# **Macroeconomic Assumptions**

Macroeconomic assumptions underlying the USDA baseline are characterized by above-trend growth in 2004 followed by steady growth at average historical levels beginning in 2005. Costs of energy and other raw materials and exchange rate developments are important uncertainties in the outlook. The baseline's macroeconomic assumptions were completed in October 2004.

The U.S. and world economies continue to become increasingly interdependent both through growing trade and through financial market integration. The United States maintains its global share of gross domestic product (GDP) at about 30 percent. With the largest GDP and capital market, the United States plays a large role in determining economic conditions around the world, although growing economic interdependence implies that international macroeconomic conditions also have important effects on the U.S. economy.



U.S. and world gross domestic product (GDP) growth

The baseline assumes that U.S. GDP growth moderates in the near term from the rapid growth in 2004 as the economy moves toward a longrun annual growth rate near 3 percent. Continuing U.S. technological advances associated with computing and telecommunications will provide support for worldwide productivity growth.

- Global economic growth is also projected to reflect steady gains as most countries of the world move close to longrun sustainable economic growth rates.
- Relatively high oil prices in 2004 and beyond will constrain Asia and its manufacturing sector, which is far more dependent on energy for GDP growth than are more developed economies.





World economic growth is projected to strengthen from the slow growth of 2001-03, averaging over 3 percent through 2014. Increased incomes and growth in population raise global food demand, leading to gains in agricultural trade and U.S. exports.

• Consumption and imports of food and feed in developing countries are particularly responsive to growth in income. As incomes rise in these countries, consumers generally diversify their diets, moving away from staple foods to include more meat, fruits, vegetables, and processed foods. These consumption shifts increase import demand for feedstuffs and high-value food products. Historically, this has included increases in U.S. exports of meat and processed foods.

GDP growth for developed countries, European Union-25, and Japan



Developed economies are projected to grow at rates similar to those of the 1990s, averaging 2.6 percent in 2006 and beyond.

- The adoption of the euro enhanced cross-border trade and investment within the European Union (EU). Enlargement of the EU to include countries of Central and Eastern Europe implies closer integration, creating more trade and investment opportunities.
- In spite of this, the EU does not grow as rapidly as the United States, reflecting smaller population growth and rigidities in labor markets that constrain economic gains.
- Japan continues to face significant economic challenges, largely the result of its unresolved banking problems and persistent deflation. Japan's share of world GDP is expected to decline to less than 13 percent by 2014, down from more than 17 percent in the early 1990s.



GDP growth for developing economies and the former Soviet Union

Economic growth in developing countries is projected at a 5.1 percent average annual rate in 2006-14, while overall growth in the former Soviet Union (FSU) is projected to average slightly below 5 percent per year.

- Long-term growth near 4 percent is projected for Latin America. This will attract foreign capital inflows, sustaining growth.
- Growth in the developing economies of East and Southeast Asia is projected to be about 6 percent for the next decade, but still will be below the very strong average growth of over 7 percent in the 1990s.
- China's economic growth is consistently the strongest in Asia, and is expected to average above 7 percent over the next decade.
- Russia, Ukraine, and the other former Soviet Republics benefit from their shift to market economies, with GDP gains of 4-5 percent annually in these countries for the next decade.



Global population growth is a major factor underlying agricultural demand and trade. Historically, about 70 percent of increases in food use have been related to population growth, leaving about 30 percent driven by increasing incomes and other factors. With population growth slowing in the baseline projections and income growth strengthening, population gains will become relatively less important in determining food and agricultural demand growth.

- World population growth declines from an annual rate of 1.7 percent in the 1980s to an average of about 1.1 percent annually during the projection period.
- Developed economies and the FSU have very low projected rates of population growth in the baseline, 0.4 and 0.1 percent respectively. The projected annual average population growth rate for the United States is the highest among developed countries, 0.9 percent, in part reflecting large immigration.
- Population growth rates in developing countries decline by almost half between the 1970s and the projection period, but remain above those in developed countries and the FSU. As a consequence, the share of world population accounted for by developing countries continues to increase, from 80 percent in 2004 to 82 percent by 2014.
- China's population growth rate slows from 1.5 percent per year in 1981-90 to 0.6 percent in 2005-14. The population growth rate in India, the world's second most populous nation, is projected to decline from 2.1 percent to 1.3 percent per year between the same periods. Nonetheless, this growth narrows the gap between its population and that of China.
- Brazil's population growth rate falls from 2.1 percent annually in 1981-90 to 1.0 percent in 2005-14. Sub-Saharan Africa's population growth rate declines from 2.9 percent to 1.9 percent per year for the same periods, still leaving Africa with the highest population growth rates of any region.



