



StraightTalk®

From The Conference Board Chief Economist Bart van Ark



How Unique Is the Current Era?

What Can Two Millennia of Economic Data Tell Us?

Dear Reader,

As many break away from their daily routine this summer, we are considering what kind of routine, if any, will return to economic activity in the fall. The emerging consensus seems to be that the current period of slow growth in advanced economies will last for at least another six months. Some argue it may persist for a few years more or even longer than a decade.

Descriptions of the current era as “unprecedented” are ubiquitous, but attempts to compare the current economic environment with historical events have proven difficult because of the uniqueness of each past event. Still, it is hard to think about where we are heading in the longer term without adopting a historical perspective. “In the long run, we are all dead,” John Maynard Keynes quipped back in the 1920s. While this comment has often been interpreted as meaning Keynes did not care about long-term economic performance, he really meant to point out that the long run is a misleading guide to current affairs or policy measures. True or not, if we are indeed looking at several years of slower growth ahead, the longer term may already be here.

So how unique are our current times? To gain some perspective on this question, this month’s issue offers a very brief quantitative economic history of the world economy during the past two millennia, including a discussion of the sources of growth and decline and an interpretation of what they could mean for our understanding of current times. Throughout the issue, I use topline numbers on macroeconomic output and income growth from the eminent scholar Angus Maddison, who died this April at the age of 83. Angus was my academic mentor and helped shape my interest in and focus on the longer-term dynamics of economic performance. If you would like to learn more about his research, I recommend his last book *Contours of the World Economy 1-2030 AD: Essays in Macro-Economic History* (Oxford University Press, 2007) and his website (www.ggdc.net/maddison).

Bart van Ark



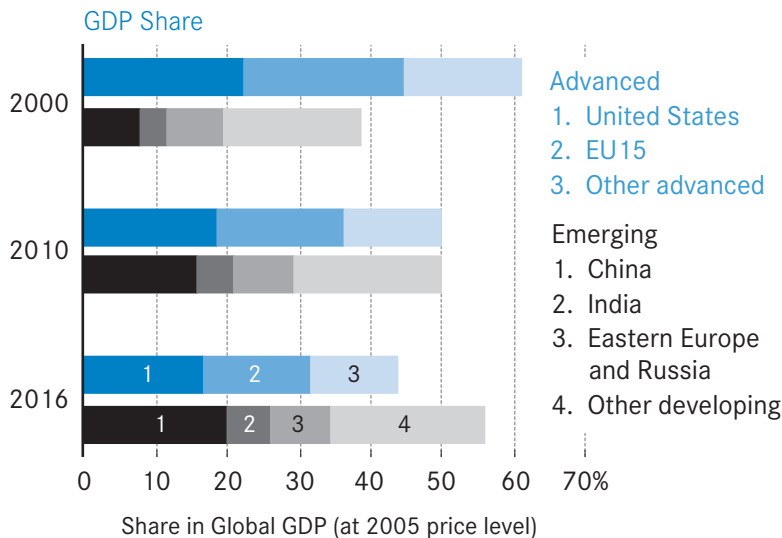
Are Today's Changes in Global Output Shares out of the Ordinary?

Between 2000 and 2010, the global output share of the advanced economies (Western Europe, the United States, Canada, Japan, and other advanced economies in East Asia and the Pacific) fell dramatically—from about two-thirds to about one-half. The proportional rise of the global output share of the emerging economies has largely been driven by India and China. The Conference Board global projections for the period through 2016 (which were updated this June) suggest that the global output share for the

advanced economies will be shaved off another 6.5 percentage points in six years' time, as emerging economies will continue to grow much faster during this period (Chart 1).

Chart 1

There has been an unprecedented shift of global output toward emerging economies during the new century



To calculate regional shares of world GDP, we employ data for 181 countries, drawing from The Conference Board Total Economy Database, the IMF's World Economic Outlook Database (April 2010), and our own projections of 2010 country-level GDP growth and 2011-2016 regional GDP growth. Regional shares are calculated from GDP converted at purchasing power parity, which are updated from 2005 using deflator changes.

