers are included if performance is available for the entire period measured. CA does not necessarily endorse or recommend the managers in this universe.

Cambridge Associates, LLC is a Massachusetts limited liability company with offices in Arlington, VA; Boston, MA; Dallas, TX; and Menlo Park, CA. Cambridge Associates Limited is registered as a limited company in England and Wales No. 06135829 and is authorised and regulated by the Financial Services Authority in the conduct of Investment Business. Cambridge Associates Limited, LLC is a Massachusetts limited liability company with a branch office in Sydney, Australia (ARBN 109 366 654). Cambridge Associates Asia Pte Ltd is a Singapore corporation (Registration No. 200101063G).

Investment Publications Highlights

Summarized by the Published Research Team

"Oil Shock: A Mild Challenge to the Expansion" by David Greenlaw, Morgan Stanley, March 4, 2011

The effects of the recent rise in oil prices will likely remain mild. Importantly, developed economies are less vulnerable to high energy prices, as the energy shocks of the 1970s induced greater energy efficiency. While further cuts in supply and significant price increases would pose a threat to U.S. expansion, three factors still argue for strong (e.g., 4%) growth in 2011: (1) the rise in energy quotes to date has largely reflected strong global demand; (2) the expansion is gaining momentum and resilience; and (3) policy will likely remain supportive of growth.

Some market participants are once again questioning the sustainability of the current U.S. economic recovery. A surge in oil prices is one headwind; looming fiscal restraint is another. The threat from energy shocks should remain mild unless there are more cuts in supply and significant further price gains from current levels. Indeed, three key factors still argue for strong growth (e.g., 4%) in 2011: (1) most of the rise in energy prices to date has reflected increasing global demand; (2) the expansion is gaining momentum and resilience; and (3) policy will likely remain stimulating.

The economic impact of rising energy prices depends on their source (i.e., increasing demand or falling supply). Demand-driven price increases tend to have little impact on growth, as they are the result of economic strength. In contrast, price hikes due to a supply shock will both depress growth and boost inflation. However, the impact of such supply shocks depends on their magnitude, the speed of the price change, and their duration.

If prices remain steady, the part of the recent increase in oil prices attributable to supply shocks—approximately \$15 to \$20 per barrel (bbl)—could pare 0.4% to 0.6% from U.S. GDP growth in 2011. This estimate focuses on supply-driven changes in energy prices rather than their level. Such changes behave like a tax hike, draining discretionary income from consumers. For example, a \$1 sustained increase in gas prices will have an effect similar to a \$120 billion to \$130 billion tax hike, or 1.1% of disposable income.

On a global basis, the increase in oil prices transfers income (and wealth) to oil producers. Thus, the effects on global growth will depend on how the producers spend the transfer. But an energy price spike is different from a simple price increase because it is large and sudden. Duration will be another critical factor, as spikes that appear to be lasting create uncertainty over the direction of prices. This uncertainty can trigger hoarding as users fear supply shortages. Further, it can be corrosive to risky assets.

Investors often ask whether there is a level at which energy prices will trigger "demand destruction" or, more broadly, if there is a threshold for economic weakness. This is not surprising, as superficially there is a strong correlation between high energy prices and recessions. However, this can be reconciled in recognizing the starting point. For instance, if the recent increase in Brent crude oil from \$90/bbl to \$120/bbl were sustained, it would materially change the economic outlook. That is still true.

However, the effects of any supply-driven rise in oil prices this time are likely to be fundamentally different from those in the 1970s. Three factors

1

have reduced vulnerability in the developed economies. First, the energy shocks of the 1970s induced greater energy efficiency; U.S. energy use/GDP is half of its 1973 level. Second, higher energy taxes have accelerated that process in Europe and Japan. Third, energy as a share of U.S. household budgets has declined, from 7% in the late 1970s to a little more than 5% today.