U.S. agricultural trade-weighted dollar projected to strengthen 1/

1/ Real U.S. agricultural trade-weighted dollar exchange rate, using U.S. agricultural export weights.

Exchange rates in the baseline are expressed as local currency per U.S. dollar, in real (inflation-adjusted) terms, thus reflecting nominal exchange rates and relative inflation rates. With this measure, a decrease in a country's exchange rate indicates an appreciation of its currency since fewer units of that currency are needed to equal the value of one U.S. dollar. Implications for the value of the U.S. dollar are then measured as weighted averages of individual country-specific exchange rates. For example, the U.S. dollar value index shown in the chart is a trade-weighted measure for U.S. agricultural markets, where the weights reflect relative U.S. agricultural exports to foreign countries. Alternative measures of the value of the U.S. dollar can be constructed using different weights, such as agricultural trade weights of competitors in global trade or U.S. exports weights for a specific commodity.

- While there is a depreciation of the U.S. dollar in the near term, the dollar is projected to appreciate again starting in 2007. The strengthening of the U.S. dollar assumes that capital moves into the United States to take advantage of well-functioning financial markets, transparent financial accounting standards, a relatively risk-free environment, and high expected long-term productivity growth and investor returns, which mitigates concerns with the budget and trade deficits. Nonetheless, high aggregate U.S. trade and budget deficits and a historically low domestic savings rate could make the near-term depreciation of the dollar sharper and longer than assumed in the baseline. If this were to occur, near-term U.S. and world economic growth would be weaker as well.
- A return to a strengthening dollar in the baseline reduces U.S. agricultural competitiveness and constrains growth in exports. This is partially offset by longer term global economic growth, which increases the demand for U.S. exports. U.S. exports of bulk commodities and horticultural products tend to be the agricultural products most sensitive to an appreciating U.S. dollar due to relatively stronger global trade competition in those markets.
- China is assumed to maintain a policy of a fixed nominal exchange rate relative to the U.S. dollar, keeping its currency at a level that several indicators suggest is significantly undervalued. This policy lowers prices for Chinese exports, thereby affecting both agricultural and nonagricultural trade. Even with a fixed nominal exchange rate, higher projected inflation in China than in the United States implies some real appreciation of the Chinese currency. However, an appreciation of the Chinese currency in nominal terms would make the real currency appreciation greater, which would tend to lower China's exports and raise the volume of its imports.



Inflation rates, which came down in the 1990s (except in the transition economies of the FSU), are projected to remain low through 2014.

- For developed countries and the world as a whole, inflation is projected to be below 3 percent.
- Inflation rates for countries of the FSU are sharply lower than the exceedingly high rates during the transition period for those economies in the 1990s.
- Inflation rates in developing countries are also projected to fall. Inflation in Asia declines to rates comparable to those in developed countries. Those in Latin America and Africa and the Middle East, while declining, will remain substantially above inflation rates in the rest of the world.
- As the U.S. and world economies move to longrun sustainable rates of economic growth, inflationary pressures will begin. In response, the Federal Reserve Board and central banks in other countries are assumed to raise short-term interest rates to limit price increases. In addition, as world economies grow, demand for credit rises and further boosts interest rates. Finally, a weaker U.S. dollar relative to the yen and the euro in the near term is expected to result in U.S. interest rates rising more than those in Japan and Europe to continue financing the U.S. budget and trade deficits. However, relatively low inflation rates will keep domestic interest rates from moving to the high levels seen in the 1980s.

### Crude oil prices



Oil prices increased in 2004 due to uncertainties in the international oil market that resulted from the unstable situation in the Middle East, supply problems from the Gulf of Mexico to Norway that lowered effective production capacity, and economic expansion in developing Asia (especially in China) that raised demand. Crude oil prices are projected to average somewhat higher in 2005 as continued (although slower) growth in the major Asian economies will keep oil demand strong, outpacing gains in new crude oil supplies.

