International Trade and the Bay Area Economy

Regional Interests and Global Outlook 2008





Bay Area Council Economic Institute

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Executive Summary

In a period when the U.S. economy is slowing sharply, the global economy is expected to stay relatively strong, providing continuing opportunities for U.S. exporters and cushioning declines in the domestic economy. The global economy is nevertheless expected to slow in 2008 and 2009, as credit and financial market issues stemming from sub-prime mortgage crisis and credit market issues in the U.S. spread globally. According to the International Monetary Fund (IMF), global growth is projected to be 3.7 percent in 2008, down from 4.9 percent in 2007, and 5 percent in 2006. Canada and Mexico, which are heavily impacted by developments in the U.S., will see the sharpest slowdown. Europe's economy will slow to about 1.4 percent growth, though Eastern Europe and Russia should do better. Latin America's economy will slow, as will Japan's.

Once again, the developing economies of Asia will show the strongest economic performance worldwide, with China at 9–10 percent growth, India at approximately 8 percent, and the Association of Southeast Asia Nations (ASEAN) slightly under 6 percent. The major risk to this generally positive outlook will come from conditions in the U.S. If the U.S. economy experiences an extended period of very slow growth or recession, exports from Asia and other major markets will be affected, with negative implications for global growth.

Reflecting a slowing economy, world trade growth is also decelerating, falling from 9.2 percent in 2006 to 6.8 percent in 2007 and a projected 5.6 percent in 2008.

Multilateral negotiations to reduce trade barriers—which otherwise could be expected to give trade expansion a shot in the arm—have stalled, with deep disagreements among the participating countries over agriculture and other issues. The expiration of U.S. Trade Promotion Authority (TPA) in July 2007 has also dimmed the prospects for bilateral agreements to reduce trade barriers. In December 2007, a new bilateral free trade agreement was ratified with Peru—a bright spot on the trade negotiating agenda. Other trade agreements with Colombia and Korea, however, still await congressional approval.

The region's stake in access to global markets is substantial. The Bay Area is the United States' fourth largest exporting region, after New York–New Jersey, Houston and Los Angeles–Long Beach, and accounts for 36 percent of California exports. As a long-term trend, major Bay Area companies across a range of industries are deriving an ever-larger share of their revenues from global sales. Of 50 companies tracked in a semi-annual survey by the Bay Area Council Economic Institute, 43 saw their domestic sales increase from 2004 to 2006, while 7 saw domestic sales fall. In the same period, 44 saw their international sales increase, 4 saw international sales fall, and 2 remained the same.

More significantly, of the companies tracked, 16 saw the *share* of revenues from domestic sales grow relative to international markets, while 29 saw the share of their revenues from international sales relative to domestic markets grow (and for 5, the ratio remained the same). In some cases the shift was substantial: Google's revenue share from global sales increased

from 34 percent to 43 percent, 3Com's from 62 percent to 69 percent, Varian Medical Systems' from 40 percent to 47 percent, Yahoo's from 26 percent to 32 percent, Cypress Semiconductor's from 35 percent to 41 percent, and eBay's from 42 percent to 48 percent. These figures suggest that Bay Area companies are, on the whole, increasing their global orientation, and that global sales are assuming greater importance in their revenue flows and business strategies.

While large companies account for the lion's share of these exports by dollar value, the vast majority of exporting companies in the Bay Area—approximately 95 percent—are small- and medium-sized businesses. There is a clear trend toward small- and medium-sized businesses entering global markets at an earlier stage in their development.

Computer and electronic products, mostly from the Bay Area, dominate California's export profile, representing almost 35 percent of total exports. Other major export categories include machinery (11.6 percent), transportation equipment (10.6 percent), chemicals (6.8 percent), agricultural products (5 percent) and food products (4.1 percent).

California's exports are directed primarily toward Asia (45.2 percent), with NAFTA nations (Canada and Mexico) accounting for 26.5 percent, and Europe 21.1 percent. Latin America and the Caribbean account for 3.5 percent, and the rest of the world for less than 1 percent. Six of the state's top ten export destinations are in Asia, two are in North America, and two are in Europe.

This has been a stable pattern over many years. Worth noting, however, is China's upward move, from being the state's seventh largest market in 2002 to its fourth largest in 2006. This reflects dynamic growth in China's domestic markets, and their increased accessibility since China's entry into the World Trade Organization in 2001. The fact that in 2008 the global economy (and Asia in particular) is expected to grow faster than the U.S. economy—coupled with a strong Bay Area orientation toward Asia and exchange rate shifts that make U.S. exports more competitive—should substantially benefit the Bay Area.

State and regional policymakers will confront major decisions regarding goods movement—the port, airport, rail and highway infrastructure that moves commercial freight from its point of origin to its destination. More than $3 billion in funds approved by voters in November 2006 will be allocated to statewide goods movement projects, stimulating a sharper focus on goods movement priorities, and their economic and environmental implications. International trade is the fastest growing component of regional goods movement.

California ports are being challenged by growing competition from ports in Canada and Mexico, and an increasing share of Asian traffic is bypassing the West Coast altogether in favor of all-water routes to East and Gulf Coast destinations. Investment in goods movement infrastructure, including increased rail capacity from the Port of Oakland to the Central Valley and over the Sierras to transcontinental destinations, will be important to regional mobility, and to the Bay Area's competitiveness as a global trade hub.

1

Global Economic Outlook

The global economy will remain strong, but growth rates will slow significantly.

The global economy is expected to remain strong in 2008, with 3.7 percent growth. This reflects a significant slowdown, however, from 4.9 percent growth in 2007 and 5 percent in 2006. Slower growth is expected through 2009. In general, emerging and developing economies will benefit from continued strength in commodity markets, while most industrial economies will slow considerably. The largest uncertainty in this forecast is the economic slowdown in the United States caused by mortgage and financial market issues and their resulting effects on credit and consumer spending. A major economic retrenchment in the United States could impact other economies through capital market disruptions and falling U.S. imports. A flat economy or a short, shallow U.S. recession, on the other hand, would have only a minimal effect on the world economy.

The following forecasts are based on International Monetary Fund analysis, supplemented by recent reporting.

Canada

Canada's economy, which will be disproportionately affected by a U.S. slowdown, is expected to slow from 2.8 percent growth in 2006 and 2.7 percent in 2007, to 1.3 percent in 2008 and 1.9 percent in 2009.

Mexico

For the same reasons, growth in Mexico is expected to slow from 4.8 percent in 2006 and 3.3 percent in 2007, to 2.0 percent in 2008 and 2.3 percent in 2009.

Europe

Growth in the Euro area should also slow sharply, from 2.8 percent in 2006 and 2.6 percent in 2007, to 1.4 percent in 2008 and 1.2 percent in 2009. Despite weakness in the U.S. economy and a falling dollar, the Eurozone economy has been resilient but is now being impacted by rising energy costs and falling business confidence. Spain, which has been an engine of European growth for the last ten years, faces challenges due to the collapse of its housing

market after an extended boom. Falling business confidence, higher interest rates and higher unemployment are also taking their toll in the United Kingdom. Growth in the U.K. (which has not adopted the Euro), should also slow from its 2006 rate of 2.9 percent and 2007 rate of 3.1 percent, to 1.6 percent in 2008 and 2009.

Russia and Eastern Europe

Eastern Europe has continued its process of integration with the European Union. With Bulgaria and Romania joining in 2007, 10 former Soviet Bloc countries have become members since 2004. The benefits have included greater access to Western European markets, increased foreign direct investment, and rising incomes. This has contributed to growth averaging 5 percent. So far, only one country (Slovenia) has joined the Euro currency area, but all have indicated their intention to do so and are in various stages of accession.

For the economies of Eastern Europe, 2006 was a strong year with average growth of 6.6 percent based on increasing domestic demand, inbound foreign investment, and an improved economy in Western Europe (particularly Germany). Growth in 2007 slowed to 5.8 percent and is expected to slow further to 4.4 percent in 2008 and 4.3 percent in 2009, due largely to decelerating growth in the major European economies that are Eastern Europe's primary market.

Russia's economy, which has benefited from higher global energy prices, grew a robust 7.4 percent in 2006 and 8.1 percent in 2007. Growth in 2008 is projected at a slower but still robust 6.8 percent, with 6.3 percent projected for 2009. Collectively, Russia, Eastern Europe and the CIS (Commonwealth of Independent States) should see growth rates second only to emerging Asia.

Japan

Japan's economy rebounded from an extended downturn in 2006, with 2.4 percent growth. Businesses expanded employment and production capacity, stimulating consumption. Like other large industrial economies, growth slowed in 2007 to 2.1 percent, with further slowing expected in 2008 (1.4 percent) and 2009 (1.5 percent).

China

Despite government efforts to tap the brakes, China's economic growth continued in 2007 at a rate of 11.4 percent, exceeding its 11.1 percent growth rate in 2006. However, the global economic downturn is expected to impact China as both exports and investment in factories and infrastructure slow. The IMF currently projects a still robust growth rate of 9.3 percent growth in 2008, and 9.5 percent in 2009.

Korea

Korea's economy is expected to slow from 5.1 percent growth in 2006 and 5.0 percent in 2007, to 4.2 percent in 2008 and 4.4 percent in 2009.

India

India's economy also saw strong growth in 2006 (9.7 percent), supported by strong domestic consumption, investment and exports. Growth slowed slightly in 2007 to 9.2 percent, and is expected to slow further in 2008 (7.8 percent) and 2009 (8 percent). Still, India's economy is expected to remain among the world's most dynamic.

Southeast Asia

While the performance of individual economies will vary, the major Southeast Asian economies have sustained strong growth rates, rising from 5.7 percent in 2006 to 6.3 percent in 2007. Slower growth of 5.8 percent is projected for 2008, and 6.0 percent for 2009. Weaker economies in the U.S. and Europe in particular are dampening global sales by export-dependent economies such as Singapore.

Latin America

Growth in Latin America is expected to ease from 5.5 percent in 2006 and 5.6 percent in 2007, to 4.4 percent in 2008 and 3.6 percent in 2009. Performance by individual countries in the region will vary considerably.

Africa

Africa's economies also saw significant growth in 2006 (5.9 percent) and 2007 (6.2 percent), based on strong commodity prices, debt relief, and foreign investment. Growth is expected to expand to 6.3 percent in 2008, and 6.4 percent in 2009.

Middle East

Middle Eastern economies have continued to benefit from strong oil revenues, and strength in non-oil activity. Average growth of 5.8 percent in 2006 and 2007 should rise to 6.1 percent in 2008 and 2009.

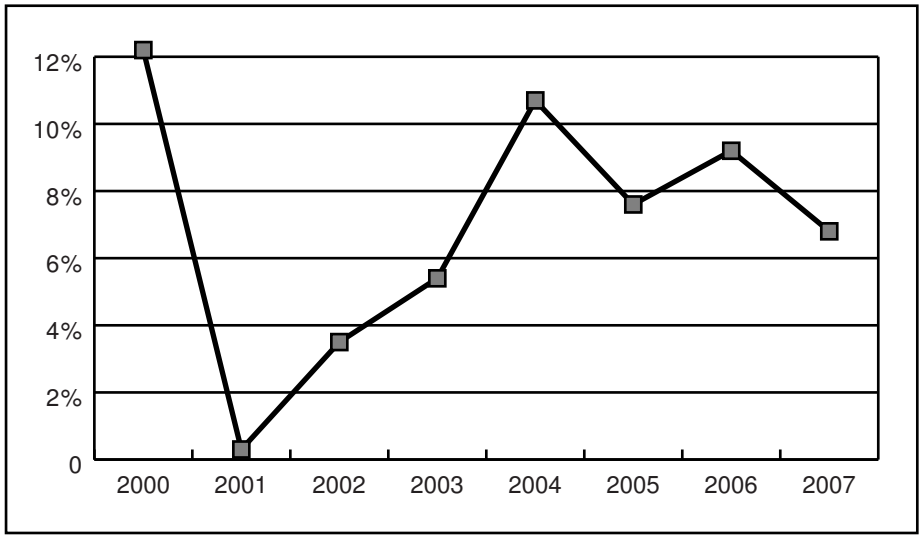
2

Global Trade Outlook

Trade will continue to grow, but its pace will decelerate.

World trade has grown strongly since its last slump in 2001, with a 9.2 percent expansion in 2006. In 2007, however, trade growth dropped to 6.8 percent. Different sources—the World Trade Organization, World Bank, and International Monetary Fund—have different projections for trade in 2008, but all agree that the pace of trade is slowing. The International Monetary Fund projects that 2008 could see a further drop to 5.6 percent. While these projections still predict healthy levels, they reflect a weaker world economy, continuing volatility in global financial markets, and rising energy costs.

World Volume of Trade in Goods and Services, 2000–2007
(Average of Annual Percent Change for Exports and Imports)



Source: International Monetary Fund, World Economic Outlook, April 2008

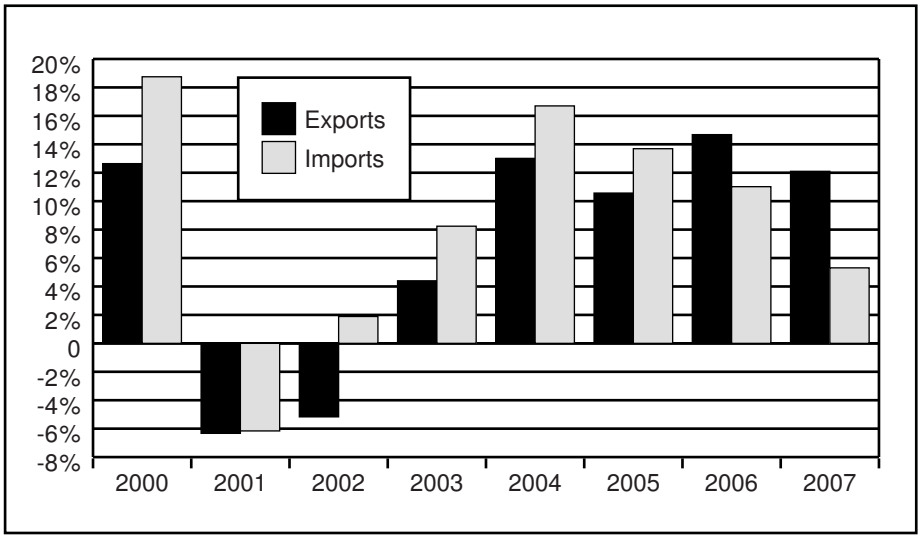
Trade began to slow early in 2007 due to reduced demand in larger developed economies, including the United States. Nevertheless, developing economies and the Commonwealth of Independent States (CIS) have sustained healthy economic expansions, contributing more than 40 percent to the growth of world economic output, and accounting for a record 34 percent share of world merchandise trade in 2007. It remains to be seen whether developing economies can sustain these growth and import levels in the face of significant slowdowns in

the U.S., European and Japanese markets. Continued strength in global commodity markets and decreased reliance on developed country markets for their exports, however, suggest that GDP and import growth in emerging economies should remain healthy through 2008.

Continuing a long-term trend, both imports and exports by developing and newly emerging economies are growing faster than the imports and exports of the more established economies. Import growth in the developed economies of North America, Europe and Japan slowed in 2007. In contrast, imports by developing and CIS economies grew faster than exports, accounting for more than half of global import growth. The rate of expansion for both imports and exports in Europe dropped to 3.5 percent. South and Central American merchandise imports grew 20 percent (compared to export growth of 5 percent.) Asia's export growth (11.5 percent) continued to exceed import growth (8.5 percent.) Japanese imports were largely flat (growing only 1 percent), but China and India both recorded double-digit import growth.

U.S. Department of Commerce data shows that U.S. exports grew a strong 14.7 percent in 2006 and 12.1 percent in 2007, while imports in the same years grew only 11 and 5.3 percent. This was the first time in a decade that the rate of export growth exceeded the growth of imports. Recent export growth can be attributed in part to a weakening dollar, which makes U.S. exports more competitive. The currencies of Japan, Taiwan, and Hong Kong stayed largely unchanged relative to the dollar, but the currencies of India and Thailand increased about 10 percent, and the currencies of China, Singapore and Malaysia appreciated about 5 percent relative to the dollar. The dollar depreciated sharply relative to the Euro and the pound, and to the currencies of commodity exporters such as Canada, Russia and Australia. As a result, European dollar-denominated export prices rose at double-digit rates.

U.S. Merchandise Trade Volume, Exports and Imports, 2000–2007 (Annual Percent Change)



Source: Office of Trade and Industry Information, Manufacturing and Services, International Trade Administration, U.S. Department of Commerce

Global trade in services increased by a strong 18 percent in 2007, a trend seen in all regions. Part of this growth can be attributed to exchange rate movements. U.S. service imports grew a relatively modest 9 percent, while service exports rose 14 percent. This rise contributed to a U.S. service trade surplus of $120 billion.

A sharp or prolonged economic downturn in the United States, with falling imports, could negatively impact other economies, including trading partners in Asia. If overseas markets contract, this could also dampen U.S. exports. Sales to Mexico and Canada would be most affected, but sales to Europe could also suffer. Still, with the dollar at a historic low in international currency markets, and with overseas economies likely to outperform the U.S., exports should remain robust during 2008–09.

Exchange Rates, China and the U.S. Trade Balance

In recent years, a strong dollar has contributed to the U.S. trade deficit, but in 2007 the U.S. dollar fell to par with the Canadian dollar and an exchange rate of $1 to €0.71 with the Euro, the lowest value relative to the European currency in its history. Despite driving up commodity prices, the weakening of the dollar has benefited U.S. exporters and helped to moderate import growth. Wachovia Economics Group estimates that net exports contributed 0.7 percent, or nearly one-third of the 2.5 percent year-on-year U.S. economic growth recorded in the fourth quarter of 2007.

