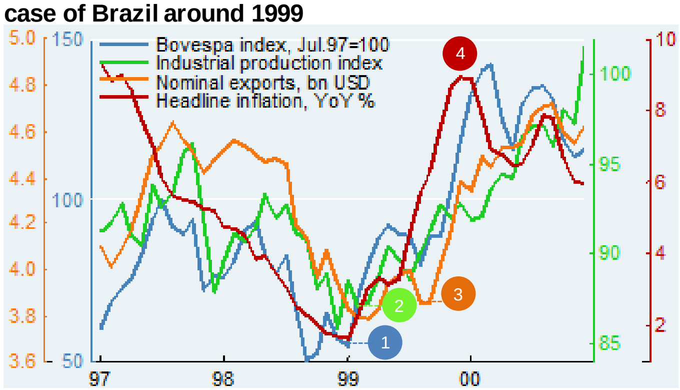
Topics: Emerging market equities; China and the US

Bottom-feeding, emerging markets and some improvements in leading indicators

We prepared a paper for an upcoming conference on the history of "bottom-feeding": the decision to reinvest in a market after a crisis. The paper reviews several decades of equity and credit market crises. One observation: it takes time for defaults, delinquencies, capital flight, unemployment, bank failures and profit declines to work their way through the system. **More importantly, our main conclusion is that by the time they do, markets have typically already risen substantially.** For bottom-feeding investors, leading indicators like PMI business surveys are much better post-crisis investment signals. For US markets in particular, an upturn in the PMI survey has almost an eerie ability to mark the exact bottom in asset prices.

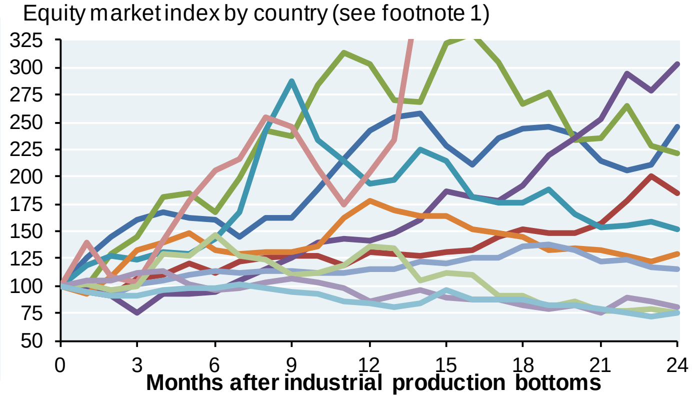
As for emerging markets and bottom-feeding, the pattern often looks like the first chart below, on Brazil in the late 1990's. A balance of payments crisis builds up, and the release valve is a decline in the currency. Investors are often concerned about two things after a devaluation: (a) that inflation will rise sharply, and (b) that it will take time for exports to recover since they do not respond to a devaluation immediately. As a result, investor litmus tests may require inflation to stop rising, and exports to start rising. In 1999, Brazilian inflation did rise for a year before peaking (#4), and exports took a year to recover (#3). However, **the Bovespa equity index (#1) recovered sooner**, roughly in line with the rise in industrial production (#2).

Looking for reinvestment signals after a devaluation: the case of Brazil around 1999



Source: Financial Times, Banco Central do Brasil, IBGE, IMF. February 2014.

Equity market performance after upturn in IP
Equity market index by country (see footnote 1)



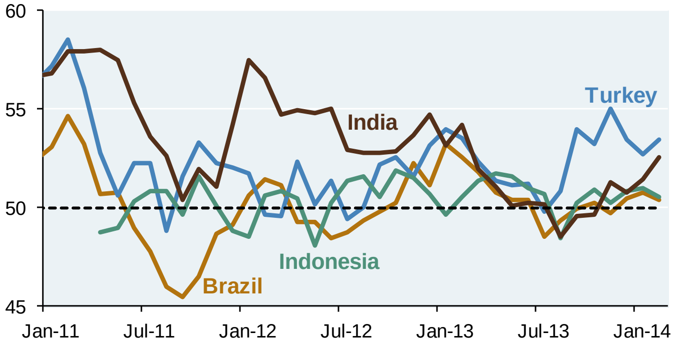
Source: respective central banks and statistical agencies, MSCI. Feb 2014.