Source: The Conference Board

These shifts in global economic activity are unprecedented even if one takes a long-term historical perspective (Chart 2). With the possible exception of the 1820–1870 period, when the effects of the Industrial Revolution began to be broadly felt in what are today's advanced economies, there have never been such rapid shifts in economic activity between major regions in the world. The first 16 years of the twenty-first century represent a relatively short period, however, and a comparison of this brief time frame to longer historical periods may be somewhat flawed. In the 50 years between 1820 and 1870, the combined share of global output for Western Europe, North America, and Australia and New Zealand increased from about 25 percent to 43 percent, which is an 18 percentage point increase. If we compare the shift in global output for this historical 50-year period with a projection for 2000–2050, the numbers for the latter period are still striking. For example, in a very conservative scenario that assumes there will be no further shift in global output toward

emerging economies after 2016, the rise in emerging economies' global output share between 2000 and 2050 would be from 39 percent to 57 percent—another increase of 18 percentage points. The more plausible scenario, however, is that the output share of the advanced economies will be reduced to about one-third of global output by 2025.

Lessons from the Rise and Fall of the Roman Empire

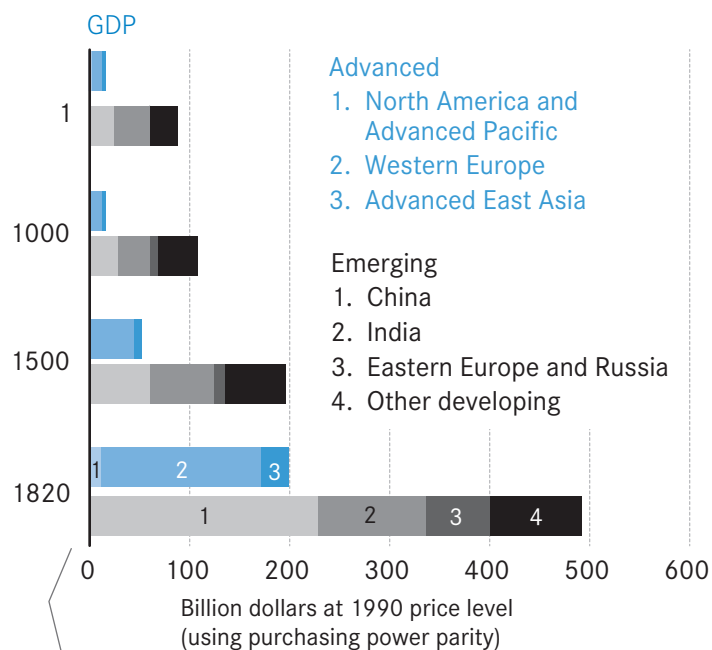
Is the sharp increase in the emerging economies' share of global output the definitive sign of the rise of China and Asia and the shift of economic power from the Atlantic to the Pacific? Are these developments signaling the end of the western market-based capitalist model and the rise of the Asian state-capitalist model?

It is difficult to answer these questions in the middle of a transition. But one may wonder how quickly economic systems really rise and fall. It turns out it takes centuries. While there are huge complexities involved in comparing economic systems at different times, Angus Maddison's numbers of output, population, and income growth provide an interesting perspective on the dynamics of growth in earlier times.¹ For example, at the peak of its wealth (around AD 164), the Roman Empire accounted for, at most, 58.5 million people (about one-fifth of the current U.S. population). The urbanization ratio for the empire was about 9 percent (about the same as Western Europe in 1700). Average income per head of the population in AD 14 was about US\$570 in the Roman Empire and about US\$850 for peninsular Italy alone (both figures are in today's prices).² The US\$570 income level was only about 20 percent above average world income because the Roman Empire's population accounted for as much as a quarter of global population at the time. For comparison, the population of advanced economies today accounts for only 15 percent of the global population, but the average income level for these economies is more than three times higher than the world average (Charts 3 and 4 on page 4). Strikingly, the very large income differentials between the elite (who accounted for less than 1 percent of the population) and laborers in the Roman Era are probably not very different from those of today.

