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POINT of VIEW
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Our Perspective on Issues Affecting Global Financial Markets

Crowdfunding: The Future of Capital Banks Not Included

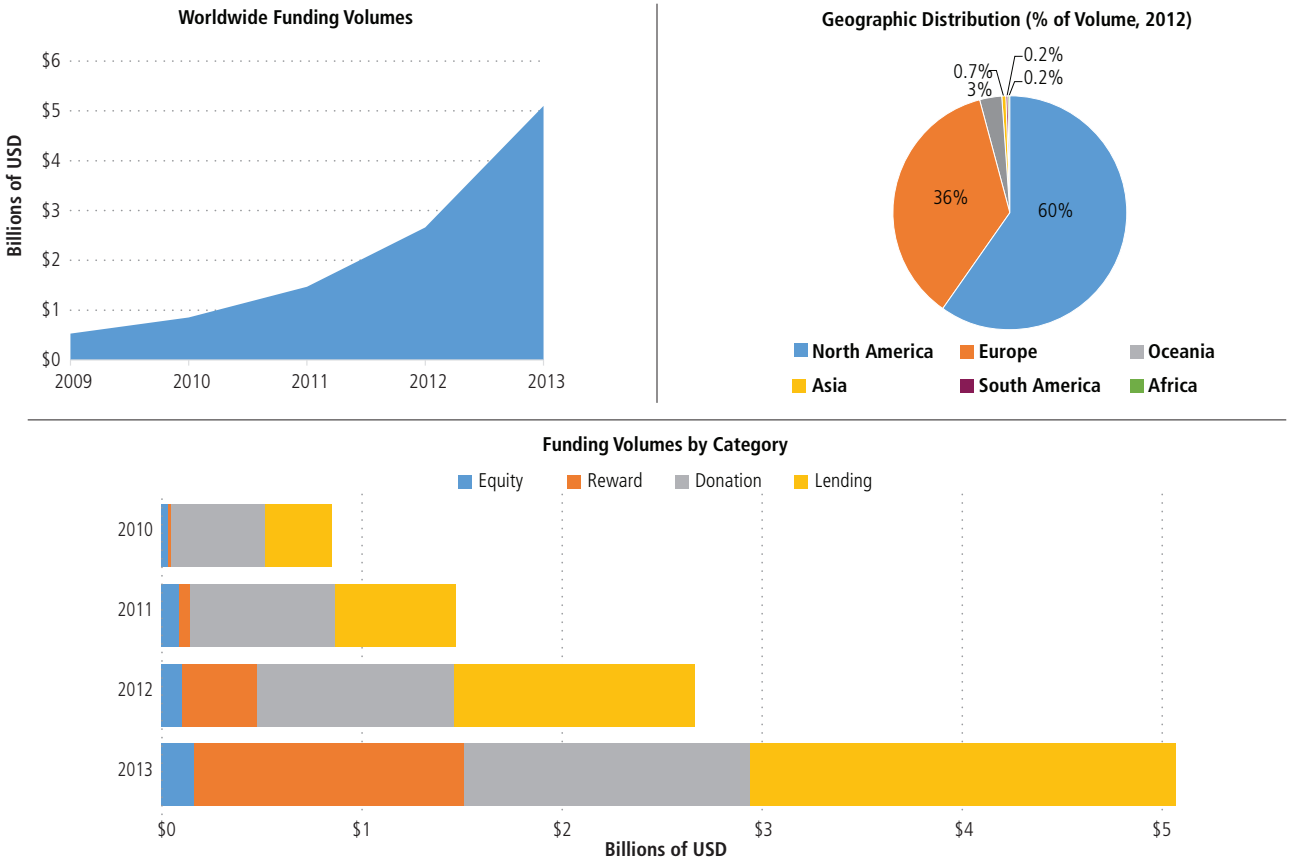
If you have not yet received a request for a "Kickstarter" donation from a friend, a child, or a grandchild, prepare yourself, you soon will. Where once good ideas sat fallow in the minds of those unable to raise capital, today, online venues like Kickstarter, Indiegogo, GoFundMe, Prosper, and Lending Club give entrepreneurs, artists, investors, and even governments access to money for projects or new business ideas.

This is the world of crowdfunding, the scattered "efforts by…individuals and groups–cultural, social, and for-profit–to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries."[1] The existing financial intermediaries bypassed by such funding sources are not only banks, but also payday lenders, venture capital funds, and the like. These institutions stand to lose from disintermediation, which refers to the ways that new services allow savers to connect directly with borrowers, rather than connecting with one another through a centralized intermediary.

Everything from raising donations on Kickstarter to refinancing credit card debt by borrowing from an online "peer-to-peer" lending service qualifies as crowdfunding. Estimates put the total market value of global crowdfunding in excess of $5 billion. Small though it may be, in 2009, total crowdfunding was only $530 million. In four years, crowdfunding has increased 10 times.[2] What is more, all categories of crowdfunding have seen major growth (See Figure 1).

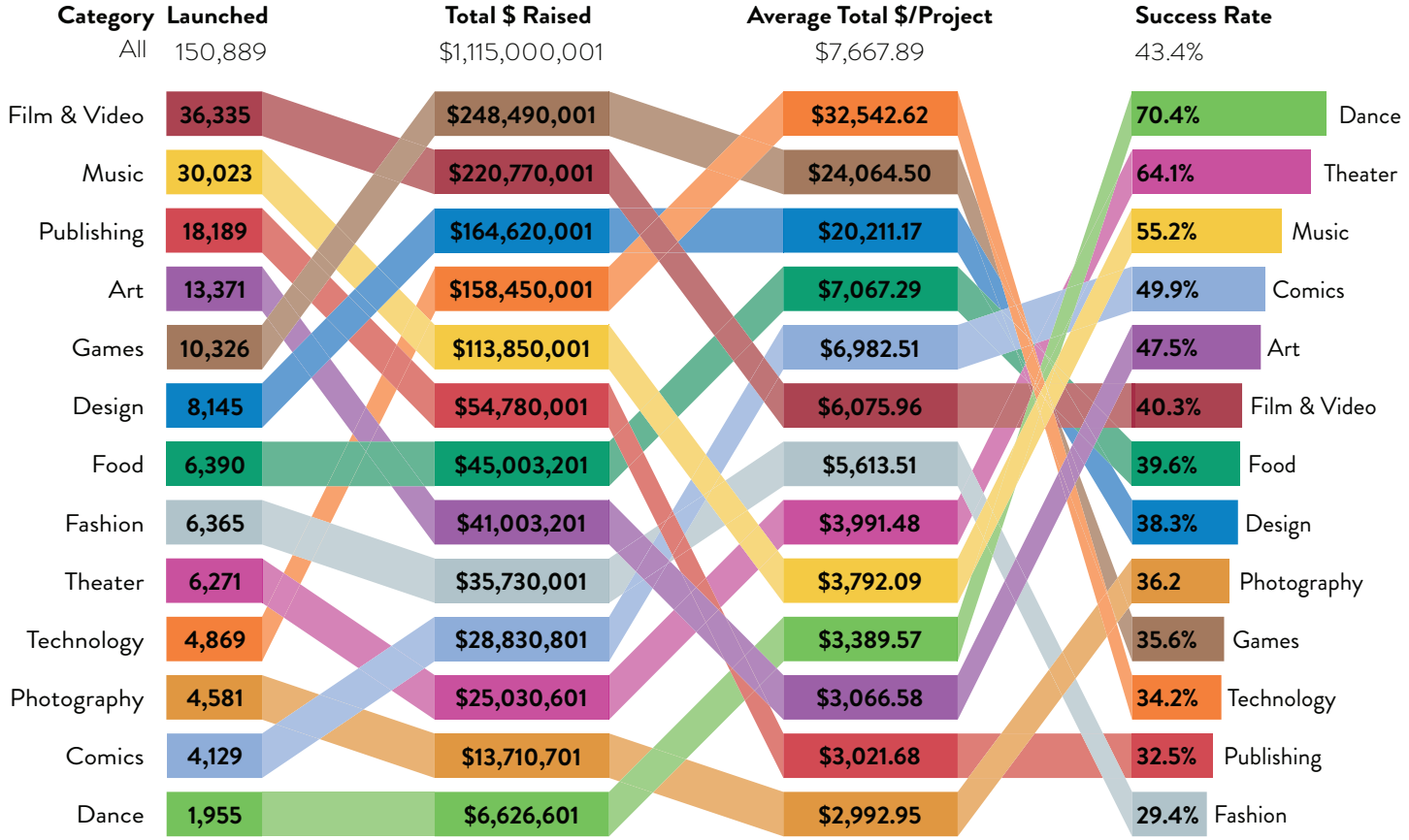
Crowdfunding, the term, sounds frivolous, or even fraudulent. But before dismissing the concept altogether, consider that these services transcend the internet, changing the way that credit, equity, and donated dollars find their way into everyday life. Below we profile two prominent kinds of crowdfunding: peer-to-peer lending and reward-based giving. We shall see that these new methods of raising money open avenues for companies and entrepreneurs whether or not traditional banks are willing to help.

