

Point of View

International Investing: A Global Demographic Primer

by Paige Mueller*
Asli Ball**

For many institutional investors, real estate is a long-term investment. So while near-term changes in economic, property and capital market conditions impact our daily decision-making processes, long-term trends help create a framework for decisions regarding portfolio growth, allocation, exit strategies, and investment performance. As new investment vehicles become available, many real estate investors have started looking outside of their national boundaries, although investors from geographically-constrained countries have been investing in real estate outside their countries for many years. Analysis of a new country for real estate investment usually starts with a review of political, economic, legal, and capital market structures. After this initial review, analysis of demographic short- and long-term trends, are important determinants of real estate demand. Long-term demographic forecasts also give us some glimpse of which markets—and on a global basis, countries—will produce strong demand for real estate, which may reach a turning point that could necessitate changes in policy or behaviors, and which will be more suitable for particular property types.

In the long run, demographers suggest that the global marketplace could be quite different 10, 20, and even 50 years from now. But when looking at the future, it is important to remember that future events are not always so easy to forecast and the longer the timeframe, the larger the margin of error. While investors often assume that events will

* GIC Real Estate, San Francisco, CA 94104 or pmueller@gicre.com.

** GIC Real Estate, London, U.K. or asliball@gic.com.sg.

continue on a smooth trajectory or return to a historical average, history suggests a path that is not necessarily so smooth. In addition, major events sometimes create a change of path and these events are not so easy to forecast. Even the basic population forecast has not been without error; for example, the baby boom/bust and the impact of HIV/AIDS on populations in Africa. For this reason, it is necessary to constantly re-evaluate the current trends, as well as investment assumptions and models.

So given the above caveats, what can we learn from our demographer colleagues about the future of real estate? While a complete analysis would be worthy of an entire book, this paper focuses on a couple of the larger issues: the distribution of global population growth and a short synopsis of aging populations.

The Global Scene Now (and a Very Truncated History)

Our generation has already experienced a doubling of global population from about 3 billion in 1960 to more than 6 billion in 2000—a relatively short time period given that it took 118 years to double from 1 billion around 1805 to 2 billion. The United Nations (U.N.) forecasts that population growth will slow, but bring world population to 8 billion by 2030 and 9 billion by 2050. These numbers represent a growth rate going forward (0.8% per annum on average) that is half the pace of the past fifty years.¹ While this topic alone is deserving of lengthy study, we relegate most of this discussion to the References section for further reading in the need for brevity (see the U.S. Census Bureau publications in particular), and limit discussion here to the difference between the developed countries and the developing countries.