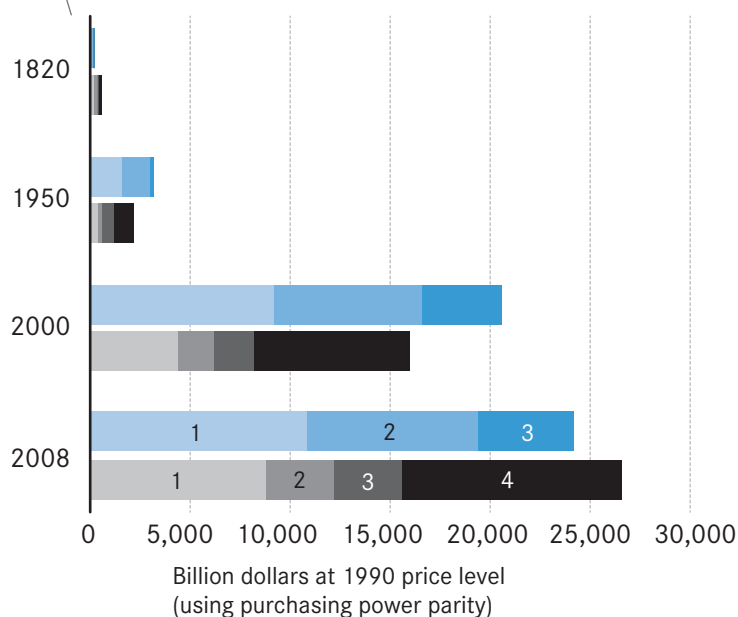
Maddison points to several factors that explain the Roman Empire's ascent: the transition from a fragmented political structure to an emperor-run system with a large bureaucracy and centralized control that worked in conjunction with strong local governments, a nonideological and pragmatic approach to issues of conflict and religion, a strong infrastructure that supported an extraordinary degree of economic integration and development,

Chart 2

Until 1820, only China and India made up more than half of world GDP



The 2000s have seen a larger output for today's emerging economies



¹ All numbers reported in the remainder of this issue are obtained from Angus Maddison's latest book, *Contours of the World Economy, 1-2030 AD: Essays in Macro-Economic History* (New York: Oxford University Press, 2007) or from his website (www.ggdc.net/maddison).

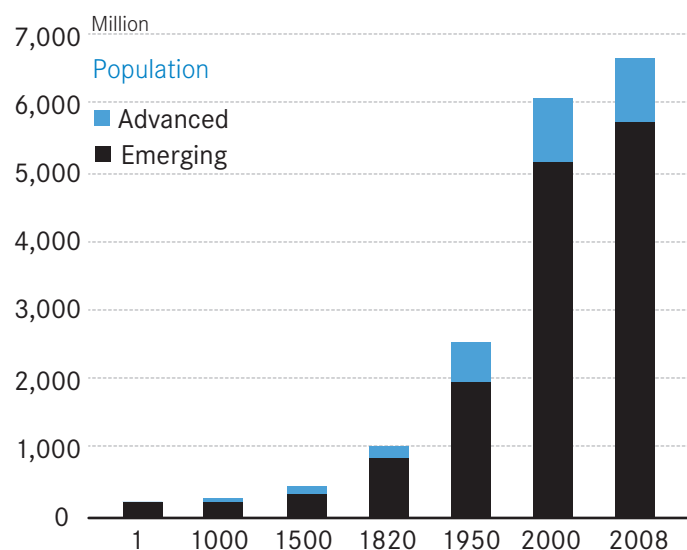
² To be more precise, all references to "today's prices" refer to purchasing power parity-converted measures of income for 1990. See The Conference Board Total Economy Database (www.conference-board.org/data/economydatabase) for the 1950-2009 series of output and per capita income.

