



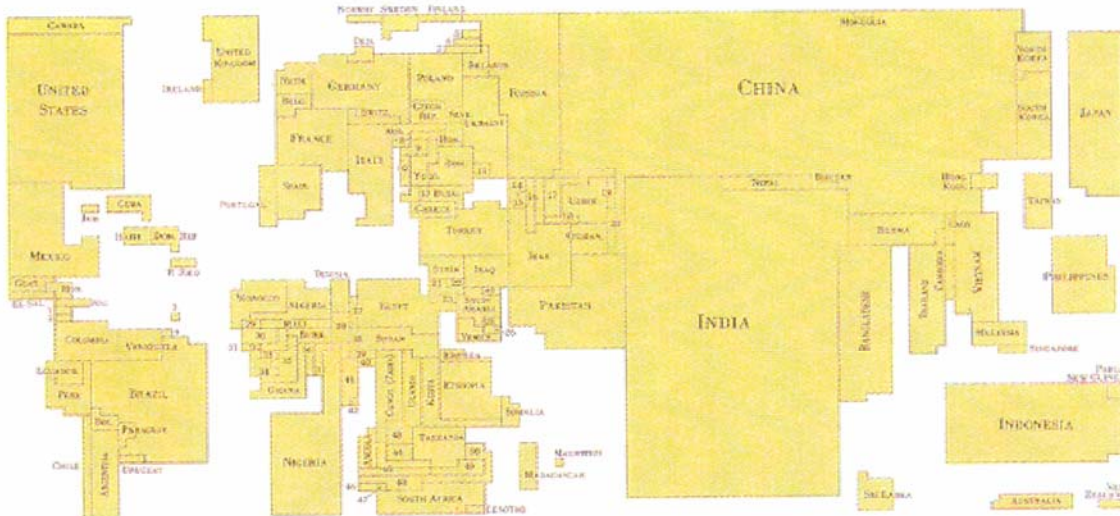
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## Why the World Works in the Long Run

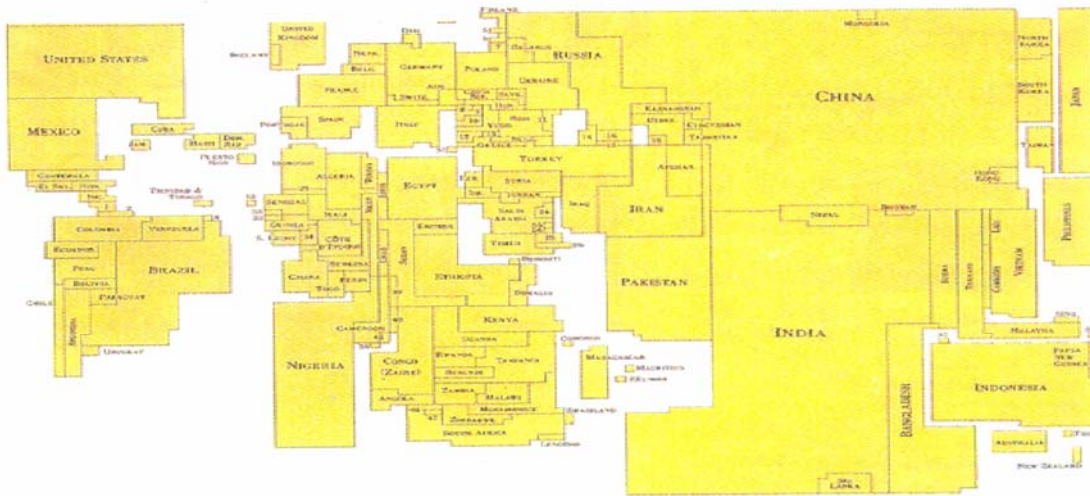
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The world is being “rewired” in the first decade of this century. Globalization started in earnest in 1989 with the fall of the Berlin Wall and has accelerated in the early years of this new century. Prior to 1989 our world consisted of Europe, Japan, and the U.S. China, India, Russia and the rest of the world’s populace mattered little. Thanks to the emergence of capitalism in one form or another, we now have a single economic ideology driving resource allocations. Pictorially, this can be seen in the charts that follow and Table 1. The former describe the world visually in terms of population density and wealth location whereas Table 1 displays GNP per capita for the major developed nations and China.