fig. 1 CROWDFUNDING METRICS: GROWING FAST AROUND THE WORLD, AND IN MANY FORMS



Source: Bruegel.org, Massolution

fig. 2 DONATION/REWARD-BASED FUNDING CAMPAIGNS POP UP FOR ALL KINDS OF PROJECTS. SURPRISINGLY, ALMOST HALF OF ALL PROJECTS GET FUNDED!



Source: Kickstarter.com, Payden Calculations

Note: 2009-Present

THE NEW BANKING SYSTEM? PEER-TO-PEER LENDING AND THE ROLE OF TRADITIONAL BANKS

Envision the typical loan officer at a commercial bank. Apart from signing off on the loans made, her job requires building a loan book, funding the loan book and monitoring both financial and credit metrics along the way. Loan officers crystalize the essentials of what defines a bank: taking in deposits, making loans, and managing risk. And it is big business. In the United States alone, loans and leases account for 60% of commercial bank assets, or $7.3 trillion.

As with a bank, online lending platforms bring many savers together in a large pool of money and transform these "deposits" into loans. Unlike a bank, online, the individual lenders can set their preferences for the kinds of loans on which they want to bid: maximum amount, risk grade, etc.[3] Rather than a loan officer deciding which loans savers' funds support, each investor specifies and directs her savings to the desired end. Since 2005, the two leading peer-to-peer lending websites have raised a cumulative total of $5.5 billion (See Figure 3).

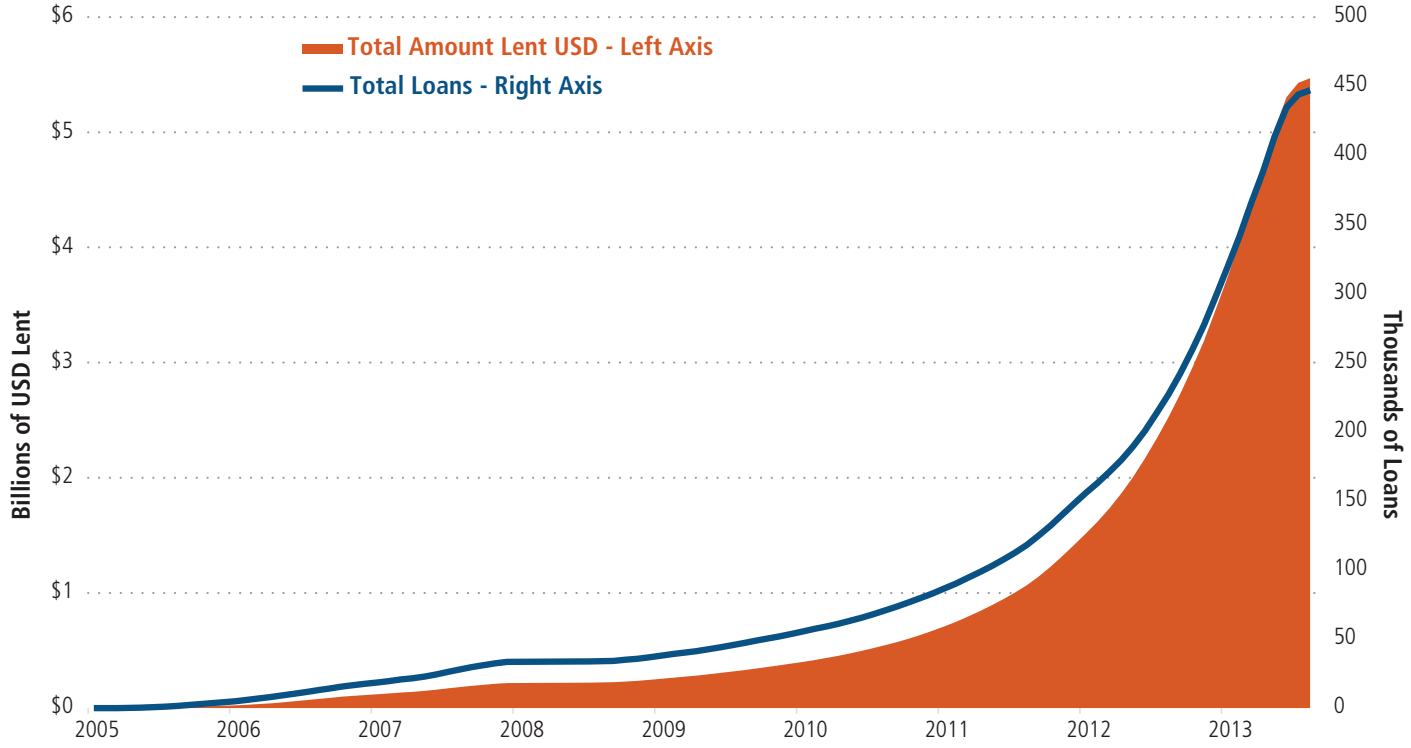
These lending services (like Lending Club and Prosper) offer borrowers lower cost loans than banks, funded by individual and institutional savers. Some estimates suggest that up to 70% of online loan funding now comes from institutional investors.[4] This is not a mom-and-pop phenomenon. Using data analytics, standard FICO scores, and, in some cases, algorithmic machine learning, these online loan brokers make prospective borrowers' credit metrics available to lenders. But these lenders are not exact replacements for traditional banking.

Banking's most native function, risk management, takes quite a new shape in the world of online peer-to-peer finance.[5] Daily bank operations require the matching and monitoring of trillions of dollars' worth of assets and liabilities to ensure liquidity and solvency. Peer-to-peer lenders face no such constraints because they serve as broker between borrower and lender.

«IF YOU HAVE NOT YET RECEIVED A REQUEST FOR A 'KICKSTARTER' DONATION FROM A FRIEND, A CHILD, OR A GRANDCHILD, PREPARE YOURSELF, YOU SOON WILL.»

The risk in peer-to-peer finance falls solely on the participants themselves, not on the intermediating entity. If you pony up a pool of sav-

fig. 3 PEER-TO-PEER DEBT FUNDING HAS EXPLODED SINCE 2011, RAISING MORE THAN $5 BILLION OVER THE COURSE OF ITS EXISTENCE



Source: lendstats.com; Data is for Prosper and Lending Club

*Months may not match exactly for lenders

ings to fund part of a loan, and the borrower defaults, your money is gone. With your regular bank today, if someone defaults on a loan, it has no effect on your savings account. In fact, even in the midst of the greatest financial crisis in a generation, with large institutions going insolvent, pools of savings did not evaporate. If we operated in a world of only peer-to-peer lending, many lenders would have lost everything.

