

The Browser Economy

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An Analysis for determining the  
Optimization of Investment and Consumption Allocations  
according to their  
Valuation in a Market Economy

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The Browser Economy  
Executive Summary  
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An effective state is fundamental to the operation of free markets, as essential as their ready and willing buyers and sellers. More than a necessary expense, the state is an integral institution of an economy's capital and like all capital must be adequately maintained for the efficient provision of final goods and services. The question for anyone with an interest in policy effectiveness in such provision is simple; along the spectrum of possible governmental scope of operations, from basic policing, to provision of infrastructure, to a comprehensive safety net, to public ownership of components of the productive apparatus, where should we place our policy target? We take it for granted that any implemented policy should be amended or discarded, if deemed ineffective. We feel some urgency in the determination of this target, given the recent global recession with its anemic recovery. We use the myth of a pre-market Browser Economy to elucidate the oft-unrecognized disparate nature of utility and value in current economic thinking.

It is the premise of this piece that the principal goal of policy in a modern economy must be to insure "life, liberty, and the pursuit of happiness" for its citizenry and welcome guests. It need not attempt to guarantee that happiness, in fact it cannot, but it should not allow that pursuit by one club to impede the pursuit by others. In a market economy in which virtually every good or service consumed in the satisfaction of this goal involves a monetary exchange and in which the pursuit of this goal by some private parties results over short time horizons in an upheaval of production, trade, and employment that for many is the only access to money for such exchange, maintenance of the necessary liquidity cannot be assured by private funding and is the ultimate responsibility of the public sector. In fact it is the responsibility of Congress alone according to the Constitution to "coin Money," and "regulate the Value thereof", though the general consensus has permitted the creation of money through the issuance of private banking debt since well before that document's creation.

We find in this study that for a given level of liquidity, as quantified by expenditures on final consumption and on capital goods and services, where capital expenditures include both public and private sectors, an optimum equilibrium ratio of 0.618... for

(1) final consumption to total expenditures

is equal to that of

(2) capital to final consumption expenditures.

Conditions favorable to overall economic growth, meaning a rise in the general standard of living, are indicated by ratios somewhat below the optimum for (1) and above that figure for (2).

Examination of World Bank data for the period 1970 to 2013 shows a ratio range for the world economy of a few percentage points below (1) and for the OECD nation average of a similar range, before rising above (1) in 2009. Some notable economies trending several points above the target for this duration are Greece, Mexico, and until 2004, Brazil and India. The U.S. trend

rose above (1) in 1982 during the Reagan administration with the implementation of supply side policy and has risen gradually, with the exception of most of the Clinton tenure when it stabilized, to a current level of approximately 7 points above the mark.

With this optimization level in mind, we analyze the Z.1 Federal Reserve September 2014 data of U.S. sector and combined accounts, comparing the annual values for 1975, 2005, and 2013 as a percent of GDP and total asset value, with respect to structural changes based on those percentage differences between 1975 and 2005, 1975 and 2013, and 2005 and 2013. As compared with 1975, as of 2013 there was a 16.1% sector swing in percent of domestic net worth to households at 11.1% and ROW at 5.0%, from the business and public sectors, most noticeably in a reduction of Nonfinancial Noncorporate business of 3.9% and Federal government of 7.8%. We might expect this from supply side policies over this period, though the NN business figure is perhaps surprising, but what is more surprising, given the prognostications and promises of the Hayekian school, is that the return on total domestic wealth as measured by GDP as a percentage of Personal Sector asset value, decreased by 5.9% from 21.0% in 1975 to 15.1% in 2005 before the financial crisis, before recovering slightly to a 5.4% differential in 2013 at 15.6% after modest market intervention. The differential figures using Personal Sector net worth are 0.2% less.

In final summaries of consolidated accounts, we add figures for land, infrastructure, and human capital to the national balance sheet to demonstrate the unfounded concern among some parties about the size of the national debt and to emphasize the lack of wisdom in failing to maintain public infrastructure and human capital. We also state why, in the context of free competition in the production of commodity final consumption products, labor is reduced to a commodity level, defined as compensation to abundant, fungible labor for no more than the cost of paycheck to paycheck costs of living. As a result, employers producing commodity goods for the global competitive markets cannot compensate such labor, regardless of skill set, for sunk education costs or long-term medical and retirement costs.

