



Global Auto Industry Trends

Federal Reserve Bank of Chicago

**Detroit, Michigan
November 3, 2003**

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Corporate Economics and Strategic Issues**

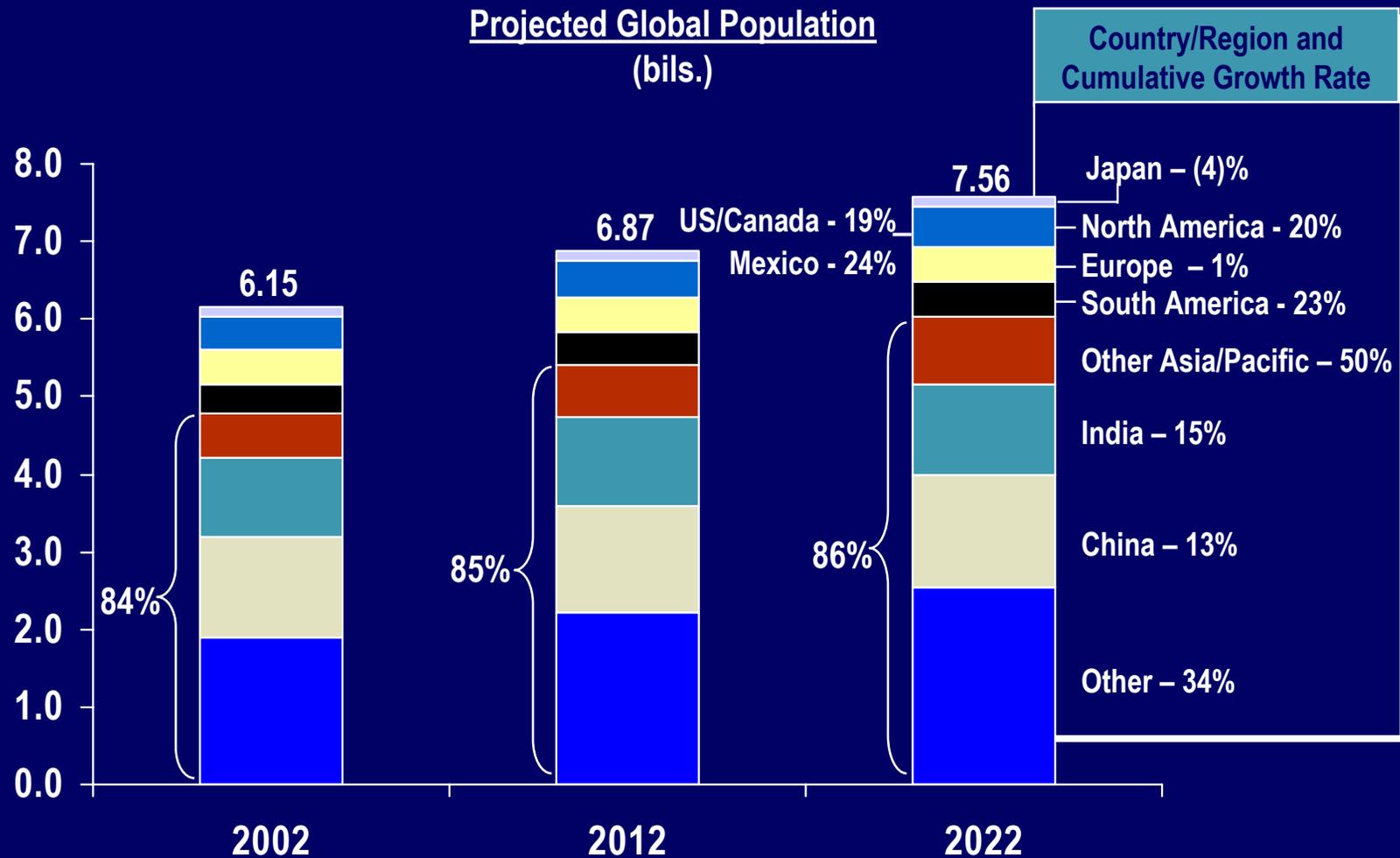
Topics for Today

- **Population and Demographic Trends**
- **Vehicle Ownership and Real GDP Per Capita**
- **Trends in Global Vehicle Demand**
- **Regulatory and Trade Outlook**