- From 2006 to 2009, real oil prices are projected to fall as supply and demand adjust to recent high prices and move the market to a more sustainable long-term balance.
- From 2010 on, crude oil prices are projected to rise slightly faster than the general inflation rate. New oil discoveries, along with new technologies for finding, extracting, and refining oil, are assumed to allow for continued substantial growth in demand with modest relative energy price inflation. These projections are broadly consistent with the U.S. Department of Energy, Energy Information Administration's January 2005 *Annual Long-Term Outlook*.
- Most of the growth in world oil demand will be due to strong Asian GDP growth, which is highly dependent on energy availability. Higher oil prices could lower Asian and global GDP growth from rates projected in the baseline, although ensuing economic adjustments through adoption of existing energy-saving technologies common in developed economies make a sustained growth slowdown less likely (see box, page 14).
- Oil prices have historically affected prices of natural gas and supply conditions for nitrogen-based fertilizer. However, the links between the oil and natural gas markets have weakened significantly due to dramatic growth in the demand for natural gas and deregulation throughout the natural gas supply and demand system. As a result, prices for natural gas and fertilizer will continue to be volatile. U.S. imports of fertilizer will mitigate the impact of rising natural gas prices on farm operations in the United States (see box, page 15).

### Potential Risk to Macroeconomic Assumptions High Prices for Oil and Other Industrial Commodities

Large increases in oil prices in 2004 were accompanied by sharp gains in prices for other industrial commodities. There is some risk that continued high prices could slow global economic growth from that assumed in the baseline.

- Much of the gain in oil prices reflects rapid economic growth in developing Asia. These economies tend to be highly energy intensive, taking more energy to generate a dollar increase in real GDP than in the United States and other developed countries. Thus, strong economic growth projected for these countries could be curtailed if high oil and industrial commodity prices persist.
- However, recent evidence suggests the developing Asian economies may have greatly improved energy efficiency, and many have coal as an alternative energy source. Consequently, growth impacts of high oil prices may be smaller than in earlier years. Additionally, if economic growth in these countries slows significantly, demand for oil and other industrial commodities would fall, with prices declining as well. These types of economic adjustments (as happened in the late 1980s when a spike in industrial commodity prices triggered a slowdown in world growth and encouraged conservation of energy and raw materials, which combined to lower demand and prices) reduce the likelihood of a sustained economic slowdown due to high oil and industrial commodity prices.
- Instead, if the world economy were to adjust with less flexibility, global economic growth could be lower than assumed for the baseline.

### Fertilizer Imports To Mitigate the Impact of Rising Natural Gas Prices on the Farm Sector

Tightness in the U.S. natural gas market is expected to persist for the medium term, although the resulting price volatility will have only modest implications for the farm sector because of higher imports of fertilizer. Although the direct use of natural gas on U.S. farms is small compared to use of other energy sources, nitrogen-based fertilizer produced from natural gas feedstock is of considerable importance in the production of many crops, such as corn, cotton, and rice. Use of nitrogen-based fertilizers (nitrogenates) has been part of the remarkable productivity gains of U.S. agriculture.

## **Natural Gas Market Developments**

While the United States has imported significant amounts of natural gas from Mexico and Canada over the past 20 years, North America had been largely self-sufficient in natural gas production until the last several years. In this period, the natural gas market tightened as demand for this low-polluting fuel rose for use in electricity generation, petrochemical production, and other manufacturing. Natural gas imports through shipments of liquefied natural gas (LNG) will become increasingly important in augmenting North American supply and relieving the demand pressures on prices. However, there currently are not enough facilities to convert LNG to natural gas to meet projected natural gas demand, with several years needed before new LNG conversion facilities will be available to ease this situation. Thus, natural gas prices could be high and somewhat volatile over the next several years.

## Fertilizer Market Adjustments

North American nitrogenates are produced using natural gas due to its availability, historically low price, and environmental friendliness. However, as U.S. natural gas prices rose sharply in recent years, some U.S. plants that produce nitrogen-based fertilizer shut down, reducing domestic fertilizer production capacity. Instead, fertilizer suppliers imported nitrogenates from major fertilizer exporters, such as Trinidad and Tobago, Canada, Russia, and Saudi Arabia. These countries have lower natural gas prices and thus a substantial cost advantage in nitrogenate production.