In July 2005, China (responding to U.S. pressure) revalued its currency upward by 2.1 percent and has since then allowed the yuan to appreciate in value within a controlled range. In the last two years, the yuan has risen approximately 10 percent against the dollar. The impact of these shifts on the U.S.–China trade balance has been small, however, due to Chinese import restrictions, U.S. government restrictions of the export of high technology to China, and the high propensity of Americans to consume and their low propensity to save. From the yuan's appreciation, the Asian Development Bank estimates a net impact on the U.S. trade imbalance of only $3.6 billion. McKinsey & Company estimates that even if the yuan were to appreciate by a dramatic 45 percent against the dollar, China would still run a $90 billion trade surplus with the U.S., since Chinese products would still retain a fundamental cost advantage.

In 2007, China's overall merchandise exports grew 26 percent to $1.2 trillion, and imports grew 21 percent to $956 billion. Of the $1.2 trillion in exports, 34 percent ($326 billion) went to the United States.

United States Trade Balance with China
(Billions of Dollars)

2000	2001	2002	2003	2004	2005	2006	2007
-84	-83	-103	-124	-162	-202	-233	-256

Source: WISERTrade

Understanding the bilateral trade balance with China is complicated by the growth of intra-firm trade, and of trade in intermediate goods within Asia. More than half of Chinese exports

are produced by foreign firms, who import as much as two-thirds of their components from other countries, and also capture a large share of the final products' value. Increasingly, smaller Asian economies that once exported technology products directly to the U.S. are exporting components to China, where they are assembled into finished products and exported to the U.S. and other global markets. This has happened as manufacturing assembly has shifted from countries such as Japan, Hong Kong, Taiwan and Korea to the Chinese mainland. As a result, intra-Asian trade has increased from 26 percent of regional exports in 1985 to 37 percent in 2005, and the share of East Asian exports going to the U.S., Europe and Japan has fallen from 53 percent to 43 percent.

Economist David Hale notes that in 2003, intermediate goods (components) accounted for 28 percent of East Asia's exports to China, compared to 19.2 percent in 1992, and they accounted for 34.3 percent of Chinese imports compared to 17.6 percent in 1992. Through these intra-firm trade and intermediate goods transactions, China runs a large trade surplus with the U.S. and Europe, but runs deficits with Korea, Taiwan, Japan and ASEAN (Southeast Asia). This has the effect of magnifying Chinese trade surpluses (at the point of export) with the U.S., while diluting bilateral U.S. deficits with other Asian partners.

In the face of persistent large bilateral deficits, some members of the U.S. Senate have threatened retaliatory legislation against China based on alleged currency manipulation. It appears, however, that focusing on currency realignment will not fundamentally alter the U.S.–China trade balance, and as a strategy, may be misdirected. It should also be noted that Chinese foreign exchange reserves, accumulated largely through exports, are being heavily recycled to finance the large U.S. budget deficit.

The overall U.S. trade deficit (including both goods and services) fell to $712 billion in 2007, a decline of 6.2 percent from 2006 levels. This was the first absolute shrinkage in the deficit since 2001, and occurred despite a 10.2 percent increase in the bilateral deficit with China. ($256.3 billion). The bilateral deficit fell with Japan, Canada and the European Union, but increased with Mexico.

Data from the Institute of Supply Management shows 61 consecutive months of export growth through December 2007. U.S. exports in 2007 were a record $1.6 trillion, a 12.6 percent increase from 2006. According to the Office of the U.S. Trade Representative, this accounted for 40 percent of U.S. economic growth. Imports also hit a record of $2.33 trillion (up 5.9 percent). The narrowing of the deficit reflected a strong global economy and slowing import growth, which in turn reflected weaker demand in a slowing U.S. economy.

While bilateral U.S. import and export balances are important, the paradigm for how global trade is conducted is rapidly evolving beyond the traditional model in which products are made in one country and shipped to another, toward a more distributed process where the final product contains components and processing contributed by several countries. In this new model, basic research might be done in one country, applied (product) research in another, with final assembly done in a third, from components sourced in multiple countries.

This globally distributed process is particularly prevalent for multinationals and large companies in the IT sector. A technology product from China might count as a Chinese import in U.S. trade data, but may contain mostly imported components produced by U.S. companies or third countries. If Intel designs a processor in California but manufactures it in a plant in Israel or Ireland, trade statistics don't capture the value of the design, and if the finished product is later sold in the U.S., it is classified as an import, even though the lion's share of the value and profit accrues to Intel. The interpretation of data regarding bilateral trade balances is therefore not as simple as the figures themselves may suggest.

The effect of these global processes on trade value analysis is demonstrated, for example, in the following table from a 2007 study that identified the costs of components in the Apple iPod.

The Most Expensive Inputs in the 30GB 5th-Generation iPod, 2005

Component	Supplier	Company HQ Location	Manufacturing Location	Estimated Factory Price	Cost as % of all iPod Parts	Gross Profit Rate	Est'd Value Capture
Hard Drive	Toshiba	Japan	China	$73.39	51%	26.5%	$19.45
Display Module	Toshiba-Matsushita	Japan	Japan	$20.39	14%	28.7%	$5.85
Video/Multimedia Processor	Broadcom	US	Taiwan or Singapore	$8.36	6%	52.5%	$4.39
Portal Player CPU	PortalPlayer	US	US or Taiwan	$4.94	3%	44.8%	$2.21
Insertion, test, and assembly	Inventec	Taiwan	China	$3.70	3%	3.0%	$0.11
Battery Pack	Unknown			$2.89	2%		$0.00
Display Driver	Renesas	Japan	Japan	$2.88	2%	24.0%	$0.69
Mobile SDRAM Memory - 32 MB	Samsung	Korea	Korea	$2.37	2%	28.2%	$0.67
Back Enclosure	Unknown			$2.30	2%	26.5%	
Mainboard PCB	Unknown			$1.90	1%	28.7%	
Subtotal for 10 most expensive inputs				**$123.12**	85%		**$33.37**
All other inputs				$21.28	15%		
Total all iPod inputs				$144.40	100%		

Source: Personal Computing Industry Center, University of California, Irvine researchers, Greg Linden, Kenneth L. Kraemer, and Jason Dedrick, calculated using data from Portelligent, Inc., 2006

Yet another reason why data may paint a distorted picture of the trade balance concerns software exports, which are often sold through overseas subsidiaries and, as such, aren't booked as U.S. exports. Moreover, overseas sales by Internet companies such as Google and

Yahoo don't show up in some relevant comparisons, because they are classified as services rather than goods.

World Trade Volumes in Goods and Services (Annual Percent Change)

	Ten-Year Averages											
	1990–1999	2000–2009	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
World Export and Import Volume (Average of Annual Percent Change)												
World Trade Volume	6.5	6.7	12.2	0.3	3.5	5.4	10.7	7.6	9.2	6.8	5.6	5.8
Price deflator												
In U.S. Dollars	—	4.5	-0.4	-3.6	1.1	10.4	9.6	5.5	4.9	8.2	8.6	1.1
In SDRs	-0.7	3.4	3.3	-0.1	-0.6	2.0	3.7	5.8	5.4	4.1	10.4	0.8
Export Volume												
Advanced economies	6.5	5.4	11.7	-0.5	2.4	3.3	9.0	6.0	8.2	5.8	4.5	4.2
Emerging and developing economies	7.5	9.4	13.7	2.6	6.9	10.5	14.1	11.1	10.9	8.9	7.1	8.7
Import Volume												
Advanced economies	6.3	5.1	11.7	-0.5	2.7	4.1	9.3	6.3	7.4	4.2	3.1	3.7
Emerging and developing economies	6.5	11.0	13.7	3.1	6.3	10.1	16.1	12.0	14.4	12.8	11.8	10.7

Advanced Economies Export Volumes in Goods and Services (Annual Percent Change)

	Ten-Year Averages											
	1990–1999	2000–2009	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Advanced economies	**6.5**	**5.4**	**11.7**	**-0.5**	**2.4**	**3.3**	**9.0**	**6.0**	**8.2**	**5.8**	**4.5**	**4.2**
United States	7.1	5.0	8.7	-5.4	-2.3	1.3	9.7	6.9	8.4	8.0	8.7	6.8
Euro area	6.1	5.2	12.0	3.9	1.7	1.5	7.0	4.8	7.8	6.0	4.1	3.7
Germany	5.9	7.3	13.5	6.4	4.3	2.5	10.0	7.1	12.5	7.8	5.3	4.2
France	6.2	3.5	12.4	2.5	1.5	-1.2	4.0	2.8	5.5	2.7	1.8	3.2
Italy	4.4	2.8	9.0	2.6	-2.9	-2.0	4.9	1.0	6.2	5.0	2.7	2.2
Spain	9.4	4.5	10.2	4.2	2.0	3.7	4.2	2.6	5.1	5.3	3.9	4.0
Japan	3.8	6.9	12.8	-6.8	7.4	9.2	14.0	6.9	9.7	8.8	5.0	3.3
United Kingdom	5.6	3.6	9.1	2.9	1.0	1.7	4.9	8.2	11.0	-5.4	1.3	2.7
Canada	7.9	1.0	8.9	-3.0	1.2	-2.3	4.8	2.2	0.7	0.9	-3.0	0.1
Other advanced economies	7.9	7.3	14.9	-1.9	6.4	8.2	12.8	7.6	9.0	7.4	5.1	4.8
Major advanced economies	5.9	4.8	10.7	-0.9	1.2	1.7	8.3	5.7	8.6	5.1	4.4	4.0
Newly industrialized Asian economies	9.8	9.4	17.3	-3.8	10.1	13.3	17.2	9.5	10.9	8.7	6.2	6.2

Advanced Economies Import Volumes in Goods and Services (Annual Percent Change)

	Ten-Year Averages											
	1990–1999	2000–2009	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Advanced economies	**6.3**	**5.1**	**11.7**	**-0.5**	**2.7**	**4.1**	**9.3**	**6.3**	**7.4**	**4.2**	**3.1**	**3.7**
United States	8.3	4.4	13.1	-2.7	3.4	4.1	11.3	5.9	5.9	1.9	-0.7	2.6
Euro area	5.8	4.9	11.1	2.0	0.4	3.0	6.9	5.5	7.8	5.1	4.1	3.9
Germany	5.9	5.4	10.2	1.2	-1.4	5.4	7.2	6.7	11.2	4.8	4.6	4.3
France	5.0	4.8	14.9	2.2	1.7	1.1	7.1	5.0	6.8	3.6	2.5	3.9
Italy	4.1	3.1	5.8	1.8	0.2	1.2	4.2	2.2	5.9	4.4	2.8	2.8
Spain	9.3	6.3	10.8	4.5	3.7	6.2	9.6	7.7	8.3	6.6	3.0	3.1
Japan	3.5	4.2	9.2	0.7	0.9	3.9	8.1	5.8	4.2	1.7	2.6	5.1
United Kingdom	5.3	4.1	9.0	4.8	4.8	2.0	6.6	7.1	10.0	-3.2	0.2	0.4
Canada	6.2	4.0	8.1	-5.1	1.7	4.1	8.3	7.5	5.0	5.7	4.5	1.2
Other advanced economies	7.2	7.3	14.3	-3.9	6.5	7.4	13.8	7.8	8.8	8.2	5.7	5.4
Major advanced economies	6.0	4.4	10.9	-0.2	2.0	3.5	8.5	5.9	7.2	2.4	1.7	3.0
Newly industrialized Asian economies	9.3	8.5	17.6	-5.6	9.1	10.0	16.7	7.6	9.5	8.3	6.6	6.6

World Exports (Billions of U.S. Dollars)

	Ten-Year Averages											
	1990–1999	2000–2009	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Goods and services	5,752	12,898	7,879	7,607	7,986	9,298	11,280	12,817	14,700	17,019	19,535	20,855
Goods	4,584	10,388	6,348	6,074	6,353	7,425	9,016	10,290	11,887	13,729	15,836	16,923

Source: International Monetary Fund, World Economic Outlook, April 2008

3

The Trade Negotiating Agenda

With 95 percent of the world's consumers outside the United States, and 12 percent of U.S. GDP tied to exports, the stakes for U.S. companies in an open trading system and increased market access are high.

In recent years, regional and bilateral trade agreements have been the primary vehicle for reducing barriers to trade. These agreements continue to expand opportunities in selected markets, as regional economic integration strengthens around the world. Global (multilateral) negotiations, however, remain the backbone of trade liberalization, and World Trade Organization (WTO) members are continuing talks to reduce barriers more comprehensively through the Doha Round.

Global Negotiations in the WTO

Trade Negotiating Agenda: The Doha Round

Ministers of 142 countries launched the latest round of global trade talks in Doha, Qatar on November 14, 2001, with a target for completion by January 2006. That date has long since passed and participants in the round do not appear close to reaching a consensus. The talks focus on the core agenda of market access for agriculture, manufactured goods, and services. The major sticking points relate to agriculture and industrial goods. Developing nations, led by countries such as India, China and Brazil, want cuts in developed countries' domestic farm subsidies (U.S.) and agricultural import tariffs (EU), while industrial nations want better access to developing countries' markets for both manufactured goods and services.

Normally, these differences would be reconciled through cross-sectoral trade-offs. In July 2006, however, the disputes were so contentious and positions so far apart that the negotiations were suspended. In early 2008, trade ministers announced a renewed push to reach an agreement. In July, however, those talks reached a new impasse, dimming the prospects for further progress. A suspension of the Doha Round would shift the focus of trade negotiations further toward regional bilateral agreements—a development that would continue opening markets but would also accelerate the fragmentation of the global trading system.

Talks continue on the General Agreement on Trade in Services (GATS) to open new service sectors to trade, and to eliminate restrictions in existing services. Progress, however, has also been slow.

Information on the current status of the Doha Round negotiations can be accessed on the WTO website at http://www.wto.org, and on the U.S. Trade Representative's website at http://www.ustr.gov.

Trade and Climate Change: A Looming Issue?

While international labor and environmental standards have been debated for many years in trade circles and have directly impacted negotiations for all U.S. bilateral free trade agreements since NAFTA (North American Free Trade Agreement), there are signs that climate change could soon be added to the list of issues impacting trade relations and negotiations. Momentum in Congress toward enacting climate change legislation and climate change policies being considered by the European Union have surfaced the possibility that foreign producers of goods for the U.S. market could be penalized for production processes deemed to cause excessive $C0_2$ emissions, and that U.S. exports to other countries (particularly the EU) could be subject to similar provisions. Potential measures that could be applied include import tariffs or the requirement to purchase emission permits.

Such measures could potentially destabilize existing trade agreements, slow the development of future market opening initiatives, and open the door to trade retaliation. It is unclear whether or not measures of this kind would be authorized under WTO environmental rules. They would almost certainly, however, be challenged. The elimination of tariffs on trade in clean energy technologies has been proposed by free trade advocates as a less disruptive means for achieving climate change goals.

Free Trade Agreements

While work in the WTO Doha Round has stalled, Free Trade Agreements (FTAs)[*] are proliferating worldwide. For the U.S., these agreements often embody political as well as economic goals.

There are currently more than 300 FTAs in place worldwide, with another 60 or more proposed or under negotiation. Roughly half of these agreements have been concluded since 2002: 119 by Asia-Pacific countries, and 21 by the EU. China is engaged in or has proposed 28, India has proposed or is negotiating 19, and Mercosur (*Mercado Commun del Sur*), which includes Argentina, Brazil, Paraguay and Uruguay, is also involved in multiple negotiations. Colombia, which has an FTA pending before Congress, has recently concluded a Free Trade Agreement with Canada, and together with Peru, Bolivia and Ecuador, is negotiating another with the European Union.

[*] Free Trade Agreements are increasingly being referred to as Trade Promotion Agreements.

In Asia alone, two region-wide trade agreements are under consideration—proposed by China and Japan. One would encompass China, Japan, Korea and ASEAN, and the other would include these 13 countries plus Australia and New Zealand. Significantly, neither includes the United States.

Approximately 50 percent of world trade now takes place through FTAs, which benefit the companies operating under them by providing competitive advantages over companies from non-participating countries. For example, prior to the signing of the U.S.–Chile FTA, U.S. exporters faced an 11 percent across-the-board tariff when competing with exporters from Canada, whose products entered Chilean markets duty-free under a prior FTA.

Consideration of FTAs by the United States is therefore not occurring in a vacuum, as most partners in FTAs with the United States either have or are negotiating other deals with multiple partners. Of the roughly 300 FTAs operating worldwide, the U.S. is currently party to only 10, with 16 countries participating: Israel (1985), Mexico and Canada/ NAFTA (1994), Jordan (2000), Singapore (2003), Chile (2004), Australia (2005), Central America and the Dominican Republic (2005), Bahrain (2006), Morocco (2006), and Peru (2007).

Washington Policy Approaches to FTAs

Common goals shared by U.S. FTAs are: eliminating tariffs, reducing subsidies and other barriers to agricultural trade, improving intellectual property protection, strengthening protection for foreign investors, and gaining market access in the services sector. These agreements also follow a blueprint, with the strongest agreement to date serving as a model for the next.

The Bush administration has pursued a policy of "competition in liberalization" that includes trade agreements at the global, regional, and bilateral levels. The theory behind this approach is that trade liberalization through bilateral agreements will contribute to the progressive reduction of trade barriers worldwide, and will increase pressure for progress in multilateral talks. Congressional approval of Trade Promotion Authority (TPA) in August 2002 enabled this approach, leading to a range of new agreements.