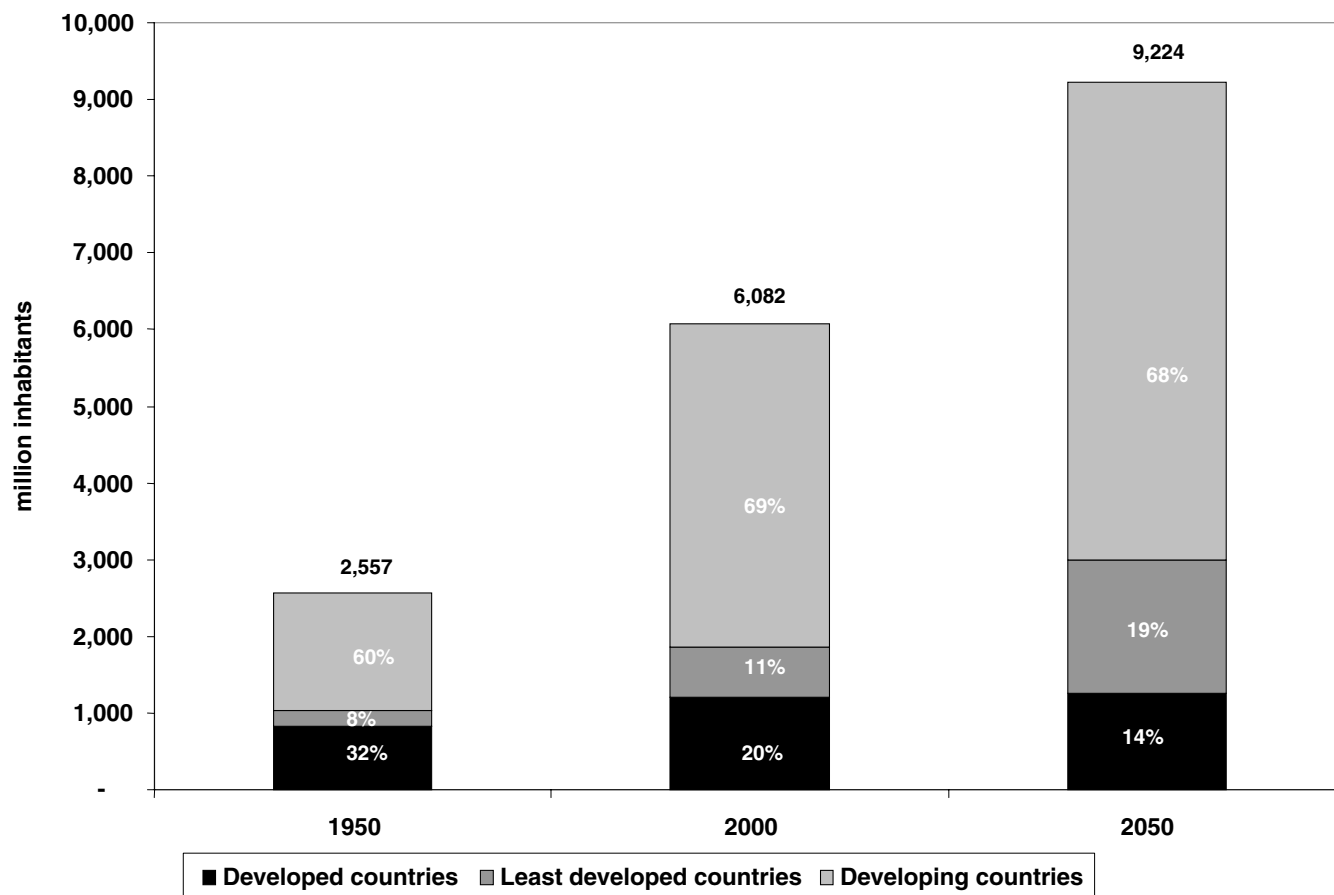
Improved living conditions and healthcare have led to longer life spans throughout most of the world during the past 50 years. Conversely, changing social, educational, and economic conditions have caused birth rates in the developed countries to drop precipitously. Thus population growth has slowed considerably in most of the developed

world. A noticeably different pattern can be seen in the least developed countries where birth rates remain high and life expectancies are not only half that of some long-lived Asian countries, but in some cases, are declining.² As a consequence, the U.N. forecasts that 99% of population growth³ through 2050 will be in the developing countries while the percentage of the global population living in the developed countries will decline to 14% in 2050, from 20% in 2000 and 32% in 1950 (Exhibit 1).

At the country level, some interesting trends appear in the forecast. First, while the economic growth story in China has been at the forefront of headlines for several years, the Chinese population is expected to peak by 2025 due to recent lower birth rates.⁴ As a result, China's population base is expected to increase by 118 million through 2050, a number that is slightly less than the U.S. forecast of 124 million new people (Exhibit 2).

India is expected to lead world-wide population growth through 2050, with more than 520 million new people. Nigeria follows with 228 million, ahead of Bangladesh and Pakistan with more than 130 million new people each. The Congo, United States, and China follow with approximately 120 million new people each. These countries alone will create more than a third of the forecast global population growth by 2050. Notably absent from the list of largest countries are the European countries. Only Germany appears in the top 20 list in 2005 and by 2050, only Turkey makes the list. However, if we combine the European Union (E.U.) countries together, the E.U. would be ranked third in 2005 with nearly 489 million people, which highlights why the E.U. is economically and politically important for its member states from a global perspective. The 2050 forecast indicates a slight decline in the E.U. population of approximately -0.1% per annum. Here it would be easy to diverge into a number of disparate topics outside the traditional realm of demographics to issues such as income inequalities, implications for future health and security, etc., but one extremely important topic is economic power—for if the list of largest countries is rearranged by economic rather

Exhibit 1
Where the World Population Lives



Source: United Nations.

than population size, we see a significantly different picture (Exhibit 3).