GDP at 1990 International Geary-Khamis dollars. North America and Advanced Pacific includes Australia, New Zealand, Canada, and United States. Western Europe includes Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Sweden, Switzerland, and United Kingdom. Advanced East Asia includes Japan, South Korea, Taiwan, Hong Kong, and Singapore.

Sources: Maddison (2007), The Conference Board

Chart 3

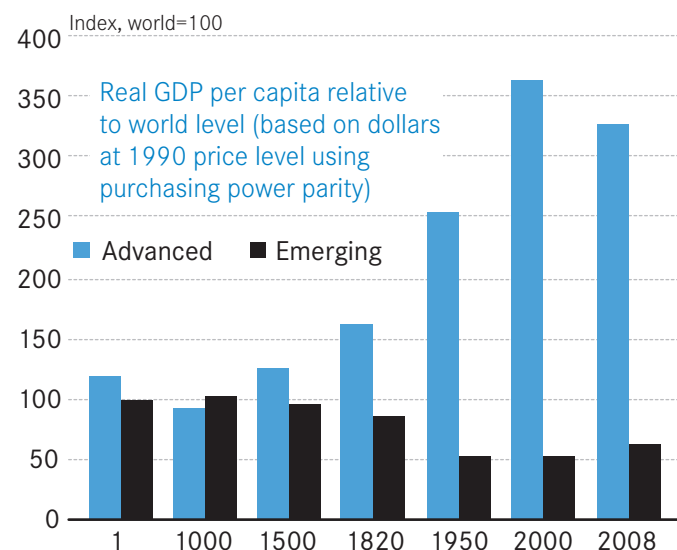
Advanced economies account for only 15 percent of the world's population



Sources: Maddison (2007), The Conference Board

Chart 4

The income differentials between advanced and emerging economies increased strongly after 1820



Sources: Maddison (2007), The Conference Board

and a military power that gradually increased in terms of size and central command. After AD 200, however, the empire gradually fell into decline, although it took several centuries before it essentially disappeared. Forces behind the fall included population decline and income stagnation that arose during the third century and were the result of plagues, civil wars, military weakness, and the loss of some provinces. Even a shift of economic and political power to the east could not overcome these pressures. Still, the economy of the Roman Empire was one of the first examples of how the combination of centralized political and economic power with large structural changes in economic activity could lead to moderate (from today's standpoint) but not insignificant advances in living standards.

Over the remainder of the first millennium, per capita income and population in the world economy hardly increased. According to Maddison, the overall population in Western Europe in AD 1000—about 25.5 million—was about the same as in AD 1. Population growth in Asia was also very slow until AD 1000, and it was close to a standstill in the two major subregions (China and India) during this period. Average income was more or less stagnant for a whole millenium or even declined (e.g., Western Europe). The Middle East advanced the most during the first millennium, and, by AD 1000, the region had the highest average income per head—US\$625 dollars (in today's prices). But at only 20 million, its population accounted for less than 10 percent of the world's population.

Growth in Imperial China

The quantitative sources of the rise of China's economy some 1,000 years ago were essentially the same as in the Roman Empire: population growth, income growth, and centralization of power. Between AD 1000 and AD 1500, the populations of both Europe and Asia began to grow, but with China and India taking the lead. During this period, China also experienced the broadest change in its political and economic structures. Between AD 700 and AD 1300 (the heydays of the Tang and Song dynasties), China underwent significant *intensive growth*,

as its population grew in conjunction with a rise in per capita income (Charts 5 and 6). There was a strong emphasis on economic and political centralization and an effective, monetized agricultural tax system based on revenues from the development of new techniques in grain and rice cultivation. For China as a whole, average living standards increased by about 30 percent—from US\$466 to US\$600 (in today's prices). The changes in agriculture took place in conjunction with significant growth in the handicraft industries and maritime trade.