So why lend at all? The remarkable growth of peer-to-peer finance following the financial crisis should not come as such a surprise. In part, the technology required to support large scale online capital raising had not been developed yet. But, more important, investors around the world are searching for yield.

With the developed world's interest rates at historic lows, individual and institutional investors are willing to bear more risk for double digit returns. Indeed, certain lenders boast returns in excess of 19% and estimates of average return on investment generally range from 5-12%.[6]

A BRIGHT FUTURE BEYOND BANKING FOR ONLINE PEER-TO-PEER FINANCE

In 2011, 18-year old Palmer Luckey was hard at work in parents' basement in Long Beach, California, piecing together virtual reality video gaming hardware. Unable to find ready money to fund his dream, Luckey took to Kickstarter, posting his project and requesting $250,000.

In 30 days he raised $2.4 million. Read that sentence again. $2.4 million, in 30 days, for a virtual reality hardware prototype. Hard as that feat may seem to believe, the apparent potential of crowdfunding only amplified when Facebook announced their purchase of Oculus VR, the company Luckey founded, for $2 billion.

«THE REMARKABLE GROWTH OF PEER-TO-PEER FINANCE FOLLOWING THE FINANCIAL CRISIS SHOULD NOT COME AS SUCH A SURPRISE... INVESTORS AROUND THE WORLD ARE SEARCHING FOR YIELD.»

"Bubble-like technology valuations," you say. We will refrain from opining on the appropriateness of the price tag, and point instead to the trajectory the company took. It was a trajectory made possible by the 9,522 Kickstarter donors.

Kickstarter et al., provide entrepreneurs, artists, supranational organizations, and even Presidential candidates a venue to raise capital for an endeavor. Donors earn rewards in the form of prototype products, final output (such as a CD), or the emotional satisfaction of contributing.

As a donation/reward based system, Kickstarter (and others like Indiegogo) are not involved in equity funding for young companies. Recent legal changes notwithstanding, crowdfunding equity is generally illegal in the United States, and accounts for under 5% of worldwide crowd funding. Not to say that the world is not involved. In 2012, people in 177 countries backed a Kickstarter project.[7]

Instead of providing equity financing, donation based crowdfunding websites provide a forum where those willing to put up prospective capital meet those with ideas but bereft of capital. As of June 2014, Kickstarter projects had raised over $1.2 billion dollars in categories ranging from food projects and comics, to technology, publishing, and dance (see Figure 3). In 2012 alone, 17 projects raised more than $1 million. Preliminary studies find that just under half of the proposed projects, around 43%, reach their funding goal.[8,9]

For those who might dismiss the concept as a neat way for generous friends and family to support the half-baked ideas of their kids (a common sentiment), we are here not to disagree, but to encourage a view toward the broader possibilities for such donation/reward based crowd financing.

Imagine a municipality in need of funding a new road, used by a small portion of the community but known by all. Putting the project up for crowdfunding gives those immediately effected the opportunity to put money towards fixing the road and gives others in the community, who may not use the road, the chance to contribute to a local cause. At a smaller scale, just such a thing happened. In 2012, eighty-eight backers pledged $3,015 for the construction of an Athens, Georgia bus stop.[10]

PEERING OVER THE HORIZON

Crowdfunding still bears the air of novelty and frivolity. However, we hope that this tour through the online world of peer-to-peer financing has gone some way to show that traditional financial intermediaries, like banks and venture capital funds, may be increasingly marginalized by the online service providers. In late June, Lending Club, looked to achieve a $5 billion valuation in a $500 million IPO.[11]

We do not mean to suggest that the success of Kickstarter or Lending Club will cause leading financial institutions to shut down. In the wreckage of the 2008 global financial crisis, these new forums for raising capital shine as beacons for the future of finance. We see, for example, "a number of Japanese entrepreneurs, from fashion designers to restaurant operators…are turning to online fundraising…when regular banks won't help."[12] If banks are not willing to extend funds to riskier credits, new crowdfunding technologies have proved that there are savers among us happy to bet on a riskier project or lend to a riskier borrower.

In our view, the emergence of crowdfunding should encourage investors to take a broader view of what constitutes financial intermediation, recognizing, just as in the 1970s with money market funds or the 1980s with high-yield bonds, that the financial system evolves whether or not we think it is right, wrong, dangerous or goofy.

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Sizing Up China: Will it Really Be the World's Largest Economy in 2014

The world awoke on April 30, 2014 to discover that China would become the largest economy by year end, dethroning the United States from the top spot it has occupied since 1872. The global macroeconomic landscape shifted overnight.[1]

But how did this happen? Did it really come to pass overnight? Sure, two decades of double digit growth helped China, but was it really enough to make it the largest economy in the world?[2] In short, no. Hype (and national pride) aside, China's rise is as much a product of statistics as it is of economics.

Comparing the relative size of economies, each using different currencies, is difficult and often misunderstood. As we will see, despite the pinpoint numerical accuracy wielded by economists measuring national economies is very difficult. Rest soundly, America, you are still the biggest economy in the world. For now.