Poverty and Wealth

At USD\$12.5 trillion in 2005, the U.S. economy is by far the largest in the world. China ranks fourth at USD\$2.2 trillion with India ranked as number twelve at USD\$0.8 trillion. Thus, given the extreme differences in economic size among countries, demographic analyses alone can be quite misleading as an indicator of investment potential.

However, incremental improvements in wealth going forward will help millions of people become consumers for the first time. Additionally, goods are generally less expensive in the developing markets, providing additional purchasing power. Gross

domestic product (GDP) is often adjusted by a factor called purchasing power parity to reflect the lower prices in developing markets. The Brookings Institute estimates that 53 countries have average per capita gross national income of less than \$2 per day. This includes half the world's population—more than 3 billion people. While the U.N. Millennium Development Goals plan to lift more than 500 million people out of extreme poverty, individuals are unlikely to become purchasers of consumer goods and quality housing until their incomes are well above the global poverty line. Stable countries with incomes in the mid-level ranges and higher are already beginning to experience dramatic growth in capital market structures, retail, and housing. Examples include parts of Mexico, Malaysia, and Central and Eastern Europe. Here, the retail markets are changing from

Exhibit 2
World's Largest Countries by Population

Country	2005	2050	Change 2005–2050	2005–2050 %pa
China	1,306	1,424	118	0.2%
India	1,080	1,601	521	0.9%
U.S.	296	420	124	0.8%
Indonesia	242	336	94	0.7%
Brazil	186	228	42	0.5%
Pakistan	162	295	133	1.3%
Russia	143	111	–32	–0.6%
Bangladesh	144	280	136	1.5%
Nigeria	129	357	228	2.3%
Japan	127	100	–27	–0.5%
Mexico	106	148	42	0.7%
Philippines	88	148	60	1.2%
Germany	82	74	–8	–0.2%
Vietnam	84	108	24	0.6%
Egypt	78	127	49	1.1%
Ethiopia	73	145	72	1.5%
Turkey	70	86	16	0.5%
Iran	68	90	22	0.6%
Thailand	64	69	5	0.2%
Congo (Kinshasa)	61	183	122	2.5%
Uganda	29	133	104	3.5%
Sudan	32	84	52	2.2%

Note: Values are population in millions. The source is the U.S. Census Bureau and IMF.

local street marts to shopping centers with multinational retailers. For instance, Wal-Mart is one of the most visible global retailers with more than 2,600 stores in at least fourteen countries outside the U.S. and is currently the largest retailer in Mexico. Even countries with lower *national* income levels are experiencing dramatic changes in some of their *local* real estate markets as the income disparity can be quite large between urban and rural regions—China and India are obvious examples.

Housing is also booming in many countries with national or regional pockets of mid-level incomes. In particular, the housing markets in countries such as Thailand, Mexico, and Turkey, as well as urban centers in China, have grown considerably in recent years. Rising income levels, lower interest rates, and newly emerging or expanding mortgage markets are driving double-digit growth in

home sales in Mexico and Turkey alike. In some developing countries, demand is driven by growing employment opportunities in the urban centers. Combined with new infrastructure, clearer property rights, and changing property-related laws, regions within India, China, and Central and Eastern Europe are experiencing new demand for housing. Many of these countries also need to upgrade old public housing stocks.

Much of the activity in developing countries will be concentrated in a few urban centers. The U.N. reports that the percentage of the population living in urban centers as opposed to the rural countryside increased from 18% in the less developed countries in 1950 to 40% in 2000 and is expected to increase to 48% by 2015. The continued concentration of people in small geographic areas is expected to create further need for new infrastructure.