Population by Region in 2002 to 2022

Emerging Markets Account for 84% of Total World Population in 2002, 86% in 2022



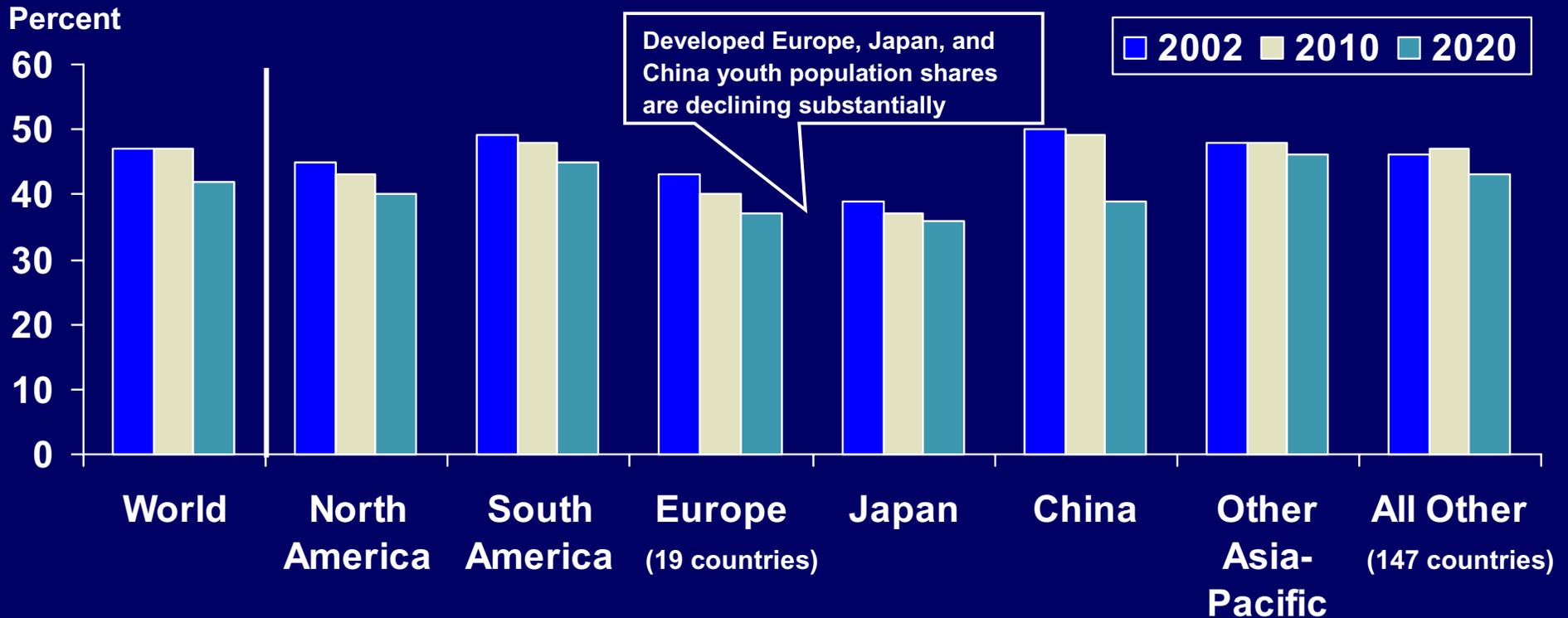
Source: U.S. Census International Database



Youth Driving

Over 3 Billion People will be Between 15 and 44 In 2020 – Opportunity for Differentiation by Understanding Global Youth Needs and Requirements

Percent of Total Population 15 to 44



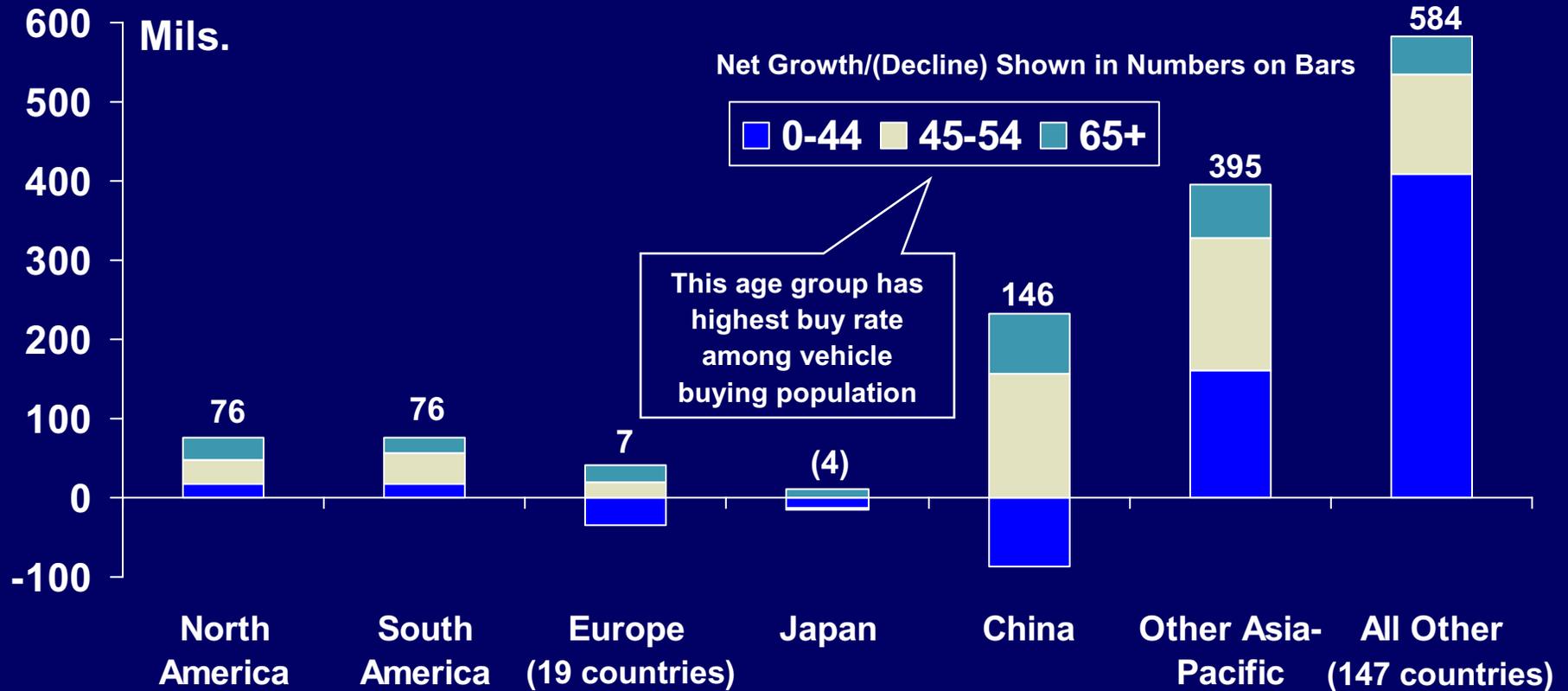
	2002	2010	2020
World Population 15-44 in Millions	2,892	3,145	3,152