This is not just the case in Brazil. The second chart looks at equity markets after 11 currency devaluations and depreciations since 1975[1]. The pattern demonstrates how an upturn in industrial production was usually a good signal for investors. The IP signal worked better than the currency devaluation itself (too early), and better than signs of improving exports or inflation stabilization (too late). Ideally, we would look at equity performance after Purchasing Manager (PMI) surveys bottom, but such surveys have limited history in EM countries. Actual industrial production is the next best thing to look at.

As for EM equities today, PMI surveys in the 4 EM debtor nations have begun to rise (see chart on next page). With my fundamental analysis hat on, I still see inflation rising, interest rates rising, continued capital flight and more pain ahead for households and businesses in these countries. On the other hand, history shows that after substantial devaluations/depreciations (the 4 debtor nation currencies have declined by 25%-30% since 2011), equity markets have usually anticipated an eventual economic improvement, **even before the facts on the ground look any better.** For bottom-feeding investors, this is something to pay attention to.

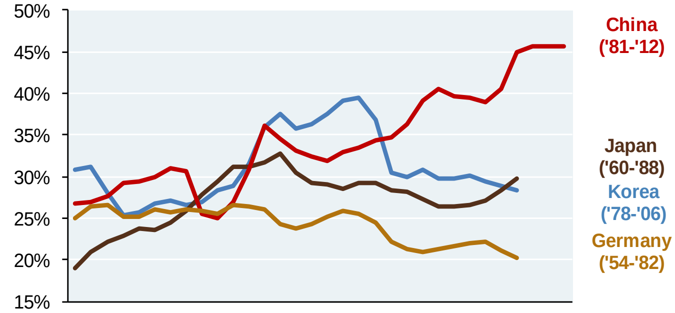
[1] Italy (1976), Spain (1977), India (1991), United Kingdom (1992), Mexico (1994), Malaysia (1997), Korea (1997), Thailand (1998), Russia (1998), Brazil (1999) and Argentina (2002).

Big 4 EM Debtors: PMIs improving
Purchasing Managers' Index, manufacturing level



Source: Markit, J.P.Morgan Securities LLC. February 2014.

Chinese capital formation eclipses prior industrializations
Gross fixed capital formation, % of GDP



Source: Bank of Korea, ESRI, IMF, National Bureau of Statistics of China Bundesbank, OECD.

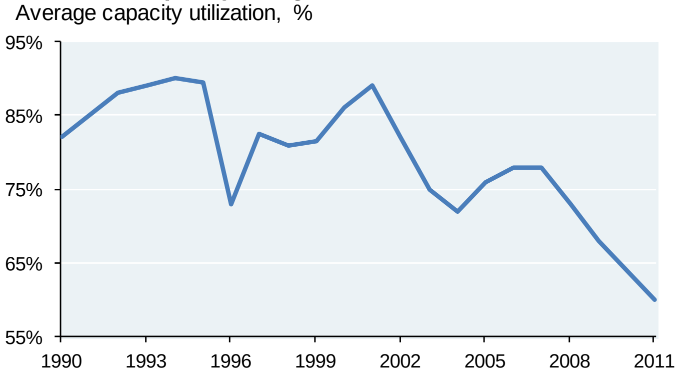
On the US and China

Government spending represents around 15% of GDP in both the US and China. Most investment conclusions we draw are short and medium term, but some are long term as well. The way this 15% gets spent has important implications for the long-term outlook. In China, it looks like more capital spending and bank recapitalization is on the way, and in the US, entitlement spending is squeezing out almost everything else. Neither approach seems ideally suited to long-term improvements in growth and productivity.