Exhibit 3
World's Largest Countries by GDP

Country	GDP
U.S.	12,486
Japan	4,571
Germany	2,797
China	2,225
U.K.	2,201
France	2,106
Italy	1,766
Canada	1,130
Spain	1,127
South Korea	793
Brazil	793
India	775
Mexico	768
Russia	766
Australia	708
Netherlands	625
Belgium	372
Switzerland	368
Turkey	362
Sweden	359

Note: Values are USD in billions. The source is the U.S. Census Bureau and IMF.

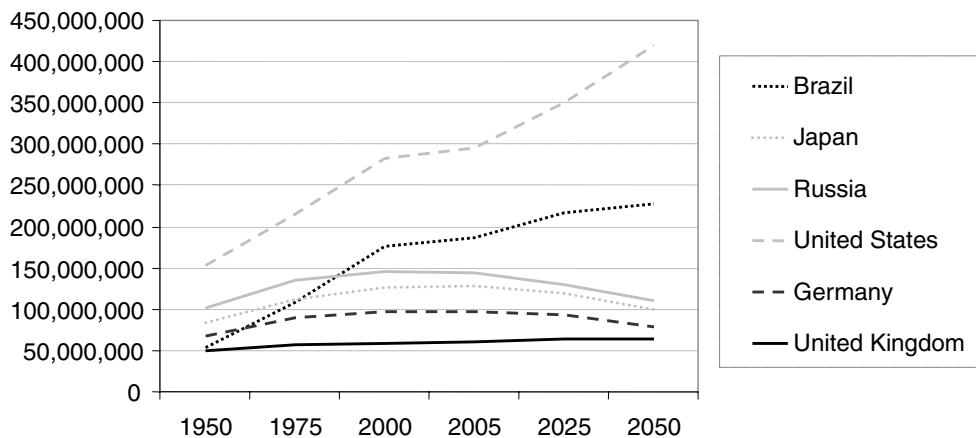
future population growth. First, the populations in many of the developed countries are expected to peak and then decline sometime before 2050 (Exhibits 4 and 5) and secondly, their populations will become older, significantly increasing the old-age dependency ratio⁵ on the working population. While much of the literature on aging has been focused on developed countries, many developing countries will also experience significant changes in the age structure of their populations. Countries such as China, India, Brazil, Mexico, and Indonesia are expected to have significantly older populations by 2050.

The aging and slow growth trends in the developed countries are occurring for three reasons. First, the average number of children born per female (the fertility rate) has fallen by nearly 50% in the developed world since 1950 and is now lower than the estimated 2.1 children per female ratio estimated to keep the population stable. In markets such as Germany, Japan, and Switzerland, the fertility rate is particularly low (< 1.5). Second, in developed countries, the age pyramid is somewhat skewed by the 'Baby Boom' generation who were born following World War II and into the early 1960s. As this generation moves toward retirement, they will cause a disproportionate rise in the number of older persons—as they have done in every other age category during their lifetime. Third, advances in technology, wealth, and health-care have extended life expectancies⁶ (Exhibit 6).

Aging

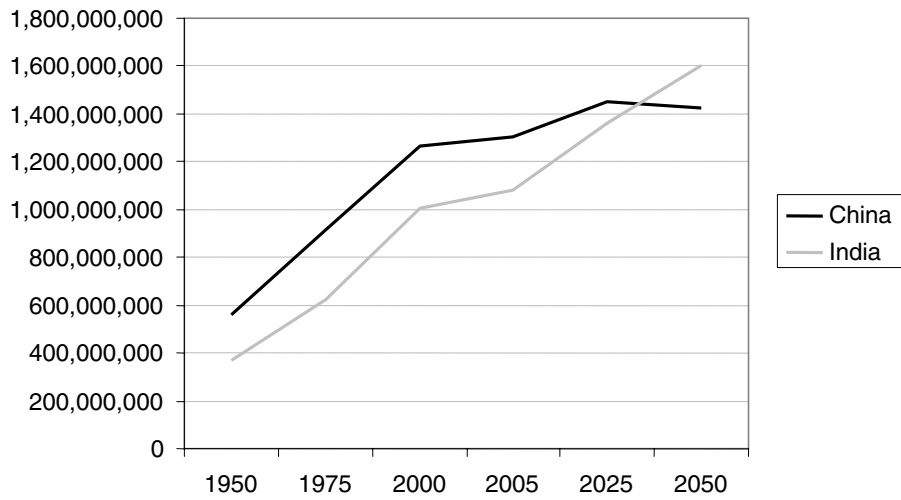
The ability of the developed countries to manage two critical demographic factors will be key to their