With the expiration of TPA on July 1, 2007, however, and the failure of Congress to renew it, the scope for negotiating new agreements has narrowed sharply. Agreements with Panama, Colombia and Korea that were concluded prior to expiration and now await Congressional approval are grandfathered under the prior TPA rules and will be voted on by Congress in up-or-down votes (i.e., without amendment). New agreements not covered by TPA rules will be subject to being reopened on a line-by-line basis in the congressional approval process.

Congressional opposition to FTAs has focused on the adequacy of standards and enforcement regarding the labor and environmental policies of negotiating partners. While labor and environmental issues have historically divided Republicans and Democrats when it comes to FTAs, a compromise was reached in early 2007 that allowed a proposed Peru agreement to go forward, and an agreement between House leaders and the White House in May 2007 led

three other countries with pending U.S. FTAs (Panama, Colombia and Korea) to implement measures designed to address congressional concerns.

Democratic support for FTAs has also been linked to the Trade Adjustment Assistance Act (TAAA), which provides for transitional training and support for workers displaced by trade agreements. Recent proposals have called for an expansion of Trade Adjustment Assistance benefits to include service workers, a move that would benefit a wider range of workers but would potentially double the program's cost. The White House has opposed the measure on the grounds that it converts Trade Adjustment Assistance from a trade-related program to a universal income support and training program. TAAA expansion is likely to remain a factor in future political negotiations.

U.S. FTA Regional Initiatives

The pursuit of FTAs by the United States has been framed by regional strategies. The Bush administration has identified three key regions: the Americas, countries that are members of the Association of Southeast Asian Nations (ASEAN), and the Middle East and Africa. Liberalization initiatives in the Americas are linked to the Free Trade Area of the Americas (FTAA) initiative, an effort to remove barriers to trade among the 34 countries of North, Central, and South America. The ASEAN regional initiative seeks to advance trade liberalization with the fastest growing economies in Asia. The Middle East and Africa emphasis is largely an outgrowth of the war on terror and a desire to increase stability in the Middle East, though it also carries forward a longstanding policy goal to aid the development of the African continent.

While the Bush administration has adopted regional approaches to trade, its tactic has generally been to negotiate country-by-country with strategically chosen partners within these key regions. Where opportunity presents itself, such as with the ASEAN countries and some Central American countries, the negotiations have on occasion included more than just one country.

Latin America

Free Trade Agreement of the Americas

The Free Trade Area of the Americas (FTAA) would embrace 34 Western Hemisphere nations with a total population of 800 million, creating the world's largest free-trade zone with a combined economy of $18 trillion. Negotiations have been underway for nearly 13 years on issues including market access in agriculture, industrial goods, services, investment, and government procurement. Other areas under negotiation include intellectual property, subsidies, dumping, countervailing duties, competition policy, dispute settlement, electronic-commerce, and interactions with civil society. As with the WTO's Doha Round, talks have stalled. The last summit for negotiations was held at Mar del Plata, Argentina, in November 2005. No agreement was reached at that time and no comprehensive agenda for future

negotiations was developed. The FTAA has been dormant since then, and there is little expectation for further progress.

The talks faltered over points similar to the differences stalling the Doha Round: developed nations seek expanded trade in manufactured goods and services and increased intellectual property protection, while less developed nations seek an end to agricultural subsidies and freer trade in agricultural goods. Other issues also come into play in the U.S., particularly congressional concerns over labor and environmental standards and their enforcement.

While broader regional talks are in stalemate, Latin American countries are not waiting idly to negotiate exclusively with the United States: parallel agreements and free trade talks are multiplying with potential partners in North America (Canada), Europe and Asia. Among others, Mercosur (Argentina, Brazil, Paraguay and Uruguay) is negotiating with the EU; Mexico has a free trade agreement with Japan; Chile also has agreements with the EU, China and Japan, among many others; and Panama has an agreement with Singapore. These agreements give businesses in those countries a potential leg up on U.S. competitors.

Because of the difficulty of reaching agreement with all Latin American countries as a group, the United States has endeavored to negotiate agreements with individual countries or groups of countries in the region, avoiding the larger countries (such as Brazil and Argentina) with sharper differences and stronger bargaining power. So far, agreements have been concluded with nine countries in the region in addition to Mexico and Canada.

U.S.–Chile Free Trade Agreement

The U.S.–Chile Free Trade Agreement went into effect on January 1, 2004. Chile's economy is the most open and stable in South America, and receives high marks for competitiveness, transparency and a low level of corruption. Under the agreement, tariffs on 90 percent of U.S. exports to Chile and 95 percent of Chilean exports to the United States have been eliminated.

Between 2003 and 2007, U.S. exports to Chile increased by more than 300 percent, from $2.7 billion to $8.3 billion. This compares favorably to overall U.S. exports, which grew just 43 percent during the same period. In addition to strengthening bilateral trade, the agreement has helped U.S. companies compete with companies from other countries, such as Canada and Japan, which also have FTAs with Chile.

U.S.–Central America and Dominican Republic Free Trade Agreement

The U.S.–Central America and Dominican Republic Free Trade Agreement (CAFTA-DR) was signed in May 2004 and approved by Congress in July 2005. Ratification by the other CAFTA-DR members was recently completed with the passage of a nationwide referendum in Costa Rica. Participants include the United States, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and the Dominican Republic. Like other U.S. FTAs, the CAFTA-DR agreement covers trade in manufactured goods, services and agriculture, as well as investment and intellectual property protection, and will give duty-free access to the region for

approximately half of all U.S. farm exports and 80 percent of consumer exports. The remaining tariffs will phase out over ten years for manufactured and consumer products, and 15–18 years for agricultural products. The agreement also immediately eliminates many non-tariff service and investment barriers, and increases standards for intellectual property protection.

Although CAFTA-DR nations are small, U.S. trade with the region is significant, totaling $38.2 billion. Particular opportunities should open up for U.S. companies in areas such as telecommunications services, fabrics and farm products. The CAFTA-DR agreement faced a rocky road in Congress, with opposition from textile and heavily subsidized sugar interests and the AFL-CIO. While organized labor argued that the agreement's requirement that CAFTA-DR members enforce their own labor laws fails to provide adequate labor protection, the International Labor Organization (ILO) found that CAFTA-DR countries' laws are generally in line with the ILO's core labor standards. Negotiations therefore focused largely on enforcement.

The United States maintains a trade surplus with CAFTA-DR countries of over $1 billion. In 2006, U.S. exports to all six countries grew at a rate of 16 percent, outpacing the U.S. 14.4 percent growth rate for exports to the rest of the world. Agriculture accounts for just over 10 percent of all U.S. exports to CAFTA-DR countries, and just over 16 percent of all CAFTA-DR country exports to the United States.

U.S.–Andean Free Trade Agreement

In May 2004, the U.S. launched negotiations with Colombia, Ecuador, and Peru to establish a U.S.–Andean Free Trade Agreement (AFTA), with conclusion originally targeted for January 2005. Bolivia participated as an observer; Venezuela, however, did not participate. Because of difficulties relating to agriculture and intellectual property, negotiations have continued well past the deadline. Talks with Ecuador have been frozen as a result of recent changes to hydrocarbon legislation there and a dispute between the Ecuadorian government and the U.S. oil company Occidental.

U.S.–Peru Free Trade Agreement

Congress gave its approval to the U.S.–Peru FTA in December 2007. While this was a victory for the President's free trade agenda, congressional Democrats were divided. Some considered Peruvian concessions on labor and environmental protection an achievement, while others felt they didn't go far enough—a split that may affect the approval process for future agreements. The Peru agreement will enable increased market access for U.S. goods such as machinery, electronics, plastics and agriculture. In 2006, two-way trade between the U.S. and Peru totaled $8 billion, of which $2.9 billion was U.S. exports. The agreement is projected to increase U.S. exports by $1.1 billion. Nearly all products from Peru already enter the U.S. duty-free, and the FTA provides U.S. exporters reciprocal access.

U.S.–Colombia Free Trade Agreement

Congressional approval is pending on a U.S.–Colombia FTA. Two-way trade approached $16 billion in 2006 (up more than 70 percent since 2002) and reached $18 billion in 2007. The U.S. is Colombia's largest trading partner, and like Peru, 90 percent of Colombia's exports already enter the U.S. duty-free. Approval would increase reciprocity by expanding access to local markets for U.S. exporters. California cut flowers producers could see increased competition, but agricultural exports as a whole would benefit from the substantial reduction in Colombian tariffs that U.S. exporters currently face.

Approval is also seen as a way to support Colombia's government in its struggle with drug traffickers and terrorists, and to offset the regional influence of Venezuela's president Hugo Chavez. Opponents in Congress have stalled the approval, alleging that Colombia's government hasn't done enough to curb violence against union organizers. Congressional confrontation sharpened in March 2008 when the House Democratic leadership changed a longstanding rule requiring a vote within 90 days of submission of the agreement by the White House, deferring consideration of the agreement indefinitely. Since the major terms of the Colombia agreement are similar to those already approved by Congress in the U.S.–Peru Free Trade Agreement, the reasons for the election year delay appear largely political.

U.S.–Panama Free Trade Agreement

In November 2003, President Bush notified Congress of his intention to negotiate a bilateral free trade agreement with Panama. Negotiations were completed in June of 2007, and this agreement is also now awaiting action by Congress. Two-way trade between the United States and Panama amounted to $3.1 billion in 2006, with a positive U.S. balance of $2.3 billion. Under the agreement, 88 percent of U.S. exports of consumer and industrial goods will immediately become duty-free, with the remaining barriers to be reduced progressively over ten years. The agreement also seeks to reinforce political ties between the United States and Panama—an important consideration given growing U.S. reliance of the Panama Canal for trade between Asia and U.S. East and Gulf Coast ports.

Asia

Enterprise for Association of Southeast Asia Nations (ASEAN) Initiative

In October 2002, the U.S. launched the Enterprise for ASEAN Initiative (EAI) aimed at enhancing U.S. relations with ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam). Under the EAI, the United States offered bilateral free trade agreements to ASEAN countries that are committed to the economic reforms and openness inherent in an FTA with the United States. Any potential FTA partner must be a WTO member and have a TIFA (Trade and Investment Framework Agreement) with the United States. With two-way trade of nearly $120 billion,

the 10-member ASEAN group already is the United States' fifth largest trading partner. On the investment front, ASEAN's internal economic integration holds a key to increasing long-term U.S. investment, which has suffered in comparison with U.S. investment in China.

U.S.–ASEAN Free Trade Efforts

Country	FTA	TIFA	WTO	GSP
Brunei		✓	✓	Not eligible
Burma			✓	Not eligible
Cambodia			✓	✓
Indonesia		✓	✓	✓
Laos			Negotiating accession	Not eligible
Malaysia	Launched	✓	✓	Not eligible
Philippines		✓	✓	✓
Singapore	✓	✓	✓	Not eligible
Thailand	Negotiating	✓	✓	✓
Vietnam			Negotiating accession	Not eligible
ASEAN-10		Negotiating		

(FTA = Free Trade Agreement, TIFA = Trade and Investment Framework Agreement, WTO = World Trade Organization, GSP = Generalized System of Preferences)

Source: U.S. Trade Representative

U.S.–Singapore Free Trade Agreement

The U.S.–Singapore agreement, reached in 2003, was the first FTA between the United States and an Asian nation and the first Free Trade Agreement to take effect during the Bush Administration. The agreement is relatively limited in its effect, in that Singapore does not impose tariffs on imported goods. However, the elimination of non-tariff barriers has likely led to the expansion of U.S. exports to Singapore. At the time the agreement went into effect, Singapore was the eleventh largest export destination for U.S goods. In 2006, it was ranked number 9, ahead of France and Taiwan. U.S. exports to Singapore increased by 52 percent between 2002 and 2006, while overall U.S. exports have increased by just under 50 percent.

U.S.–Thailand Free Trade Agreement

The U.S. announced the opening of Free Trade talks with Thailand in February 2004. This was the United States' second bilateral FTA negotiation in Southeast Asia, after its 2003 agreement with Singapore. U.S. concerns with Thailand's trade and investment regime include high tariffs and non-tariff barriers on both industrial and agricultural goods, restrictions on access to the services market, and deficiencies in Thailand's intellectual property and customs regimes. Since the start of negotiations, the two countries have concluded six rounds

of talks, with little progress towards completion. Thailand is currently the twenty-fourth largest market for U.S. exports, and ranks eighteenth among California's export markets.

U.S.–Malaysia Free Trade Agreement

In March of 2006, the United States announced its intention to negotiate a Free Trade Agreement with Malaysia. In addition to strengthening economic ties with the United States' tenth largest trade partner (the U.S. is Malaysia's sixth largest), the agreement is also seen as a way to strengthen political ties with a key Muslim nation. If it is approved, U.S. officials estimate that trade would expand significantly from its 2007 level of nearly $50 billion. As most Malaysian products already enter the U.S. market duty-free, the agreement would expand U.S. exports by leveling the playing field. Sticking points in the negotiations have included Malaysian procurement policies, access to Malaysia's financial services market, high levels of agricultural protection, intellectual property rights, and labor and environmental concerns. With so many issues to be resolved, negotiations stalled in 2007 but were resumed in early 2008 with the goal of completion before 2009.

Other Agreements in the Asia-Pacific Region

U.S.–Australia Free Trade Agreement

The U.S.–Australia Free Trade Agreement entered into effect in January 2005. This was the first FTA between the United States and a developed country since the U.S.–Canada Free Trade Agreement in 1988. The agreement eliminates 99 percent of tariffs on U.S. manufactured goods exports. (Manufactured goods account for 93 percent of all U.S. exports to Australia.) Some import restrictions remain for sensitive farm products such as sugar.

Negotiations were less contentious than for other bilateral FTAs. A coalition of trade unions and other groups opposed the agreement, as did American pharmaceutical companies (due to Australia's Pharmaceutical Benefits Scheme.) Intellectual property rights, especially related to computer and television piracy, were also an issue. A recent study found that 31 percent of software in Australia is pirated. Australia acted to address this issue by passing legislation in August 2004. The agreement also addressed specific concerns of U.S. agricultural producers.

Whether the agreement produces a significant expansion of trade remains to be seen. In 2004, Australia ranked number 14 among U.S. export markets and number 30 as a source of imports into the United States. As of the end of 2006, it had retained its export market rank, even though U.S. exports to Australia grew more slowly than did overall exports, but its rank as a source of imports fell back to 37. Imports also failed to keep pace with overall U.S. imports, growing by 9 percent over the two year period, much less than the 26 percent growth in overall U.S. imports. Two years is probably too short a time frame for the agreement to show major results, but it is surprising that trade has grown so modestly to date.

The agreement presents particular opportunities for Bay Area companies, as Australia is a major market for computers and electronic equipment; chemicals; wood and paper products; and oil and gas equipment.

U.S.–Korea Free Trade Agreement

The U.S.–Korea Free Trade Agreement, concluded in April 2007 after ten months of negotiation, will eliminate tariffs on nearly 95 percent of product categories traded between the two countries within three years of its start date. Seoul has agreed to phase out its 40 percent tariff on U.S. beef over 15 years and remove its 8 percent duty on cars. Financial services would also benefit, as U.S. banking, securities firms, insurers and asset managers would be able to acquire or establish financial institutions in Korea, open branches, and provide cross-border services.

In 2007, the United States exported $34.7 billion in goods to Korea, making it the seventh largest destination for U.S. goods. In the same year, Korea was also the seventh largest source of U.S. imports, at $47.5 billion. The agreement is particularly significant, as it is one of the few free trade agreements the U.S. has negotiated with a major global economy.

Korean farmers and auto workers, fearful of U.S. imports, have opposed the agreement. In the U.S., opposition—led by Ford and Chrysler, but not GM (which has equity in Daewoo)—has focused on alleged Korean non-tariff barriers and the effectiveness of U.S. access to Korea's automobile market. The agreement has not been submitted to Congress—for political reasons similar to those faced by the Colombia agreement. Though Trade Promotion Authority has expired, because the FTA was concluded in April 2007, it will be voted on under TPA rules.

Pacific 4 – Singapore, Chile, New Zealand, Brunei

In February 2008, President Bush announced that the United States would join negotiations already underway between Singapore, Chile, New Zealand and Brunei for an agreement on investment and financial services. While the U.S. already has FTAs with Singapore and Chile, it is seeking additional opportunities for structured economic engagement in Asia. This stems in part from concerns that countries in the Asia-Pacific region could one day move toward a regional trading arrangement that excludes the United States.

Middle East and Africa

Trade liberalization with countries in the Middle East started in 1985 with the implementation of the U.S.–Israel Free Trade Agreement, the first bilateral FTA with any country. This was followed in 2000 by the U.S.–Jordan Free Trade Agreement, which eliminates tariff and non-tariff barriers to trade in nearly all industrial goods and agricultural products by 2010. As part of its strategy to promote growth and stability in the Middle East, the Bush Administration subsequently proposed the establishment of a Middle East Free Trade Area (MEFTA) in

May 2003, with completion targeted for 2013. In addition to the bilateral FTAs described below, the United States and the United Arab Emirates (UAE) have been negotiating an FTA since March 2005. The U.S. has also expressed interest in negotiating a Free Trade Agreement with Oman.

U.S.–Morocco Free Trade Agreement

The U.S.–Morocco FTA was approved by Congress in July 2004. In addition to boosting trade and investment, the agreement was designed to bolster Morocco's position as a moderate Arab state. In 2006, the United States exported $875 million worth of products to Morocco, with a modest two-way trade flow approaching $1.4 billion; in that same year, the United States enjoyed a $354 million surplus. This surplus is nearly four times the surplus of $94 million in 2003, the year before the agreement went into force. Sensitive issues in the negotiations included the opening of Morocco's market to U.S. wheat, rules of origin in the U.S. for Morocco's textile exports, and drug prices.