In light of these developments, United States policy recommendations are made for restructuring of business and personal taxes so as to target costs of common or public goods and services use and to get rid of arbitrary income taxes and thereby all loopholes with replacement through the use of electronic fiat currency as a Universal Basic Income equally for all citizens as a right of citizenship, to decouple long term social from immediate product costs in worker compensation, and to provide for a clear separation of basic public and premium private provision and insurance in health, education, property and finance, such as FDIC coverage. This latter matter indicates a separation of private and publicly backed banks and an end to “too big to fail” status. The intent of all envisioned policy is to free up entrepreneurial efforts to grow and succeed or fail on their own as private concerns and to provide for a rational, comprehensive public safety net, secured against ill-advised privatization.

The following is the link to the unpublished working paper:

<https://uniservent.org/political-economy/>

To the I.8.5+V Initiative:

<https://uniservent.org/i-8-5-5-initiative/>

# The Browser Economy

## Abstract

With respect to the current competitive global market, some axioms are stated concerning,

- (1) the nature of market exchange for intermediate goods and services in which a good or service is said to trend toward commodity pricing given a surplus in supply and lack of entitlement of that good or service, and given a competitive market for the final good or service, resulting in
- (2) a trend toward commoditization of labor of any surplus skill set, and the inability of the free and unregulated competitive market to provide for long term needs of any such employed labor, with a statement of
- (3) the lack of productive value of investment in any financial asset that does not invoke productive human labor.

The implication of this last statement is that a fully automated economy operating without human labor cannot produce a good that has value in the market place for the simple reason that such economy cannot produce buyers with cash, with the result that the increased automation of production facilities trends back toward a browser economy, i.e. a market free economy as conceptualized herein.

An overview of the development of the production of consumption and capital goods and services from a natural pre-production and pre-economic valuation model is presented, including a conceptual development of pre-trade tokens of value into a system of monetary trade and of the division of labor into a system of entitlements based on that trade. A macro-econometric analysis suggests a natural optimization ratio between final consumption and combined final and capital goods and services, that is total production, below which investment is productive of overall growth and above which disinvestment leads to a stagnation for major sectors of the economy and real asset inflation for those with the financial assets to remain in the bidding for those real assets.

A look at data from the World Bank and the Federal Reserve System for the past four or so decades confirms this optimization level, where government disinvestment along with a running trade deficit from the advent of supply side policy implementations through 2005 over shadowed any increase in investment of the US private sectors, resulting in stagnation for over half the economy despite supply side forecasts. Failure to account for human capital in the national accounts is examined with its implications for misguided concerns about the public deficit and debt. Some policy implications addressing this misguided, anti-government bias are examined in the conclusion.

## Foreword

This writing is an amalgamation of a couple of projects started over the past few years. The first of these was “The Browser Economy” which was intended to be a book length series of chapters alternating between an exposition of a mythical group of intelligent, spiritually aware, but what we might call technologically naïve humans in an initial environment of sufficiency and therefore pre-economic, and an exegesis of the mythology in light of our current economic condition. The intention was to weave the (hopefully) poetic with the prosaic and eschew any mathematical references, which are poetry to me, and in the process differentiate between the origins and nature of value and those of economic utility.

The second of these, which derived from the first, was an investigation of possible natural constraints to the allocation of production efforts between goods and services used for consumption,  $C$ , and investment,  $I$ , based on the fact that a common monetary valuation is applied to both categories, though  $C$  and  $I$  are fundamentally different in utilitarian genesis. Consumption is essentially grounded in human survival and the social effort,  $H_C$ , to draw sustenance as immediately as possible from the earth’s natural bounty, while investment is essentially a combination of human ingenuity and effort,  $H_I$ , acting on those natural resources,  $R_N$ , to produce items for later consumption or to leverage current consumption in conditions of relative scarcity, natural or otherwise. The resulting investment goods and services, which includes the knowledge base or technologies, then become a hybrid, a manmade-natural resource,  $R_I$ , where total resource utilized,  $R$ , becomes a combination of  $R_N$  and  $R_I$  which we refer to as capital. Capital then is an effective multiplier of natural human effort and can in fact be less than one, as we shall see.

This second investigation is necessarily mathematical, and since consumption and investment are disparate activities, a primary school adage suggests itself, that you can only add things that are qualitatively alike and by logical implication only multiply things that are qualitatively and dimensionally disparate. Such investigation should attempt to see what happens if the combination of human effort and natural resources is modeled as a mathematical as well as economic product, that is as a cross-product, instead of conventionally in accounting terms as the summation of a commonly denominated monetary value. Still, since both  $C$  and  $I$  are so valued by a monetary resource of limited supply, those values must be subject to summation in the marketplace, so that in a market economy where trade is mediated by some token of value,  $v$ , the total production,  $P_G$ , should ideally equal the sum in an equilibrium condition, or

$$({}_v H_C + {}_v H_I) \times {}_v R = {}_v P_G = {}_v P_C + {}_v P_I .$$

The problem is that only the consumption products,  $P_C$ , make it to final market to be exchanged for the value paid for making them,  ${}_vH_C$ . While in equilibrium, the value paid for investment efforts,  ${}_vH_I$ , should be equal to the capital that is newly produced,  ${}_vP_I$ , and to  ${}_vR_I$  which is used up and must be replenished or maintained. However, in addition to the capital goods produced that show up in the intermediate market, there are necessary capital services that must be produced and maintained, that do not necessarily show up in the any market valuation, as part of  ${}_vH_I = {}_vR_I = {}_vP_I$ , as with government services and private financial transactions.