From the fourteenth century onward, China entered a phase of more *extensive growth*. The population increased more than threefold between 1500 and 1820, but per capita income growth stagnated at around US\$600 (in today's prices). Central bureaucracies began to show signs of inertia as their focus shifted from economic expansion to maintaining a domestic political stronghold. While technological evolution in China certainly did not stop, it did not translate into macroeconomic changes, even though particular regions (notably the Yangzi River delta) advanced to levels of economic development similar to those of the Low Countries and Britain. A gradual decline in external trade and an increasingly inward political orientation discouraged inventions and productivity growth and ultimately led China to lose its economic leadership to Europe.

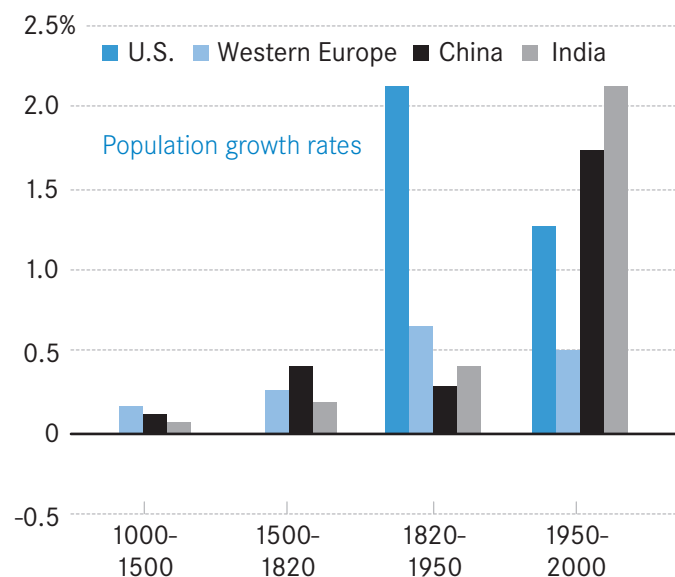
Why and When Did the West Rise?

Even though the causes, timing, and geographical locus of China's loss of leadership are still hotly debated by economic historians, estimates of macroeconomic growth of output and population suggest that Europe gradually gained ground on China starting in 1500. While Western Europe's population still grew much slower than the population of China, average per capita income in Europe was already 30 percent higher in 1500, 66 percent higher by 1700, and twice as high as in China by 1820.

The controversy among economic historians about the rise of Europe has focused on whether it was caused by radical breakthroughs in steam technology and access to abundant mineral resources (i.e., the drivers of the Industrial Revolution of the late eighteenth century)

Chart 5

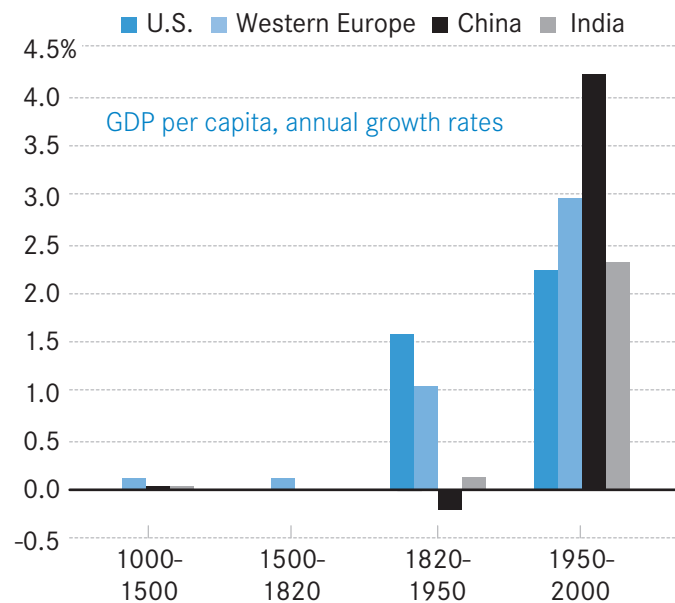
During periods of intensive growth, population rises...