Source: U.S. Census International Database



Changing Population Age Composition

Developed Europe, Japan, And China Are Aging Rapidly



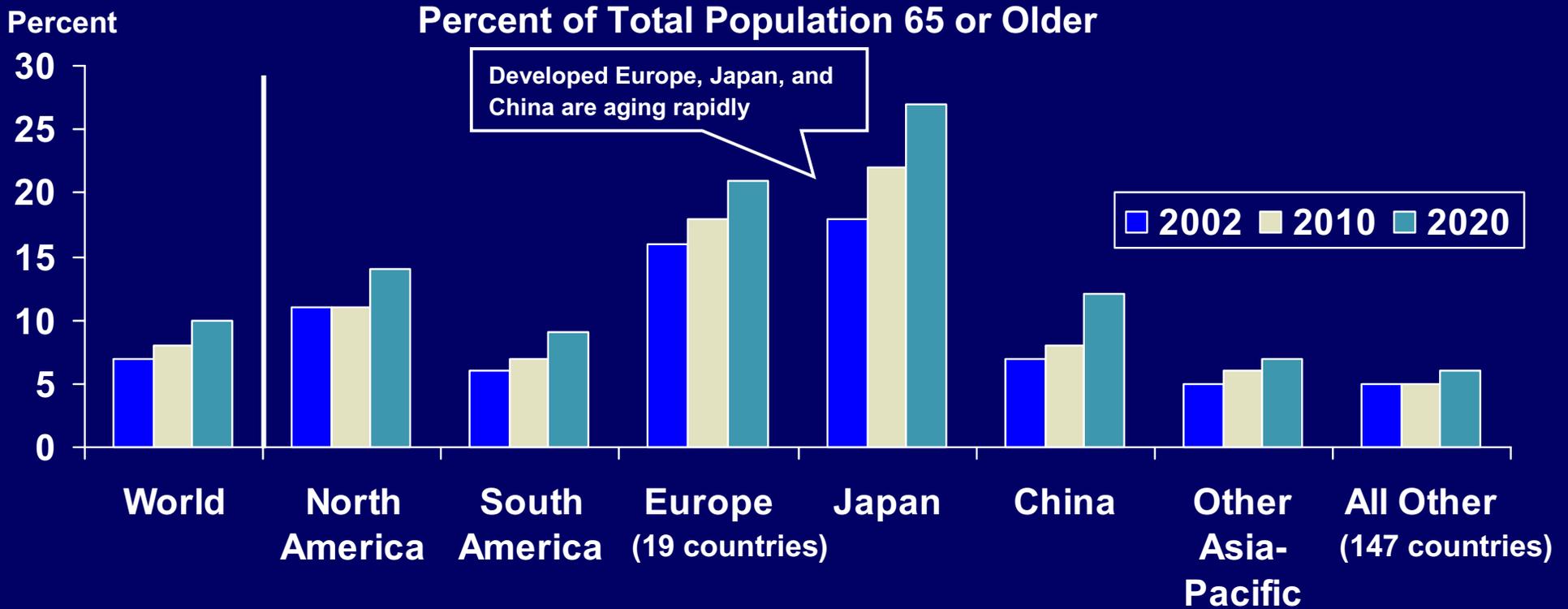
Population in Millions	North America	South America	Europe	Japan	China	Other Asia-Pacific	All Other
2002	422	362	450	127	1,287	1,614	1,887
2020 Proj.	498	438	457	123	1,433	2,009	2,471