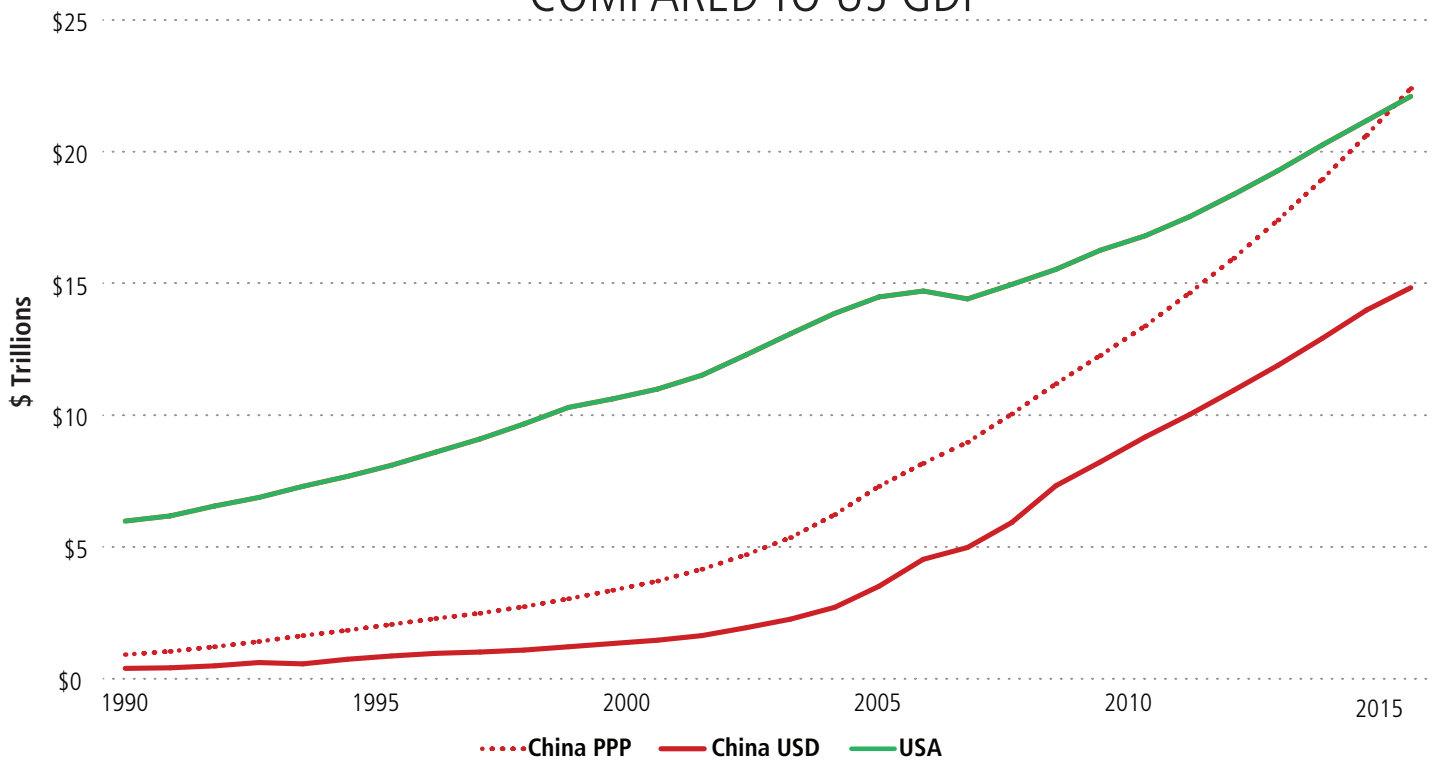
A LOOK INSIDE THE GDP FACTORY

While hotly contested in academic and policy circles, gross domestic product (GDP) still remains the most important metric of an economy's size. If for Winston Churchill "democracy [is] the worst form of government except all those other forms that have been tried," we feel the same about GDP. It works well, not perfectly, for measuring national economic activity.

Strictly speaking, gross domestic product is the final market value of "stuff" produced within a country during a year and is computed by multiplying the price and volume of all the goods and services sold in an economy. This arithmetic exercise, while simple in theory, proves to be difficult with the sheer number of transactions in an economy.

Consider the world's most complex economy, the United States. Each quarter, economists and statisticians at the Bureau of Economic Analysis gather behind locked doors, with all forms of communication

fig. 1 TWO DIFFERENT MEASURES OF CHINESE GDP COMPARED TO US GDP



Source: IMF WORLD ECONOMIC OUTLOOK 2014 (ICP 2011)

*Purchasing Power Parity

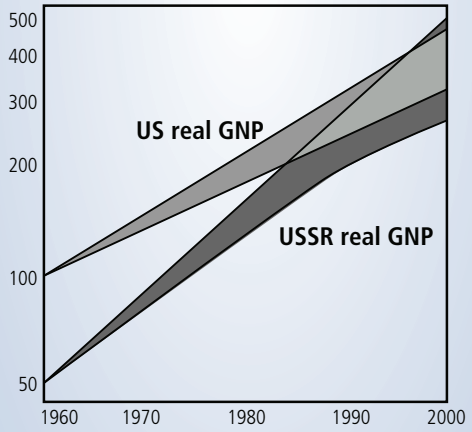
DID YOU KNOW?

Sound Familiar?

In the 1961 edition of his best-selling macroeconomic textbook, Nobel Prize winning economist Paul Samuelson predicted that the Soviet economy would overtake the US economy in size by 1984. After it became clear this would not occur, the 1980 edition pushed out its forecast, now suggesting the USSR would beat the US in size by 2002. So much for that.

Source: Marginal Revolution

US / USSR GROWTH PROJECTIONS IN 1961



Recreated from *Economics* by Paul Samuelson (1961)

disabled, and utilize more than 10,000 streams of data to calculate GDP.[3] They use techniques that have been improved through time and still publish numbers that change by more than two percentage points during revisions! How can we rely on China's secretive National Statistics Bureau to be any better when even the most advanced national accounts system cannot get it right?

But, if we do take the GDP of China and the US at face value (a huge leap, we know), we run into another problem: how to compare GDP measurements in different currencies (the Chinese Yuan with measurements in United States Dollars).[4]

MARKET EXCHANGE RATES - A SIMPLE COMPARISON TOOL

The easiest way to compare GDP size across countries would be to convert them all to a single currency using market exchange rates. Unfortunately, this kind of simple exchange calculation assumes that all goods are tradable and that international trade drives foreign exchange rates.

In reality, goods are often not tradable across countries (e.g., labor, rent) and market exchange rates are volatile, driven by speculation, capital flows and government policy.[5] In China, government policy plays a particularly potent role: the exchange rate is set at a non-market rate (presumably below the rate that would prevail on the market so as to keep the currency cheaper to benefit exporters).

FEAR NOT, PPP IS HERE

To solve the market exchange rate problem, statisticians developed purchasing power parity (PPP) exchange rates to more accurately compare the size of economies which use different currencies. Purchasing power parity is a theory of exchange rates which posits that an identical basket of goods and services in one country should cost the same as it does in another country, once we account for the exchange rate.

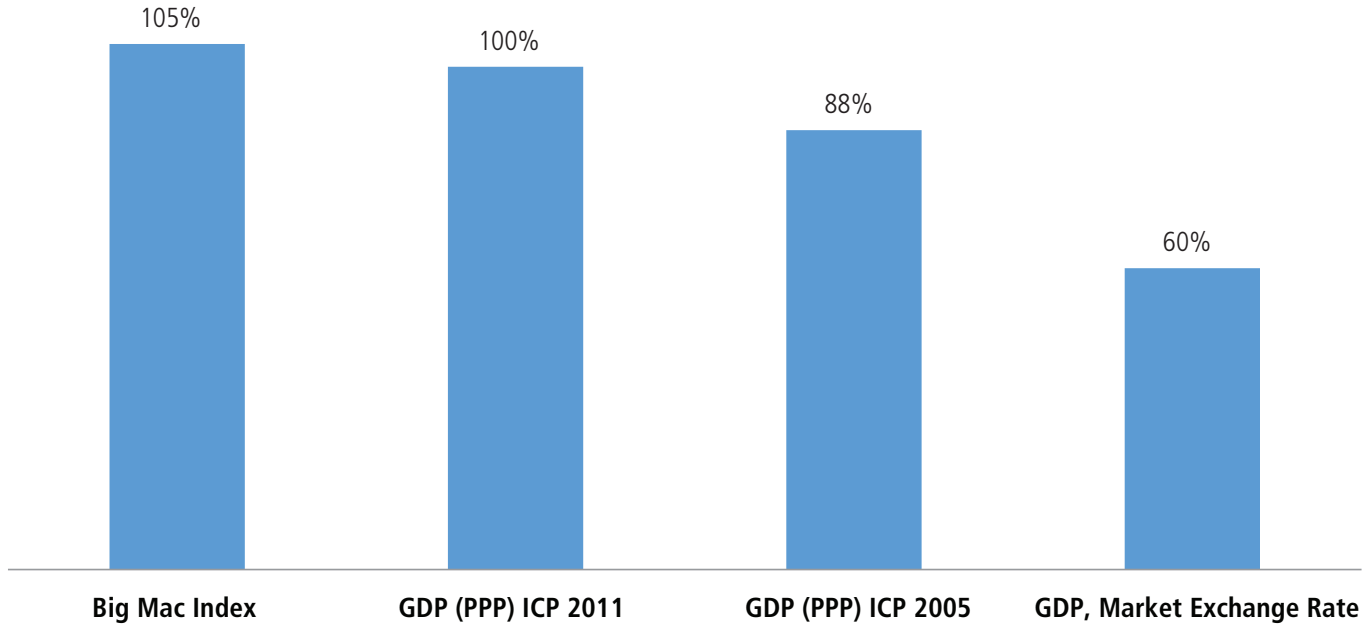
The most famous example of a PPP index is the "Big Mac Index" published by *The Economist*.