More than 95 percent of bilateral trade in consumer and industrial products is now tariff-free, with all tariffs scheduled to be eliminated within nine years. The agreement covers all agricultural products (benefiting California), and offers particularly good opportunities for the sale of U.S. consumer products. Because Morocco enjoys duty-free exports to the EU, it also offers a platform for access to both European and African markets.

U.S.–Bahrain Free Trade Agreement

A U.S. FTA with Bahrain, a strategic ally in the Persian Gulf, was signed in September 2004 and went into effect in August 2006.

U.S.–Southern Africa Free Trade Agreement

The United States and the five members (Botswana, Lesotho, Namibia, Swaziland, and South Africa) of the Southern African Customs Union (SACU) launched negotiations in January 2003 aimed at concluding a Free Trade Agreement by the end of 2004. The SACU region is the United States' largest market in sub-Saharan Africa, and this would be the first U.S. Free Trade Agreement in the region. The talks have focused on technical barriers to trade, including issues on agriculture, rules of origin, textiles and apparel, and customs. Negotiations over issues of particular importance to the U.S., such as market access, investment, government procurement and intellectual property rights, have been difficult, however. As an interim step, the U.S. and the Southern African Customs Union signed a more modest Trade, Investment and Development Cooperation Agreement (TIDCA) in July 2008.

A Trade and Investment Framework Agreement (TIFA) was also signed in July 2008 between the U.S. and the East African Community (Burundi, Kenya, Rwanda, Tanzania and Uganda).

Even as FTA talks continue, the African Growth and Opportunity Act (AGOA), signed by President Clinton in 2000 and extended by President Bush in 2004, provides duty-free access to U.S. markets for over 6,000 African products. Thirty-eight African nations are currently eligible for benefits.

What Proposed FTAs Mean for Bay Area Trade

The table on the next page illustrates the pattern of Bay Area exports, across goods and for each of the three regions that are the primary focus of Washington's regional initiatives: the Americas, ASEAN, and the Middle East & Africa. The columns labeled "All" include these three regional categories plus Australia and Korea (countries in the Asia-Pacific Region but outside of ASEAN). These columns do not include Canada and Mexico, which—while part of the current FTAA (Free Trade Agreement of the Americas) initiative—have their own longstanding agreements with the United States.

In all, some 18.2 percent, or $6 billion of the Bay Area's exports are bound for countries in these regions with which either a Free Trade Agreement exists or is in process. Of the three regions broken out separately in the table, ASEAN clearly holds the most promise for Bay Area exporters, as it accounts for 7 percent of total Bay Area exports, while neither of the other two accounts for more than 2 percent.

Of the North American Industry Classification System (NAICS) commodity groups, Computer and Electronic Product Manufacturing is far and away the region's largest export category, accounting for 60 percent of all Bay Area exports. With few exceptions, these products are the largest export commodity to each of the countries and regions discussed above. Where Computer and Electronic Product Manufacturing is not the largest export category, either Miscellaneous Manufacturing (Israel), Chemical Manufacturing (Bahrain), or Petroleum and Coal Products (Guatemala, Chile, and Panama) are the largest. Since information technology products are already covered by the Information Technology Agreement of 1996, which eliminates barriers to exports of technology products, the net increase in exports that the Bay Area can expect is relatively modest ($300–400 million).

Bay Area Exports to Priority Regions for Trade Liberalization

(Countries included are limited to those discussed in the preceding text as having an agreement in place or in process.)

		Bay Area Exports in 2006 ($ Millions)					% Share of Ttl. NAICS Exports				%
NAICS	Description	FTAA	ASEAN	Middle East & Africa	All	Total Trade	FTAA	ASEAN	Middle East & Africa	All	Share of Ttl. Trade
	Total	594.7	2,391.6	669.4	6,252.1	34,373.2	1.7	7.0	1.9	18.2	100.0
334	Computer and Electronic Product Mfg.	263.4	1,733.8	287.1	3,711.7	20,653.2	1.3	8.4	1.4	18.0	60.1
333	Machinery Mfg.	42.3	312.5	52.3	851.2	3,683.1	1.1	8.5	1.4	23.1	10.7
325	Chemical Mfg.	23.4	69.9	26.7	267.4	2,388.3	1.0	2.9	1.1	11.2	6.9
339	Miscellaneous Mfg.	18.9	25.6	195.5	320.8	1,489.7	1.3	1.7	13.1	21.5	4.3
336	Transportation Equipment Mfg.	3.9	38.3	43.6	164.9	997.1	0.4	3.8	4.4	16.5	2.9
324	Petroleum and Coal Products Mfg.	193.7	85.2	10.4	395.2	859.3	22.5	9.9	1.2	46.0	2.5
335	Electrical Equipment, Appliance, and Component Mfg.	6.7	47.0	13.9	162.1	840.9	0.8	5.6	1.6	19.3	2.4
311	Food Mfg.	10.4	21.8	7.8	96.7	727.9	1.4	3.0	1.1	13.3	2.1
332	Fabricated Metal Product Mfg.	6.7	15.6	5.8	80.8	573.7	1.2	2.7	1.0	14.1	1.7
111	Crop Production	6.5	8.7	13.1	57.1	506.9	1.3	1.7	2.6	11.3	1.5
312	Beverage and Tobacco Product Mfg.	2.5	4.0	0.8	22.2	444.8	0.6	0.9	0.2	5.0	1.3
331	Primary Metal Mfg.	2.8	10.8	2.8	29.7	344.1	0.8	3.2	0.8	8.6	1.0
326	Plastics and Rubber Products Mfg.	2.2	4.2	1.2	14.4	158.1	1.4	2.7	0.7	9.1	0.5
322	Paper Mfg.	2.1	1.7	0.5	8.0	155.6	1.4	1.1	0.3	5.1	0.5
327	Nonmetallic Mineral Product Mfg.	1.6	4.4	1.7	16.3	116.8	1.3	3.8	1.5	13.9	0.3
511	Publishing Industries	1.3	2.3	1.9	14.1	105.0	1.2	2.1	1.8	13.4	0.3
323	Printing and Related Support Activities	0.4	2.4	1.6	16.4	86.0	0.5	2.8	1.8	19.1	0.3
315	Apparel Mfg.	1.6	0.7	1.4	6.7	77.6	2.0	0.9	1.7	8.7	0.2
337	Furniture and Related Product Mfg.	0.9	0.8	0.4	3.8	42.5	2.1	1.9	1.0	9.0	0.1
321	Wood Product Mfg.	0.5	0.1	0.1	1.6	38.6	1.3	0.2	0.2	4.1	0.1
316	Leather and Allied Product Mfg.	1.0	0.7	0.5	5.1	32.4	3.2	2.1	1.4	15.6	0.1
313	Textile Mills	1.4	0.1	0.0	1.7	17.0	8.1	0.4	0.3	9.9	0.0
314	Textile Product Mills	0.5	0.9	0.2	2.9	16.9	2.7	5.6	1.4	16.8	0.0
114	Fishing, Hunting and Trapping	0.1	0.1	0.0	0.6	6.3	1.1	0.8	0.3	9.1	0.0
112	Animal Production	0.0	0.0	0.1	0.3	5.5	0.2	0.0	1.5	6.0	0.0
212	Mining (except Oil and Gas)	0.0	0.1	0.1	0.4	5.4	0.4	1.6	1.1	6.9	0.0
113	Forestry and Logging	0.0	0.0	0.0	0.0	0.2	1.5	1.8	0.5	7.3	0.0

Source: WISERTrade, with final calculations by Beacon Economics

4

International Trade in the San Francisco Bay Area

As a long-term trend, major Bay Area companies across a range of industries are deriving an ever-larger share of their revenues from global sales.

Data from the U.S. Bureau of Economic Analysis and the Census Bureau suggests that exports of manufactured goods support more than 730,000 jobs in California, including 1 in 3 jobs in the computer and electronics sector, 1 in 4 jobs in transportation equipment manufacturing, and 2 in 9 jobs related to fabricated metal products. In all, this accounts for 1 of every 18 private sector jobs. Nearly 59,000 California businesses sell their products overseas.

Bay Area Export Profile

Bay Area exports of goods totaled nearly $48 billion in 2006, accounting for over one-third of California's exports. The Bay Area ranks as the fourth largest exporting region in the U.S. For more detail on the five metro areas that make up the Bay Area, see Appendix III.

Exports of Goods from U.S. Metropolitan Areas
Top 3 Metro Areas and Bay Area Region by Export Value, 2006

Metro Area	Export Value 2006
New York–Northern New Jersey–Long Island, NY–NJ–PA	$66,228,887,963
Houston–Sugar Land–Baytown, TX	$53,280,990,686
Los Angeles–Long Beach–Santa Ana, CA	$48,718,100,044
Bay Area	**$47,953,704,012**
San Francisco–Oakland–Fremont, CA	$18,358,236,440
San Jose–Sunnyvale–Santa Clara, CA	$28,171,262,113
Napa, CA	$181,134,467
Santa Rosa–Petaluma, CA	$986,687,568
Vallejo–Fairfield, CA	$256,383,424

Source: Intl. Trade Administration, U.S. Department of Commerce, Metro Exports
Note: Metro areas are those defined in December 2006 by the Bureau of the Census. These data are based on an Origin of Movement (OM) ZIP-code-based series and are therefore not comparable with data based on an OM state-based series.

Bay Area Region Metro Exports Value, 2006
Percent Share of California Exports

Metro Area	% Share of Export Value
San Francisco–Oakland–Fremont, CA	13.9
San Jose–Sunnyvale–Santa Clara, CA	21.3
Napa, CA	.1
Santa Rosa–Petaluma, CA	.7
Vallejo–Fairfield, CA	.2

Source: Intl. Trade Administration, U.S. Department of Commerce, Metro Exports

Nearly 20 percent of manufacturers in the region export, while many others sell components to other companies that incorporate them into exports. The region's exports are led by technology, including computers and electronic equipment, telecommunications equipment, environmental technology, medical technology and bio-pharmaceuticals.

Global demand for the Bay Area's technology products and services has been a driving factor behind the region's economic expansion for the last two decades and accounts for a large share of revenue for Bay Area technology companies. It should also be noted, however, that since 2001, California's once preeminent status as a technology exporter has slipped. The state's $52 billion in technology exports in 2006 (primarily from the Bay Area) was 23 percent below its 2000 peak, and while California remains the nation's top technology exporter, according to AeA, it has lost significant ground to second-ranked Texas ($38.6 billion) and third-ranked Florida ($9.5 billion).

Notwithstanding the prominence of technology in the region's export profile, the Bay Area sells a diverse range of products and services internationally, including apparel, consumer products, business and finance services, education services, engineering, urban planning and architectural design, processed food and wine.

Global Sales by Bay Area Companies

In our last report on international trade in the Bay Area (2005), we analyzed the share of revenues that leading Bay Area companies received from global sales, compared to revenues from domestic sales. Fifty of the region's best known companies were reviewed, from both technology and non-technology industries. The results showed a strong orientation toward global markets, which in many cases outweighed domestic markets in importance. This was not limited to information technology (hardware and software)—although it was most pronounced there—but included biotechnology and other leading sectors such as medical devices and apparel.

For this report (2008), the Bay Area Council Economic Institute revisited those companies to see how the patterns identified in 2005 (and previously in 2003) had changed. A comparison found that of the 50 companies tracked, 43 saw their domestic sales increase, while 7 saw their domestic sales fall. In the same period, 44 saw their international sales increase, while 4

saw their international sales fall and 2 sustained the same sales level as before. This indicates a continuing shift of sales toward global markets, although many companies also saw strong growth in their domestic business.

More significantly, of the companies tracked, 16 saw their *share* of revenues from domestic markets increase relative to global markets, 29 saw the share of their revenues from international markets increase relative to domestic markets, and 5 saw the ratio of international to domestic sales remain the same. In some cases the shift was substantial: Google's revenue share from global sales increased from 34 percent to 43 percent, 3Com's from 62 percent to 69 percent, Varian Medical Systems' from 40 percent to 47 percent, Yahoo's from 26 percent to 32 percent, Cypress Semiconductor's from 35 percent to 41 percent, and eBay's from 42 percent to 48 percent.

If anything, these numbers understate the trend, since in their reporting, many companies combine U.S. sales with sales to Canada and Mexico ("North America"), which in the following table are counted together as domestic sales. They clearly indicate that Bay Area companies are, across a broad front, increasing their international orientation, and that global markets are assuming a progressively greater importance in their revenue flows and business strategies.

2004 and 2006 Net Sales of Leading Bay Area Companies (Millions of Dollars)

Companies	Net Sales 2004		Net Sales 2006		Growth 2004–2006	Growth 2004–2006
	U.S.	Intl.	U.S.	Intl.	U.S.	Intl.
Adobe Systems Incorporated	$771	$896	$1,267	$1,308	+64%	+46%
	(46%)	(54%)	(49%)	(51%)		-3
Advanced Micro Devices, Inc.	$1,038	$3,963	$1,399	$4,250	+35%	+7%
	(21%)	(79%)	(25%)	(75%)		-4
Agilent Technologies	$1,586	$2,970	$1,698	$3,275	+7%	+10%
	(35%)	(65%)	(34%)	(66%)		+1
Apple Computer, Inc.	$4,893	$3,386	$11,486	$7,829	+135%	+131%
	(59%)	(41%)	(59%)	(41%)		0
Applied Biosystems Group	$809	$932	$855	$1,056	+6%	+13%
	(46%)	(54%)	(45%)	(55%)		+1
Applied Materials, Inc.	$1,337	$6,676	$1,708	$7,459	+28%	+12%
	(17%)	(83%)	(19%)	(81%)		-2
Ariba, Inc.	$160	$85	$178	$118	+11%	+39%
	(65%)	(35%)	(60%)	(40%)		+5
Autodesk, Inc.	$349	$603	$515	$1009	+48%	+67%
	(37%)	(63%)	(34%)	(66%)		
BEA Systems, Inc.	(Americas) $548	$464	(Americas) $623	$577	+14%	+24%
	(54%)	(46%)	(52%)	(48%)		+2

Companies	Net Sales 2004		Net Sales 2006		Growth 2004–2006	Growth 2004–2006
	U.S.	Intl.	U.S.	Intl.	U.S.	Intl.
Bio-Rad Laboratories, Inc.	$370	$720	$444	$830	+20%	+15%
	(34%)	(66%)	(35%)	(65%)		-1
Cadence Design Systems Inc.	$599	$599	$765	$719	+28%	+20%
	(50%)	(50%)	(52%)	(48%)		-2
Check Point Software Technologies Inc.	$226	$289	$265	$310	+17%	+7%
	(44%)	(56%)	(46%)	(54%)		-2
ChevronTexaco	$24,451	$29,481	$38,474	$41,829	+57%	+42%
	(45%)	(55%)	(48%)	(52%)		-3
Cirrus Logic, Inc	$69	$127	$71	$123	+3%	-3%
	(35%)	(65%)	(37%)	(63%)		-2
Cisco Systems, Inc.	(Americas) $12,233	$9,812	(Americas) $15,785	$12,699	+29%	+29%
	(56%)	(44%)	(55%)	(45%)		+1
The Clorox Company	$3,547	$615	$3,878	$766	+9%	+25%
	(85%)	(15%)	(84%)	(16%)		+1
Cypress Semiconductor Corporation	$325	$623	$310	$782	-5%	+26%
	(34%)	(66%)	(28%)	(72%)		+6
eBay Inc.	$1,890	$1,381	$3,109	$2,860	+64%	+107%
	(58%)	(42%)	(52%)	(48%)		+6
Electronic Arts	(North America) $1,610	$1,347	(North America) $1,584	$1,367	-2%	+1%
	(54%)	(46%)	(54%)	(46%)		0
Fair, Isaac & Company, Inc.	(North America) $554	$152	(North America) $595	$230	+7%	+51%
	(78%)	(22%)	(72%)	(28%)		+6
Gap Inc.	$13,321	$2,946	$12,807	$3,136	-4%	+6%
	(82%)	(18%)	(80%)	(20%)		+2
Genencor International	(North America) $658	$667	(North America) $1,467	$1,558	+123%	+134%
	(50%)	(50%)	(48%)	(52%)		+2
Gilead Sciences, Inc.	$0.658	$0.667	$1.47	$1.56	+123%	+134%
	(50%)	(50%)	(48%)	(52%)		-18
Google, Inc.	$2,119	$1,070	$6,030	$4,575	+185%	+328%
	(66%)	(34%)	(57%)	(43%)		+9
Hewlett-Packard Company and Subsidiaries	$29,362	$50,543	$32,244	$59,414	+10%	+18%
	(37%)	(63%)	(35%)	(65%)		+2