Source: U.S. Census International Database



Aging Population

Over 700 Million People will be Older than 65 In 2020 – Opportunity to Design Vehicles for Changing Physiology



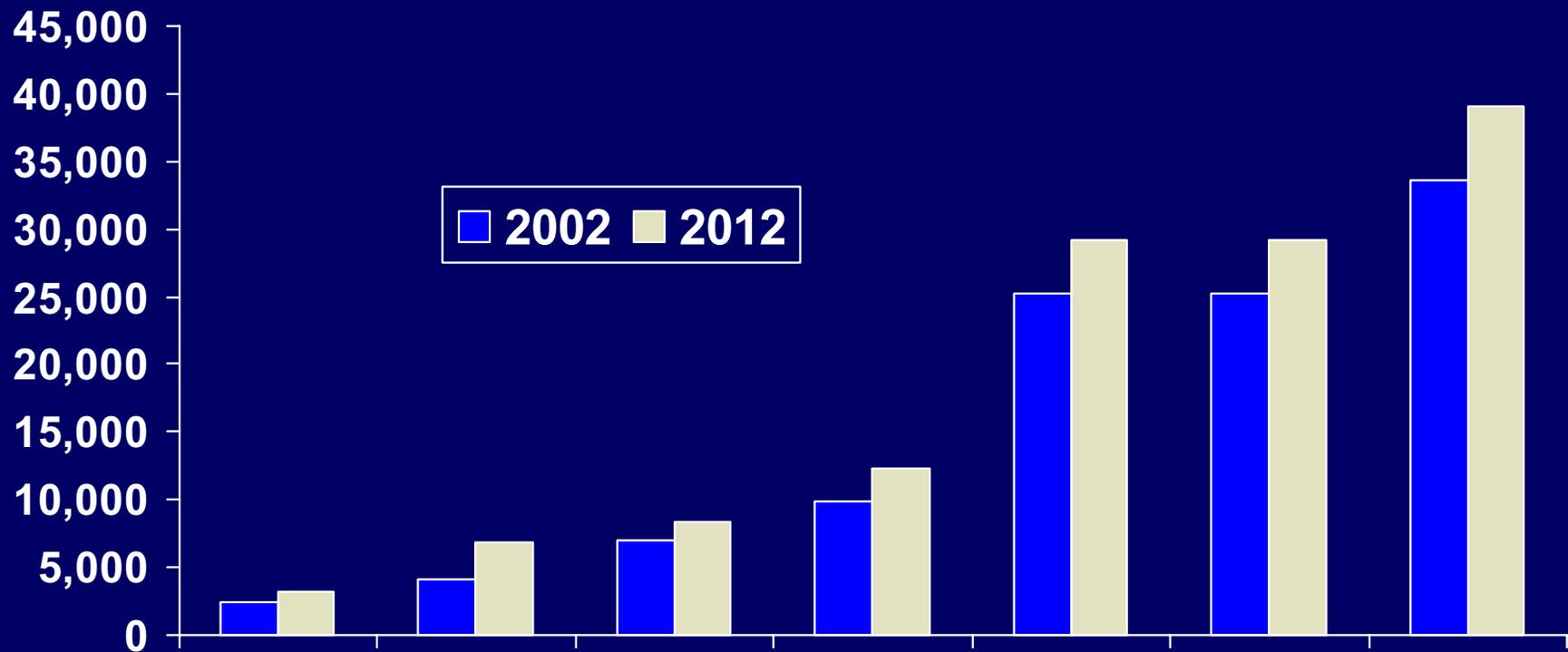
	2002	2010	2020
World Population 65+ in Millions	436	517	707

Source: U.S. Census International Database



Vehicle Ownership Increases with Income Per Person

Real GDP per Capita (@ppp1998\$)