The result is the following, that has but one positive real solution, where I mean “real” in the mathematical sense in contrast with complex number notation,

$$({}_vH_C + {}_vH_I) \times {}_vR = {}_vP_C = {}_vP_G - {}_vP_I.$$

If  ${}_vP_C$  is assumed to be equal to  ${}_vH_C$  and set to 1, then the equilibrium value of  ${}_vH_I = {}_vR_I = {}_vP_I$  is 0.618... which is also the ratio of consumption value,  ${}_vP_C$ , to total value,  ${}_vP_G$ , which we will call  $C_G$ , and serves as an attractor or optimization value toward which a system will gravitate unless disturbed by sectoral or political interests. In this regards, the GDP of an economy becomes a measure of  ${}_vP_G$ , the final consumption expenditure serves as a measure of  ${}_vP_C$ , and the difference, investment, government, and rest of the world accounts, serve as a measure of  ${}_vP_I$ .

Examination of international data from the World Bank, in which the world average level of final consumption has been just below  $C_G$  by an amount closely approximating the economic growth rate for the past 50 years, confirms the reasonableness of this hypothesis. A review of the Federal Reserve national account data for 1975, 2005 and 2013, supports this analysis and indicates the damaging effects to the US economy of disinvestment in both the public and private sectors, the latter by a shifts to imports and overseas production, resulting from a failure to adhere to this constraint.

In light of the current impasse in congress and the election results of 2014 and the likelihood that the incoming congress will want to continue on its misguided mission to dismantle the public sector, it is important to expedite publication of this information as I have not come across such analysis elsewhere. The nature of the comments on the disparate nature of consumption and investment in the analysis seemed to mesh with what I had written concerning the browser economy, so I decided to merge the two. The preface was then written to give some basis for what follows in the combined piece.

## Preface

The browser economy presented here is important to study because it reduces all of modern economic activity to its fundamental components; (1) a naturally productive environment conducive to human survival, (2) human activity whose *raison d'être* is the satisfaction of the physical needs for that survival, (3) human activity whose *raison d'être* is the provision of emotional satisfaction, and which is largely directed to the acquisition and social exchange of objects or other facets of the environment in a system of value that conveys relational relevance and esteem within the community, (4) the application of innate organizational intelligence throughout the community whose reason *d'être* is an understanding of and efficient and concerted operation within that environment for the satisfaction of (2) and (3), and finally the rationalized interplay of these first four components resulting in, (5) an increasingly effective manipulation of the facets of that environment so that the first component becomes a synthesis of both natural and human productivity.

The day in the life of the browser economy presented here represents that seminal moment when (4) comes to bear on (1) in such a manner as to mix the innate human capacities and propensities of (2) and (3), thereby initiating (5). It is my belief that most economic analysis fails to understand, or if understood, then understates or ignores that (3) is an innate motivating principle of the human condition essentially outside the realm of economics, separate and distinct from either (2) or (4). As a result, analysis from the left tends to deprecate (3) and see the answer to problems with (2) as being realized through a collective reorganization of (4) directed toward (2), from which the satisfactions of (3) naturally follow. Analysis from the right, on the other hand, sees problems with (2) as properly addressed by individual adjustments in (4) from which corrections in (2) and (3) will or will not follow depending on the individuals correct operation of (4) and tends to deprecate the effect of changes in (5) on (1, 2, 3, and 4).

Component 3 is the basis of currency and has an origin quite apart from any notion of its use in trade for necessary goods arising from component 2. The right of recreational activity along with that of possession and of sharing those possessions as one sees fit is a fundamental aspect of "liberty and the pursuit of happiness" embraced as a legitimate priority in the US and other democracies. Crystallized in the marketplace and trading floor as money, however, this emotional expression of validation adds a dimension to economic interaction that can obfuscate the rational production and consumption of goods and services. It is widely acknowledged that individuals will gladly give to others in perceived need out of their own larder for items they would eagerly hold for the highest bidder in the marketplace.