China: the credit crisis, the cost to clean it up and global ramifications

A few years ago, I started showing the chart (above, right) to clients: **the Chinese capital spending boom has totally eclipsed other post-war industrializations**. In the early stages, given how far behind China was after the disastrous Great Leap Forward and the Cultural Revolution, it made sense to see a more rapid acceleration. But by 2011, it became clear that the capital spending/corporate credit boom would bear costs as well as benefits, leaving some over-indebted companies unable to repay debts. As shown below, Chinese capacity utilization is falling (not a surprise). This IMF series only goes through 2011, but falling producer prices since then suggest not much has changed.

Too much capacity brings down utilization rate
Average capacity utilization, %



Source: IMF - Article IV Consultation on China. 2011.

Rising levels of corporate debt in China
Non-financial corporate debt, % of GDP

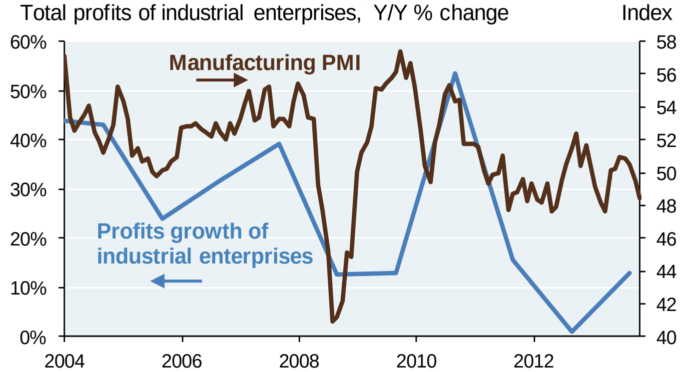
Source: BIS, Empirical Research Partners. Q3 2013.

The capital spending boom was mostly financed by corporate debt, borrowed from banks. China has the highest corporate debt to GDP ratio of almost any country in the world, and two thirds was channeled to state-owned enterprises (SOEs) rather than to more profitable small and medium enterprises (SMEs) [in 2009 alone, 95% went to SOEs]. One driver of the corporate debt expansion: the average real cost of borrowing for SOEs has been negative for the last ten years, a by-product of financial repression of savers (low deposit rates). In addition to corporations, local governments have been big borrowers as well, financed by land sales and large transfers from the Central Government.

Currently, non-performing loans reported by banks are close to zero, but that's a meaningless number since the credit is allocated so freely by banks and wealth management lenders which tripled over the last 5 years. This latter source of financing looks like it is about to undergo a severe retrenchment. The basic materials, industrial and utility sectors are the most over-leveraged. Some highly leveraged companies also hold a lot of cash, but if it was invested in the shadow banking system and re-routed to other SOEs, who knows how much it's really worth.

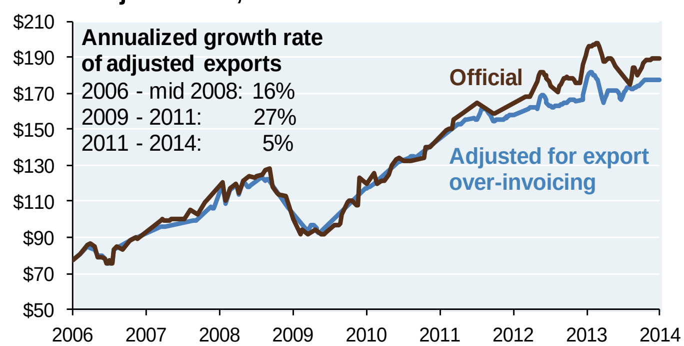
Chinese industrial profits growth has declined since 2011, and leading indicators have weakened. Exports collapsed in February, but due in part to distortions that are hard to factor out (lunar holidays and related factory shutdowns, over-invoicing by exporters, etc). **The big picture is that rising wage growth and 30% currency appreciation since 2007 have slowed China's export trajectory.** As we wrote a few weeks ago, there may be a point at which the US, the EU and Japan do not increase import penetration further. China's share of imports has flattened out in all three.