Exhibit 4
Total Population



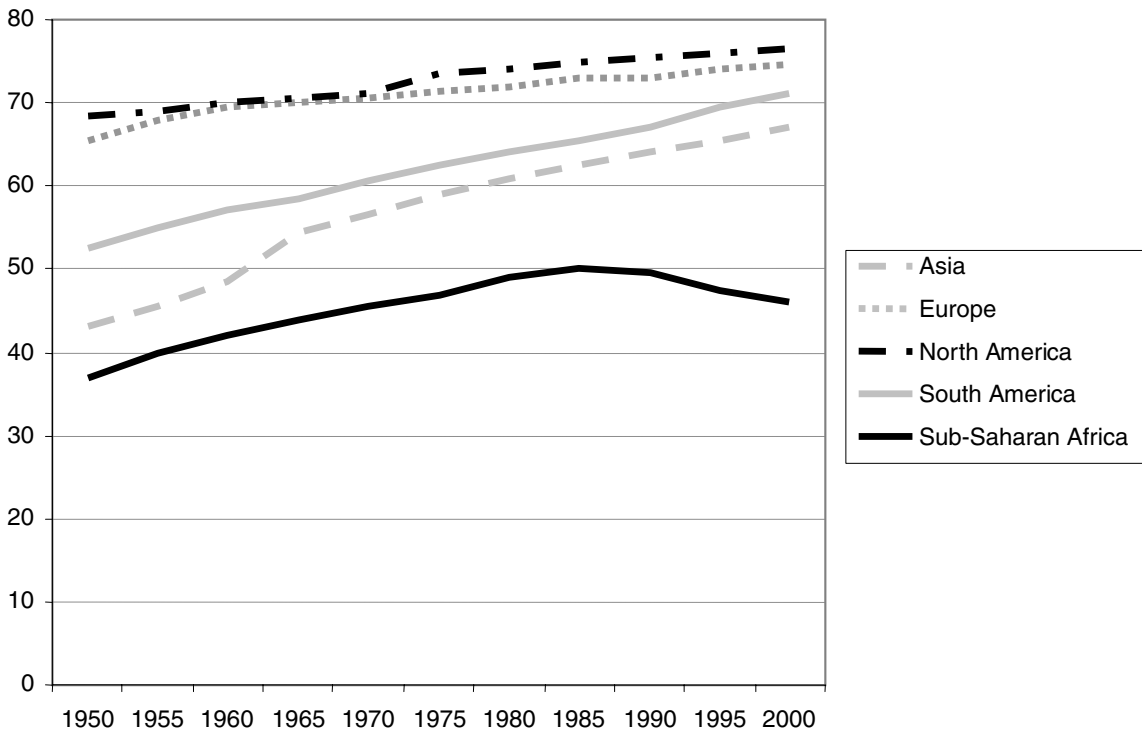
Source: United Nations.

Exhibit 5
Total Population



Source: United Nations.

Exhibit 6
Life Expectancy: 1950 to 2005



Source: United Nations

Populations in a few developed countries, namely the U.S., Canada, and Australia, are expected to be exceptions, primarily because they remain highly attractive to foreign immigrants. Canada and Australia have migrant populations that are twice the 9.5% average of developed nations, and the U.S. also has a significantly higher portion of migrants, particularly given its size, of 13%. The U.K. population is also expected to continue increasing in size, although at a slower pace, and its proportion of migrants is similar to the average amongst developed countries. This introduces a significant political risk to the population forecasts, as the forecast growth in these countries is highly dependent on the stability of government-dictated immigration policies. Recent migration patterns show that migrants, at least those who can be measured, are increasingly concentrated in wealthy countries, and immigration policies in these countries are increasingly favoring skilled workers. However, there is some indication that immigration rates have already slowed (at least legally) in the U.S. from peak rates in 2001–2002. Whether this is a short-term cyclical effect or a longer-term trend is yet to be seen.