Here is how the index works. It costs 16.60¥ to buy a Big Mac in China and $4.62 in the United States. However, if we are to convert 16.60¥ into U.S. dollars using exchange rates, we arrive at $2.74. Therefore, a person in China with 16.60¥ could not buy a burger in the United States. Their "purchasing power" in dollars is much lower than it was in local currency in China. In order to fix this, *The Economist* simply divides the cost of a Big Mac in local Yuan by the cost of a Big Mac in the United States to arrive at a "PPP" exchange rate of 3.59¥/$. In theory, a PPP exchange rate like this one can have spectacular ramifications. As shown in Figure 2, the Chinese economy would be 5% larger than the United States using the Big Mac Index Exchange rate, while it is 40% smaller using the market exchange rate.

In practice, statisticians do not rely on burgers to measure economies. Instead, calculating PPP exchange rates for countries, the World Bank's International Comparison Program (ICP) uses a basket of 155 categories of goods and services, controlling for quality and cultural preference. The task is so time-intensive and complicated that PPP calculations are made only once every six years.[6] However, since PPP

«AS WE WILL SEE, DESPITE THE PINPOINT NUMERICAL ACCURACY WIELDED BY ANALYSTS AND ECONOMISTS ALIKE, THERE IS A MUCH GREATER DEGREE OF UNCERTAINTY REGARDING THE QUESTION OF ECONOMIC SIZE.»

fig. 2 CHINA'S 2014 GDP AS A SHARE OF THE US: IT DEPENDS ON HOW IT IS MEASURED



Source: The Economist, IMF- World Economic Outlook and International Comparison Program

and inflation measure prices for different baskets of goods, often times we end up with extrapolations that are incorrect. As shown in Figure 2, depending on which exchange rate we use, the global macroeconomic landscape is very different, with China predicted to be anywhere from 60%-105% the size of the U.S. economy by the end of 2014.

By basing exchange rates on the price of baskets of goods and services, we obtain a better estimate of relative size. Markus Rodlauer, chief of the IMF's China mission, instructs: "The advantage of using GDP at PPP rates is that it better measures welfare, and also PPPs tend to be more stable and thus the $GDPs of countries (used for international comparisons, etc.) don't jump around as much."[7] While it is not perfect, at least the latest central bank move does not immediately upset the calculus.

CHINA, THE US, PPP, AND THE WORLD LARGEST ECONOMY

We can now make better sense of the latest news: China may claim the title as the world's largest economy by 2014 year end. In local currency, Chinese GDP at the end of 2014 looks likely to be 62.8¥ trillion, while US GDP should clock in close to $17.5 trillion. In dollar terms, we would see the Chinese economy register at only $10.0 trillion. However, using PPP rates from ICP 2005, we find the gap narrowed: the US is only roughly 12% larger than the $14.6 trillion Chinese economy. But, using the PPP rates from ICP 2011, we find that the gap is closed and China's GDP catches up with the USA.

All this is not to say that China has not grown. Quite the opposite. China's ascension over the past few decades qualifies as nothing short of an economic miracle. By drawing attention to the methods economists use to compare economic size, it becomes evident that things are not so clear. Different measurements produce different results.

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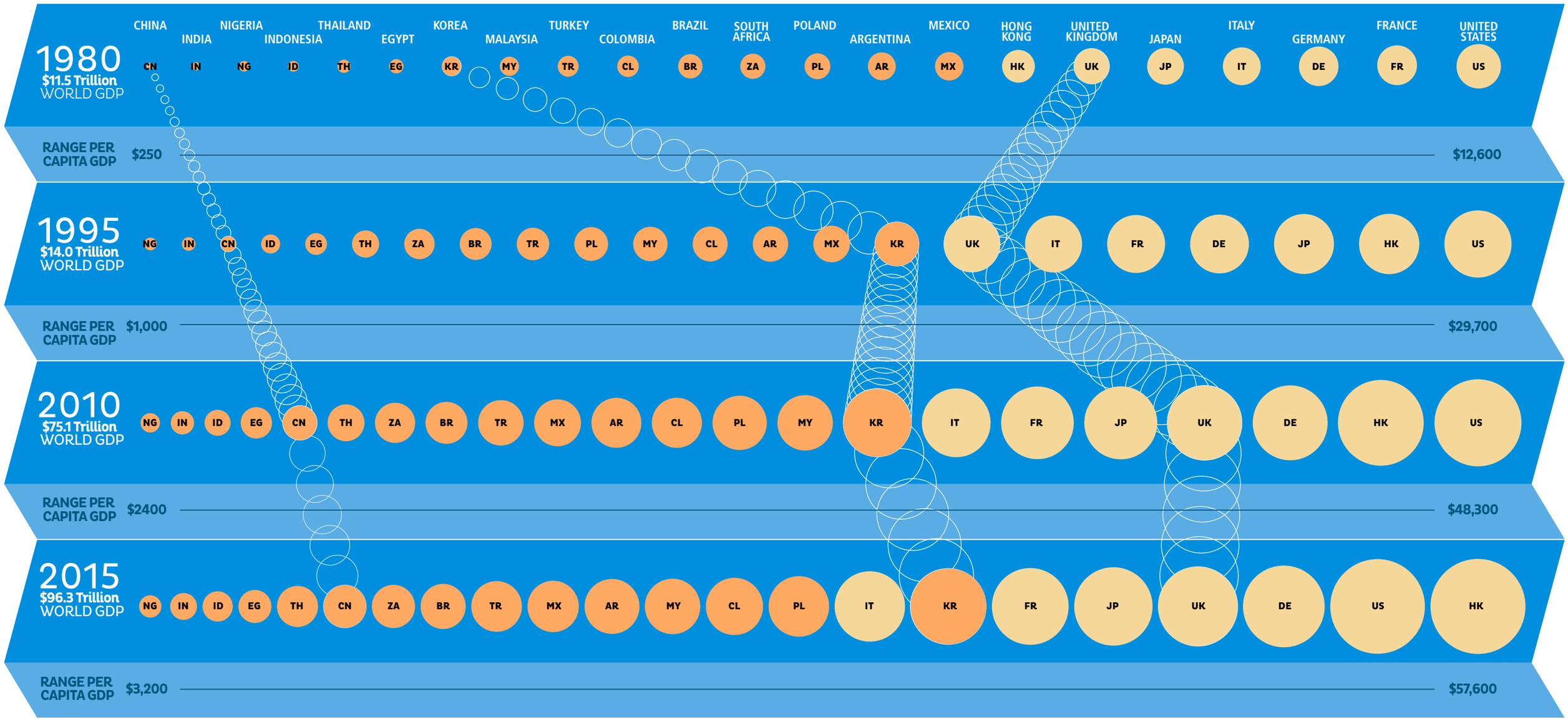
We selected 7 advanced economies and 15 developing economies around the world and explored the universal improvement in the standard of living measured through the lens of per capita gross domestic product, represented by the size of the circles.

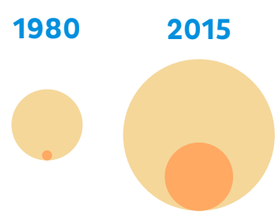
RAGS to Riches: A Story of the Global Economy

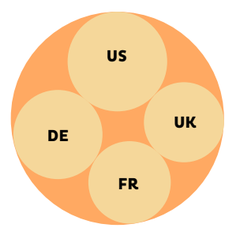


Per capita GDP continues to be the best proxy of standard of living across countries. It is determined by taking the economic wealth, measured by GDP, and dividing it by the population. We use Purchasing Power Parity (PPP) measures of GDP which are calculated by the IMF (refer to *Sizing Up China: Will It Really Be the World's Largest Economy in 2014?* article on page 5 on the merits of PPP). While per capita GDPs might or might not tell us the whole story, they give us a great outlook on the improving standards of living around the World.