Profits vs. PMI business survey
Total profits of industrial enterprises, Y/Y % change



Source: China National Bureau of Statistics, Markit. February 2014.

Chinese export growth flattening out particularly after some adjustments, billions of USD



Source: China Customs, Goldman Sachs, *How fast are Chinese exports really growing?* March 2014.

There are silver linings to keep in mind. **First, all of this is no secret to equity investors.** Chinese equities most affected by these trends are banks, telecoms, energy companies, utilities and other large companies that are accessible to most foreign investors and which list in Hong Kong. The MSCI China Index (a proxy for such companies) has lumbered along at ~10x earnings for the last 3 years. Their current P/Es are 8.6x, lower than every country in the MSCI All Country World Index except Russia and Turkey. Many are even cheaper than that, since "new China" stocks (technology, digital media, healthcare, consumer staples) trade at higher multiples. The MSCI China Index has under-performed EM equities since 2009. However, some managers have generated higher returns by adding exposure to SMEs and private companies that are not in the MSCI index (e.g., privately-owned Minsheng Bank).

China's struggles are no secret to equity investors
P/E multiple for MSCI China equity index, 12-months trailing

Source: MSCI, J.P. Morgan Securities LLC. March 2014.

Equity performance of China vs. EM
Index, 1/1/2009 = 100; total return USD

Source: Bloomberg. March 2014.

Second, not all credit crises are the same. There are three kinds worth distinguishing:

1. Net *creditor* countries with a credit bubble denominated in their *own* currency
2. Net *debtor* countries with a credit bubble denominated in their *own* currency
3. Net *debtor* countries with a credit bubble denominated in *foreign* currency

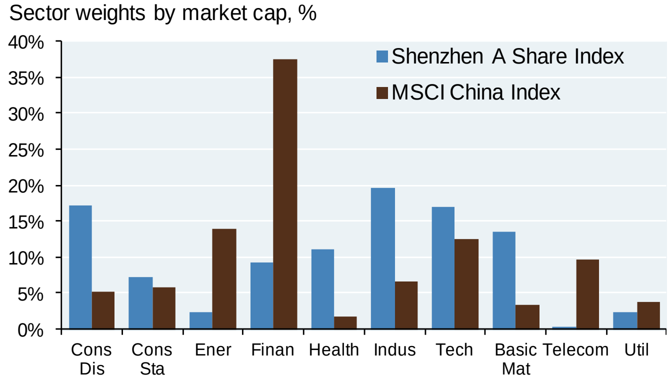
China falls into the first category (it does not rely on foreign capital; it has massive foreign exchange reserves; and its external debt/gdp ratio is a third of other EM countries). In theory, such a crisis should entail smaller economic and market adjustments, while the many instances of the third category have been more painful. Currencies often strengthen in the first category, since companies and households sell foreign assets, repatriate and repay domestic debt.

Third, as Chinese PM Li Keqiang mentioned last week, the government has fiscal and monetary ammunition to smooth the adjustment. Inflation is low (for China), and not a policy constraint. Likely stimulus candidates are more urbanization and rail programs, tax subsidies for high-tech/clean energy and other preferred sectors, relaxation of property restrictions and lower VAT taxes on the service sector. Bank reserve requirements could be cut, but that seems less likely.