The notion of *laissez faire* has traction in public discourse for what it assumes about the inherent ethics of human beings, the actions of scoundrels notwithstanding, and not primarily for of what it says about the efficacy and effect on productivity of authoritative oversight of markets. Yet this latter rationale is the focus of most theorists of the right, who may or may not embrace the former, despite the fact that



maintenance of a policing/military authority to deter common theft & robbery/pillage & plunder is axiomatic to their thinking.

The notion of redistribution of wealth, in particular of financial wealth through taxation, has traction because it acknowledges that a society in which the majority of individuals have no entitlement to employment to exchange for the money needed to purchase the necessities of life is antithetical to the first and foremost of the inalienable rights, that of "life". Such a society is rightly perceived to be anti-democratic and little more than the oligarchy it was designed to replace. Yet this thinking downplays the fact that such money has little value if the expertise and machinery to produce those necessities are disrupted or displaced by such redistribution.

The problems faced by the global market economy at this juncture are easy enough to state in light of the following axioms with respect to markets, in particular those for intermediate goods and services which involve most labor markets:

1. Over the long term, the market value of a good or service that is in short supply is determined by the market demand or willingness to pay for that good or service based on its perceived utility to the buyer for its end use or with an intention of incorporating it into a final product. To the degree that the market value exceeds the supplier's lowest willing sales price, it involves the payment of a market rent to the supplier, which he perceives as a market profit. The difference between the supplier's lowest willing sales price and the total cost, fixed plus variable, proportionally assigned to production of the good or service, is the operational profit of the supplier.
2. Over the long term, the market value of a good or service that is in abundant supply and fungible is determined by the costs the supplier must and is willing to spend in bringing the good or service to market, which for widely equivalent production techniques and costs is by its commodity pricing. To the degree that the market value is less than the buyer's highest willing purchase price for the good or service based on its perceived end use value or intermediate value in a final product, it involves the payment of a market rent-in-kind to the buyer, which he perceives eventually as a surplus value or market profit. Such commodity pricing will have no market profit for the supplier, though it may have an operational profit at the high end, but will cover at best only the cost of production on the low end.
3. Over the long term, in the absence of seller entitlements, defined as arising either naturally, i.e. due to geography, uniqueness, rarity of product, trade secrets, slight of hand, etc. or culturally, i.e. due to property, patent, copy rights, professional license, slight of hand, such goods and services become commoditized. If the final product of which such commodities are a component is not itself commoditized, the supply of such commodities will involve payment of a rent-in-kind to the buyer, otherwise the final product will be a commodity.

4. Long term equilibrium in a product market, therefore, occurs when commoditization of supply of intermediate or final products is achieved, and can include an operational, but no trade or market profit.

5. Labor, which is a service, *of any skill set* is subject to the above constraints, and over time will tend toward commoditization, in particular toward the low end of the compensation scale in which only the current costs make up its market value. Any historic costs of education and upbringing become sunk costs, while anticipated prospective medical and retirement costs cannot be commanded by such labor due to the fungibility of commodity labor and the fact that such costs are not currently incurred. Commodity labor, therefore, cannot provide for its own safety net, unless it is provided as an entitlement as part of its compensation or as a social program. As a result, free markets employing commodity labor cannot compensate for historic costs or prospective future costs for that labor, regardless of the desire or willingness of any employer to do so. Governmental structuring of labor compensation to account for such costs can be effective only to the degree that it is universally applied and to the degree that isolation against competition from products involving unstructured compensation is consistently assured.

6. Since labor in the broad sense of all skill sets, including holders of entitlement, is responsible for both intermediate and final production of and consumption demand for goods and services, at equilibrium cash income flow to such factors of final production should equal cash expenditure for final products. However, this is not necessarily the case for cash flows to and between owners of raw materials, intermediate or pre-existing goods or other instances of real capital, due to the retention of value in unconsumed real capital products and in cash as working capital or uninvested savings.

7. Financial savings do not constitute an economic investment unless they are used to employ labor, in the broad sense, in the production of new capital goods and services, which are then used in the production of final goods and services. If they are used to purchase existing capital goods or facilities, they constitute a transfer payment and do not create net new investment, unless the facilities were idle and are subsequently put to use with added labor in the production of final goods and services. Investment does not produce a return until such intermediate goods and services result in the production and sale of final goods and services. If it fails to result in such final production and is not utilized, it represents consumption or productive waste; as a transfer of title only, any gain in sales price over purchase price, net of maintenance and perceived as profit by the original owner, represents an inflation of asset price to the overall economy and does not constitute growth.

