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## State Population Trends: Regions Footprint

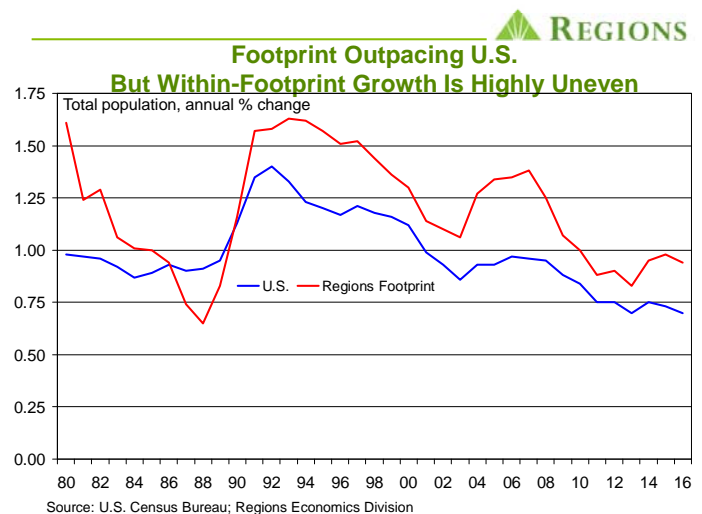
The U.S. Census Bureau recently released comprehensive 2016 data on state level population, including the components of change in population. We thought it would be useful to examine not only the 2016 data but some of the longer-term trends in the data on state level population, the details of which will come as a surprise in some quarters. After all, in light of what has been considerable discussion about the virtues of putting up walls along borders, the reality is that in many states net international migration has been and remains a key source of growth in the total population. Then again, putting up walls may seem a tempting option for some states, not so much to keep foreigners out but to keep current residents in, at least those states for which domestic out-migration has acted as a persistent drag on growth in the total population. In any event, the following discussion will highlight what we think are some of the more interesting trends in state level population over recent years – comparable 2016 data on the metro area level are not yet available.

As seen in the chart to the side, total population growth in the Regions footprint has consistently outpaced growth for the U.S. as a whole. Indeed, the last year in which population growth in the footprint lagged growth for the U.S. as a whole was 1989. Overall population trends have been similar, i.e., growth has been decelerating for some time, mainly due to falling birth rates, but nonetheless the footprint has consistently grown at a faster pace than the U.S. as a whole. But, as we routinely point out in our presentations of data on the state and metro area levels, looking at the data for the footprint as a whole masks what are often stark differences across individual states/metro areas. The same is true with the data on population and the components of change.

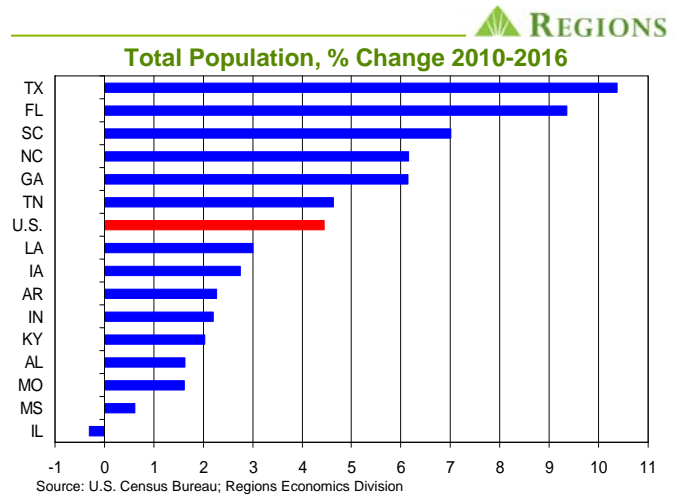
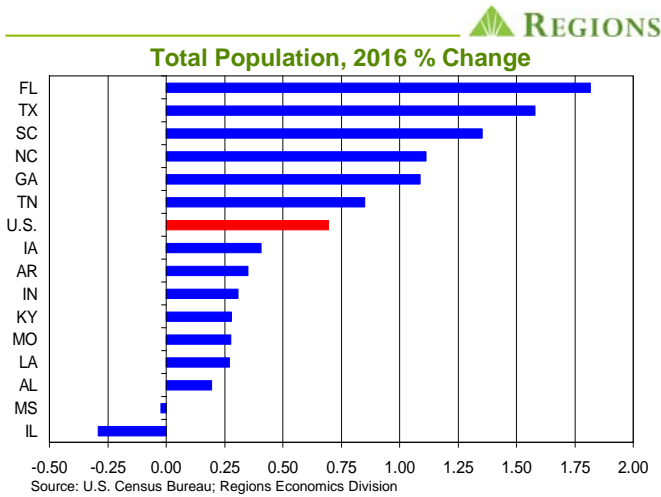
For the U.S. as a whole, total population increased by just 0.70 percent in 2016 (reflecting an increase of 2,230,895 persons), matching 2013 as the slowest annual rate of population growth since 1937. The total population of the 15-state Regions footprint grew by 0.94 percent in 2016, reflecting an increase of 1,201,974 persons, which means the footprint accounted for 53.88 percent of the net increase in U.S. population in 2016. This was the third consecutive year in which the footprint accounted for more than half the net increase in the U.S. population, which was also the case in each year from 2004 through 2008. As of 2016 the footprint population stood at 129,165,706 persons, which accounts for 39.97 percent of the total U.S. population, similar to the footprint shares of total nonfarm employment and total personal income, amongst other metrics. The footprint share of total U.S. population has obviously increased over time given the faster rate of population growth within the footprint – for instance, in 1990 the footprint accounted for 37.45 percent of the total U.S. population.