Companies	Net Sales 2004		Net Sales 2006		Growth 2004–2006	Growth 2004–2006
	U.S.	Intl.	U.S.	Intl.	U.S.	Intl.
Intel Corporation	$7,965	$26,244	$7,512	$27,870	-6%	+6%
	(23%)	(77%)	(21%)	(79%)		+2
JDS Uniphase Corporation	(North America) $407	$229	(North America) $736	$468	+81%	+104%
	(64%)	(36%)	(61%)	(39%)		+3
KLA-Tencor Corporation	$343	$1,154	$416	$1,654	+21%	+43%
	(23%)	(77%)	(20%)	(80%)		+3
Komag Incorporated	$54	$404	$20	$917	-170%	+127%
	(12%)	(88%)	(2%)	(98%)		+10
Levi Strauss & Co. and Subsidiaries	$2,278	$1,873	$2,327	$1,866	+2%	0%
	(55%)	(45%)	(55%)	(45%)		0
LSI Logic Corporation	$853	$847	$957	$1,025	+12%	+21%
	(50%)	(50%)	(48%)	(52%)		+2
National Semiconductor	$421	$1,562	$429	$1,729	+2%	+11%
	(21%)	(79%)	(20%)	(80%)		+1
Network Appliance, Inc.	$619	$551	$1,123	$944	+81%	+71%
	(53%)	(47%)	(54%)	(46%)		-1
Novellus Systems, Inc.	(North America) $312	$1,045	(North America) $464	$1,194	+48%	+14%
	(23%)	(77%)	(28%)	(72%)		-5
Oracle Corporation and PeopleSoft Inc.	$4,983	$5,173	$7,652	$6,728	+54%	+30%
	(49%)	(51%)	(53%)	(47%)		-4
Palm, Inc.	$573	$376	$1,203	$374	+110%	0%
	(60%)	(40%)	(76%)	(24%)		-16
Plantronics, Inc.	$277	$140	$484	$267	+75%	+91%
	(66%)	(34%)	(65%)	(35%)		+1
Quantum Corporation	$488	$320	$559	$275	+15%	-16%
	(60%)	(40%)	(67%)	(33%)		-7
Safeway	$31,463	$4,360	$34,721	$5,463	+10%	+25%
	(88%)	(12%)	(86%)	(14%)		+2
Seagate Technology LLC	$1,866	$4,358	$2,858	$6,348	+53%	+46%
	(30%)	(70%)	(31%)	(69%)		-1
Silicon Graphics, Inc. (SGI)	(Americas) $548	$294	(Americas) $306	$213	-79%	-38%
	(65%)	(35%)	(59%)	(41%)		+6
Solectron Corporation	$3,219	$8,419	$3,272	$7,289	+2%	-16%
	(28%)	(72%)	(31%)	(69%)		-3

Companies	Net Sales 2004		Net Sales 2006		Growth 2004–2006	Growth 2004–2006
	U.S.	Intl.	U.S.	Intl.	U.S.	Intl.
Sun Microsystems, Inc.	$4,768	$6,417	$5,380	$7,688	+13%	+20%
	(43%)	(57%)	(41%)	(59%)		+2
Sybase Inc.	(North America) $454	$335	(North America) $474	$402	+4%	+20%
	(58%)	(42%)	(54%)	(46%)		+4
3Com Corporation	(Americas) $263	$436	(Americas) $249	$546	-6%	+25%
	(38%)	(62%)	(31%)	(69%)		+7
Trimble Navigation Limited	$332	$337	$511	$429	+54%	+27%
	(50%)	(50%)	(54%)	(46%)		-4
URS Corporation	$3,588	$314	$3,845	$404	+7%	+29%
	(91%)	(9%)	(91%)	(9%)		0
Varian Medical Systems, Inc.	(North America) $621	$418	(North America) $705	$631	+14%	+51%
	(60%)	(40%)	(53%)	(47%)		+7
VeriSign, Inc.	$3,588	$314	$3,845	$404	+7%	+29%
	(91%)	(9%)	(91%)	(9%)		0
Yahoo! Inc	$2,653	$921	$4,366	$2,059	+65%	+124%
	(74%)	(26%)	(68%)	(32%)		+6

Source: 2004 and 2006 corporate annual reports

Although many large Bay Area companies operate globally and account for the lion's share of trade volume, overseas markets are important to many small- and medium-sized Bay Area businesses. Ninety-eight percent of exporters in the San Francisco Metropolitan Statistical Area (which encompasses San Francisco, Marin and San Mateo counties), are small- and medium-sized companies. The comparable figure is 93 percent for the San Jose MSA (Santa Clara County), 98 percent for the Oakland MSA (Alameda and Contra Costa counties), 100 percent for the Santa Rosa MSA (Sonoma County), and 98 percent for the Vallejo–Napa–Fairfield MSA (Solano and Napa counties).

Like many large companies, small- and medium-sized companies' orientation toward global markets is growing. According to the Intuit Future of Small Business Report (2008), cross-border business opportunities, improvements in technology and reductions in the cost of exporting will substantially increase the number of U.S. small businesses trading globally:

- Nearly half of U.S. small businesses will be engaged in global trade by 2018;
- Social networks will fuel borderless commerce and facilitate trade, particularly among immigrants;
- Small business diversity, particularly among businesses established by immigrant entrepreneurs, will help increase cross-border trade and unlock new opportunities.

In similar findings, the 2008 KPMG Mid Market Global Survey of companies with international activity in San Francisco and San Jose finds that:

- Half of the responding companies say their leadership is focused on global expansion, and that global expansion is integral to their growth strategy;
- 45 percent describe their global expansion efforts as successful, while only 11 percent report little or no success;
- Revenue from non-U.S. sources averages 35 percent, and non-U.S. employees average 29 percent
- 42 percent say that global expansion is not impacting their U.S. employee base, and 40 percent say their U.S. employee base has expanded;
- A significant majority plan to increase their global presence over the next five years.

Sector Outlook

Semiconductors and Information Technology

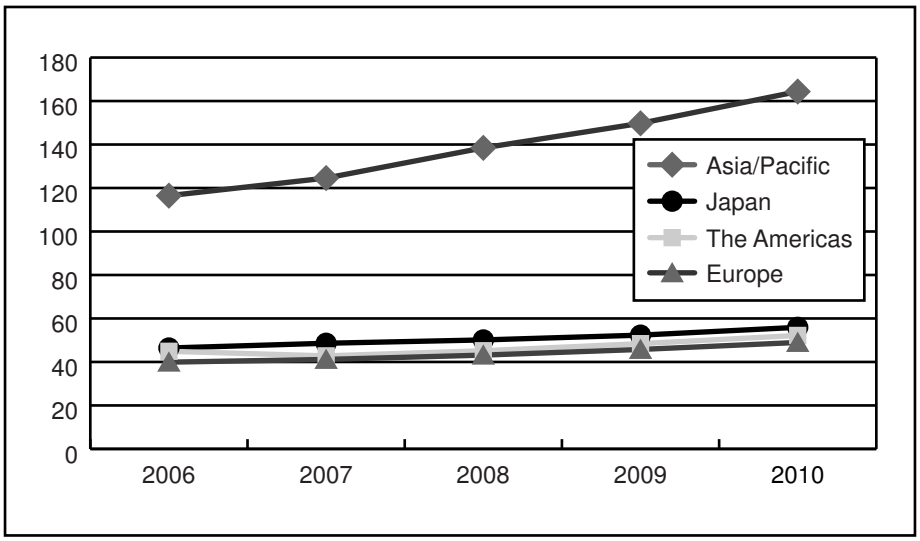
Because most IT (Information Technology) products incorporate semiconductors, semiconductor sales can be taken as a bellwether for information technology markets generally.

The global semiconductor market grew 15 percent to a record $247 billion in 2006, which was the fourth consecutive year in which semiconductor sales showed an annual increase. Expansion was led by the Asia-Pacific region. The Semiconductor Industry Association (SIA) estimates worldwide sales at $257 billion for 2007 (representing 3.8 percent growth), and forecasts $277 billion (7.7 percent growth) for 2008, and $296 billion (7 percent growth) for 2009. This points to continued growth in global markets for information technology products, but represents a slowdown compared to historical growth rates closer to 15 percent and the 11 percent average annual growth rate in the 2001–2006 period.

Sales of consumer products, especially in digital media processing, PCs and wireless technology will continue to underpin growth in this sector. Asia accounted for $115 billion in semiconductor sales in 2006, or 46 percent of the world market. The American market accounts for 18 percent of the world, placing it number three of the four major regional markets (Asia, Japan, U.S. and Europe)—a major realignment from 2000, when the American market was the world's largest.

Semiconductors are the second largest U.S. export to China. China continues to propel the growth in Asian markets, based primarily on growth in the Chinese computer and telecommunications sectors. (Last year China was the world's fastest growing semiconductor market, its largest mobile phone market, and its second largest personal computer market.) The Asia-Pacific market should continue to grow faster than other regions and will soon almost triple the size of the market in the U.S.

Semiconductor Sales Regional Market Forecast
Shipments in Millions of Dollars



Source: Semiconductor Industry Association, Semiconductor Forecast, Nov. 2007

Education

Education occupies a distinct place in the Bay Area's trade profile. (Education provided to foreigners is considered a service export.) With one of the nation's largest concentrations of institutions of higher learning, the region has a particularly strong base with which to attract students from around the world. Overall, the Bay Area hosted 23,334 foreign students in the 2005–2006 academic year, out of a total of 564,766 students in the U.S. The region is home to six of the top ten California institutions with the largest foreign student populations, including UC Berkeley, UC Davis, and Stanford University. In 2005–2006, foreign students brought an estimated $750 million into the region's economy.

The leading countries of origin for foreign students studying in California are: Japan (12.1 percent), South Korea (11.2 percent), China (8.1 percent), India (7.4 percent) and Taiwan (7.3 percent), with the leading fields being business and management (17.9 percent), engineering (14.7 percent), fine and applied arts (8.3 percent), and math and computer science (7.9 percent). Recently, however, educational costs and visa issues stemming from post-9/11 security measures have made it more difficult for foreign students to come here, eroding the United States' competitive position in international education markets relative to competitors such as the United Kingdom, Canada, Australia, and New Zealand.

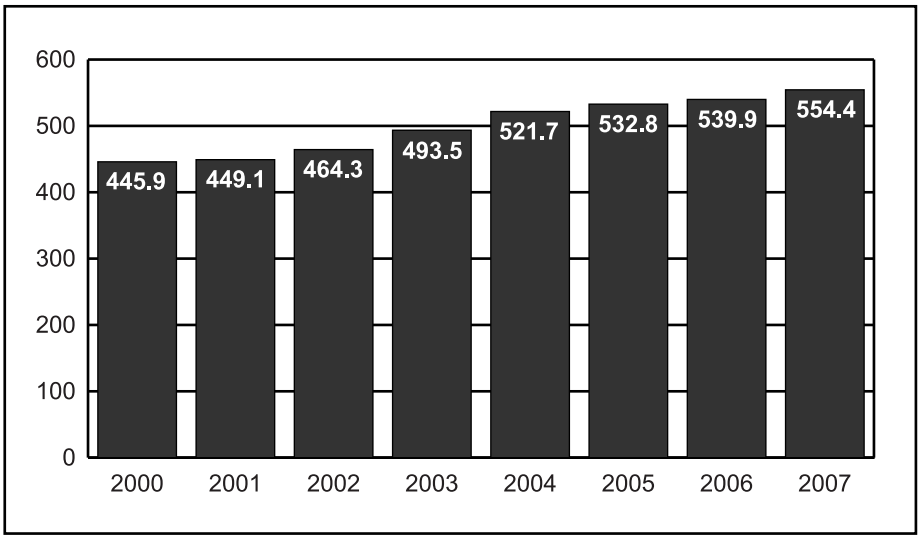
Food and Wine

California is the top producer and exporter of agricultural products in the nation. While California's agricultural products can be found in markets around the world, they are heavily concentrated in three markets—Canada, the European Union, and Japan—that absorb nearly half of the state's exports. China (including Hong Kong) and Mexico round out the top five markets.

California's agricultural exports are as diverse as their destinations. The state's top export commodities are almonds, dairy products, grapes, lettuce, and nursery products. A large proportion of the state's agricultural exports are shipped through the Port of Oakland, linking the Bay Area to the Central Valley and the competitiveness of the state's agricultural sector. In addition to agricultural commodities transiting the Port, processed foods and beverages are significant Bay Area exports.

Wine is perhaps the most distinctive agricultural export from the region. California is the fourth largest wine producer in the world after France, Italy and Spain. Wine is now the number one finished agricultural product in the state, with exports accounting for about 15 percent of production.

California Winery Shipments to U.S. and World Markets, 2000–2007 (Millions of Gallons)



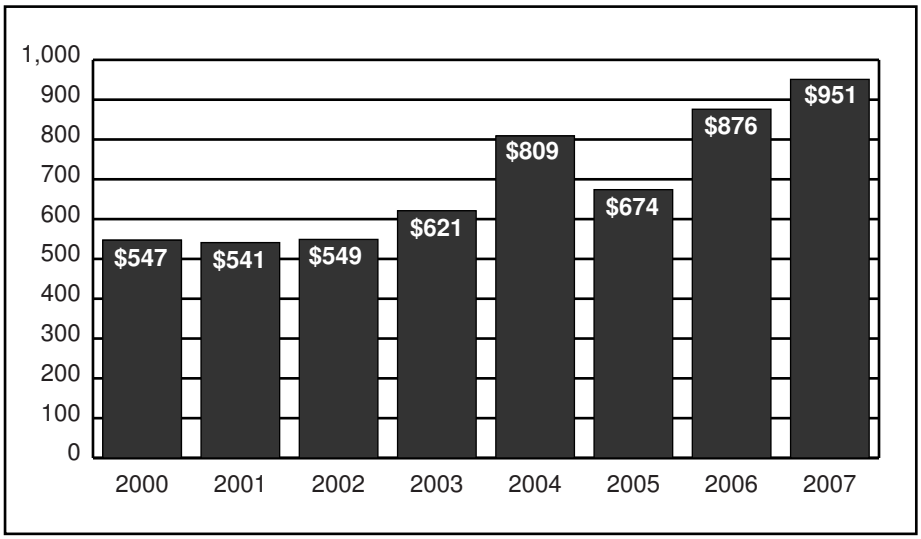
(Includes table, champagne/sparkling, dessert, vermouth, other special natural, sale and others. Excludes foreign bulk shipped by California wineries.)

Source: Gomberg-Fredrikson & Associates and Wine Institute

Ninety-five percent of U.S. wine exports originate in California, primarily from the Bay Area. Wine exports grew 4 percent in volume in 2006, and 12 percent in 2007. Measured by value, wine exports increased 30 percent in 2006 (to $876 million), and 12 percent in 2007 (to $951 million), with sales in 133 countries. The European Union is the leading market for U.S.

wine, with total sales of $474 million in 2007. Other leading markets include Canada ($234 million), Japan ($63 million), Switzerland ($26 million), and Mexico ($24 million). Global wine shipments from California have grown 77% in value over the last decade.

U.S. Wine Exports, 2000–2007
(Millions of Dollars)



Source: Wine Institute

U.S. Wine Export Markets, Value and Volume
Year to Date, Jan.–Dec., 2007 and 2006

	Value (Thousands of Dollars)		Variance '07 v '06	Volume (Thousands of Liters)		Variance '07 v '06
Partner Country Ranked by 2007 Value	2007	2006	Percent	2007	2006	Percent
European Union Total	**$474,359**	**$486,980**	**(2.6%)**	**262,927**	**245,708**	**7.0%**
Canada	$234,408	$190,478	23.1%	80,482	74,364	8.2%
Japan	$63,205	$72,564	(12.9%)	29,156	28,220	3.3%
Switzerland	$26,127	$14,490	80.3%	8,546	5,465	56.4%
Mexico	$23,822	$17,440	36.6%	13,334	9,632	38.4%
Korea, South	$18,059	$11,258	60.4%	6,792	4,332	56.8%
China	$16,162	$9,286	74.0%	5,694	3,474	63.9%
Singapore	$8,755	$5,830	50.2%	3,375	2,655	27.1%
Taiwan	$7,768	$7,316	6.2%	2,983	3,489	(14.5%)
Hong Kong	$7,495	$5,590	34.1%	3,867	3,086	25.3%
Other Countries	$70,608	$54,386	29.8%	36,020	24,051	49.8%
World Total	**$950,768**	**$875,618**	**8.6%**	**453,176**	**404,476**	**12.0%**

Source: Wine Institute using data from the U.S. Dept of Commerce, STAT-USA,

5

Trade Gateways

Bay Area ports and airports are among the largest in the nation and serve as major gateways for trade. As volumes grow, the region's infrastructure will be challenged to keep up.

San Francisco Customs District Export and Import Volumes (Billions of Dollars)

	2002	2003	2004	2005	2006	2007
Exports	35.1	33.1	38.2	36.6	41.4	43.3
Imports	44.5	46.5	55.4	62.4	69.7	68.9

Source: WISER, with final calculations by Beacon Economics
Customs District data tracks goods transiting regional trade gateways, including imports destined for other regions, and exports originating outside the region.

In 2006, nearly one-fifth (19.5 percent) of U.S. trade, by all modes, flowed through a California international gateway. Imports accounted for 74 percent of shipping through California by all modes. For exports, air cargo (airports) played a more important role than goods shipped by sea (ports)—$71.6 billion compared to $59.2 billion.

While trade volumes are increasing, the share of U.S. trade passing through California's gateways has fallen significantly. Both ports and airports have been losing market share. A major factor behind this is the growing trend of shippers to choose all-sea routes directly from Asia to Gulf and East Coast ports, avoiding congested California ports and trans-shipment across the U.S. Since 1991, the all-water share of transpacific imports has grown from 16.8 percent to 23 percent.

Airports

In 2006, California's airports handled 19.8 percent of total U.S. airborne trade by value, led by Los Angeles International Airport (LAX) and San Francisco International Airport (SFO). This doesn't include the massive role that airports play in supporting service exports such as business consulting, education and tourism.

The San Francisco (SFO), Oakland (OAK) and San Jose (SJC) international airports together handle more than 55 million passengers annually. In 2006, nearly 34 million passengers

passed through SFO's terminals alone. While all three airports play critical roles in the region's transportation networks, SFO is the Bay Area's primary portal for international traffic, with nonstop links to more than 30 international cities on 35 international carriers.