Fertilizer imports help keep prices for nitrogenates in the United States from rising as much as natural gas prices. Although fertilizer prices will rise when natural gas prices increase, as long as world fertilizer production capacity remains ample, the availability of fertilizer imports to augment domestic supplies will continue to moderate fertilizer prices for the U.S. farm sector.

Table 1. U.S. macroeconomic assumptions												
Item	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GDP, billion dollars			10.100	10.107	10.000					17 700	10 700	10.070
Nominal	11,004	11,752	12,432	13,137	13,829	14,543	15,294	16,084	16,914	17,788	18,706	19,672
Real 1996 chained dollars	10,381	10,838	11,196	11,554	11,901	12,246	12,601	12,966	13,342	13,729	14,127	14,537
percent change	3.0	4.4	3.3	3.2	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Disposable personal income												
Nominal (billions)	8,160	8,641	9,134	9,636	10,166	10,725	11,315	11,938	12,594	13,287	14,018	14,789
percent change	4.2	5.9	5.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Nominal per capita, dollars	28,033	29,402	30,783	32,170	33,623	35,146	36,741	38,412	40,163	41,998	43,922	45,938
percent change	3.2	4.9	4.7	4.5	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.6
Real (billion 1996 chained)	7,734	7,997	8,237	8,500	8,772	9,053	9,343	9,641	9,950	10,268	10,597	10,936
percent change	2.3	3.4	3.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Real per capita, 96 dollars	26.569	27.209	27.759	28.377	29.013	29.665	30.335	31.024	31.731	32.457	33.204	33.971
percent change	1.3	2.4	2.0	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3
Consumer spending												
Real (billion 1996 chained)	7 356	7 613	7 83/	8 077	8 310	8 552	8 701	0 038	0 201	0 551	0.818	10.003
percent change	3.3	3.5	2.9	3.1	3.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Inflation measures												
CDB price index chained	106.0	109.4	111.0	112 7	116.2	110 0	121 /	124.0	126.9	120.6	122.4	125.2
ODF price index, chained	100.0	100.4	2.4	0.4	110.2	110.0	121.4	124.0	120.0	129.0	132.4	135.5
	1.0	2.3	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
CPI-U, 82-84=100	184.0	189.1	194.0	199.1	204.0	209.1	214.4	219.7	225.2	230.9	236.6	242.5
percent change	2.3	2.8	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PPI, finished goods 82=100	143.3	147.5	151.2	153.6	156.0	158.5	161.1	163.6	166.3	168.9	1/1.6	174.4
percent change	3.2	2.9	2.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
PPI, crude goods 82=100	135.3	156.9	172.6	164.0	159.1	161.0	163.1	165.4	167.7	170.0	172.4	174.8
percent change	25.1	16.0	10.0	-5.0	-3.0	1.2	1.3	1.4	1.4	1.4	1.4	1.4
Crude oil price, \$/barrel												
Refiner acq. cost, imports	27.9	38.5	42.6	37.5	34.1	33.1	33.0	33.9	34.9	35.9	36.9	37.9
percent change	17.9	38.1	10.6	-11.9	-9.0	-2.9	-0.4	2.8	2.8	2.8	2.8	2.8
Real 1996 chained dollars	26.3	35.5	38.3	33.0	29.3	27.9	27.2	27.3	27.5	27.7	27.8	28.0
percent change	15.8	35.0	8.0	-14.0	-11.0	-5.0	-2.5	0.6	0.6	0.6	0.6	0.6
Labor compensation per hour												
nonfarm business, 92=100	149.7	155.5	161.0	166.5	172.1	178.0	184.0	190.3	196.7	203.4	210.3	217.5
percent change	4.1	3.9	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Interest rates, percent												
3-month T-bills	1.0	1.3	3.2	3.8	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
3-month commercial paper	1.1	1.6	3.5	4.3	4.5	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Bank prime rate	4.1	4.2	5.9	6.5	7.5	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Treasurv bonds (10-vear)	4.0	4.5	5.3	5.5	6.0	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Moody's Aaa bonds	5.7	5.9	6.4	6.8	7.5	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Civilian unemplovment												
rate, percent	6.0	5.5	54	54	54	54	54	54	54	54	54	54
Nonfarm payroll emp millions	129.9	131.3	132.9	134.3	135.8	137.3	138.8	140.2	141.6	143.0	144.5	145.9
percent change	-0.3	1.0	1.2	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0
Total population, million	201 1	203.0	296 7	200 5	302 /	305.2	308.0	310.8	313.6	316 /	310 1	321.0
nercent change	10	200.0 1 0	10	10	0.02.4	000.2	0.00.0	0.0	0.0	0.0.4	0.0	00
porcent change	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