Sources: Maddison (2007), The Conference Board

Chart 6

...in conjunction with a rise in per capita income



Sources: Maddison (2007), The Conference Board

or by a gradual emergence of more general social, political, and economic forces. In Maddison's interpretation, there are at least four factors that favor the gradualist answer: the recognition of the human capacity to transform the forces of nature through rational investigation and systematic experimentation, such as the rise of universities and the massive increase in printing and publishing; the fostering of entrepreneurship, especially in urban trading centers (Bruges, Venice, etc.); a series of reforms of marriage, inheritance, and kinship arrangements; and the emergence of a multipolar nation-state system that supported trade, competition, and intellectual exchange. The latter development, which occurred in distinct contrast to the tendencies toward centralization that characterized the Roman and Chinese systems, meant there was increased room for private initiative.

The rapid rise of the European economic system can also be traced to intensive growth that combined technological change with productivity increases, rapid urbanization, and the geographical specialization of intensive agriculture around urban centers. In the nonagricultural economy, increased trade resulted in increased use of the money economy and greater mobility for human capital. Increased property rights for land and capital lowered transaction costs and helped raise investments in machinery and infrastructure. As productivity increased and prices gradually declined, higher real wages and purchasing power caused the rise of the middle classes, a phenomenon that has been especially characteristic of growth since 1870.

Between 1820 and 1913, the Western economies saw a rapid increase in economic growth of around 2 percent. While not spectacular by today's standards, this increase was historically unprecedented and reflected the gradual spreading of the effects of the Industrial Revolution, which originated in Britain and, over the course of a century, eventually found its way to Europe, North America, the Pacific, and Japan.

Despite this intensification of trade, the rest of the world, with the exception of Latin America, lost out on the growth burst in the advanced countries. The reasons for the huge divergence are still widely discussed, but potential causes include the detrimental effects of colonialism, negative terms of trade for developing versus advanced economies, and weak domestic institutions in the low-income nations themselves. Between 1950 and 1973, the world economy experienced an unparalleled increase in prosperity that was much more widespread than during the previous 150 years. The world economy grew faster than any time before or since. The unique circumstances of the post-World War II recovery were certainly an important factor, but the combination of investment and technological change with global trade was a more sustainable driver. Strikingly, the divergence in comparative living standards didn't fall even during this period: by 2000, the comparative level of income between advanced and developing economies was 7:1—a level similar to that in 1973.

Perhaps Not So Unique?

How out of the ordinary are our current times? From a growth perspective, the world economy has grown at about a 4 percent rate over the last decade. This rate may continue at the same pace for at least the next five years, even with the slowing growth performance of the advanced economies. This is spectacular growth from a very long-term historical perspective, and only somewhat slower than what we saw during the “golden years” of 1950–1973. However, the locus of growth is different this time. For the first time in a full millennium, we are seeing emerging and developing economies grow their share of global output. China and India are the major contributors to this change. While both are unlikely to continue with 8+ percent growth for decades, growth performance of 5 or 6 percent will significantly raise the predominance of these countries in the global economy. This is true even if the growth potential in other Asian, Latin American, and African economies is not recognized.

The numbers on historical growth are very illuminating, but they obviously cannot tell the whole story. History is not easily caught in topline macroeconomic numbers only, and one should be cautious in using them to draw big lessons from the past. That said, there are some common threads explaining economic advances: population growth, investment and productivity, and key innovations in technology and institutions, including government. Another lesson is that change is mostly very, very gradual. There will always be important negative or positive events (or “shocks”), like natural disasters and wars or technological breakthroughs (e.g., the invention of the steam engine or the rise of ICT), but they may take decades or even centuries to transform societies. We may be witnessing such a phase of transformation right now. But there are also large differences with regard to the past, and an important one is the greater interconnectivity of the global economy. While this may speed up some of the changes in economic power described above, it will also provide greater opportunities to reap the benefits of change for those who stay behind.