In addition to reduced vulnerability, three other current factors argue for strong U.S. growth in the near term. First, until recently, the rise in energy prices largely reflected strong global demand. In fact, global demand is set to average 88.6 million bbl/day in 2011—a record high. Second, the economic expansion is gaining momentum and resilience. Consumer financial positions and savings rates are in far better shape than in 2008. For example, debt service in relation to income has dropped to a range of 11% to 12%, or 200 basis points (bps) lower than that of 2008. Moreover, it is becoming increasingly clear that the weather was a substantial drag on economic activity in January, masking the true strength of an accelerating economy. Indeed, February data (e.g., ISM, auto sales, retail sales) suggest there may have been a sharp rebound in activity in the second half of last month as the weather moderated. Monetary and fiscal policy is also likely to remain supportive of growth. Federal Reserve (Fed) Chairman Ben Bernanke has reiterated his determination to maintain a highly accommodative policy stance. Finally, the effects of the stimulus package that kicked in on January 1 have only begun to show up in incoming data.

"Oil Risks on Both Planets" by Global Economics Weekly, Barclays Capital, March 4, 2011

The European Central Bank (ECB) and the Fed are living on different planets when it comes to their monetary policy priorities. The Fed's policy focus

has been on employment while the ECB is concerned with fighting inflation. Indeed, given the unprecedented monetary and fiscal policies unleashed in both the United States and the Eurozone following the financial crisis, investors need to monitor closely the risks of a policy error in both areas in response to another oil shock.

The Fed and the ECB are living on different planets when it comes to their monetary policy priorities. While the Fed has been focusing on employment, the ECB has been concerned with fighting inflation. This divide recently deepened when Fed Chairman Bernanke testified that the recent rise in commodity prices would lead to only a modest rise in U.S. consumer price inflation. In contrast, the ECB has taken a more hawkish tone on rising commodity and energy prices and believes that vigilance will be required to contain upside risks to price stability. As a result, in Europe the market has begun to price in a 25 bp hike in front-end rates in both April and July of this year. These drastically different approaches to dealing with inflation have been exacerbated by the recent turmoil in the Middle East & North Africa and its effects on oil prices and inflation expectations. Given the unprecedented monetary and fiscal policies unleashed in both the United States and the Eurozone following the financial crisis, investors need to monitor closely the risks of a policy error in both areas in response to another oil shock.

The political unrest in the Middle East & North Africa and the subsequent rise in oil prices—up 15% in three weeks—come on the back of a sustained increase in food and energy prices in Europe and the United States over the last six months. Inflation and unemployment levels in the United States and the Eurozone are not dramatically different. However, policymakers in the two regions have different interpretations of the data. Essentially, the Fed sees the current employment environment and inflationary pressures as cyclical

and has applied policy accordingly, whereas the ECB believes that current trends are more secular in nature. The Fed's goal has been to use unprecedented monetary policy to lower interest rates in the United States, devalue the dollar, increase exports, and support a wealth effect to encourage businesses to borrow, invest, and hire more to help increase employment.

Scenarios in which a major Middle East oil exporter falls under attack or the flow of oil is severely disrupted are not out of the question, and there is a real possibility that oil prices could go back to 2008 levels. The global economic ramifications of such an event in terms of the effects on growth and inflation have the potential to be great. An increase in oil prices would most affect consumption, the largest component of U.S. and Eurozone GDP, and a retrenchment by consumers due to higher oil prices and increasing inflation would negatively affect what is already considered fairly weak economic growth. It is difficult to quantify the exact impact of an increase in the price of oil on household consumption and global GDP growth, but it is sizable. If West Texas Intermediate (WTI) prices stay around \$100, growth could lower by around 0.2% from fourth quarter 2010; this impact could more than double if WTI rises to \$125.

Any additional increase in the price of oil would serve to further divide the Fed and ECB, with the former more focused on the employment implications and the latter concerned about the inflationary impact. Inflation in the Eurozone is likely to run well above targets in the months ahead. Given the divergent policy priorities, how each handles such a shock—if it were to occur—will be worth monitoring closely. However, as a consequence of the extremely loose fiscal and monetary policy of the last few years, both the Fed and ECB may lack the appropriate policy tools to respond to a rapid rise in oil prices. Using the 1970s as a guide, policymakers lost credibility

during the oil supply shock as inflation expectations became entrenched and the ensuing inflation was detrimental to economic growth, creating periods of economic stagnation. Going forward, policymakers in both the United States and Europe need to be careful when making policy decisions as a mistake leading to increased inflation expectations could have disastrous consequences.