*Advanced and Developing Economies are categorized by the IMF World Economic Outlook (2014) based on a variety of metrics including Human Development Index and per capita GDP

CHINA'S PER CAPITA **GDP WILL BE 20% OF THE US** IN 2015, COMPARED TO ONLY 2% IN 1980

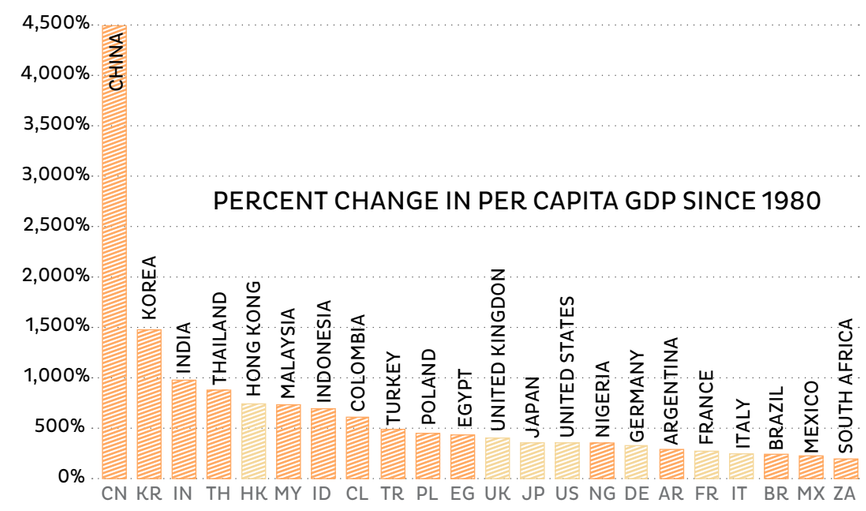




KOREA, A DEVELOPING ECONOMY, WILL HAVE A GREATER STANDARD OF LIVING IN 2015 THAN THAT OF US, UK, GERMANY & FRANCE COMBINED IN 1980

CHINA'S STANDARD OF LIVING WILL BE BETTER THAN THE UK'S WAS IN 1980

PER CAPITA GROWTH RATES IN DEVELOPING COUNTRIES OVERSHADOW THOSE OF MOST ADVANCED ECONOMIES



SOURCE: INTERNATIONAL MONETARY FUND WORLD ECONOMIC OUTLOOK (2014), U.S. CENSUS BUREAU, PAYDEN CALCULATIONS

Is Inequality The Biggest Problem The World Economy Faces?

The rich are getting richer, the poor, poorer. The top 1% garner 45% of total income. An unelected economic elite squirrel away capital comprising multiples of national income, keeping the economy in chains. Of capitalism, inequality is a feature, not a bug.

A doorstopper of a book that rocketed to #1 on best seller lists, Thomas Piketty's 600-page tome, *Capital in the 21st Century*, has the world abuzz with talk of inequality. The book provides an exhaustive look at the nature and history of inequality. How is inequality measured? Is the distribution of wealth really so lopsided? If so, why? What are the implications for economic activity in the decades ahead?

Below, we explore Piketty's claims and argue that while the rise of inequality is an undisputed fact, it is not the most important economic problem future generations face.

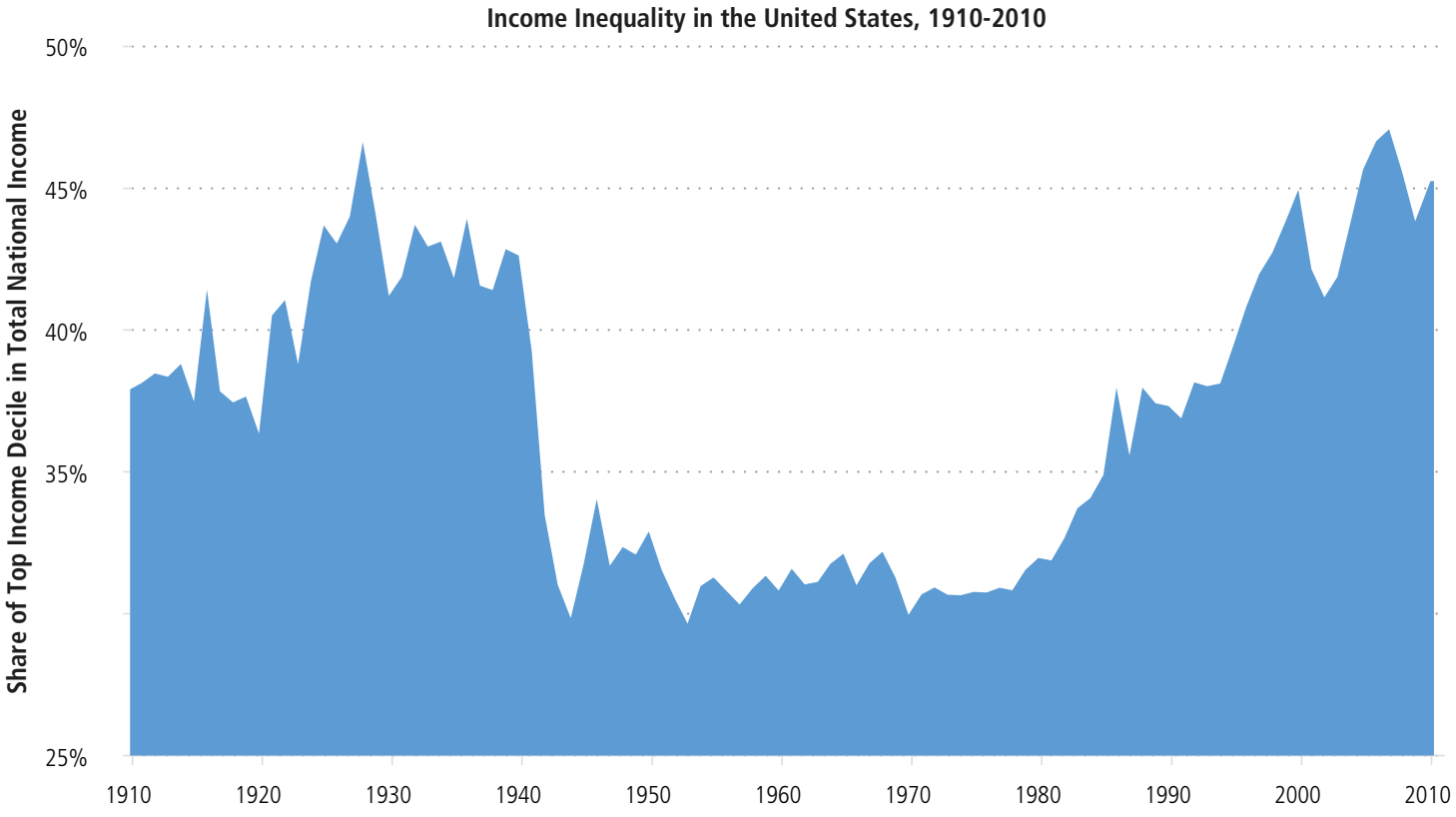
WHAT DO WE MEAN BY INEQUALITY?

Worries about inequality date back at least to the late 1700s when David Ricardo fretted about its impact on society. His concerns were justified. Ricardo's eighteenth century featured large holdings of agricultural land, the rents from which lined the pockets of the British elite. The world belonged to the capital/landowners: all others fought for the crumbs.

Today, when we think of inequality, provincial estates are not the first thing to mind. Discussions of inequality in the 21st century generally assume one of three shapes: someone makes more money (inequality of income from labor), someone has more "stuff" (including possessions or wealth), or some combination of the two.