SFO is the fourth largest airport in the nation by air cargo value, OAK ranks eighteenth, while SJC does not currently handle significant cargo volumes. The volume of domestic and international cargo handled by the region's three international airports (1.3 million metric tons in 2006) is forecast to increase sharply between now and 2020. While some cargo moves in dedicated cargo aircraft, most international freight is carried in the bellies of wide-bodied commercial aircraft.

California airports handle trade with a significantly higher value per kilogram than other U.S. airports. San Francisco International, in particular, has a value-to-weight ratio more than twice that of most airports in the country. Goods shipped through SFO are dominated by high technology products such as integrated circuits, largely shipped to or from Silicon Valley, with Japan, South Korea and Taiwan being the primary markets. International cargo (freight and mail) accounts for more than half of the air cargo volume handled by SFO. International volume grew 0.7 percent in 2006 (down from 3.2 percent growth in 2005).

While international cargo values at OAK are much smaller than those at SFO, OAK handled more total cargo by weight in 2006 (663,000 metric tons) than SFO (593,000 metric tons), with domestic air cargo accounting for the greater level overall. (OAK is the principal airport used by FedEx and UPS in the region.) Like SFO, exports through Oakland are led by integrated circuits, which account for more than half the total value; other top exports are computer and office equipment, measuring and controlling devices, and medical instruments and supplies.

Ports

Marine ports are major gateways for the surface shipping of commodities and manufactured goods. More than 50 percent of U.S. containerized traffic flows through West Coast ports (California, Oregon and Washington), and 36 percent of all containerized shipping flows through California's three major ports, reflecting growing trade with Asia. The Port of Oakland, the nation's fourth largest container facility, handles 9.2 percent of West Coast container volume, second to Los Angeles and Long Beach, which together handle 60.4 percent.

Bay Area ports handle a diverse range of products. Redwood City focuses primarily on construction materials, while Richmond and Benicia handle petroleum products, sugar and automobiles. The Port of Oakland, however, dominates containerized cargo, handling 99 percent of the containerized cargo passing through Northern California. Revenue tonnage at the Port of Oakland grew 3 percent in 2007 and container volume grew 3.3 percent, slowing from the 3.4 percent and 5.3 percent growth rates achieved in 2006 and the 13.3 percent and 11 percent levels of 2005.

Revenue Tonnage, Northern California Ports, 2007

	Total Revenue Tonnage			Containers		
	Total	**% of Coast**	**% Chg from 2006**	**Total (TEUs)**	**% of Coast**	**% Chg from 2006**
San Francisco	1,195,738	0.3	-5.6	1	0.1	-98.1
Redwood City	654,742	0.2	-29.5	–		–
Oakland	29,448,686	8	3	1,681,259	10.5	3.3
Richmond	1,067,668	0.3	7.3	–		–
Crockett	701,860	0.2	6.5	–		–
Benicia	2,193,609	0.6	46.3	–		–
Port Chicago	5,253	<0.1	-76.9	245	<0.1	-76.8
Pittsburg	520,037	0.1	-2.4	–		–
Stockton	2,411,663	0.7	-29.3	–		–
West Sacramento	512,924	0.1	9.2	14	<0.1	75
Eureka	205,224	0.1	-28.3	–		–
Area Total	**38,917,404**	**10.6**	**0.6**	**1,681,519**	**10.5**	**3.2**
	General Cargo			**Automobiles and Trucks**		
	Total	**% of Coast**	**% Chg from 2006**	**Total**	**% of Coast**	**% Chg from 2006**
San Francisco	166,158	1.7	-32	–		–
Redwood City	–		–	–		–
Oakland	36,397	0.4	-28.5	830,886	3.3	-4.5
Richmond	–		–	1,013,128	4	1.8
Crockett	–		–	–		–
Benicia	7,757	0.1	1996.5	2,116,751	8.4	50.4
Port Chicago	744	<0.1	-84.3	344	<0.1	100
Pittsburg	–		–	–		–
Stockton	408,556	4.2	-12.3	–		–
West Sacramento	245,699	2.5	-38.9	–		–
Eureka	145,641	1.5	-6.7	–		–
Area Total	**1,010,952**	**10.3**	**-23.7**	**3,961,109**	**15.7**	**21**
	Bulk Cargo			**Lumber and Logs**		
	Total	**% of Coast**	**%Chg from 2006**	**Total**	**% of Coast**	**% Chg from 2006**
San Francisco	1,029,345	1.7	1.1	218	<0.1	-93.9
Redwood City	654,742	1.1	-29.5	–		–
Oakland	–		–	–		
Richmond	54,540	0.1	100	–		
Crockett	701,860	1.2	6.5	–		–
Benicia	69,101	0.1	-24.9	–		
Port Chicago	–		–	–		
Pittsburg	520,037	0.9	-2.4	–		–
Stockton	2,001,284	3.3	-32.1	1,823	0.1	41.1
West Sacramento	266,987	0.4	362.2	–		-100
Eureka	7,400	<0.1	-82	52,183	3.8	-41.3
Area Total	**5,305,296**	**8.8**	**-15.5**	**54,224**	**3.9**	**-47.5**

Source: Pacific Maritime Association, 2007 Annual Report

Three quarters (77 percent) of the total cargo passing through the Port of Oakland moves to and from Asia (principally China, Taiwan, Korea, Japan and Hong Kong.) In September 2006, the Port recognized the growing importance of China as an import and export partner by opening an office in Shanghai.

Agricultural commodities, including fruits, vegetables, rice, still wine and cotton, account for a large share of the exports transiting the Port, making Oakland a critical export gateway for the products of the Central Valley. Wastepaper and scrap metal are also significant exports.

Anticipating further growth, the Port of Oakland has recently opened two new terminals with state-of-the-art cranes that can handle in excess of 30 containers per hour. In August 2006, the Port finalized its development program to convert the 388 acres of the decommissioned Oakland Army Base into useable facilities for the Port's maritime operations.

One of the Port's key goals has been to dredge its harbors, approach channel, berths and turning basin to a draft of -50 feet, to accommodate the latest generation of 8,000 TEU (twenty-foot equivalent unit) vessels. This project should be substantially completed by June 2009. Increasing channel depth and port capacity are critical, as more than 120 ships in the 6,000–9,000 TEU range are currently on order worldwide. Many of those ships will call at California and Bay Area ports.

Based on activity at the Port of Oakland, adjacent areas of the Central Valley (Stockton, Tracy, Lathrop) are developing as commercial warehousing and distribution centers, bringing much-needed jobs to the area.

California ports serve national as well as state and regional markets, handling more than 30 percent of the total value of U.S. maritime trade, and more than half of the total value of waterborne merchandise trade. Seaborne imports from Asia are shipped primarily through California ports to the Rocky Mountain states, the Midwest and the East Coast, and California ports are also the primary handlers of exports to Asia. Oakland competes for this business with the ports of Los Angeles and Long Beach and, to a lesser degree, with the ports of Seattle and Vancouver and newly developed ports in British Columbia and Mexico.

In recent years, congested conditions at Southern California ports have created an opportunity for Oakland—which still has unused capacity—to capture additional traffic, including visits by ships making Oakland their first port of call. (Most ships arriving in California currently make Los Angeles/Long Beach their first port of call, and continue on to Oakland.) Despite this additional traffic, and despite increased container activity every year since 2001, the Port of Oakland has recently lost market share to other West Coast ports (falling from 13.1 percent in 2002 to 9.2 percent in 2006).

Goods Movement Issues

International trade is the fastest-growing component of regional goods movement, and containerized cargo is the fastest growing segment of marine commerce, with volume

expected to double in the next 15 years and triple in the next 20. This places a growing burden on regional transportation infrastructure.

The infrastructure that moves freight is important not only to international trade but also to regional mobility, as trucks account for a growing volume of traffic on Bay Area roads and bridges. In December 2004, the Metropolitan Transportation Commission released a report, *Regional Goods Movement Study for the San Francisco Bay Area*, which identified issues and strategies for more effectively incorporating goods movement (freight) into regional transportation planning, an issue that had long been neglected. Among the subjects discussed in that report are long-term capacity at ports and airports, improvements in the region's road and rail transportation systems, and future infrastructure investment strategies.

More recently, the Port of Oakland played a key role in developing a northern California consensus vision for improving goods movement infrastructure. Supported by over 19 local and regional transportation planning agencies, this vision recognizes two primary goods movement corridors in need of improvement. The Central Corridor extends from the Port of Oakland, along Interstate 80 and transcontinental rail tracks, and over Donner Pass in the Sierra Nevada mountains. While truck traffic in this corridor is important, it is transcontinental railroad traffic that largely defines the corridor. The Altamont Corridor extends from the Port of Oakland, over the Altamont Pass, and into the San Joaquin Valley. This corridor, serving relatively shorter trips (including time-sensitive agricultural products), is dominated by truck traffic. In both the Central and Altamont corridors, infrastructure constraints limit throughput and reliability, which in turn constrains the ability of the Port to serve cargo growth.

Specific regional issues include:

- the impact of highway congestion on goods movement cost and reliability;
- competition between freight and passengers for existing railway capacity, and the bottlenecks caused by at-grade rail crossings;
- improvement of railbeds and expansion of railway tunnels over the Sierras, to permit the double-stacking of containers bound for Rocky Mountain, Midwest and East Coast destinations;
- peak-period truck congestion and bottlenecks in rail capacity in and out of the Port;
- environmental impacts caused by truck and ship emissions in neighborhoods adjacent to Port facilities;
- the potential for a cross-bay water transportation system linking the region's major international air cargo facility (SFO) and its major domestic air cargo facility (OAK), bypassing congested bridges;
- long-run capacity at SFO and other regional airports to handle growing air traffic volume;
- Loss of industrial land due to competition from higher-value uses.

Congestion is a particular concern for ports and airports, impacting both traffic in general and the reliability of trip times for shippers. This is the case not just at the ports and airports themselves, but also outside the gates, as truck volume increases. Trucks carry more than 80 percent of the region's freight, with most trips internal to the region. In coming years, the annual number of vehicle miles traveled by trucks within the region is projected to grow dramatically. The environmental impact of goods movement—primarily emissions from ships and diesel particle emissions from trucks—has emerged as a significant issue, particularly for neighborhoods adjacent to port facilities.

The State of California estimates that a total of $47 billion in new investment in transportation infrastructure is needed to meet statewide goods movement requirements, including environmental goals. Estimates by the California Business, Transportation and Housing Agency in its *Goods Movement Action Plan* suggest that $2–5 billion will be needed for emission reduction projects alone, but an updated estimation by the California Air Resources Board (CARB) projects that $6–10 billion will be required. In its 2006 report *Emission Reduction Plan for Ports and Goods Movement in California,* the California Environmental Protection Agency estimates that if implemented through 2020, this level of investment ($6–10 billion) would forestall $34–47 billion worth of emission-related health problems in the state. Environmental projects are included in the $3.1 billion allocation for goods movement investment from bonds approved by California voters in 2006.

6

Policy Issues

A number of important issues emerge from today's international trade environment:

- The number of Free Trade Agreements around the world—few of which involve the United States—is growing rapidly. Well-structured regional and bilateral agreements can increase employment and open new opportunities for California and Bay Area companies. Economies that are open to international trade and investment have been shown to have higher standards of living and deliver more benefits to their citizens than economies that sustain high trade and investment barriers. The recent approval of the U.S.–Peru Free Trade Agreement with bipartisan congressional support suggests that formulas can be found to overcome historical differences over labor and environmental standards. Approval of new Free Trade Agreements is important to the competitiveness of U.S., California and Bay Area companies and the jobs they generate.

- Since a comprehensive WTO agreement that reduces barriers to trade in all 151 participating countries is ultimately a more effective vehicle for trade liberalization than a patchwork of hundreds of smaller agreements, this should be the United States' top priority. Regional, state and business leaders should support a successful conclusion to the Doha Round and engage with federal leaders on how a Doha Round accord will specifically impact California. The Bay Area, with its knowledge-based economy, will be a prime beneficiary of improved standards for and enforcement of intellectual property rights. Large domestic agricultural subsidies, few of which benefit California, are a major barrier to global agreement and should be opposed by California legislators.

- Even as globalization ties people and economies more closely together, interest groups are pushing back. Protectionism remains a problem for trade agreements in general, and for U.S. efforts to benefit consumers and the economy by reducing domestic subsidies and increasing competition. Although globalization has benefited consumers and the economy as a whole, the benefits are not evenly distributed and anxiety about job security is making trade and investment increasingly vulnerable to politicization. Because of the region's deep engagement with, and its dependence on, the global economy, Bay Area government and business leaders should be forceful advocates for open markets and trade expansion.

- California members of Congress and business and policy leaders should promote free trade in environmental technologies and services, which are becoming a significant component of the Bay Area economy and contribute to major policy objectives such as increased energy security and mitigating climate change.

- As China's role in global trade increases, continued friction is likely on a range of issues, from intellectual property to currency valuation and the implementation of China's WTO commitments. With its orientation toward Asia, and China in particular, the Bay Area has a strong interest in seeing those issues managed effectively. Unilateral moves to restrict Chinese imports—for example, in retaliation for alleged currency manipulation—will do more harm than good.

- Tighter policies on visas for foreign students and scientists instituted since 9/11 have adversely affected the attractiveness of California and the U.S. as a destination. Business travelers and tourists are also impacted. H-1B visas are in short supply, and qualified foreign graduates of U.S. universities must wait as long as five years when applying for a green card. This erodes our competitiveness, as the U.S. is turning away the global talent on which the Bay Area's technology-led economy depends. Ironically, the inability to attract and retain qualified talent, domestic or foreign, is adding to pressures on U.S. companies to move activity offshore. Members of Congress should separate the need for highly educated workers from the general debate over illegal immigration, increase the availability of H-1B visas, allow spouses of H-1B visa holders to work, and develop new policies that offer accelerated access to green cards for overseas students who graduate from U.S. universities with advanced degrees in priority disciplines. Legislation proposed by Rep. Zoe Lofgren (D–Silicon Valley) in the spring of 2008 addresses the green card issue.

- Efficient trade and transportation infrastructure will be increasingly important to California and the Bay Area as trade volumes grow. How infrastructure is managed also has growing significance for Bay Area residents in general, as ports and airports increase their capacity, trucks compete with cars for space on Bay Area roadways, and environmental issues adjacent to ports receive new attention. Trade (goods movement) infrastructure should therefore be a priority in both regional and state transportation planning, and should receive a commensurate share of transportation funding. To ensure that the Port of Oakland remains competitive with Southern California ports and with new port capacity being developed in Mexico and Canada, it is particularly important that investment in priority projects be implemented in the Altamont and Central corridors linking the Port of Oakland with major national markets and distribution centers, to enable the Port to accommodate future cargo growth. New consideration should also be given to the opportunities presented by public-private partnerships to attract private finance and build and operate goods movement infrastructure.

- Government trade services also need attention. Since the international trade and investment programs of the California Technology, Trade and Commerce Agency were closed in the state budget crisis of 2003, California has largely lost the institutional capacity to support its companies overseas. In February 2008, the state's Business, Transportation and Housing Agency produced a report on California's role in the global economy that included recommendations for how state government could play a stronger role in supporting California companies abroad and work more effectively to attract foreign investment. (To access the report, see http://www.bth.ca.gov.) The report's recommendations should be implemented as swiftly as possible.

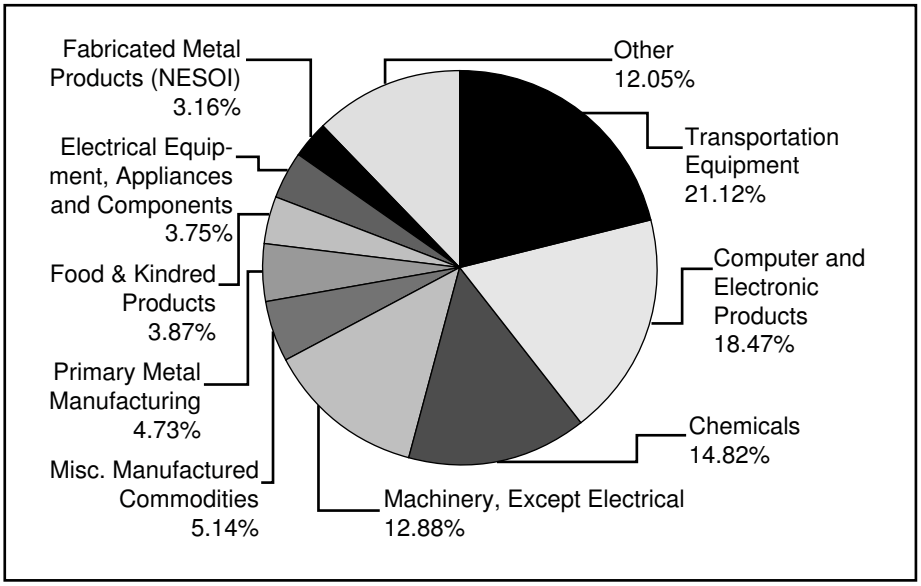
The depth of California's and the Bay Area's engagement in the international economy is accelerating. While the adjustments to globalization may prove difficult, given its strong export profile, the global nature of many of its companies, and the important role that foreign investment plays in the Bay Area, the region stands to be a prime beneficiary of trade growth. For that to occur, a global perspective must become more deeply embedded in business strategies and in national, state and regional economic and infrastructure planning.