The old-age dependency ratio, or proportion of people aged over 64 to those aged between 15 and 64, is also of concern. Demographers expect this ratio to increase from the present average of near 15% in the developed countries to near 40% by the end of the century. And while youth dependency ratios (percentage of children to adult working population) have declined significantly in the developed countries over the past 50 years (and will continue to decline in many of the developing countries), the E.U. and Japan are expected to experience a slight increase in the youth dependency ratio through 2050 as well—adding a further burden to the working population. In North America, the youth dependency ratio is expected to decline only slightly through 2050. Some empirical studies (Faruquee, 2002; and Farrell, Gui, and Shavers, 2005) suggest that as the old-age dependency ratio increases, investment, capital stock, savings, wealth, and output per person decline. It is worth watching Japan closely as the current old-age dependency ratio in this country, at just under 25%, is already at the forecast level for 2050 in the U.S. However,

the two countries have significantly different social, economic, and capital market structures that will also impact economic performance.

The labor forces in the developed economies are expected to follow a somewhat direr path. Japan, Italy, Spain, Germany, and France are expected to lose 20% to 30% of their labor forces by 2050, with minimal growth forecast in the U.K. While this could be seen as doom and gloom for office markets in these countries, the forecasts do not allow for significant changes in retirement ages, immigration policies, labor market participation rates, or productivity. Given longer expected life spans, low savings ratios in countries such as the U.S. and the U.K., and higher old-age dependency ratios, it is reasonable to expect that retirement ages could rise. Additionally, labor market structure has already changed significantly as manufacturing has shifted to countries with lower costs of production. Partly as a result, many developed economies have become more service oriented (e.g., the U.S. labor market transformed from 31% manufacturing based in 1950 to 10% in 2006). It is not yet known what type of jobs may emerge going forward as both the global marketplace and technology change.

While it is hard to imagine (short of a change in immigration) how countries such as Japan, Italy, and Germany will offset significant expected declines in both population and labor forces, many countries are already developing programs to combat labor shortage issues. For example, some countries actively promote ways to increase the birth rate via cash, subsidies, and tax benefits. Temporary migrants are commonly seen in some regions, and in several small markets such as Hong Kong and Luxembourg, migrants account for over a third of the population. Specific labor shortages have also been addressed through targeted immigrant worker programs such as medical workers in the U.K. in recent years and the better-known ‘guest workers’ program in Germany in the 1960s and 1970s.