The bottom line for investors: China remains a wild ride, global impact probably limited

- In Q1 2014, sequential growth may be only 5%. While we expect the government to push it back to their announced target of 7.5% y/y via stimulus programs, China's organic private sector growth rate is an unknown, and more capital spending may not help utilization rates or profits. I would be surprised to see a sustained return to growth rates above 8%.
- Unlike other credit crises, there are fewer cross-border implications for the global financial system, so that a China slowdown and credit unwind should not bring the world to a screeching halt (as the US did in 2008 and as Europe did 3 years later). China's central gov't debt is very low at 21% of GDP, which would allow it to recapitalize banks as it did during the banking crisis of the late 1990's (when non-performing assets were purchased at par value from struggling banks, with the losses spread out over several years).
- Due to data issues, there's a lot that we don't know (we hear reports of capital flight via citizens using UnionPay cards, and that as much as $200 bn per year makes its way out through Macau)
- Chinese investment opportunities are sometimes better accessed through private equity (which can focus on household formation and rising household incomes) rather than public equity which is dominated by industrial exporters, utilities, banks and other SOEs. Similarly, Chinese companies that list domestically in markets such as Shenzhen are often SMEs with higher profitability and better growth trends. Historically, there were strict quotas for foreign investors seeking to own these renminbi-denominated stocks (dubbed "A" shares), and allocations were made selectively to a few asset managers (J.P. Morgan Asset Management was one of the early ones). However, going forward, we expect these quotas to be loosened considerably, allowing foreign investors to own stocks more representative of the "SME experience" than the "SOE experience". As

Sector breakdown of Shenzhen A and MSCI China Indexes
Sector weights by market cap, %



Source: Bloomberg. March 2014.

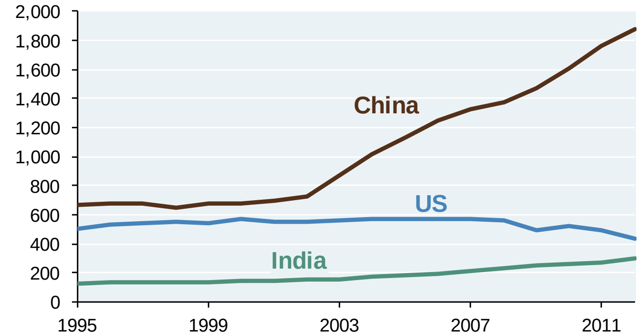
Equity performance of MSCI China, Shenzhen A, and EM
Index, 1/1/2009 = 100; total return USD

Source: Bloomberg. March 2014.

shown, there are substantial sector differences between the two, with Shenzhen markets concentrated in consumer, healthcare and smaller-scale industrial companies. In terms of performance, locally listed shares have generated modestly better performance than the MSCI China Index since 2009, albeit with a lot of volatility (25%-30%, which is 2x US volatility levels).

In some ways, the most depressing thing I hear about China is this: in 2030, it may still burn the same amount of coal as it does today. This is despite massive investment in renewable energy (needed to maintain its relative share as China's energy demand grows). While China attempts to reduce coal's *share* of primary energy from 68% to 58%, its energy demand will grow fast enough so that the *volume* of coal burned remains the same. **This may be an over-statement, but given issues around air quality, water quality and desertification of some cities (see box[2]), China might be the first country to ever pollute itself out of contention for reserve currency status.** One alternative would be for China to aggressively tap what the US EIA describes as the world's largest basins of recoverable shale gas reserves. But this is a very water-intensive process, and for a variety of reasons, shale gas makes up less than 0.5% of China's domestic natural gas production. The other alternative: a deal with Russia to import natural gas and reduce its reliance on domestic coal. As far as the Ukraine situation goes, a Russian rift with the EU might not be the worst thing for Chinese policymakers.

The world's three largest coal users
Annual coal consumption, million tonnes of oil equivalent



Source: BP Review of World Energy. June 2013. Data through 2012.