Memo:
Average Annual
Growth Rate

India
4%

China
6%

Brazil
3%

Poland
3%

Japan
2%

Germany
2%

U.S.
2%

Source: World Bank



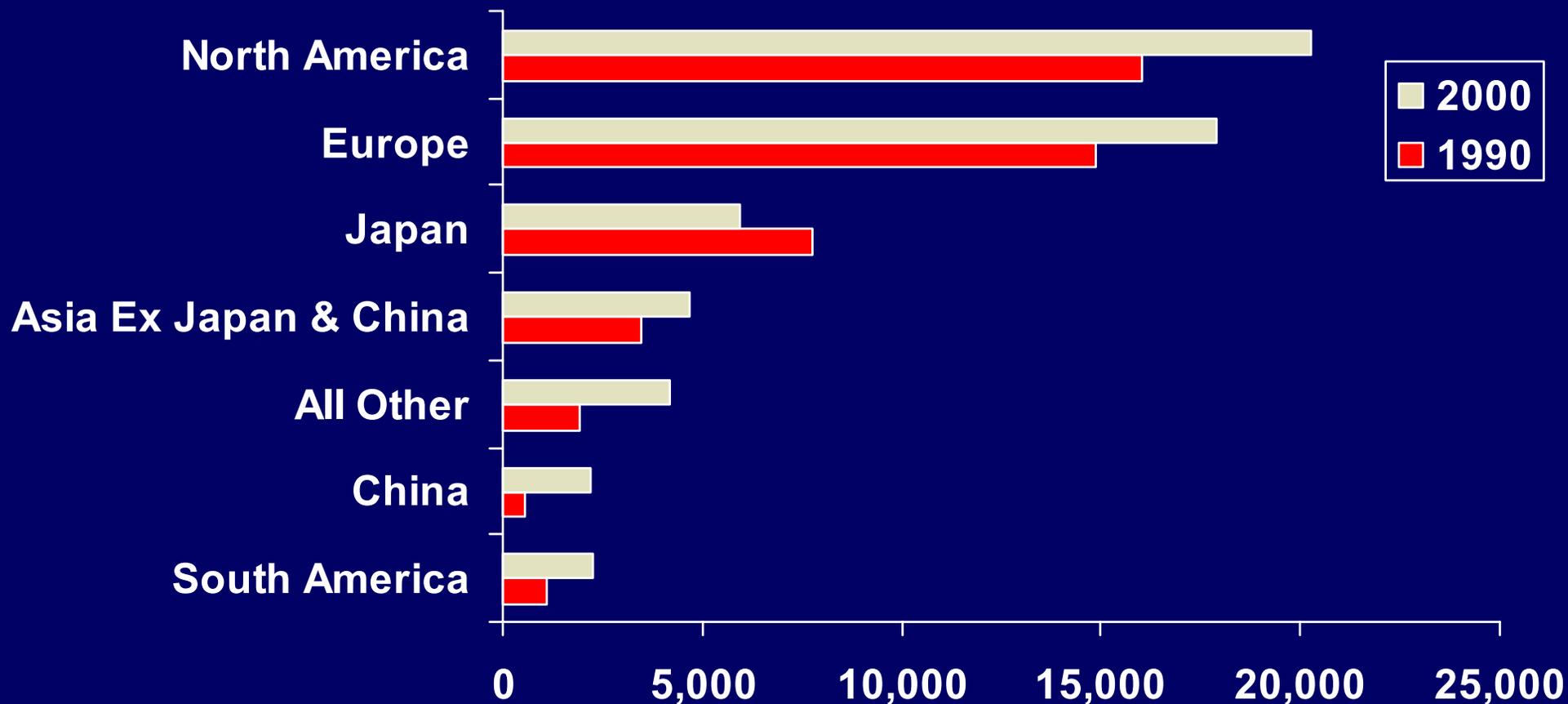
Determinants of Income Per Capita

- **Productivity Growth**
- **Market Access**
- **Human Capital and Other Investment**
- **Institutional Framework – Rule of Law and Property Rights**