Domestic macroeconomic assumptions were completed in October 2004.

#### Table 2. Global real GDP growth assumptions

	Share of								Average			
Region/country	world GDP 1996-2000	2002	2003	2004	2005	2006	2007	2008	1991-2000	2001-2005	2006-2014	
	Percent					Per	rcent cha	ange				
World	100.0	1.8	2.6	4.1	3.4	3.3	3.2	3.2	2.8	2.6	3.2	
less United States	69.6	1.8	2.5	3.9	3.4	3.4	3.3	3.3	2.5	2.6	3.4	
North America	32.6	2.0	3.0	4.3	3.3	3.2	3.0	2.9	3.3	2.6	2.9	
United States	30.4	1.9	3.0	4.4	3.3	3.2	3.0	2.9	3.3	2.6	2.9	
Canada	2.1	3.4	2.0	2.6	3.2	3.1	3.0	3.0	2.7	2.5	3.0	
Latin America	6.4	-0.8	1.9	4.0	3.8	3.9	3.9	3.9	3.4	1.8	3.9	
Caribbean & Central America	0.6	2.6	2.7	3.1	3.6	4.3	4.0	3.6	3.6	2.9	3.7	
Mexico	1.7	0.7	1.3	3.9	4.0	4.0	4.0	4.0	3.6	1.9	4.0	
South America	4.1	-2.1	2.1	4.1	3.7	3.8	3.9	3.9	3.3	1.5	3.9	
Argentina	1.0	-10.9	8.7	6.5	3.5	3.5	3.5	3.5	4.7	0.7	3.5	
Brazil	1.9	1.9	-0.2	3.4	3.5	3.7	3.9	3.9	2.7	2.0	3.9	
Other	1.2	-2.0	1.6	3.7	4.1	4.0	4.0	4.0	3.3	1.5	4.0	
_												
Europe	27.5	1.2	1.0	2.2	2.4	2.4	2.4	2.4	2.0	1.7	2.4	
European Union-25	25.9	1.2	1.0	2.2	2.4	2.4	2.4	2.4	2.0	1.7	2.4	
Other Europe	1.6	1.8	1.8	2.3	2.5	2.4	2.4	2.4	1.4	2.1	2.4	
Former Soviet Union	1 1	48	70	6.6	5.0	48	48	48	-4.3	59	48	
Russia	0.8	4.7	7.3	7.1	5.0	5.0	5.0	5.0	-3.9	5.8	5.0	
Ukraine	0.1	4.8	9.4	8.0	6.4	4.5	4.5	4.5	-7.7	7.5	4.5	
Other	0.2	5.0	4.8	4.3	4.3	4.3	4.3	4.3	-3.6	5.6	4.3	
Asia and Oceania	27.0	2.2	4.1	5.3	4.0	3.7	3.7	3.8	3.2	3.4	3.9	
East Asia	21.9	1.7	3.8	5.3	3.7	3.3	3.4	3.4	2.9	3.1	3.5	
China	3.1	8.0	9.1	9.4	7.5	7.3	7.3	7.3	10.2	8.3	7.3	
Hong Kong	0.5	1.9	3.2	5.6	5.2	4.8	4.6	4.5	4.4	3.2	4.5	
Japan	15.9	-0.4	2.5	4.2	2.4	1.8	1.8	1.8	1.4	1.6	1.8	
Korea	1.4	6.9	3.1	5.0	4.4	5.2	5.4	5.3	6.2	4.5	5.2	