Water everywhere, but not a drop to drink: China's environmental mess

The **air quality** category "PM 2.5" measures pollutant particles that are under 2.5 microns in diameter. This measure in Beijing recently averaged 300 micrograms per cubic meter, and peaked at 500; the World Health Organization recommends a cap of 25. As reported in the New York Times last fall, the smog was so bad in Zhejiang Province that a fire went unnoticed by residents for three hours; and visibility in the city of Harbin was less than 10 meters, forcing the closure of all schools. Chinese scientists warn that its air pollution is now so bad that it resembles a nuclear winter, slowing photosynthesis in plants and potentially damaging the food supply.

Severe water pollution affects 75 percent of China's rivers and lakes and 28 percent are unsuitable even for agricultural use. Since 1960, Chinese renewable water resources per capita have fallen in half and are 20% of US levels. 300 million people lack access to safe drinking water: the OECD estimates that hundreds of millions of Chinese citizens are drinking water contaminated with inorganic pollutants such as arsenic and excessive fluoride, as well as toxins from untreated factory wastewater, inorganic agricultural chemicals, and leeching landfill waste. A Ministry of Water Resources survey in 2012 found that 28,000 of China's waterways had disappeared over the past 20 years. The pictures in this link tell the story with revolting clarity: http://www.businessinsider.com/china-water-pollution-2013-3?op=1

According to China's State Forestry Administration, over 27% of the country suffers from **desertification**, impacting around 400 million people. The area affected covers more than 1,000,000 square miles, or about one-third of the continental United States.

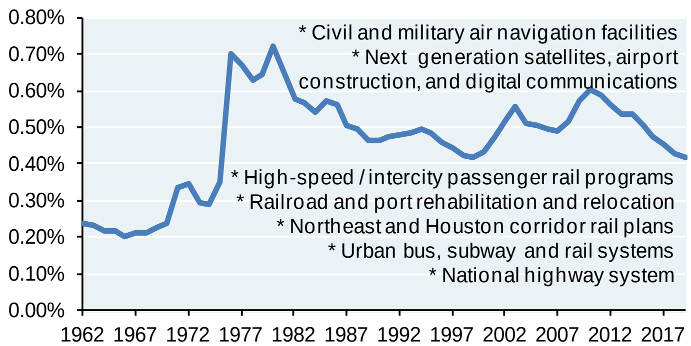
[2] Sources:
Gavekal Dragonomics China Research, February 27, 2014
Woodrow Wilson International Center Environmental Change and Security, "*At the Desert's Edge*", June 27 2013
"*Jokes, Lies and Pollution in China*", New York Times, October 29, 2013
"*China's Environmental Challenges*", Judith Shapiro, American University, 2012
"*The World's Water: China and Water*", Peter Gleick, 2008-2009
"*28,000 Rivers Disappeared in China: What Happened?*", Yale Center for Environmental Law & Policy, June 2013

On the US: questions which all have the same answer

I have placed a gag order on myself regarding US economic data for another month or so. Given the coldest weather in 35+ years, some weak economic data is due to the deep freeze in the South and the Midwest (housing starts, existing home sales and hours worked have been awful). While that line of thinking has some merit, there are other pockets of weakness that cold weather does not explain (weak capital goods shipments and non-manufacturing employment surveys). It will take a pickup in momentum for the US to get to where I thought it would be by mid-year, which I still expect to happen; we will know more by the end of April.