With any given data series, no single observation is nearly as telling as the longer-term trends, which is also the case with the population data. For instance, the nature and severity of the 2007-09 recession and the stubbornly slow rebound introduced some cyclical distortions to migration patterns that were layered on top of steadily declining birth rates. This helps account for the persistent deceleration in the growth of the U.S. population over the past several years. Over the 2010-2016 period the total population of the U.S. grew by 4.45 percent, compared to growth of 5.61 percent for the Regions footprint. Over this period, the footprint accounted for over 49 percent of the total increase in the U.S. population.

But, as noted above, there are stark differences in growth rates for the individual states that comprise the Regions footprint, both for 2016 and for the 2010-2016 period. So, while population growth in the footprint has easily outpaced the national average, the reality is that population within the footprint has been highly concentrated amongst a subset of the 15 states. In 2016, Florida's population grew by 1.82 percent, the fastest of any state within the footprint with Texas, at 1.58 percent, posting the second fastest growth. South Carolina, North Carolina, Georgia, and Tennessee all logged population growth in excess of the national average in 2016. At the other end of the spectrum, however, both Illinois and Mississippi saw their populations decline in 2016 while the remaining states all registered



population growth well shy of the national average. As a side note, Florida's 2016 rate of population growth was the fourth fastest in the U.S., behind Utah (2.03 percent), Nevada (1.95 percent), and Idaho (1.83 percent).



The same patterns are seen in the data over the 2010-2016 period – Florida, Georgia, North Carolina, South Carolina, Tennessee, and Texas all posted population growth in excess of the national average, with Illinois seeing its population decline while Mississippi's population barely increased and the remaining states saw their populations grow well below the national average rate. Over this longer period Texas saw the fastest population growth of any state in the footprint with growth of 10.37 percent, topping Florida's increase of 9.36 percent. Conversely, Illinois posted a 0.31 percent decline in total population over the 2010-2016 period. As seen in the above charts, population growth has been highly concentrated amongst the group of six fastest growing states. While the relative size of Florida and Texas somewhat skews the math, these six states accounted for 95.30 percent of total population growth within the footprint in 2016 and 90.22 percent of population growth over the 2010-2016 period. And, Texas ranked third nationally in terms of population growth over the 2010-2016 period, behind Washington DC (12.56 percent) and North Dakota (12.37 percent).

We think it also useful to look at the components the change in the total population over time. One component of the total change in population is what is referred to as the "natural change," which is simply the difference between the number of births and the number of deaths. Net migration is the other component of change in the total population, in other words, the difference between the number of people who move into and out of a given area over a given time period. Net migration can further be decomposed into domestic migration and international migration, a difference we find it instructive to highlight. Obviously for the U.S. as a whole net domestic migration is always zero.