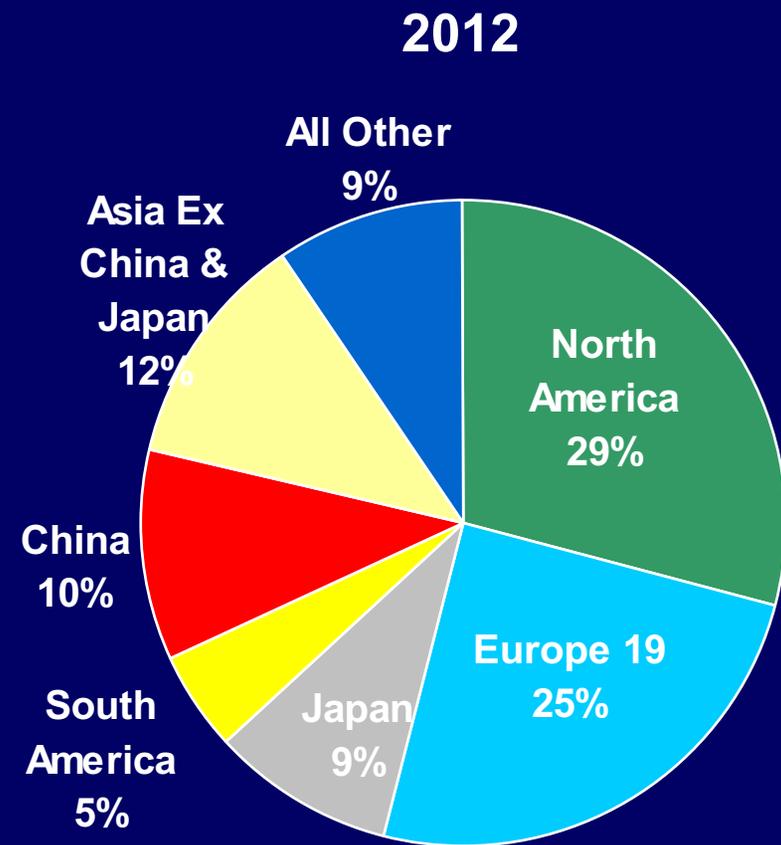
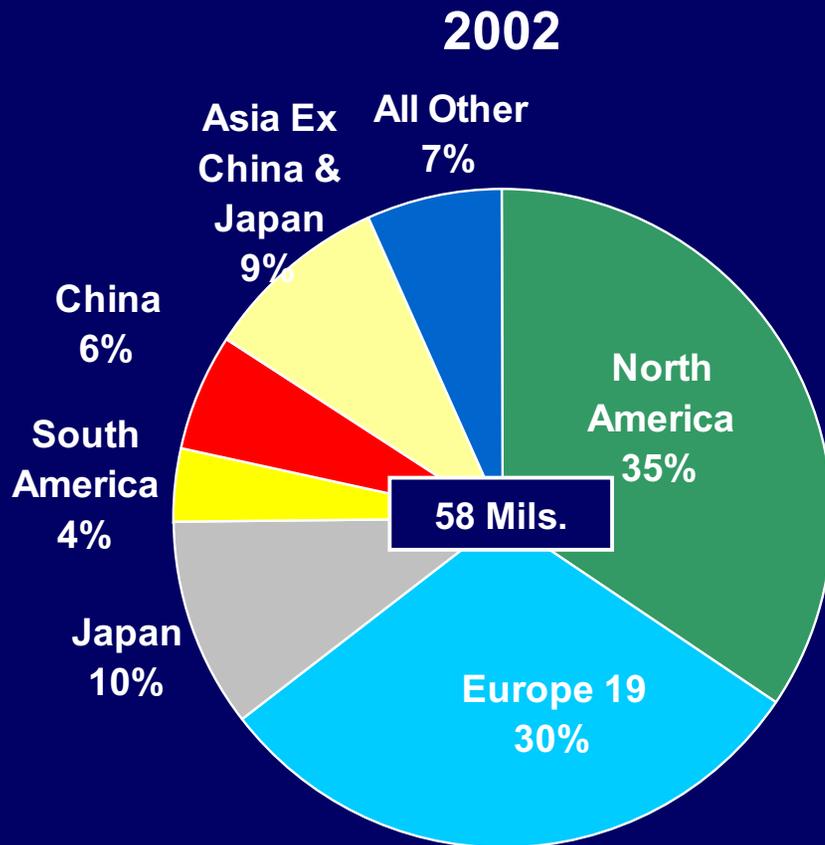
Vehicle Sales – 1990 and 2000

North America, Europe, and Japan Accounted for 86% of Vehicle Sales in 1990, and 77% in 2000