A Story behind Each Number Angus Maddison (1926 – 2010)

Angus Maddison, a lifelong scholar in the measurement of long-term economic growth in the world economy, died in Paris on April 24, 2010. From the 1950s to the 1970s, he held various posts at the OECD in Paris, where he worked on improving countries' measures of GDP, unemployment, and education. During the 1980s and 1990s, he was an economics professor at the University of Groningen (The Netherlands), where he developed a broadly based research program on the sources of growth and development. The most important part of this program was the development of historical measures of GDP and per capita income growth and comparative levels of economic performance. In addition to his major contributions to the measurement and analysis of economic growth in Western economies, he also conducted pathbreaking research on the quantification of the historical

growth performance of today's developing and emerging economies, including China, India, the Islamic world, and Africa. The full set of numbers Maddison published in *Historical Statistics on World Population, GDP and Per Capita GDP 1-2008 AD* is available online from his homepage on the Groningen Growth and Development Centre website (www.ggdc.net/maddison). The Conference Board is proud to have inherited one small part of this monumental enterprise in the form of the output and productivity estimates since 1950 that appear in the Total Economy Database (www.conference-board.org/data/economydatabase).

Note: A full obituary of Angus Maddison by Derek Blades, Bart van Ark, and Harry X. Wu will be published under the same title in the September 2010 issue of *The Review of Income and Wealth*.

The Conference Board U.S. Economic Outlook, 2009–2011

Percentage change, seasonally adjusted annual rates
(except where noted)

	2010			2011			Annual		
	Actual	Forecast					2009	2010	2011
		II Q*	III Q	IV Q	I Q	II Q			
Real GDP	2.4	1.5	1.4	1.3	2.0	2.9	-2.6	2.7	1.8
Real disposable income	4.4	2.9	1.4	1.4	1.8	2.3	0.6	1.5	2.0
CPI inflation	-0.7	0.1	1.3	1.4	1.5	2.0	-0.3	1.7	1.2
Real consumer spending	1.6	1.9	1.7	1.5	2.0	2.2	-1.2	1.4	1.8
Light vehicle sales (mil. units)	11.28	11.98	11.72	11.91	12.30	13.23	10.35	11.48	12.81
Housing starts (mil. units)	0.62	0.66	0.67	0.68	0.69	0.76	0.55	0.64	0.74
Real capital spending	17.0	12.1	5.2	1.6	4.9	5.0	-17.1	5.8	5.8
Inventory change (bil. '00\$)	75.7	36.7	8.7	8.6	25.5	37.4	-113.1	41.3	24.8
Real government purchases	4.4	0.8	0.0	0.2	-2.3	-1.9	1.6	0.8	-0.4
Federal	9.1	0.6	-0.9	-0.5	-5.5	-5.3	5.7	3.7	-1.7
State and local	1.3	0.5	0.6	0.6	0.0	0.5	-1.5	-1.2	0.4
Net exports (bil. '00\$)	-425.9	-406.8	-393.9	-387.7	-388.2	-401.4	-363.0	-391.3	-395.6
Exports	10.4	14.2	11.7	10.4	8.2	7.3	-9.5	13.1	10.0
Imports	28.8	7.2	6.8	7.3	6.8	8.5	-13.8	12.1	8.3
Pre-tax operating profits (bil.**)	1583	1598	1613	1635	1656	1679	1258	1590	1668
Industrial production	6.1	3.5	3.8	4.1	4.4	4.7	-11.3	5.1	4.2
Unemployment rate (%)	9.6	9.7	10.1	9.9	9.7	9.5	9.3	9.8	9.7
Federal funds rate	0.19	0.19	0.19	0.19	0.24	0.24	0.16	0.18	0.35
90-day T-bills (%)	0.15	0.17	0.17	0.23	0.28	0.33	0.15	0.15	0.42
10-yr. Treasury bonds (%)	3.49	2.99	3.09	3.19	3.29	3.99	3.26	3.32	3.68
Exchange rates									
\$/Euro	1.24	1.29	1.29	1.29	1.29	1.30	1.40	1.27	1.30
Yen/\$	92	90	92	94	94	96	93	92	95

* ACTUAL DATA ** CURRENT \$ LEVEL WITH IVA & CCA

Note: Data for Q2 are revised actuals. Data for Q3 and thereafter are based on the June forecast.

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