As Piketty defines it, labor income includes wage and salary income as well as non-wage compensation (government transfers, for in-

fig.1 THE CHART FEARED MOST BY PLUTOCRATS? INCOME INEQUALITY IN US REACHES LEVELS NOT SEEN SINCE THE ROARIN' 1920s



Source: Piketty 2013

« THANKS TO A DOORSTOPPER OF A BOOK THAT ROCKETED TO #1 ON BEST SELLER LISTS, THOMAS PIKETTY'S 600-PAGE TOME, *CAPITAL IN THE 21ST CENTURY*, HAS THE WORLD ABUZZ WITH TALK OF INEQUALITY. »

stance). Capital, on the other hand, includes the "nonhuman assets that can be owned and exchanged on some market," which includes real estate, plants and machinery, infrastructure, patents, etc.

SO, WHERE'S THE DATA?

Astute though he may have been, Ricardo lacked data to support his claims. Until the early twentieth century, a lack of data frustrated empirical research in political economics. However, the advent of the progressive income tax in most rich countries around the turn of the twentieth century provided more than just government revenue, it provided a treasure trove of data on household income (at least reported income, that is).

Among the first economists to synthesize the sketchy data was Simon Kuznets, 1971 Nobel prize winner and Professor at Harvard. Armed with tax data from 1914 until the early 1950s, Kuznets concluded that even if income inequality rises early in capitalistic systems, it falls as economic advance spreads across a more mature economy.

His evidence: US income inequality rose early in the twentieth century and then fell during the 1930s and 1940s. Kuznets delivered a speech in 1955 and the economics profession embraced the so-called "Kuznets curve" as gospel. Inequality was not a problem. It was simply a bug to be worked through on the inexorable path to economic prosperity for all.

FOOLED BY THE "KUZNETS CURVE"?

The problem with Kuznets is, well, history. As the story unfolded over the remainder of the 20th century, income inequality once again rose while the US economy grew to be the world's largest.

In particular, income inequality in 2010 reached levels unseen since the 1920s—that is an economic fact. Figure 1 on the previous page shows the share of national income accruing to the top 1% in the US. It once again reached the 45% level after many decades of increases. Similar trends hold broadly true across the developed world (German inequality is slightly less pronounced than that of the US).

Piketty's updated data portray the history of inequality under industrial capitalism as a "U-shaped curve" rather than the "mound-like curve" envisioned by Kuznets. Inequality rose in the 19th and early 20th centuries, then declined as a result of the capital destruction caused by two World Wars and the Great Depression. Since about mid-century, inequality has been on the rise (see Figure 2 above).

With the benefit of hindsight, the collapse in income inequality in the 1930s and 1940s was brought on by the Great Depression and World War II. It was not the product of some equalizing force of the capitalist system (as Kuznets thought).

In France, for example, the collapse of the "rentier class" between 1914 and 1945 explains the decline in inequality through the period. Income from capital collapsed and has slowly recovered.

R > G = THE "CENTRAL CONTRADICTION OF CAPITALISM"

But for Piketty the lessons gleaned from history do more than paint a better picture of the past, they inform a key prediction about the future: that inequality will persist and worsen in the 21st century. He argues that since the returns to capital outpace income growth, those with capital (and the ability to save from income) will gain.

For Piketty, ultimately, income equals output, akin to a country's GDP equaling its national income. The argument is that slower economic growth will exacerbate wealth and income inequality through the accumulation of capital. This is because while it only takes a small increase in savings generated from income to drive up accumulation of capital— those that depend on income from labor suffer from slower economic growth.

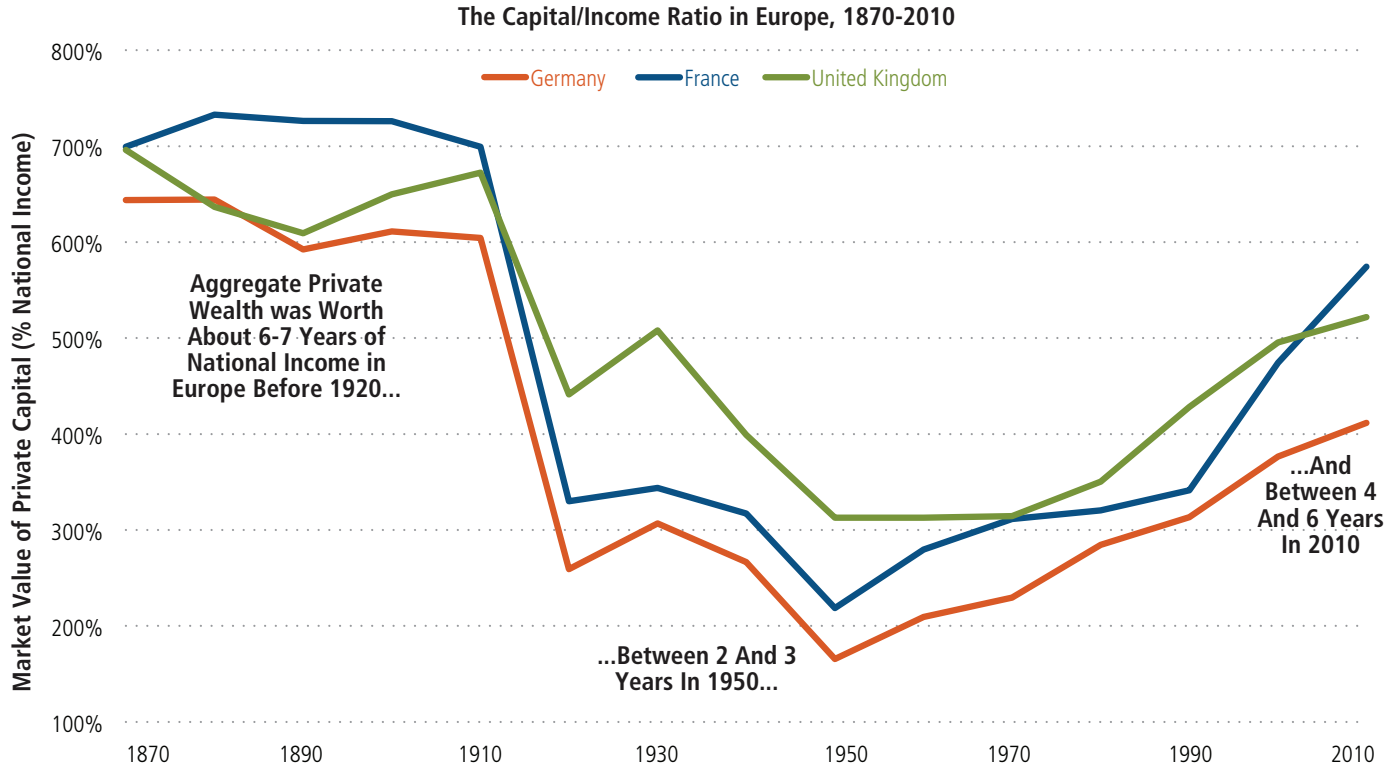
To see why, let's take "g", output growth. Output growth, or long run economic growth, is driven by two key components: demographics (population growth) and per capita output. World population growth

DID YOU KNOW?

Dump the Gini!

Inequality cannot be summarized in one, neat and simple statistic. Of course, the popular approach is the so-called "Gini coefficient," named for Corrado Gini, an Italian statistician. Using a scale from 0 to 1 (perfectly equal to perfectly unequal), it claims to summarize inequality and allow for cross-country comparison. Appealing at first glance, the problem is that it glosses over a complex world with different drivers of inequality across countries.

fig.2 A PICTURE OF INEQUALITY IN EUROPE, 1870-2010 – COULD IT BE WORSE?



