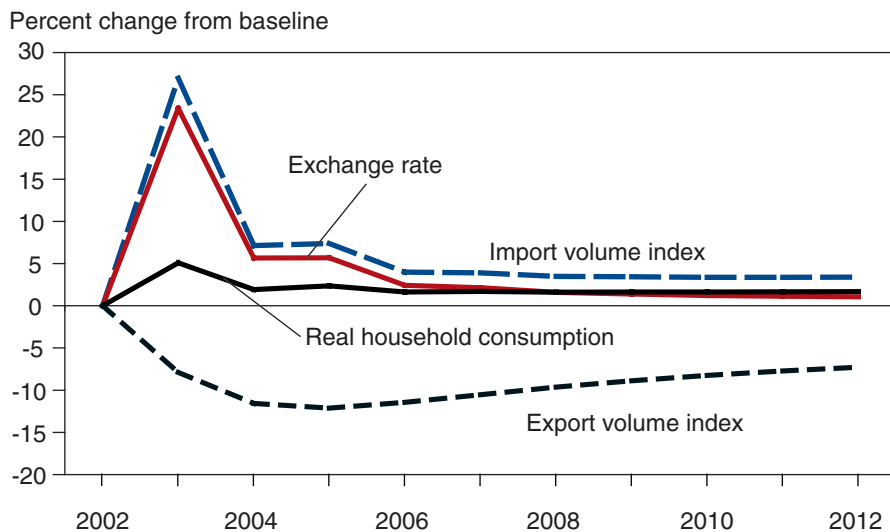


Model Results: The Impact of Macroeconomic Shocks on U.S. Trade

Macroeconomic influences are captured in the interaction between changing foreign demand for U.S. financial assets and various macroeconomic indicators, including exchange rates, interest rates, and consumption. The simulations illustrate how increased foreign demand for U.S. financial assets is linked to U.S. consumption growth, a stronger dollar, and increased net imports, whereas reduced foreign demand is likely to result in a weaker dollar, reduced consumption growth, and rising net exports. A key insight from the results is recognizing the role household spending on foreign goods has played in fostering aggregate consumption growth. This spending takes place mainly because of the willingness of foreigners to loan and invest their savings in the United States, which elevates the dollar at the expense of U.S. exports. The past growth of merchandise imports and current account deficits may set the stage for further macroeconomic adjustment in the future.

In scenario 1 (enhanced confidence), the required rate of return by foreign investors on U.S. assets in 2002 falls, triggering an initial dollar appreciation of 20 percent. This effect cuts total merchandise (agricultural and nonagricultural) exports on average by 8 percent per year during the ensuing period and increases real household expenditures (fig. 7). The heightened attractiveness of the U.S. market for foreign investors depicted in scenario 1 thus drags down total U.S. exports, even as trade and domestic markets adjust over time, restoring the exchange rate closer to the original level. U.S. total foreign liabilities in the form of existing debt would continue to grow because the level of foreign debt in the U.S. has increased and must be serviced. This situation is sustainable as long as the U.S. economy continues to grow with sustained productivity providing the wherewithal to service

Figure 7
Macroeconomic effects of a simulated increase of foreign demand for U.S. financial assets (2002)



Source: USDA, ERS simulation with dynamic USAGE model.

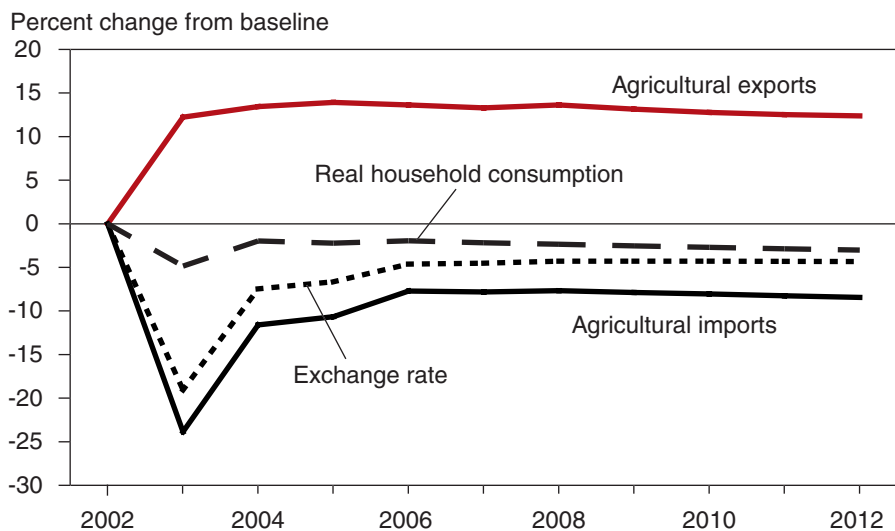
foreign debt. The simulation scenario results reinforce the analytical conclusions presented earlier on macroeconomic forces that have been realized in the form of mounting U.S. trade and current account deficits.

Scenario 2 depicts a sudden decline of confidence in U.S. financial assets by foreign investors and further explores the consequences for U.S. agricultural trade. While a sudden decline in confidence—as modeled here—is plausible, the event could take place gradually, or not at all. The effect is the opposite of the influence of the enhanced confidence scenario (scenario 1), with the dollar initially depreciating and agricultural export volume increasing by about 13 percent (fig. 8).²⁴ When the price of foreign goods increases relative to the price of U.S. exports, it results in a terms-of-trade loss, thereby reducing real household consumption. In addition, foreign capital that previously lowered borrowing costs now becomes rationed, further curbing consumption growth.

Depreciation of the dollar is not the only reason for reduced import growth, but rather acts in conjunction with the simulated effects of lower overall consumption growth. Recent experience demonstrates that without a slowdown in consumption growth, exchange rate depreciation may not by itself reduce imports. Between 2001 and 2006, for example, U.S. agricultural imports from the EU rose rapidly despite a substantial depreciation of the dollar against the euro. This effect may stem from the inelastic price demand of U.S. consumers for many imported specialty products—that is, a given price change induces a relatively small change in quantity demanded. Furthermore, the continued strength of U.S. consumption led to an increased quantity of imports, which translated into an even larger increase in value terms due to the weaker dollar. In actual market conditions, the extent to

²⁴A number of factors affect exchange rates and impacts on import and export volumes, including government intervention (see Roe, Shane, and Vo, 2006).

Figure 8
Macroeconomic and agricultural trade effects on U.S. economy of a simulated decline of foreign confidence



Source: USDA, ERS simulation with dynamic USAGE model.

which exchange rate changes affect U.S. agricultural exports and imports also depends on which foreign markets experience the greatest exchange rate changes, lags in purchasing behavior by importers and exporters (the “J-curve effect”), and the degree to which exchange rates are passed through to buyers.²⁵ Nonagricultural import growth has already begun to diminish since 2006 as a result of weakening U.S. demand for foreign goods and higher import prices.²⁶

²⁵The J-curve effect refers to an initial deterioration of the trade balance following a depreciation of the exchange rate due to inelastic demand for imported products in the shorter term, and the time it takes domestic producers to increase output of the import-competing good.

²⁶See <http://www.census.gov/foreign-trade/www/> for current trade in U.S. total merchandise imports and exports.