The final page of this document presents a detailed table showing, for each state, the components of the net change in population over the 2010-2016 period, but we'll note some of the more interesting observations here. For instance, Florida relies heavily on migration, both domestic and international, to fuel its rapid population growth. As might be expected given the composition of its population (specifically, a relatively high median age), Florida has a birth rate (defined as the number of live births per 1,000 residents) below the U.S. average and a death rate (defined as the number of deaths per 1,000 residents) above the national average. As such, the natural change in Florida's population tends to be fairly small in any given time period. At the same time, however, Florida is a domestic and international draw, and this inflow of new residents, such as retirees, in turn attracts additional residents who become part of the state's work force. So, over the 2010-2016 period Florida's population grew by more than 1.76 million persons, but natural change accounted for just 11.28 percent of this growth, with net domestic migration accounting for 49.66 percent and net international migration accounting for 39.06 percent of total population growth.

Next to Florida, South Carolina has been heavily reliant on in-migration to fuel overall population growth over recent years; over the 2010-2016 period net in-migration accounted for 75.51 percent of the state's total population growth with the natural change accounting for 24.49 percent of total population growth. Unlike Florida, however, net in-migration in South Carolina is heavily skewed towards domestic in-migration, which accounted for 64.29 percent of all population growth while international in-migration accounted for just 11.22 percent (the lowest of any state in the footprint). The remaining four states amongst the group of six states that have driven much of the recent growth in total population within the Regions footprint are also heavily reliant on in-migration as a source of growth in total

population, with net in-migration accounting for 64.03 percent of total population growth over the 2010-2016 period in Tennessee, 62.27 percent in North Carolina, 51.2 percent in Texas, and 43.28 percent in Georgia.

Conversely, Illinois, Mississippi, and Missouri all saw net out-migration (i.e., more people moved out of than into the state) over the 2010-2016 period. The latter two states did see growth in total population due to natural change over this period but the natural change in Illinois was not sufficient to offset the flow of out-migration, hence the decline in total population in Illinois over the 2010-2016 period. This is where the distinction between domestic and international net migration takes on added significance. Over the 2010-2016 period, nine of the fifteen states in the footprint – Alabama, Arkansas, Iowa, Illinois, Indiana, Kentucky, Louisiana, Mississippi, and Missouri – all saw net domestic out-migration. Each of these states, however, saw net international in-migration which, with the exception of Illinois, was more than sufficient to offset their net domestic out-migration thus yielding positive net total migration. In other words, international in-migration was a significant source of growth in total population for each of these states over the 2010-2016 period.

It is worth noting that in some of these states, such as Alabama and Kentucky, weakening domestic migration trends are a relatively recent development, i.e., in the post-recession years, while in other states, such as Illinois and Mississippi, weak domestic migration trends date back much further. There are some states in which the post-recession economy remains soft and uneven with no clear-cut driver of job growth, which has likely contributed to some residents moving elsewhere in search of better economic opportunities and also made these states less attractive as potential new homes to residents of other states looking to move. Longer-term patterns of economic growth – factors such as slower overall growth, larger shares of population in rural areas that offer more limited opportunities for industrial development and growth, or over-reliance on one key industry as an economic driver – no doubt contributed to longer-running patterns of domestic out-migration in other states. To be sure, rapid growth in one key industry can also be a driver of net domestic in-migration, for instance, the energy industry in North Dakota. Texas. We noted above that North Dakota had posted the nation's second fastest population growth over the 2010-2016 period, and much of that growth was tied to the post-recession emergence of the energy industry. But, as energy's fortunes soured starting in 2015, North Dakota saw its population barely budge in 2016, growing by just 0.15 percent with significant net domestic out-migration. In contrast, though heavily exposed to energy, a far more diverse economy has helped Texas withstand weakness in the energy industry. While net domestic migration slowed sharply in 2016, it was still positive while net international in-migration remained stable, hence Texas still saw total population growth of 1.58 percent in 2016.