"The Implications of the Oil Price Surge" by Greg Jensen et al., Bridgewater Associates, March 2, 2011

Rising oil prices will have extensive ramifications on both global growth and global price levels. One of the most important of those ramifications will be the reactions of central banks, which may lead to greater tightening measures in emerging economies, though the developed world may have a more muted reaction.

A disturbance to the global supply of oil has developed as oil-producing nations such as Libya and Tunisia have experienced political tension and social unrest. This diminished supply has caused prices to surge by 20%. Meanwhile, other commodities that are generally associated with global growth, such as copper, nickel, and zinc, have seen their prices remain flat. Rising oil prices will be both a short-term drag on growth and a driver of inflation, forcing central banks to react to increased inflationary pressures, particularly in the emerging world.

The most direct impact of an increase in oil prices is a shift in wealth and income from oil consumers to oil producers. Due to the different savings rates of consumers and producers, rising oil prices will decelerate short-term growth, as the impact on consumers in importing countries is immediate and not offset by spending in countries that produce oil. The impact will be greatest in

countries where consumers are most exposed to changes in oil prices, either because of their consumption basket or because they are not shielded from higher oil prices by government policy (taxes and subsidies). Higher prices lead to lower consumption; the loss of purchasing power could detract 40 bps from global growth. The effects of rising prices will differ across countries.

The drag on growth differs across the emerging and developed worlds. As the emerging world is experiencing faster growth, drags are more prevalent but most pronounced where there is relatively little domestic oil production. Oil producers will see much more muted impacts. The developed world will see a smaller drag on growth, though the greatest drag is expected to occur in the United States. Elevated oil prices will have the greatest impact on the spending habits of U.S. consumers, which will not be offset by positive impacts for U.S. producers. While this impact on growth is still relevant, it will likely be offset by other stimulatory pressures that continue to point to a strengthening global economy for the next six months or so.

Similar to how rising prices have a greater impact on growth in countries with little or no oil production, oil prices will have the greatest impact in countries where oil consumption is high. As oil prices rise, the prices of products derived from oil will rise accordingly, reflecting the increase in input costs. The overall effect on global inflation is expected to be a 130 bps increase, coming mostly through a rise in headline inflation relative to core inflation.

While oil shocks by definition are temporary, there are some flow-through effects to core inflation over time as oil is an input to almost everything. The degree to which oil prices eventually create pressure on core inflation depends on the stage of the business cycle a country is in, so the potential flow-through to core inflation is greater in the emerging world, where levels of economic activity are higher. Historically, when headline inflation is higher than core inflation for a sustained period, it creates upward pressure on core inflation, leading to increased pressure for core to rise, and vice versa when headline is lower than core. In percentage terms, the recent 20% spike in oil prices does not stand out relative to price increases of the past; it would take a sustained period of elevated oil prices for this to filter through to headline inflation.

Rising inflation may lead central banks to tighten policies more quickly. Historically, this action has been the most important medium-term influence on the prospects for a spike in oil prices to lead into a global recession. With increased inflationary pressures already present in the emerging world, rising oil prices will make it even harder to read the complicated inflation story.

The oil price increase will likely bring about divergent reactions between the emerging and developed worlds. It is likely that central banks in the emerging world will implement more tightening as the risks of inflation rise, particularly for those countries currently experiencing higher growth and tighter capacity. In the developed world, the impact of oil prices on policy will be more muted, but on the margin it looks as if those central banks mostly focused on inflation (such as the ECB) will lean further toward tightening, while those with dual mandates (such as the Fed) will not react as quickly.

These monthly investment perspectives are intended to provide analysis of recently published articles on a wide range of investment topics, focusing on insights from publications not as widely available as *The Wall Street Journal* and *Business Week*, for example. We regret that due to copyright restrictions, Cambridge Associates cannot provide the articles cited above.