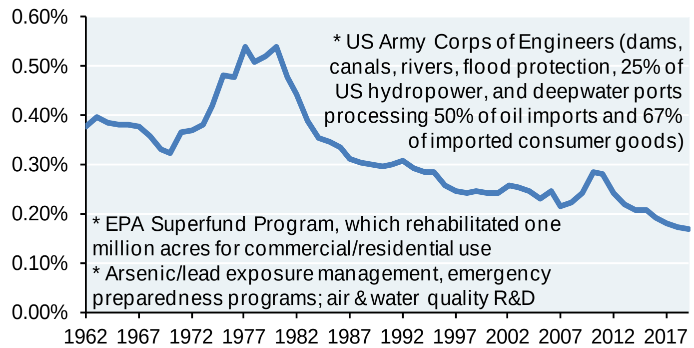
Meanwhile, I visited New Orleans[3] last month to see clients. One question that always comes up there: **why can't the US spend more on infrastructure?** As I first wrote 5 years ago, preventive infrastructure spending can be effective: $120 *billion* was spent by the US government for relief and reconstruction in the wake of Hurricane Katrina. As is now believed in the geo-forensics community[4], for just $10 *million*, the Army Corps of Engineers could have conducted more detailed subsurface exploration beneath flood walls erected in the last 25 years. Instead, to save money, testing intervals were spaced too far apart. This led to faulty extrapolations and canal wall failures that caused 80% of the damage (and which preceded water rising over the levees). Given the dilapidated state of bridges, tunnels, rails, roads and the electricity grid in some places, **why is US spending on this category *falling*?** And how does the US avoid the kind of environmental problems facing China cited on page 4 as spending on superfund clean-up and other related programs declines?

Transportation spending
Percent of GDP



Source: OMB, CBO. March 2014.

Natural Resources and Environment
Percent of GDP



Source: OMB, CBO. March 2014

Another question that comes up: **why can't the US spend more on worker retraining?** The entry of China into the World Trade Organization in 2001 accelerated a massive decline in US manufacturing jobs, and after the housing bust, the country's unemployed construction workers need new skills. As shown in the first chart on the next page, why is *less* money being spent on training, employment and related social services? The second chart on the next page is striking as well: given concerns around peak oil, fracking, climate change, etc., you would think that public sector spending on commuter rails, urbanized natural gas vehicles, carbon capture and storage, safer ways of operating nuclear power (light water reactors), more efficient internal combustion engines, battery/electricity storage R&D and renewable energy integration would be rising. **So why is energy spending falling?**

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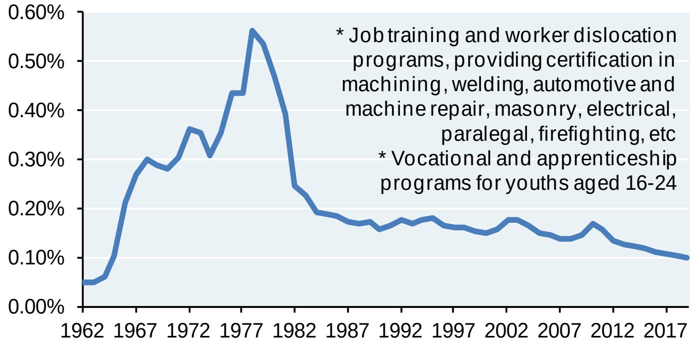
[3] I love going to New Orleans, where clients have very strong opinions. The discussions remind me of Mr. Hodding Carter (journalist and publisher) as quoted in Ken Burns' 1985 film on former Governor Huey Long: "I can't remember any Saturday night that I went anywhere that we didn't talk about killing him".

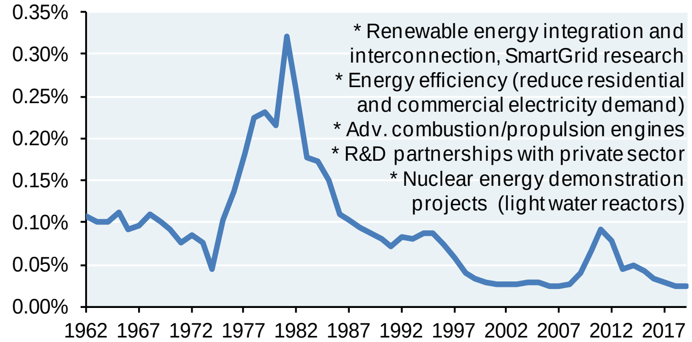
[4] David Rogers, Department of Geological Engineering, University of Missouri-Rolla, Natural Hazards Mitigation Institute. The soil beneath canal wall failures contained extensive sediment (shells, peat deposits and partially decomposed cypress trees). These materials are porous and compressible, leading to "undercutting" of canal walls which might not have happened had sheet piles been 10 feet deeper.