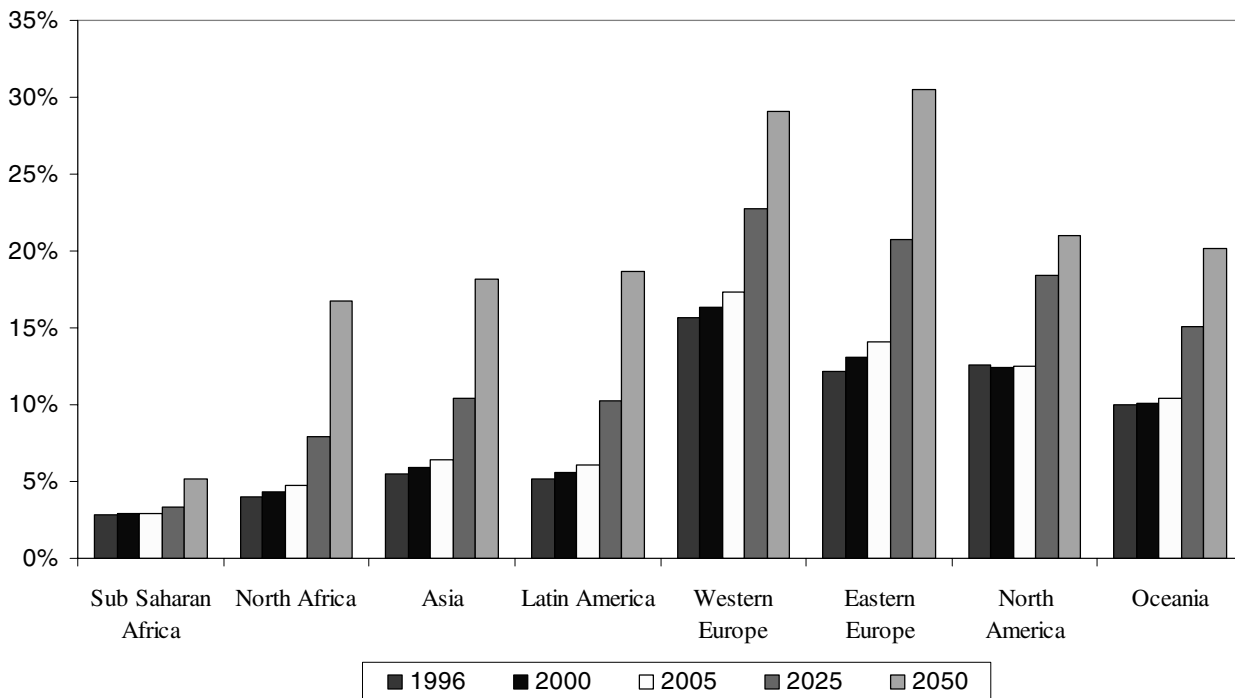
An obvious inference from the aging population will be an increased need for healthcare facilities. In Europe, the age 65+ population is expected to

account for approximately 30% of the population by 2050, up from under 15% in 2000 (Exhibit 7). In Latin America, the age 65+ population will increase to nearly 20% in 2050 from 5% in 2000, although this is likely a positive trend as wealth levels and life expectancies increase. Only Sub-Saharan Africa is expected to experience little change in the elderly population, a negative trend as the forecast is influenced by the current extreme poverty, health crises, and political instability of the region.

In the U.S., more than half of the population growth through 2030 will occur in the 65+ age group. Consumption patterns indicate that expenditures on healthcare increase significantly for the elderly. For example, the age 65+ population accounted for 13% of the U.S. population in 1999, but 36% of all healthcare expenditures. In Japan, expenditures on medical services increase by 47% for the age 60+ population as compared to those under the age of 60. Other consumer expenditures could be negatively impacted by aging populations as incomes generally decline after retirement. For

example, the median household income in the U.S. peaks at over \$63,000 at age 45–49 then falls to near \$26,000 for those aged 65+. In the U.K., the median income for those aged 65+ is £10,000 as compared to £22,000 for the total population. Questions of unfunded pension liabilities in some countries and issues associated with corporate pension plans in others increase the uncertainty of lower than expected income levels. Furthermore, as incomes decline after retirement, a larger proportion of income is allocated to basic staples such as food, fuel, and housing. However, the transfer of inter-generational wealth could offset some of these factors. While the exact amount has been hotly debated, some researchers estimate that trillions of dollars could be transferred by inheritances in the U.S. alone through 2052. Additionally, consumer expenditure patterns show some interesting trends across countries. One example is Japan where living expenditures⁷ per capita are highest for the under 29 age group. But after a sharp drop in expenditures for the 30–39 age group, consumption increases by age, peaking again at the 60–69 age group. Living expenditures

Exhibit 7
Share of 65+ Age Cohort in Total Population



Source: U.S. Census Bureau.

per capita for households aged 60+ are actually 7% higher than expenditures from the under 60 group. While the figures are skewed by larger household sizes for middle-aged households, the distribution of wealth across the generations in Japan, and definitions of household heads, it is still a striking figure.