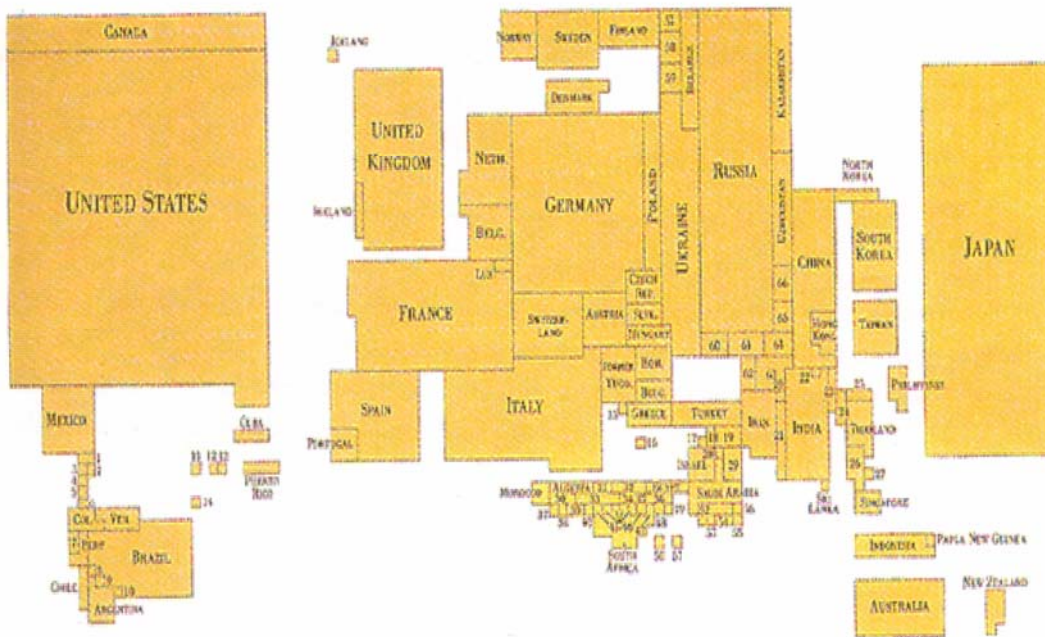
**Figure 1**  
**Demographic & Political Changes: Current Population Comparisons**



**Figure 2**  
**Demographic and Geopolitical Changes: Projected Population Comparisons**



**Figure 3**  
**Distribution of Global Wealth by Gross National Product**



**TABLE 1-GNP and GNP per Capita**

<b>Country</b>	<b>GNP</b>	<b>GNP per Capita</b>
USA	\$10.4 trillion	\$34,000
Japan	\$ 4.0 trillion	\$27,000
Germany	\$ 2.0 trillion	\$25,000
United Kingdom	\$ 1.6 trillion	\$24,000
France	\$ 1.4 trillion	\$24,000
China	\$ 1.2 trillion	\$ 1,000

Upon reflection, it is the arbitrage of labor costs that is driving globalization today. Those low GNP per capita numbers reflect wages of less than one dollar an hour in places like India, China, and other developing countries. Hourly wages in the West are around \$20 per hour. Assuming a world governed by a rule of law, high labor content industries will move to India, China and the like. Most service industries will remain local and complex manufacturing processes that require technology, education and capital will stay in the West. The migration of jobs and industries to these developing countries will occur at a mind numbing rapid pace.

What is taking place is simply the application of a very old economic law – the Law of Comparative Advantage. What it states is that every nation should specialize in making what it does well then trade those goods for other goods and services it desires. If every nation follows this maxim, all countries are better off then if they tried to only meet their needs through 100 percent internal production. Let us look at how this works in the following example.

Imagine a world of two countries with only two products – food and clothing. Labor costs are known and reflected for each country in Table 2. Let us also assume that food and clothing are equally valued in both counties such that there is a desire to have the same number of units inside each country.

If each country produced solely for its own needs the number of units of food and clothing would total 94 units as seen in Table 3. Because of its overall efficiency, Country A can produce 66 units whereas Country B can produce only 28 units.