Training, employment and social services
Percent of GDP



Source: OMB, CBO. March 2014.

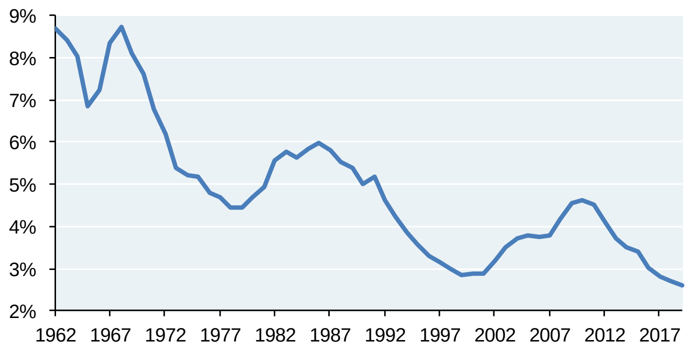
Energy
Percent of GDP



Source: OMB, CBO. March 2014.

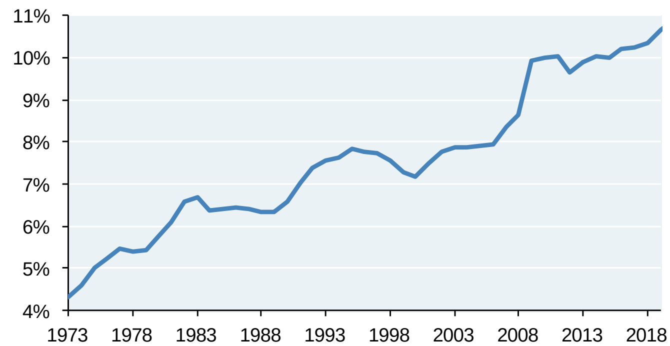
Some people ask if the US is prepared for a renewed cold war with Russia alongside its ongoing battles with other ideological enemies. One can debate whether the US has a national interest in getting militarily involved in Syria and Crimea (I don't think it does), but that's different from debating how low defense spending can go before it has repercussions in other ways. The first chart below shows spending on national defense.

Total national defense
Percent of GDP



Source: OMB, CBO. March 2014.

Entitlement Spending
Percent of GDP



Source: CBO. February 2014.

The answer to all these questions is the same: these categories are declining since they are being squeezed out by the inexorable rise in entitlement payments. There may be negative consequences for productivity, job growth and national income over the short run and over the long run (the New Orleans infrastructure cost/benefit failure is one textbook example). Of course, some argue that there are sufficient incentives for the private sector to solve the transportation, natural resource, infrastructure, job retraining, energy and urbanization challenges facing the US, so that the above trends aren't a problem. I wouldn't.

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CBO: Congressional Budget Office; EIA : Energy Information Administration; EPA: Environmental Protection Agency; ESRI: Economic and Social Research Institute; IMF: International Monetary Fund; OECD: Organisation for Economic Cooperation and Development; PM: particulate matter; PMI: Purchasing Managers' Index

On the discretionary spending charts. Discretionary spending is controlled through annual appropriations by Congress. The Office of Management and Budget (OMB), which prepares budgets for the administration, provides projections for 2014 to 2019 that supplement their historical compilations. Two things to note on the transportation chart. First, the spike in the mid 1970's resulted from a reclassification of spending from mandatory to discretionary. Second, in the case of transportation projections for 2014-2019, we included mandatory spending (set by law and not dependent on an annual congressional appropriation), since the majority of future outlays for transportation programs are projected to be mandatory rather than discretionary. We do not know why transportation spending has been reclassified, and suspect it may be part of an effort by the OMB to project lower discretionary spending. Incorporating such mandatory outlays would only marginally affect of the other categories, and would not significantly change their levels or trends.