Source: Piketty 2013

peaked in the 20th century at 1.4% after growing at 0.4-0.6% in the 18th and 19th centuries. As for per capita GDP growth, the data suggest that growth rates of about 1.5-2.0% are unlikely. Putting demographic growth and output growth together, we are unlikely to see overall growth top 3%. In fact, as shown in Figure 3, global growth peaked at 4% in the 1950-1990 period and has slowed ever since.

Second, what about returns to capital, or "r"? Here Piketty settles on an average growth rate culled from the historical data. While returns vary widely by asset class, over the last two centuries capital returned an average of 4.5-5%.

Thus, with slower output growth ahead (g of 3% or lower), those with savings will see further capital accumulation (driven by r of 4.5-5%), and inequality will persist and indeed worsen. The returns on inherited wealth will outpace economic growth. Piketty concludes that this is the "central contradiction of capitalism."

In short, the history, at least as measured, is clear: inequality is an undeniable feature of the economic landscape, but is the situation dire?

DOES "THE PAST DEVOUR THE FUTURE"?

The common thread throughout Piketty's book is an admirable one: he reminds us that economics should seek to explain or help us understand the world we actually live in, rather than engaging in abstract theorizing. In his words:

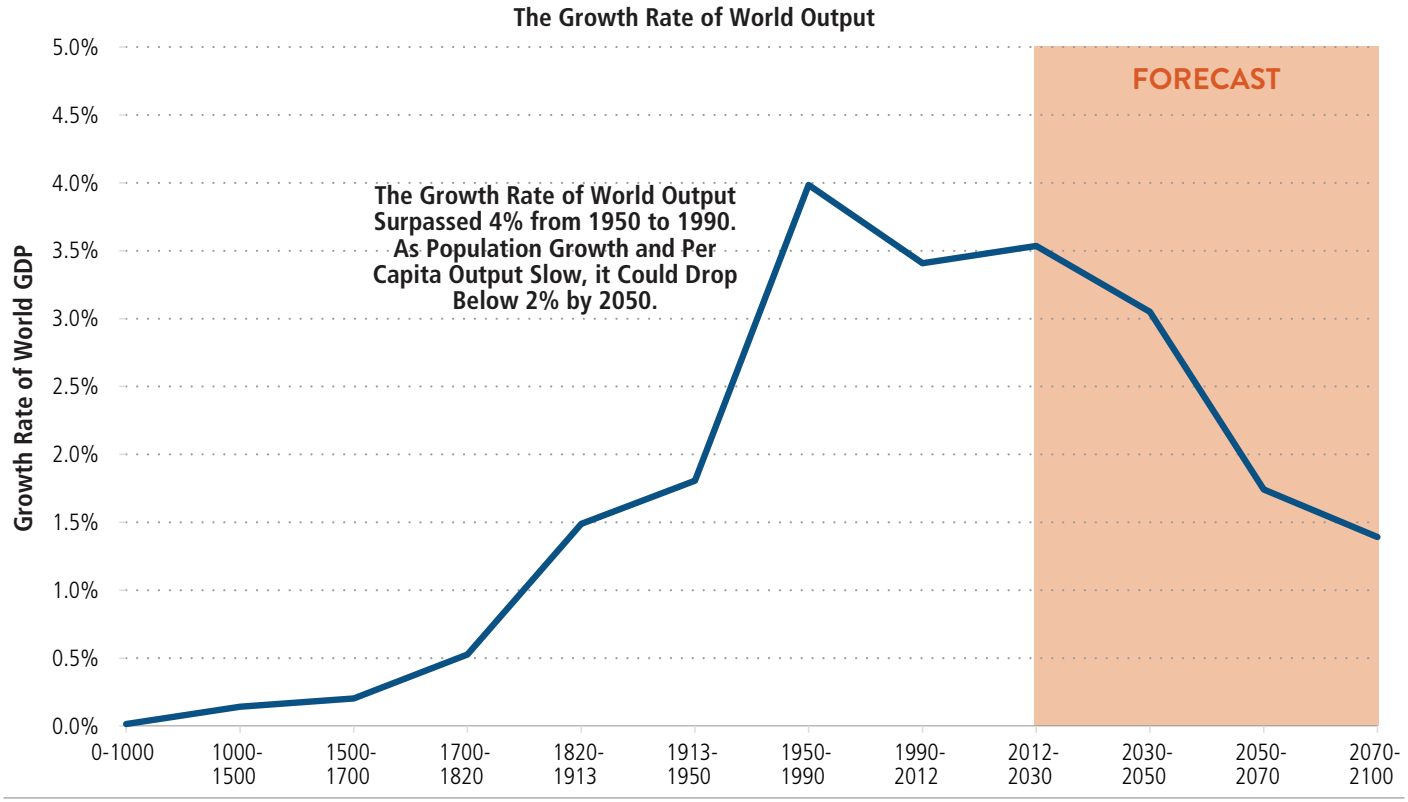
> To put it bluntly, the discipline of economics has yet to get over its childish passion for mathematics and for purely theoretical and often highly ideological theorizing, at the expense of historical research and collaboration with other social sciences. Economists are all too often preoccupied with petty mathematical problems of interest only to themselves. The obsession with mathematics is an easy way of acquiring the appearance of scientificity without having to answer the far more complex questions posed by the world we live in.[1]

But has Piketty answered those complex questions? We remain unconvinced. What strikes us most is that, despite the fuller data picture, the interesting and important answers lie just beyond the reach of the numbers.

For example, the average low income household in America today is far better off than an average income household in 1950 (when "income equality" reached its peak)—and certainly better compared to 1900 or even 1800. In the developed world today, rich or poor, nearly all homes have plumbing and electricity.

What is more, much of the data on income inequality stem from the developed world, including the US, Britain, Germany, France and Japan. But what has declined—and declined dramatically—is global income inequality. In fact, a Chinese worker is now as rich as an English worker in 1980 (see our centerpiece "Rags to Riches: A Story of the Global Economy") and the gap between the Chinese worker and the British one has narrowed dramatically. If income disparity across geographic and socioeconomic classes is your key concern, applause should be erupting.

fig.3 THE NEW NORMAL? NO, A RETURN TO THE NORM



Source: Piketty 2013

We wonder too if capital ownership is actually a limit to economic growth. Piketty himself highlights the key to the future, saying "the influence of [supply and demand] is less powerful than the diffusion of knowledge and skill and is frequently ambiguous, or contradictory, in its implications." He goes on to say that "knowledge and skill diffusion is the key to overall productivity growth as well as the reduction of inequality both within and between countries…we see this at present in China."

If all human progress is problem solving, as the philosopher Karl Popper, remarked, progress arrives through the process of meeting problems and solving them through the process of trial and error. By solving problems and accumulating new knowledge, humanity advances. The limit on progress is not capital, land or inequality. New ideas are the only limit.[2]

Further, just as the Marxist view depended on zero productivity growth, Piketty's inequality in the 21st century depends on limited productivity growth (see Figure 3) over the next century. But is this predetermined? We think this is far too grim a prediction.

In fact, today, a kid with little "capital" other than his parents' garage, a few items of junk acquired from the internet and an idea can become a billionaire (see the article, "Crowdfunding: The Future of Capital, Banks Not Included" on Page 1).

While we applaud the empirical work and the pursuit of explanations that actually explain our world, we caution against drawing dire conclusions from the data assembled. The data are messy and inequality is not itself the main hurdle to economic progress.

SOURCES

1 Thomas Piketty. *Capital In The Twenty-First Century*. Cambridge: Harvard University Press, 2014.

2 Karl Popper. *All Life Is Problem Solving*. London: Routledge, 1999.

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