Taiwan	0.9	3.6	3.2	5.7	4.6	4.5	4.5	4.5	6.4	3.0	4.5	
Southeast Asia	1.9	4.7	5.4	5.7	5.4	5.3	5.3	5.3	5.2	4.6	5.3	
Indonesia	0.5	3.7	4.1	4.3	4.8	5.0	5.0	5.0	4.4	4.0	5.0	
Malaysia	0.3	4.1	5.3	6.7	5.6	5.5	5.5	5.5	7.2	4.4	5.5	
Theiland	0.2	4.4 5.4	4.8	5.1	4.5	4.0	4.0	4.0	2.9	4.4	4.0	
Vietnem	0.4	5.4 7 4	0.0	0.9	0.0	5.5	5.5	5.5	4.5	5.4 7.1	5.5	
South Asia	0.1	7.1	6.6	63	7.Z	7.0 5.8	7.0	7.0	7.0	7.1 5.0	7.0	
India	1.0	7.0	0.0 7 1	6.7	5.0	5.0 6.0	5.0	5.0	5.5	5.9	5.0	
Pakistan	0.2	5.1	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.5	
Bangladesh	0.1	5.3	5.3	5.2	5.2	5.1	5.1	5.1	4.8	5.1	5.0	
Oceania	1 4	3.8	3.1	3.4	3.2	3.5	3.5	3.5	3.6	3.5	3.5	
Australia	1.2	3.8	3.0	3.3	3.2	3.5	3.5	3.5	3.7	3.4	3.5	
New Zealand	0.2	4.4	3.4	3.6	3.2	3.2	3.2	3.2	2.7	3.6	3.2	
Other Asia and Oceania	0.5	3.5	4.5	4.5	4.5	4.5	4.5	4.5	6.0	3.4	4.5	
Middle East	3.8	4.4	0.2	5.9	5.3	5.8	5.1	4.4	3.8	3.5	4.6	
Iran	1.0	5.9	5.3	5.5	4.5	4.5	4.5	4.5	4.1	5.2	4.5	
Iraq Osudi Asshis	0.6	5.5	-21.2	10.0	12.0	15.0	10.0	5.6	4.1	2.2	7.0	
Saudi Arabia	0.6	1.2	5.5	6.6	3.2	3.0	3.0	3.0	2.2	3.5	3.0	
l urkey	0.6	7.9	5.8	6.0	4.5	4.6	4.6	4.6	3.6	3.4	4.6	
Other	1.1	2.1	3.1	4.0	4.0	4.0	4.0	4.0	4.6	3.2	4.0	
Africa	1.6	3.4	3.3	3.7	4.5	4.3	4.3	4.3	2.7	3.6	4.3	
North Africa	0.6	3.0	4.6	4.6	5.2	5.1	5.0	4.9	3.3	4.2	4.9	
Algeria	0.2	4.1	6.7	6.5	6.8	6.3	6.0	5.8	1.7	5.2	5.7	
Egypt	0.3	2.6	2.9	3.5	4.1	4.5	4.5	4.5	4.4	3.2	4.5	
Morocco	0.1	3.2	5.5	3.9	5.1	4.7	4.5	4.5	2.4	4.8	4.5	
Tunisia	0.1	1.7	5.6	5.5	5.6	5.4	5.3	5.2	4.8	4.7	5.2	
Republic of South Africa	0.4	3.6	1.9	2.4	3.4	3.2	3.2	3.2	2.7	3.1	3.2	
Other Sub-Saharan Africa	0.6	3.6	3.3	4.4	4.8	4.7	4.6	4.6	1.7	3.7	4.6	

International macroeconomic assumptions were completed in October 2004.