Housing is an industry which has also had an impact on domestic migration trends over the past several years, even if not in an intuitively obvious way. One implication of the housing market bust associated with the 2007-09 recession is that sizeable numbers of homeowners across the U.S. were, in essence, trapped by negative equity positions in their homes. In other words, they owed more on mortgage loans than their home was worth, thanks to sharp declines in house prices across much of the U.S. This is one factor which significantly limited geographic mobility in the United States over the past several years, to which a slow and uneven recovery in the broader economy also contributed. But, as the housing market has recovered fewer and fewer homeowners are in negative equity positions and, as such, have the latitude to move should they desire or should they feel economic opportunities are better elsewhere. At the same time, recoveries in equity prices over recent years have likely helped more people feel more comfortable about retiring, which would have helped support domestic in-migration not only into Florida but in states such as the Carolinas that over recent years have become more popular as retirement destinations. And, as noted earlier, in a state such as Florida that persistently sees a high degree of in-migration, this in turn creates demand for housing and a variety of goods and services, which creates employment opportunities that attract migrants from other states, i.e., a virtuous demographic cycle if you will. There are of course many factors that go into this, such as climate, the tax structure, the availability of land, among others, and clearly some states are better positioned than others to draw in-migrants.

This in turn ties back to an age-old economic development question – which comes first, the industry or the workers? States with weaker demographic trends tend to be at a competitive disadvantage when it comes to attracting economic development. In terms of tax and other incentives to attract new development, the playing field is often more level, even states with less business friendly tax structures can always offer incentives to ease tax burdens. But, firms looking to build new production facilities are also concerned as to whether they will have an adequate supply of skilled labor, not only today when they start an operation but also tomorrow should they opt to expand. This is a much tougher hurdle for some states than for others. It is true an announcement of a new corporate facility can itself be a draw to prospective workers, but the reality is firms do not choose a location first then hope the labor supply follows. While demographic trends can change, this is not something that typically happens quickly, so this points to the need for demographically challenged states to make the most of what they do have, in this case in the form of taking steps to enhance the quality of labor.

Population trends may not necessarily strike one as being the most riveting of topics, but nonetheless it is important to have an understanding of not only what the top-line numbers are but also why they are what they are. Hopefully this discussion has answered at least a few basic questions along these lines.

Components of Total Population Change  
Regions Footprint and U.S.  
2010 through 2016

<u>STATE</u>	<u>Total Births</u>	<u>Total Deaths</u>	<u>Net Domestic Migration</u>	<u>Net International Migration</u>	<u>Net Change In Total Population</u>	<u>"Natural" Change</u>	<u>Net Migration</u>
Alabama	353,190	301,539	-2,941	28,270	76,980	51,651	25,329
Arkansas	229,411	180,610	-174	18,491	67,118	48,801	18,317
Florida	1,302,386	1,108,306	854,620	672,340	1,721,040	194,080	1,526,960
Georgia	784,875	451,623	115,096	139,171	587,519	333,252	254,267
Iowa	233,495	171,548	-10,538	34,317	85,726	61,947	23,779
Illinois	950,298	625,004	-526,705	172,656	-28,755	325,294	-354,049
Indiana	500,361	358,883	-56,184	61,416	146,710	141,478	5,232
Kentucky	333,275	262,892	-18,637	38,658	90,404	70,383	20,021
Louisiana	378,877	257,897	-26,492	42,490	136,978	120,980	15,998
Missouri	451,789	343,330	-57,855	49,415	100,019	108,459	-8,440
Mississippi	232,555	180,577	-48,274	13,713	17,417	51,978	-34,561
North Carolina	721,905	504,710	235,531	122,870	575,596	217,195	358,401
South Carolina	344,642	267,466	202,544	35,353	315,073	77,176	237,897
Tennessee	482,792	378,146	132,599	53,686	290,931	104,646	186,285
Texas	2,345,042	1,076,884	836,960	493,390	2,598,508	1,268,158	1,330,350
Regions Footprint	9,644,893	6,469,415	1,629,550	1,976,236	6,781,264	3,175,478	3,605,786
U,S,	23,775,059	15,636,999	0,000	5,641,260	13,779,320	8,138,060	5,641,260

Source: U,S, Census Bureau; Regions Economics Division