Appendices

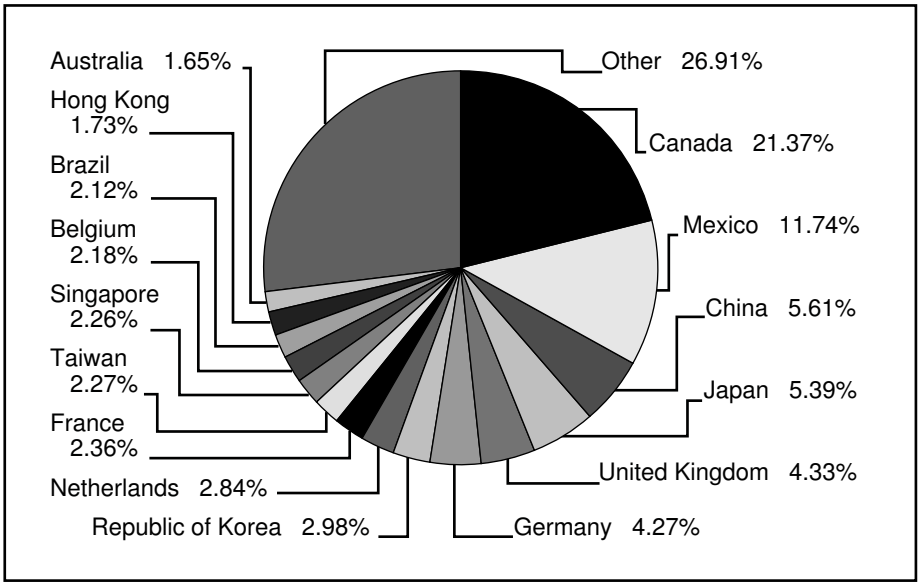
Appendix I

U.S. Trade Patterns

U.S. Top Manufactured Exports by Dollar Value, 2007



U.S. Top Export Markets by Dollar Value, 2007



Source: WISER, with final calculations by Beacon Economics

U.S. International Trade in Goods and Services, Balance of Payments Basis (Billion of Dollars)

	Exports			Imports			Trade Balance		
Year	Total	Goods	Services	Total	Goods	Services	Total	Goods	Services
1998	933.17	670.42	262.76	1099.31	918.64	180.68	-166.14	-248.22	82.08
1999	965.88	683.97	281.92	1230.97	1031.78	199.19	-265.09	-347.82	82.73
2000	1070.60	771.99	298.60	1450.43	1226.68	223.75	-379.84	-454.69	74.86
2001	1004.90	718.71	286.18	1370.02	1148.23	221.79	-365.13	-429.52	64.39
2002	974.72	682.42	292.30	1398.45	1167.38	231.07	-423.73	-484.96	61.23
2003	1017.76	713.42	304.34	1514.67	1264.31	250.37	-496.92	-550.89	53.98
2004	1160.59	807.52	353.07	1768.32	1477.09	291.22	-607.73	-669.58	61.85
2005	1283.75	894.63	389.12	1995.32	1681.78	313.54	-711.57	-787.15	75.58
2006	1457.02	1023.11	433.91	2210.30	1861.38	348.92	-753.28	-838.27	84.99
2007	1645.73	1148.48	497.25	2345.98	1967.85	378.13	-700.26	-819.37	119.12

Source: U.S. Department of Commerce, International Trade Administration, Office of Trade and Economic Analysis, 2007.

U.S. Manufactured Exports, 2007 (Millions of Dollars)

Product description	Dollar Value
Total for all Industries	1,019,377.33
Transportation Equipment	215,305.75
Computer And Electronic Products	188,325.43
Chemicals	151,115.12
Machinery (Except Electrical)	131,250.72
Primary Metal Manufacturing	48,200.71
Miscellaneous Manufactured Commodities	52,410.77
Petroleum And Coal Products	31,177.13
Food And Kindred Products	39,424.82
Electrical Equipment, Appliances, And Component	38,260.90
Fabricated Metal Products	32,213.87

Source: WISERTrade, 2007

Appendix II

California Trade Patterns

U.S. Exports to All Countries, By State, 2005–2007
In Rank Order by 2007 Value (in U.S. Dollars)

	Export Value 2005	Export Value 2006	Export Value 2007	Percent Change 2005–06	Percent Change 2006–07
All States	**904,379,818,171**	**1,037,142,972,794**	**1,162,708,293,437**	**14.7**	**12.1**
Texas	128,761,036,151	150,888,054,964	168,164,440,482	17.2	11.5
California	**116,818,585,165**	**127,746,135,340**	**134,151,760,591**	**9.4**	**5.0**
New York	50,492,176,404	57,369,299,166	69,333,647,127	13.6	20.9
Washington	37,948,360,874	53,074,909,007	66,258,480,342	39.9	24.8
Illinois	35,868,406,183	42,084,595,133	48,730,156,421	17.3	15.8
Florida	33,377,054,012	38,544,528,174	44,831,678,558	15.5	16.3
New Jersey	21,080,304,895	27,001,734,586	30,462,503,875	28.1	12.8
Louisiana	19,231,807,078	23,503,359,105	30,374,690,456	22.2	29.2
Pennsylvania	22,270,841,318	26,333,930,898	29,126,894,132	18.2	10.6

Source: U.S. Department of Commerce data, compiled by Maurice Kogon, El Camino College Center for International Trade Development

California Goods Exports by Region and Top Countries, 2007

Region	2007 Level ($ Millions)	2007 Share (Percent)	2006–2007 Growth (Percent)	1997–2007 Average Annual Growth Rate (Percent)
Asia	59,253	44.2	10.1	5.7
NAFTA partners	34,466	25.7	9.4	4.7
Europe	30,262	22.6	6.0	-0.8
Latin America and Caribbean	5,760	4.3	7.5	18.9
Africa	984	0.7	35.6	5.2
Top 15 Export Destinations				
Mexico	18,343	13.7	10.9	5.7
Canada	16,123	12.0	3.6	4.7
Japan	13,452	10.0	7.4	-0.8
China (Mainland)	10,567	7.9	27.0	18.9
Korea, Republic Of	7,410	5.5	11.1	5.2
Germany	5,560	4.1	4.7	5.0
China (Taiwan)	5,786	4.3	0.7	1.5
United Kingdom	5,217	3.9	-1.6	1.1
Hong Kong	4,919	3.7	21.8	3.4
Netherlands	4,077	3.0	11.6	3.6
Singapore	4,284	3.2	6.4	-1.1
Australia	2,821	2.1	-9.5	2.8
France	2,718	2.0	14.1	3.8
Belgium	2,026	1.5	29.4	6.9
Brazil	2,034	1.5	7.2	8.9
All countries	134,152	100.0	5.0	3.6

Note: Sum of individual country figures may not equal region totals because of rounding.
Source: WISER, with final calculations by Beacon Economics

California Goods Export Destinations by Share, 2007

	Export Share (Percent)			Rank	
Country	California	Rest of U.S.	Difference	California	Rest of U.S.
Mexico	13.7	11.7	1.9	1	2
Canada	12.0	21.4	-9.3	2	1
Japan	10.0	5.4	4.6	3	4
China (Mainland)	7.9	5.6	2.3	4	3
Korea, Republic Of	5.5	3.0	2.5	5	8
Germany	4.1	4.3	-0.1	6	6
China (Taiwan)	4.3	2.3	2.0	7	12
United Kingdom	3.9	4.3	-0.4	8	5
Hong Kong	3.7	1.7	1.9	9	16
Netherlands	3.0	2.8	0.2	10	7
Singapore	3.2	2.3	0.9	11	9
Australia	2.1	1.7	0.5	12	15
France	2.0	2.4	-0.3	13	13
Belgium	1.5	2.2	-0.7	14	10
Brazil	1.5	2.1	-0.6	15	11

Note: Difference column may vary due to rounding.

Source: WISER, with final calculations by Beacon Economics

Exports from California's Top Goods Export Sectors, 2007

Sector	2007 ($ Millions)	2007 Share (Percent)	2006–2007 Growth (Percent)	1997–2007 Average Annual Growth Rate (Percent)
Computer And Electronic Products	43,710.0	32.6	-1.9	0.1
Machinery, Except Electrical	14,455.0	10.8	-2.8	6.2
Transportation Equipment	13,748.0	10.2	1.9	4.7
Chemicals	10,430.0	7.8	20.0	9.8
Miscellaneous Manufactured Commodities	8,493.0	6.3	15.1	9.0
Agricultural Products	6,726.0	5.0	5.2	7.1
Food And Kindred Products	5,960.0	4.4	14.1	6.2
Electrical Equipment, Appliances, And Components	4,660.0	3.5	4.7	5.1
Waste And Scrap	4,550.0	3.4	34.6	21.9
Fabricated Metal Products (NESOI)	3,652.0	2.7	2.6	7.8
All sectors	134,152.0	100.0	5.0	3.6

Note: Sector rankings exclude the miscellaneous manufactured products, goods with special classification provisions, and waste and scrap.

Source: WISER, with final calculations by Beacon Economics

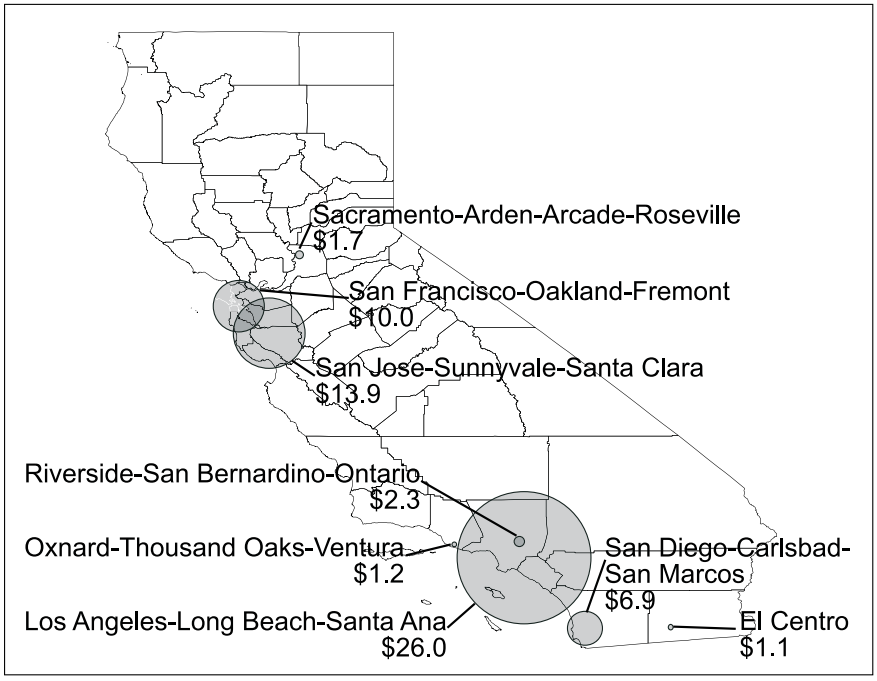
Share of Exports for Top 10 Goods Exporting Sectors, 2007

Sector	California (Percent)	Rest of U.S. (Percent)
Computer And Electronic Products	32.6	16.2
Machinery, Except Electrical	10.8	11.3
Transportation Equipment	10.2	18.5
Chemicals	7.8	13.0
Miscellaneous Manufactured Commodities	6.3	4.5
Agricultural Products	5.0	4.1
Food And Kindred Products	4.4	3.4
Electrical Equipment, Appliances, And Components	3.5	3.3
Waste And Scrap	3.4	2.0
Fabricated Metal Products (NESOI)	2.7	2.8
Total	**86.7**	**79.1**

Note: Sector rankings exclude the miscellaneous manufactured products, goods with special classification provisions, and waste and scrap.

Source: WISER, with final calculations by Beacon Economics

Exports from California Metropolitan Areas for the First Half of 2007 (Billions of Dollars)



Source: International Trade Administration and Bureau of the Census, Foreign Trade Division: Metropolitan Export Series

Exports to California's Top 5 Export Markets in 2007

Top Five Sectors	2005	2006	2007	2006–2007 Percent Change
	($ Billions)			
Mexico				
Computer And Electronic Products	5.4	5.4	4.4	-18.8
Transportation Equipment	1.2	2.1	2.1	1.8
Machinery, Except Electrical	2.1	2.0	1.8	-8.8
Food And Kindred Products	1.1	1.2	1.1	-7.3
Fabricated Metal Products (NESOI)	1.0	1.1	1.1	4.0
Total Top Five	**10.7**	**11.8**	**10.6**	**-10.1**
Total All Sectors	**17.7**	**19.6**	**18.3**	**-6.6**
Japan				
Computer And Electronic Products	3.5	3.9	3.6	-9.6
Machinery, Except Electrical	2.1	2.3	1.9	-15.3
Transportation Equipment	1.8	1.8	1.8	0.7
Food And Kindred Products	1.0	1.0	1.1	9.7
Chemicals	0.9	0.9	0.9	3.2
Total Top Five	**9.2**	**9.9**	**9.3**	**-5.9**
Total All Sectors	**13.5**	**14.0**	**13.5**	**-3.8**
Canada				
Computer And Electronic Products	4.7	4.6	4.6	-0.1
Transportation Equipment	1.4	1.5	2.3	57.4
Agricultural Products	1.5	1.6	1.8	9.1
Misc. Manufactured Commodities	0.8	0.9	1.2	32.1
Chemicals	0.7	0.9	0.9	1.3
Total Top Five	**9.0**	**9.5**	**10.7**	**13.6**
Total All Sectors	**13.2**	**14.2**	**16.1**	**13.6**
China				
Computer And Electronic Products	2.7	3.3	3.7	12.5
Waste And Scrap	1.2	1.7	1.9	11.0
Machinery, Except Electrical	0.7	1.2	1.3	10.4
Transportation Equipment	1.0	1.2	0.9	-26.5
Chemicals	0.4	0.4	0.7	57.6
Total Top Five	**6.0**	**7.9**	**8.5**	**8.3**
Total All Sectors	**7.9**	**10.0**	**10.6**	**6.0**
Republic of Korea				
Computer And Electronic Products	2.2	2.3	2.3	1.0
Machinery, Except Electrical	1.5	1.8	1.4	-20.3
Waste And Scrap	0.4	0.4	0.7	50.6
Transportation Equipment	0.5	0.5	0.6	19.6
Food And Kindred Products	0.3	0.3	0.4	29.1
Total Top Five	**4.8**	**5.3**	**5.4**	**1.5**
Total All Sectors	**6.3**	**7.0**	**7.4**	**5.2**

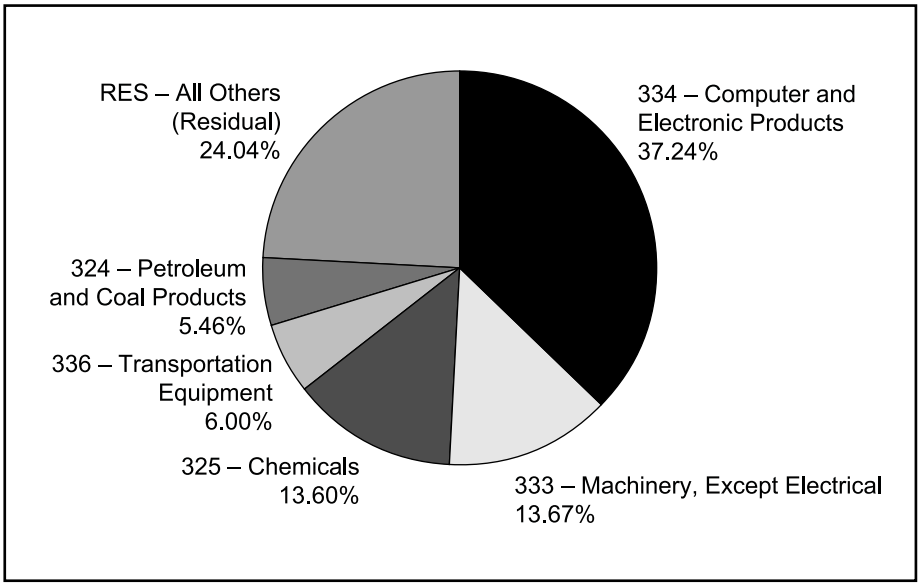
Notes: Listed sectors are ranked by 2007 value and exclude goods with special classification provisions and waste and scrap. Totals may vary due to rounding.