#### Table 3. Population growth assumptions

	Population										
Region/country	in 2001	2002	2003	2004	2005	2006	2007	2008	1991-2000	2001-2005	2006-2014
	Millions					Perc	ent chang	е			
World <sup>1</sup>	6,160	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.4	1.2	1.1
less United States	5,875	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.4	1.2	1.1
North America	317	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	0.9	0.9
United States	285	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	0.9	0.9
Canada	32	1.0	1.0	0.9	0.9	0.9	0.9	0.9	1.2	1.0	0.8
Latin America	529	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.6	1.3	1.1
Caribbean & Central America	75	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.7	1.6	1.4
Mexico	101	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.6	1.2	1.1
South America	353	1.3	1.3	1.2	1.2	1.2	1.2	1.1	1.6	1.3	1.1
Argentina	38	1.1	1.1	1.0	1.0	1.0	1.0	0.9	1.3	1.1	0.9
Brazil	178	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.5	1.2	0.9
Other	137	1.6	1.5	1.4	1.4	1.4	1.4	1.3	1.9	1.5	1.3
Europe	521	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1
European Union-25	454	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.2	0.1
Other Europe	67	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Former Soviet Union	282	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	-0.1	0.1
Russia	146	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.1	-0.5	-0.3
Ukraine	49	-0.8	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.4	-0.8	-0.5
Other	87	0.8	0.8	0.9	0.9	0.9	1.0	1.0	0.6	0.8	1.1
Asia and Oceania	3,449	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.4	1.2	1.1
East Asia	1,505	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.9	0.6	0.6
China	1,277	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.0	0.6	0.6
Hong Kong	7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	1.6	0.7	0.5
Japan	127	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.1	-0.1
Korea	48	0.7	0.7	0.6	0.6	0.6	0.6	0.5	1.0	0.7	0.4
Taiwan	22	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.9	0.7	0.5
Southeast Asia	539	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.7	1.5	1.2
Indonesia	228	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.8	1.5	1.3
Philippings	22	1.9	1.9	1.9	1.8	1.8	1.8	1.8	2.2	1.9	1.7
Thailand	63	2.0	2.0	0.0	0.0	1.0	0.8	1.0	2.2	2.0	0.7
Vietnam	80	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.2	1.0	1.2
South Asia	1 373	1.0	1.0	1.0	1.6	1.6	1.6	1.5	1.9	1.0	1.2
India	1,019	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.8	1.5	1.3
Pakistan	150	2.0	1.8	2.0	2.0	2.1	2.1	2.0	2.5	2.1	1.9
Bangladesh	133	2.0	2.1	2.1	2.1	2.1	2.1	2.1	1.7	2.0	2.0
Oceania	32	1.5	1.4	1.3	1.3	1.2	1.2	1.2	1.5	1.4	1.1
Australia	19	1.0	0.9	0.9	0.9	0.9	0.8	0.8	1.2	0.9	0.8
New Zealand	4	1.1	1.1	1.1	1.0	1.0	1.0	0.9	1.3	1.1	0.9
Other Asia and Oceania	170	2.0	2.2	1.9	1.9	1.7	1.5	1.4	2.0	1.9	1.4
Middle East	247	1.8	1.7	1.7	1.7	1.8	1.8	1.8	2.1	1.8	1.7
Iran	66	0.7	0.4	0.5	0.8	1.0	1.1	1.1	1.4	0.7	1.1
Iraq	23	2.9	2.8	2.8	2.8	2.7	2.7	2.6	2.3	2.8	2.5
Saudi Arabia	24	2.8	2.7	2.5	2.4	2.3	2.2	2.0	3.7	2.7	1.8
Turkey	66	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.6	1.2	1.0
Other	67	2.7	2.7	2.7	2.7	2.6	2.6	2.6	2.9	2.7	2.5
Africa	815	2.1	2.1	2.0	2.0	1.9	1.9	1.9	2.5	2.1	1.8
North Africa	143	1.7	1.7	1.6	1.6	1.6	1.5	1.5	2.1	1.7	1.5
Algeria	31	1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.9	1.4	1.2
Egypt	72	2.0	1.9	1.9	1.8	1.8	1.7	1.7	2.2	1.9	1.6
Morocco	31	1.7	1.7	1.6	1.6	1.6	1.6	1.5	2.0	1.7	1.5
l unisia	10	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.0
Sub-Sanaran Africa	672	2.2	2.2	2.1	2.1	2.0	2.0	1.9	2.6	2.2	1.9
Republic OF South Africa	43 630	0.3	0.1	-0.1	-0.4 2.2	-U.D 2.2	-0.8 2.1	-0.9	1.3	0.1	-1.1 2 0

1/ Totals for the world and world less United States include countries not otherwise listed in the table.
Source: U.S. Department of Commerce, Bureau of the Census and U.S. Department of Agriculture, Economic Research Service. The population assumptions were completed in August 2004.