However, what matters is not the absolute efficiency of Country A relative to B but the relative efficiency of each country in each product. A has a much greater advantage in food compared to B then it does in clothing (1 to 3 versus 2 to 4). A should emphasize food production so long as it can trade clothing for food from A.

Producing to comparative advantage for both countries is to produce six more units of food and clothing than otherwise is possible (100 versus 94). Since A is so much more efficient than B, it will end up with most of the incremental units but not all. Arguably, the number will reflect the overall productivity difference and A will reserve four units whereas B will take two units. Both countries are better off producing to their relative comparative advantage.

**TABLE 2-Products and Labor Costs**

<b>PRODUCT</b>	<b>COUNTRY A</b>	<b>COUNTRY B</b>
1 unit of food	1 day's labor	3 days' labor
1 unit of clothing	2 day's labor	4 days' labor

**TABLE 3-Internal Production Only**

<b><u>Product</u></b>	<b><u>Country A</u> 100 days</b>	<b><u>Country B</u> 100 days</b>	<b><u>Total</u></b>
Food	$1/3 \times 100 \div 1 = 33$ units	$3/7 \times 100 \div 3 = 14$ units	47 units
Clothing	<u><math>2/3 \times 100 \div 2 = 33</math> units</u>	<u><math>4/7 \times 100 \div 4 = 14</math> units</u>	<u>47 units</u>
<i>Total</i>	<i>66 units</i>	<i>28 units</i>	<i>94 units</i>

**TABLE 4-Producing to Comparative Advantage**

<b><u>Product</u></b>	<b><u>Country A</u> 100 days</b>	<b><u>Country B</u> 100 days</b>	<b><u>Total</u></b>
Food	$50 \div 1 \text{ day} = 50$ units	0	50 units
Clothing	<u><math>50 \div 2 \text{ days} = 25</math> units</u>	<u><math>100 \div 4 \text{ days} = 25</math> units</u>	<u>50 units</u>
<i>Total</i>	<i>75 units</i>	<i>25 units</i>	<i>100 units</i>

An unseen hand will rewire the old order over the next decade unless politicians interfere with imposition of tariffs and quotas that mitigate the advantages of globalization.

Closer to the moment we can see two powerful forces at work – a declining U.S. dollar and a surging China. The U.S. has engaged in monetary and fiscal expansionary policies unseen since WWII. To finance the twin deficits of trade and treasury of \$1 trillion, we borrow 85% from the rest of the savings world. This is unsustainable and will result in a depreciation of the currency. I cannot name a major currency that will deteriorate more than the U.S. dollar over the next 18 months.

The second force, China, is a juggernaut in terms of its growth. In Shanghai, the Chinese are building the equivalent of one Boston skyline every year. Fifty-five percent of semi-fabricated aluminum production in the next decade will come from Asia. Consumption of stainless steel in China is greater than that of the U.S. and Japan combined. Demand for commodities will continue at a high level for some time to come.

