DR. VARGAS: Thank you for the opportunity to address these remarks before you today. My topic is the importance of the maquiladora industry for the Mexican and U.S. economies and its relevance to the U.S. trade deficit. Everything I will say reflects my own views and not the Federal Reserve's.

Mexico's maquiladora industry program can be viewed as a type of free trade and investment agreement between Mexico and the rest of the world. One of its key features is that it allows for the duty-free importation, regardless of country of origin, of raw materials, machinery, and equipment, and other inputs that go into the production process as long as 100 percent of the output is exported.

A second important feature of the program is that it allows for up to 100 percent foreign ownership of the maquiladora investment. Having been launched in 1965, the maquiladora program predates NAFTA by almost three decades. Moreover, when Mexico designed its maquiladora program, it did so in imitation of similar programs that already existed elsewhere in the world, especially in the countries of the Pacific Rim: Taiwan, South Korea, Hong Kong, and Singapore.

Today, many countries have maquiladora type programs -- which can alternatively be called production-sharing arrangements -- so that this phenomenon is not unique to Mexico.

Why production sharing? Through the maquiladora framework, foreign manufacturers predominantly U.S. companies, are able to locate labor-intensive operations in labor-abundant Mexico, thus achieving lower labor costs in the overall production process. Mexico, in turn, receives investment -- factories, machinery equipment, state of the art production technology -- from countries such as the United States that have a relative abundance of capital, thus, Mexico is able to attract some of the foreign direct investment it needs to grow.

The maquiladora industry's importance for the Mexican economy has been increasing over time, especially in the area of job creation, exports, and foreign exchange. Maquiladoras today employ well over a million workers. Their exports account for more than half of Mexico's manufacturing exports, and they are now the country's top source of foreign exchange.

As for the industry's importance for the United States, by generating important labor-cost reductions through their maquiladora operations, U.S. companies have been able to remain competitive in the world marketplace and thus have retained or even increased their world market share in the production of many goods.

A case in point is the U.S. auto industry. During the mid to late '70s, the U.S. auto industry faced intense competition from Japanese carmakers and as a result, saw its world market share fall. In response to these developments, the U.S. auto industry restructured to become more competitive internationally, and part of its restructuring strategy involved more use of production sharing operations. Thus as their maquiladora operations grew from the early '80s onward, U.S. auto makers were able to regain some of the market share they had lost and maintain a stable share since, despite continued intense competition from Asian and other foreign car makers.

Maquiladora production ultimately garners the largest benefits for the U.S. consumer -- indeed, the world consumer -- since production sharing results in lower priced goods than would be the case if the goods were produced entirely in the United States. Any number of goods, from cars to computers, from clothes to VCRs, are made affordable today to a large number of consumers worldwide because of production sharing.

Maquiladora operations have a high degree of U.S. content -- that is, raw materials and components originating in the United States. Around 82 percent of the raw materials that maquiladoras import into Mexico are sourced in the United States. In 1998 this translated into $31 billion worth of U.S. inputs.

U.S. supplier industries linked to maquiladoras are usually higher-tech manufacturers that employ thousands of high-skilled workers throughout the United States. In fact, a 1988 survey of maquiladora companies in Ciudad Juarez showed that maquiladoras in this city alone had suppliers in every U.S. state except Hawaii, thus establishing that substantial linkages exist between maquiladoras and the U.S. economy.

Moreover, because huge production sharing operations in East Asia are not as reliant on U.S. suppliers as are maquiladoras, the positive impact on U.S. production and employment of these more distant operations is either absent or not as significant. Also, because some U.S. companies have been able to stay in business as a result of their maquiladora production-sharing strategy, we can assume that without such a strategy and unable to cope with intense international competition, these companies would likely have closed and the direct U.S. jobs they now support would not exist.

The maquiladora industry's large presence on Mexico's northern frontier has resulted in important benefits to U.S. border cities. Transportation and customs services, as well as the industrial real estate sector, have flourished on the U.S. side. Maquiladoras have also created jobs in the legal, accounting, and financial professions, and increasingly so, even in manufacturing. Maquiladora suppliers -- which typically employ high-skilled labor -- have been expanding their operations to cities like

El Paso, Texas, in order to be close to their maquiladora customers across the border.

For a city like El Paso, which like most U.S. border cities, has a high unemployment rate relative to the nation, its maquiladora linkages are important to the extent that they raise the city's overall employment level. Also, since the jobs that maquiladoras create in El Paso are in the white-collar professions or in higher skilled manufacturing, maquiladoras also work to move the city up the economic ladder.

Now for the relevance to the U.S. trade deficit. In 1998, the U.S. trade balance with Mexico equaled a deficit of nearly $16 billion dollars. A sizeable portion of U.S.-Mexico trade is through the maquiladora industry. Nearly 40 percent of total U.S. merchandise exports to Mexico and over 55 percent of total U.S. merchandise imports from Mexico in 1998 were maquiladora related.

If a balance of “maquiladora only” trade is calculated for 1990 through '98, a deficit would be observed throughout the period. If such trade is assumed away to look at what trade between the United

States and Mexico would be like without maquiladoras, the resulting balance would predominantly be in surplus. However, because maquiladora production is in large measure, the processing and manufacturing of imports of U.S. raw materials and components, the final maquiladora export to the United States that results from this process can be viewed as a re-exportation; that is, materials and components that the U.S. exports to the maquiladora are processed and then exported back to the United States. Hence, the share of maquiladora export production that originated in the United States should not be counted, strictly speaking, as part of the value of the final Mexican maquiladora export to the United States. If therefore, the “true” or “actual” value of a maquiladora export to the United States is considered to be the value that would result after the portion that originated in the U.S. is discounted from the export value, the resulting trend in the “maquiladora only” trade balance would yield a surplus rather than a deficit.

If we then see how this actual maquiladora trade balance would impact the overall U.S.-Mexico trade balance, and further, see what happens when this maquiladora only trade balance is assumed away, the resulting outcomes would be (1) a sustained U.S. trade surplus with Mexico when maquiladora “actual” trade is considered; and (2) a sustained U.S. trade deficit with Mexico if no maquiladora trade were taking place under its “actual” or more accurate valuation.

In conclusion, irrespective of whether a trade deficit or a surplus is considered good or bad, it is important to recognize that maquiladora trade flows as they are included now in the trade statistics yield a very different net result for the trade relationship between the United States and Mexico (a deficit) than if such trade flows were accounted for more accurately to reflect maquiladora exports to the United States only after being discounted by the portion that first originated in the United States as a maquiladora export to Mexico (a surplus).

Also whether maquiladora trade flows push the overall U.S.-Mexico trade balance into a deficit or a surplus position is not as relevant as recognizing that these trade flows are simply part of a single integrated production sharing manufacturing process that benefits both the U.S. and Mexican economies.

Thank you very much.