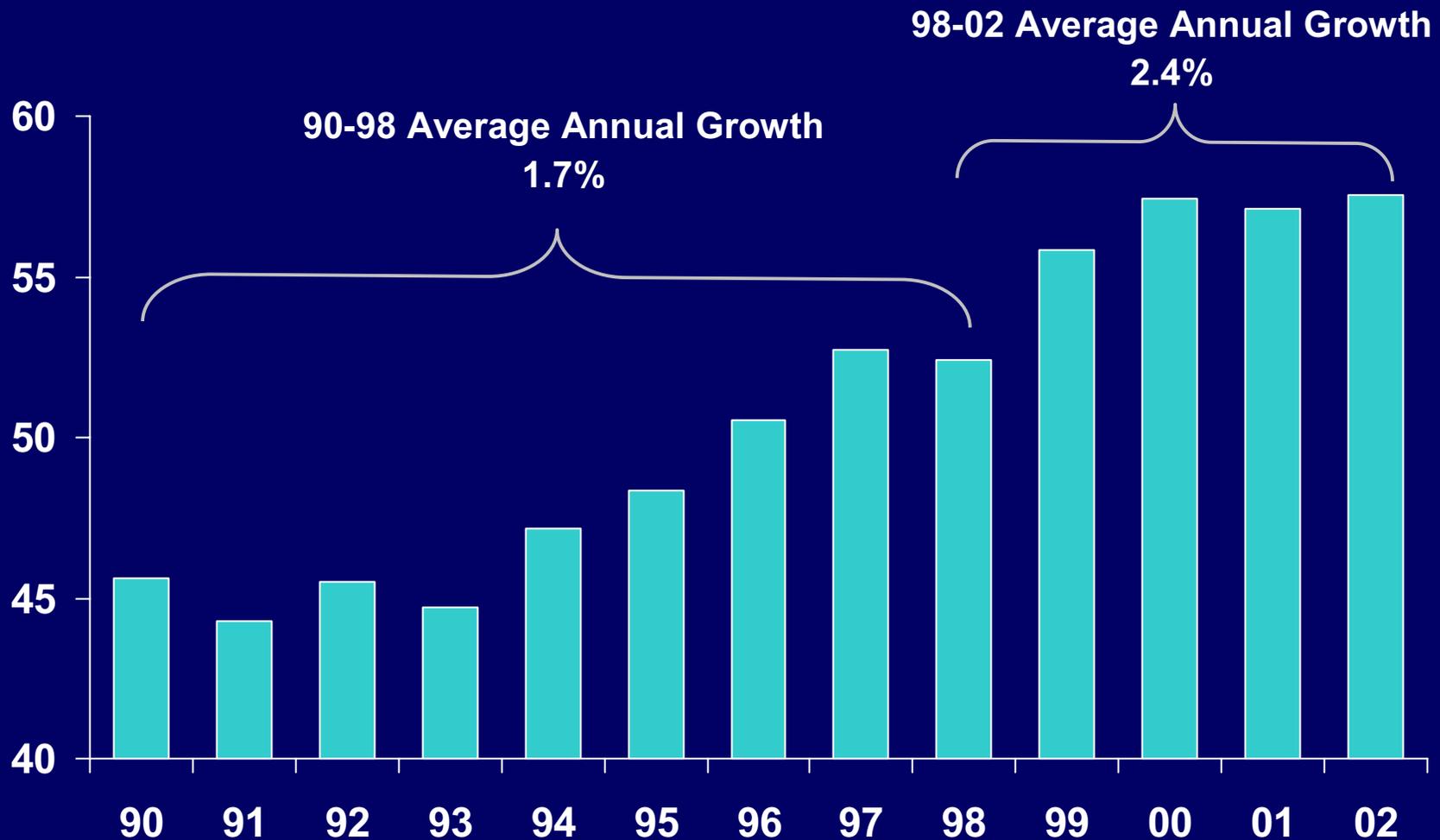


Looking Ahead

Emerging Markets will Represent 90% of Vehicle Sales Growth During the Next Decade