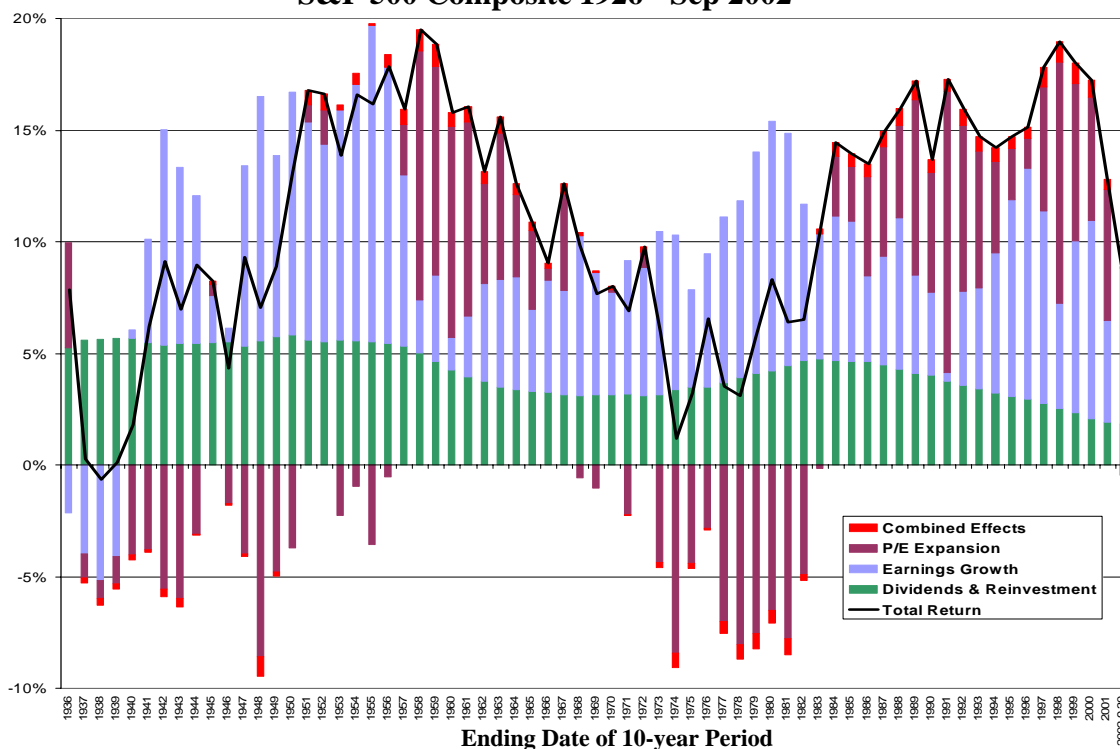
What does the investor do?

- Stay away from bonds with long maturities. Rates in the U.S. will have to rise to stave off a disorderly liquidation of dollar holdings. Even though unemployment is likely to remain high and real GNP growth may be lackluster, pressure on rates to rise will continue because of the dollars' decline.
- Equities of commodity companies, particularly energy, minerals and gold should do well. Demand from the East assures growth and a declining dollar will cause some investors to want to own "real" goods and not paper money.
- The ageing populations of the West will cause an increasing proportion of government spending allocated to medical uses. Companies that solve healthcare problems through a lowering of costs will do well.

The U.S. is the world's policeman and defense expenditures will remain high. Perhaps there will have to be some give on the "guns and butter" spending but defense spending will remain high.

No theme is more relevant, however, than free cash flow. Expanding P/E ratios as seen below drove equity returns of the 1980's and 1990's. Earnings also mattered but far less than P/E ratio expansions. Dividends mattered but very little. These trends are captured in Figure 3 and Table 5.

**Figure 4**  
**Components of Compound Annual Total Returns for Rolling 10-year Periods**  
**S&P 500 Composite 1926 - Sep 2002**



**Table 5- Components of Total Return, Compound Annual Rates**

	[A]	[B]	[C]	[D]	[E]	[F]
	EPS	P/E	Price	Dividends &	Combined	
	Growth	Change	Appreciation	Reinvestment	Effects	Total Return
<b>Period</b>						
1980-89	4.4%	7.8%	12.6%	4.1%	0.9%	17.2%
1990-99	7.7%	7.1%	15.3%	2.3%	0.9%	18.0%

**Notes on Column Arithmetic:**

$$(1 + C) = (1 + A) * (1 + B)$$

$$(1 + F) = (1 + C) * (1 + D)$$

$$E = F - D - A - B$$

Going forward, cash flow will replace earnings as a more desirable metric for measuring the financial output of a business. Identifying free cash flow and its optimum uses (and there are only five possibilities) is the principal task of the analyst today – dividends, stock buybacks, debt reduction, acquisitions, and reinvestment in company capital projects.

As a portfolio manager I want to buy a “good” company at a “good” price. The first issue surrounds the identification of free cash flow, its growth rate, the dispersion surrounding that growth rate and the optimization that cash flows use among dividends, debt pay down, stock repurchases, acquisitions and re-investments within the enterprise. The second part is the proper valuation of that cash flow stream.

In our case we want the portfolio to have an above average yield and an above average free cash flow growth rate. The sum of those two variables should allow a diversified portfolio to outperform most benchmarks over a multi-year period.