Housing markets will be particularly interesting to watch as they will be impacted by a number of trends—some positive and some negative. We have already mentioned the higher income levels, changing capital markets, and urbanization trends that are creating demand for new housing in developing markets. While some have predicted a crash in the housing markets of some developed countries as the Baby Boom generation ages, the Boomers are currently at the prime age for second home ownership, which peaks at around age 52 in the U.S., and they will remain near this age range for the next decade. Additionally, this generation seems willing to cross country borders to buy second homes and even retirement homes, often in warmer and less expensive locations. Anecdotally, we continue to see a number of stories that suggest an increasing trend in U.S. residents locating for at least part of the year in Mexico or Central America, and the British locating in Southern Europe. (In fact, the Brits have been buying in Spain for a long time.) Within the U.S., housing markets in areas such as Florida and New York have also benefited from foreign purchasers.

Furthermore, new product types are being delivered. For example, active adult communities⁸ are becoming an increasing focus of new home building in the U.S. Changes in family structure in the developed nations have also favored faster household formation as family sizes shrank and households became more unconventional. The Scandinavian countries are global leaders in terms of nontraditional forms of family living (births outside of wedlock and cohabitation outside of legal marriage), while the U.S. leads in terms of divorce rates and single-parent households.

Finally, U.S. statistics suggest that approximately one-third of the population aged 80+ needs assistance with daily living activities. While we are a good ten years away from a significant increase in

this part of the population, it does indicate an increased need for seniors housing⁹ in the future. However, the seniors housing industry will be new to many countries, and social norms as well as income levels will restrict usage in some countries. In fact, the U.N. reports that 80% of people over the age of 60 in developing countries live with children, grandchildren, or other relatives (as opposed to living with a spouse or alone) as compared to 32% in more developed countries.

Conclusion

The demographic changes described here will provide many opportunities and challenges for real estate investors in coming years. In the developing countries, population growth as well as rising income levels are likely to create significant changes in their real estate markets—as is already being seen in China and India. But the developed countries can not be written off too quickly. While the long-term demographic forecasts currently appear dismal for a few developed countries, changes in immigration policies and labor market structures could change the outlook significantly. Unknown triggers such as wars and health pandemics also introduce uncertainty into the forecasts. New property types are arising in the housing and medical industries as aging populations require different housing needs. Additionally, several developed countries are expected to experience continued growth through 2050, and the U.S. in particular has significant purchasing power as compared to other economic blocs. Thus, investment opportunities both within the developed countries and their trading partners should continue to be abundant.

Endnotes

1. The U.S. Census Bureau reports that global population growth peaked in 1962–1963 at 2.2% per annum, up from 1.5% in 1950, and has since declined to approximately 1.15% in 2005.
2. Fertility and the ratio of child-bearing age women were the most important determinants of global population growth as of 2002, although fertility is expected to decline going forward.
3. Population growth includes births, deaths, and net migration.

4. Following rapid population growth in the early twentieth century, China began in 1979 encouraging certain population groups, particularly in urban areas, to limit birth rates to one child per couple. There are some indications that these policies are being relaxed as population growth slows and old-age dependency ratios rise.
5. Defined as the ratio of persons aged 65+ to those aged 15–64.
6. One gloomy trend in this graph is the recent reduction in life expectancy, which occurred in Sub-Saharan Africa. With the arrival of HIV/AIDS more than 20 years ago, the disease is now widespread globally. It now affects more than 20% of the population in seven African countries, the most extreme of which is Botswana where 39% of the population was infected in 2002 resulting in a declining population and a reduction in national life expectancy from 72 years to 34 years. This is one example of an external event, the initiation of which is difficult to forecast, but which can have a significant impact on both the demographics and economics of a country.
7. Living expenditures include food, housing, fuel, furniture, household goods and services, clothing, medical care, transportation, education, recreation and other, as reported in 2005 by Japan Statistics.
8. Active adult communities are housing neighborhoods that are generally designed for, but not necessarily entirely limited to, those aged 50+. The market is becoming more diverse in product, but was initially designed as single-family housing communities designed for aging in place with amenities such as club houses, fitness centers, hiking trails, golf courses, and even classes and clubs organized by/for residents of the community. The average age of buyers in the U.S. is approximately 61 years.
9. Seniors housing properties provide some form of assistance in meals and/or daily living, with some types of facilities providing medical care. It includes independent living, assisted living, continuing care retirement centers, and skilled nursing facilities. The average age of occupants is generally 82 years or older in the U.S.

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