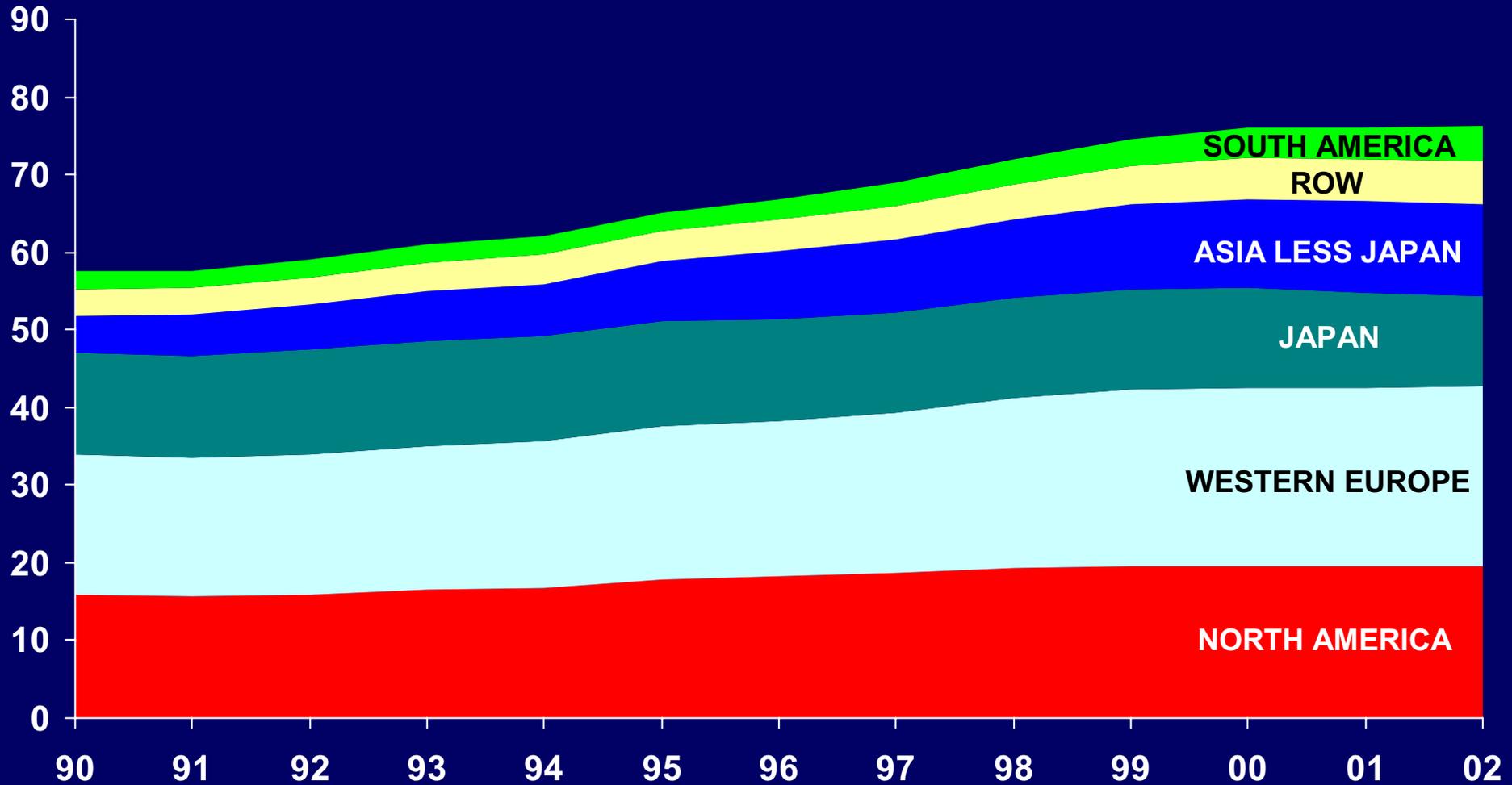


Global Vehicle Sales



Historical Automotive Capacity

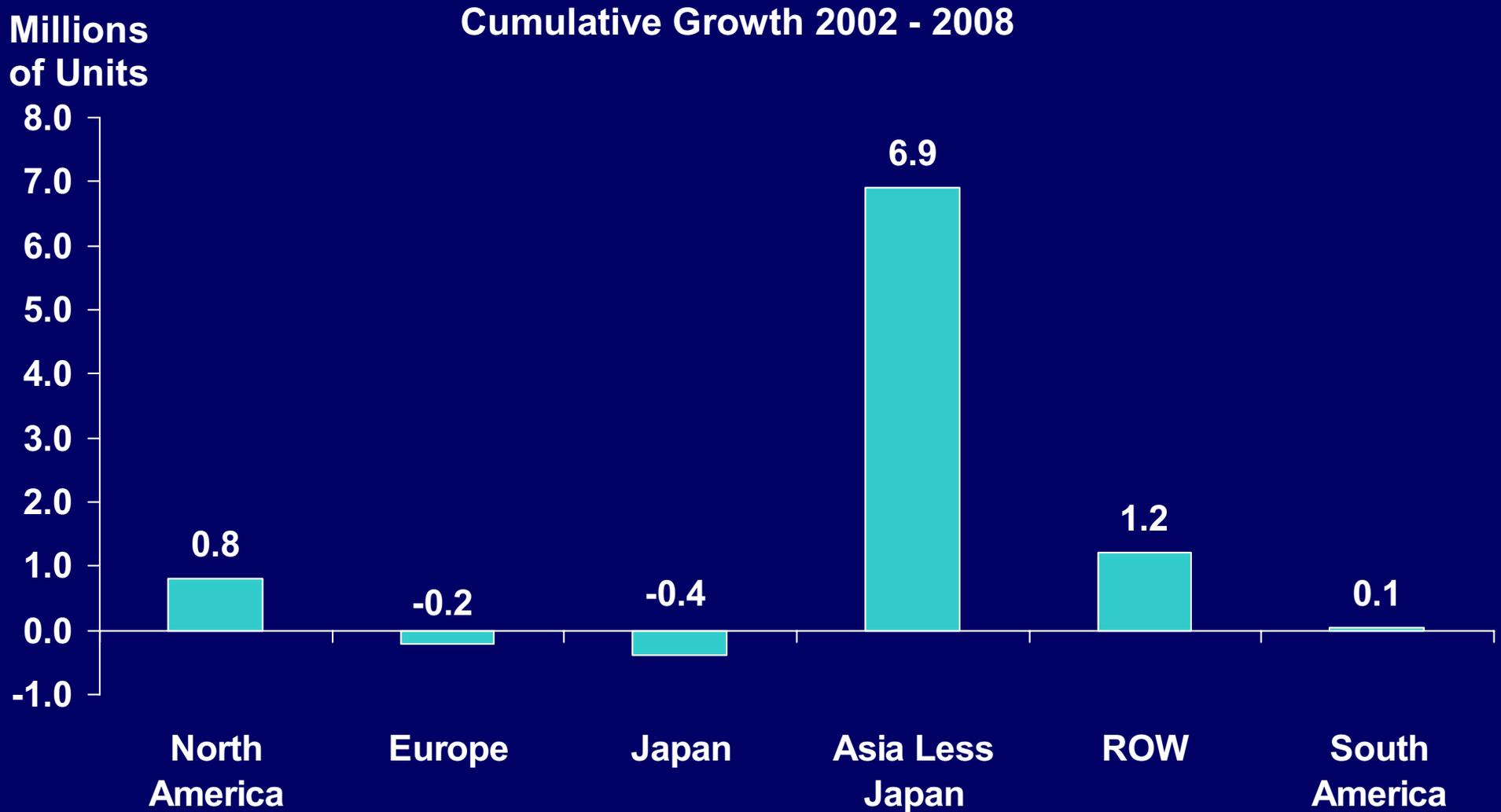
Mil. Units



Source: PWC Autofacts, 10/02



Projected Automotive Capacity



Source: CSM