Source: WISER, with final calculations by Beacon Economics

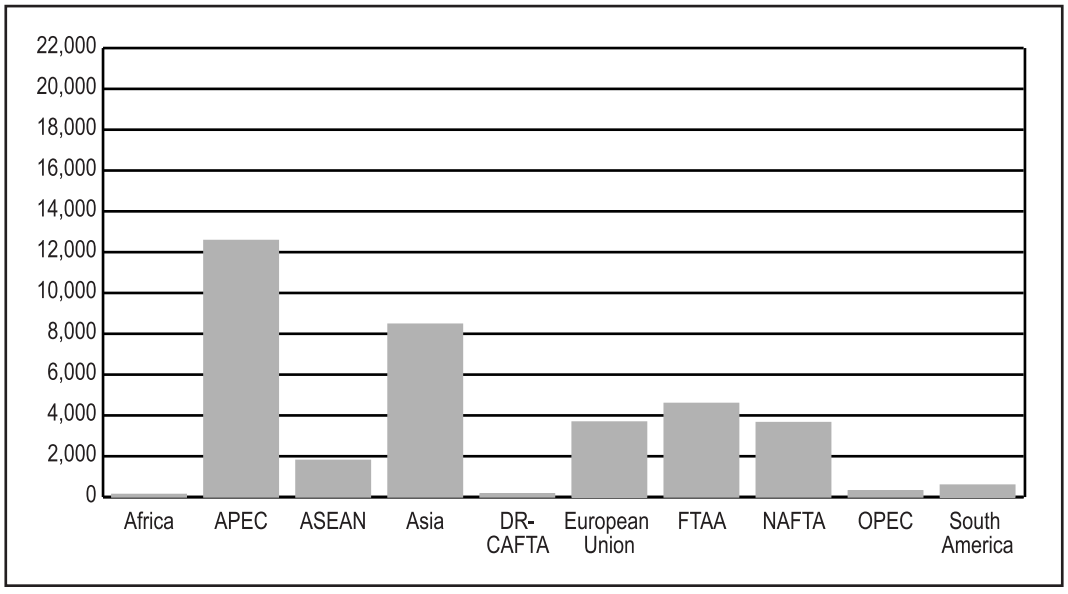
Appendix III

Bay Area Trade Patterns

San Francisco-Oakland-Fremont, CA Metro Area Exports
Top 5 Global NAICS Categories by Export Value, 2006

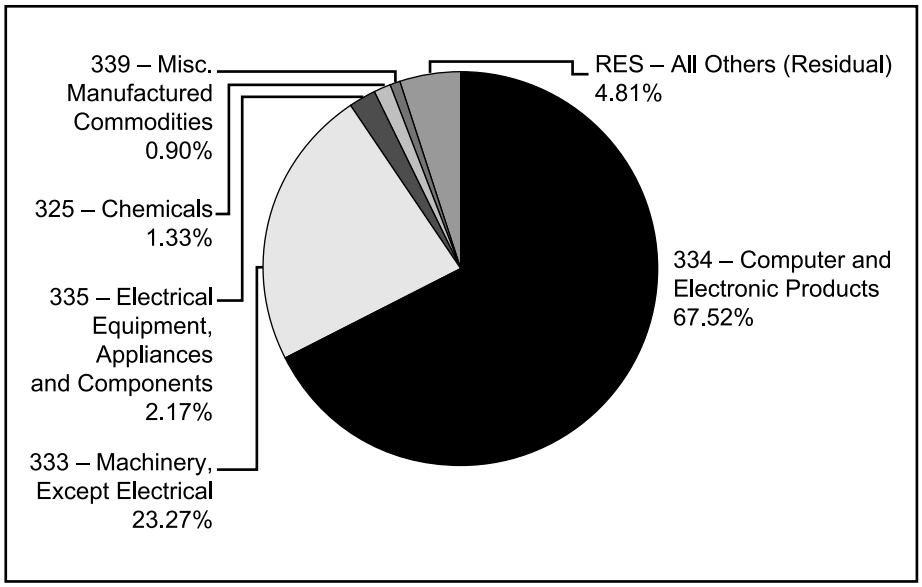


San Francisco-Oakland-Fremont, CA Metro Area Exports
Destination by Export Value, 2006
(Millions of Dollars)

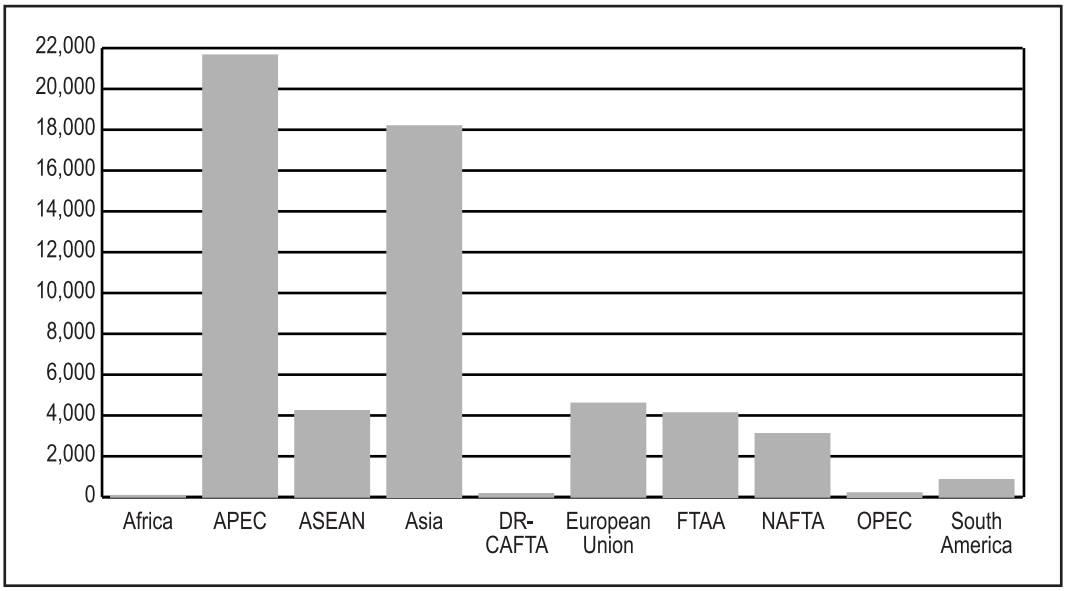


Source: Office of Trade and Industry Information, International Trade Administration, U.S. Department of Commerce

San Jose-Sunnyvale-Santa Clara, CA Metro Area Exports
Top 5 Global NAICS Categories by Export Value, 2006

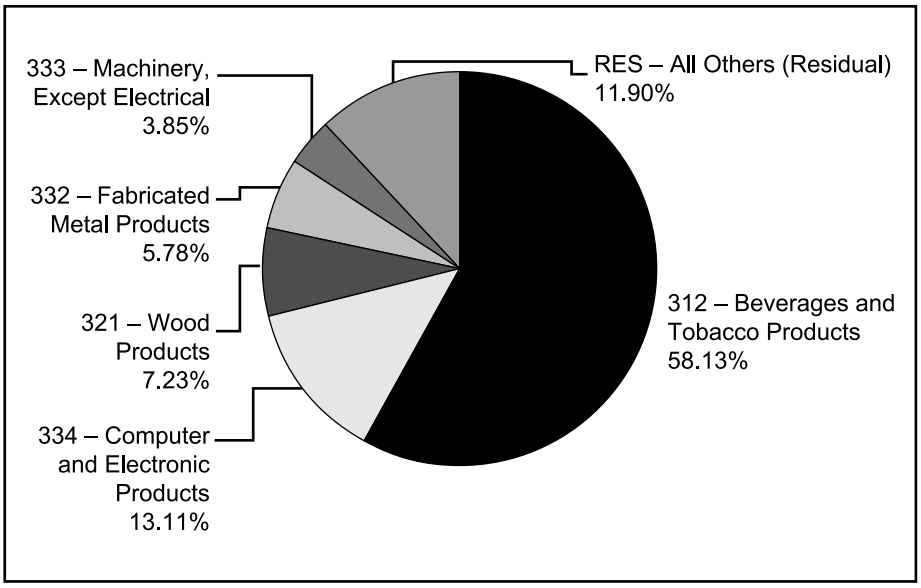


San Jose-Sunnyvale-Santa Clara, CA Metro Area Exports
Destination by Export Value, 2006
(Millions of Dollars)

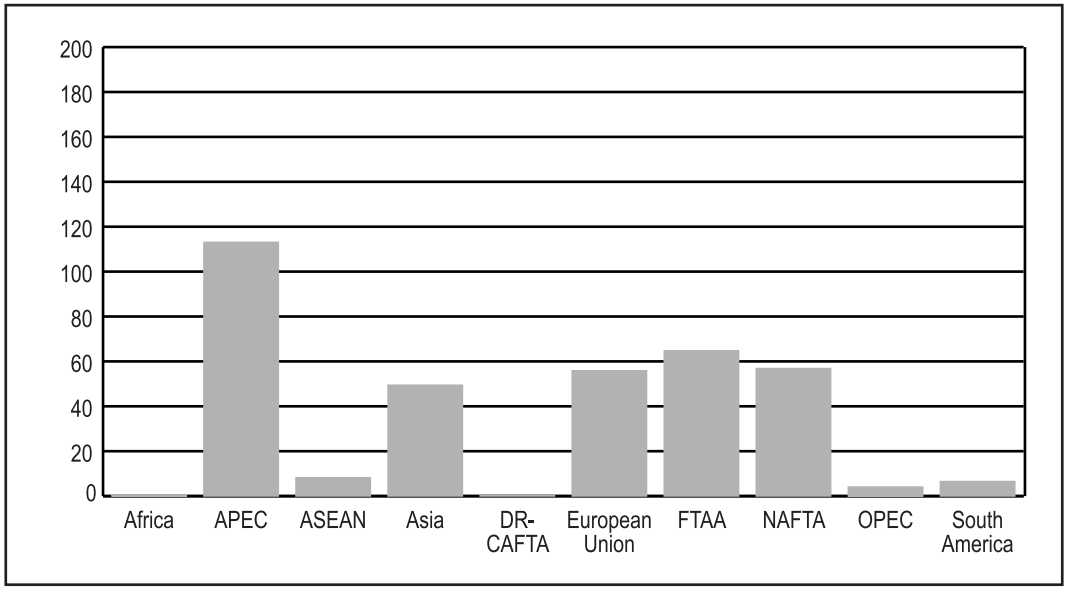


Source: Office of Trade and Industry Information, International Trade Administration, U.S. Department of Commerce

Napa, CA Metro Area Exports
Top 5 Global NAICS Categories by Export Value, 2006

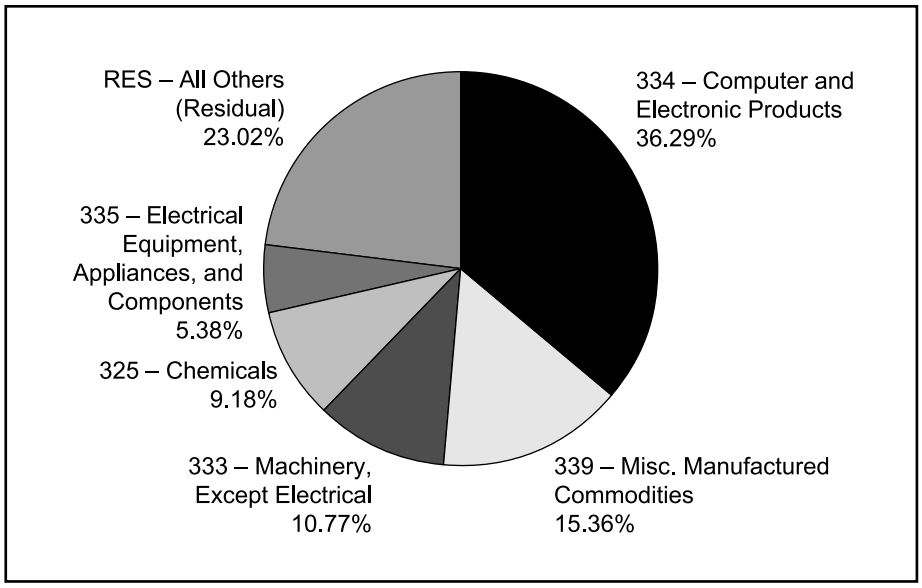


Napa, CA Metro Area Exports
Destination by Export Value, 2006
(Millions of Dollars)

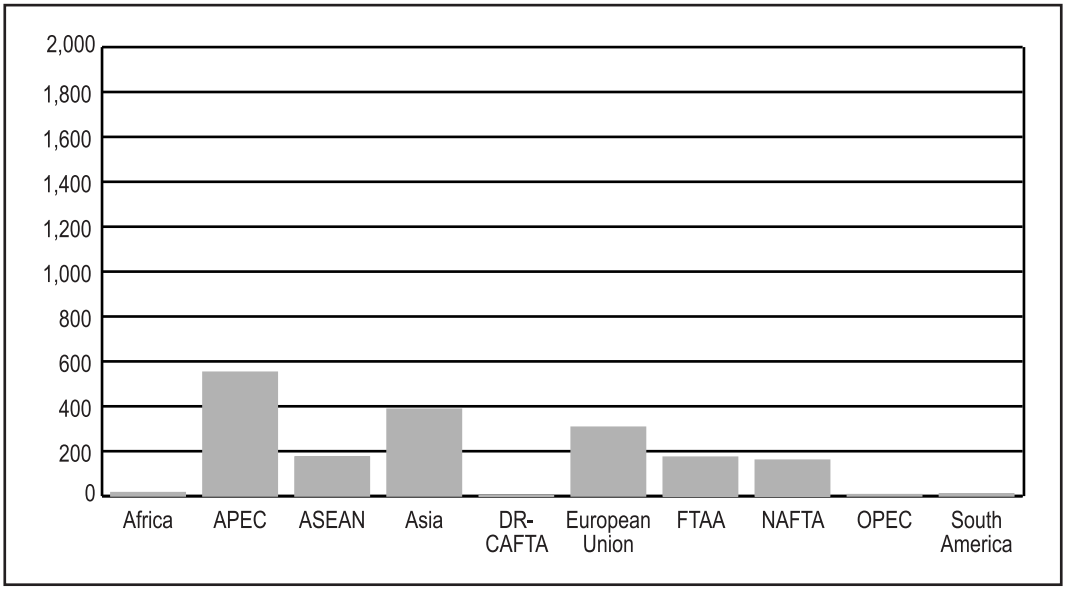


Source: Office of Trade and Industry Information, International Trade Administration, U.S. Department of Commerce

Santa Rosa-Petaluma, CA Metro Area Exports
Top 5 Global NAICS Categories by Export Value, 2006

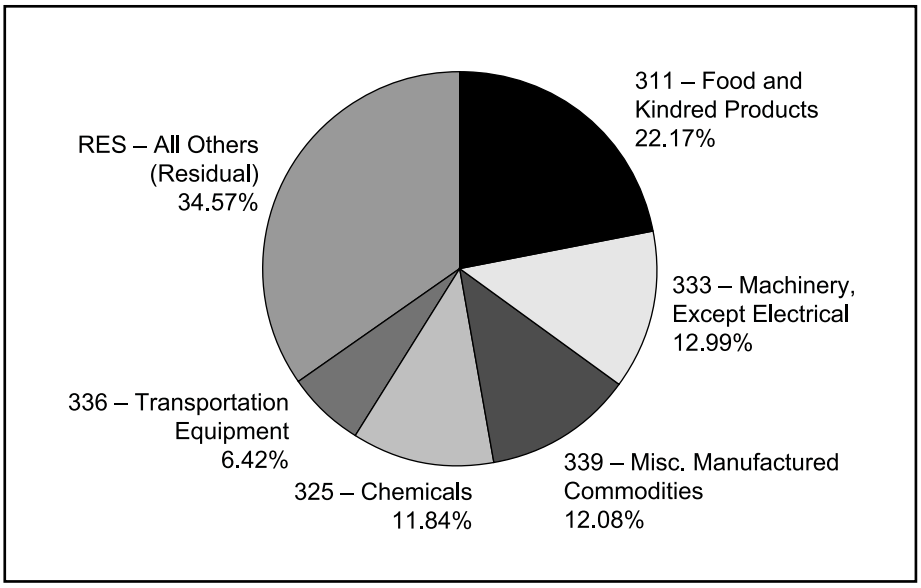


Santa Rosa-Petaluma, CA Metro Area Exports
Destination by Export Value, 2006
(Millions of Dollars)

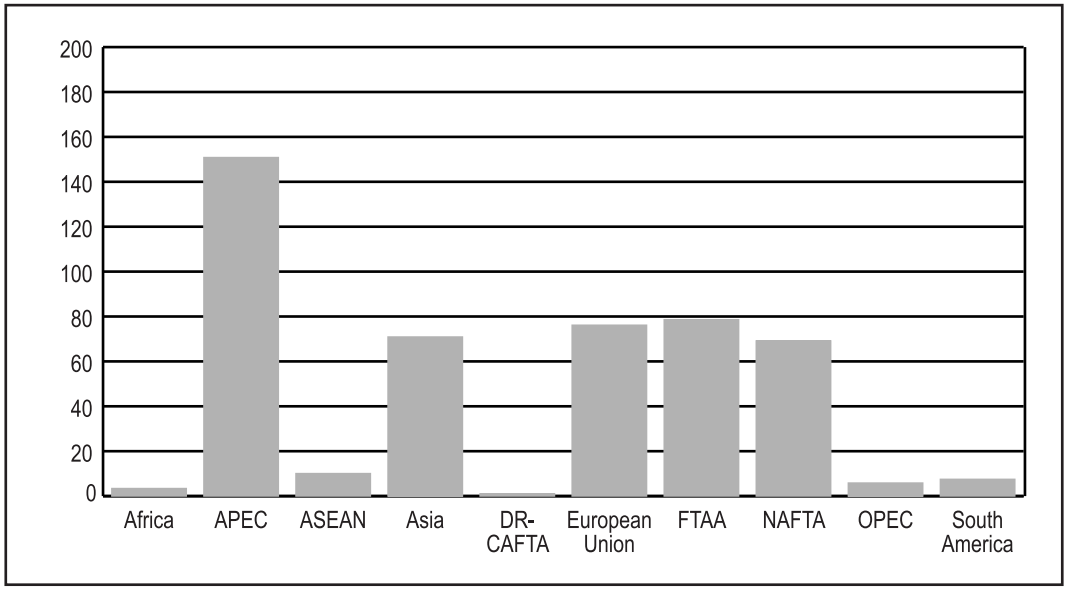


Source: Office of Trade and Industry Information, International Trade Administration, U.S. Department of Commerce

Vallejo-Fairfield, CA Metro Area Exports
Top 5 Global NAICS Categories by Export Value, 2006



Vallejo-Fairfield, CA Metro Area Exports
Destination by Export Value, 2006
(Millions of Dollars)



Source: Office of Trade and Industry Information, International Trade Administration, U.S. Department of Commerce

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