8. Thus financial arbitrage is a transfer of entitlement and does not of itself increase production, though it may increase the money supply if it involves the assumption of debt. Similarly, the sale of existing equities and liabilities and their appreciation are transfers of entitlement and do not in themselves increase production unless they initiate or increase funding of active productive operations.

9. In the long term, financial transactions, regardless of the parties involved, are productive only if they are integral to a long-term increase in production of real goods and services. In this regards, government or public expenditures are no different from private expenditures in their effect on production, and may represent an investment, productive or wasteful, consumption, wise or not, or a transfer payment, inflationary, stabilizing, or deflationary. As an investment it may or may not be integral to a long-term increase in the production of goods and services, depending on the effectiveness and wisdom of the investment; as a consumption expenditure, likewise. As a transfer payment, if a government transfer goes from a tax receipt, security sale, or fiat creation to a party that saves it as a financial asset, it is simply a transfer of entitlement and tends toward inflation of asset pricing. However, if it goes to a party that spends it on active investment or increased consumption, while a transfer of entitlement, it is one that leads to a net increase in production, or at the very least, the purchase of unsold inventory; i.e. to economic equilibrium or growth. In the case of transfer through taxation or security sales it is to the benefit of the transferee and of negative and positive benefit respectively to the other parties involved. In the case of fiat creation, judiciously applied, it is to the benefit of the transferee and to the producers of the good or service on which the transfer is spent. It is of potential negative benefit, and then relatively and not absolutely, only to those who profit primarily from their financial position in the marketplace.

10. As a result, government or public expenditure of funds raised through taxation, borrowing, or fiat are indeterminate with respect to any effect on private funding and expenditure, depending on the wisdom of the policies they implement. They are however, the only way that long-term costs of living, i.e. socialization or upbringing, education, medical, and retirement costs, can be financed for commodity labor.

With this axiomatic understanding, from recent history of the industrial, market economy:

A technology based decrease in transportation and communications costs leads to an extension of market development, domestic and global, made possible by a related increase in economies of scale. However, this requires more labor and attendant costs which, with resulting competition, forces businesses to reduce production costs. A related technology based innovation of plant and equipment results in productivity increases with employment of higher skilled workers who are initially in short supply and therefore command higher wages. Eventual rise in the supply of skilled workers, along with increasing automation of technology, leads to oversupply and a commoditization of labor in affected sectors, and eventually in long-term equilibrium in those competitive labor markets. Commodity pricing of labor covers only the costs of current production, i.e. week-to- week or at best month-to-month living costs, and so excludes payment of long term past investment costs, such as education, and future decommissioning costs, such as retirement and major medical. The current costs of commodity labor production, including current

debt service, meanwhile adjust to whatever level the market will bear. Liquidity, beyond requirements for paycheck intervals, is squeezed from the holdings of such labor over time, which ceases to be a source of savings and capital formation, so that liquidity concentrates as business and higher skilled labor holdings. As the relative pool of commodity labor increases as a percentage of the overall market, the business holdings concentrate further, but these savings cannot be reinvested without the development of new markets and instead are used to bid up the price of existing and new non-productive assets, including financial assets which though ostensibly productive, can not be economically productive unless they engage new labor. As a result, the financial assets targeted must be of long horizon or derivative of an underlying asset that is of long horizon. When the climbing asking price for the non-productive asset can no longer be met, the resulting introspection reveals an asset bubble and the owners or managers of these holdings then turn to public assistance that they otherwise deprecate.

This is not disparaging of entrepreneurial efforts, rather of those interests that truly believe that money makes money or simply want others to believe it. Judicious use of money, employing individuals in an enterprise of shared value makes money, or better yet, makes a living. Arbitrage by itself does not. It simply transfers it from one pocket to another. What the arbitrageur does with the trade differential determines whether it represents investment or asset inflation.

This short piece will attempt to show that the dynamic just outlined is a natural consequence of real capital production and the attendant financial capital creation via debt and that it leads inevitably to the capacity for production of more goods and services with less human effort. It would be advantageous if that capacity were directed to the benefit of all, but the structure of valuations and pay in a fully rationalized market system will never allow it without public overview of the market place.

Such government involvement need not be of the type feared most by the right, confiscatory taxation or government usurpation of markets or property. Nor does the government need to borrow from its citizens and especially from foreign interests to finance its necessary expenditures. But it does need to insure that all citizens have sufficient liquidity to access to the necessities and basic satisfactions of life. In terms of the Declaration of Independence from oligarchic control; first, life with liberty for all, and thereby the pursuit of happiness.

We will try to address this quest, herein.

## The Browser Economy

He awoke suddenly. The bower above remained obscure. He struggled to slip back into the dream, to pick up the curious conduit of the narrative before it evaporated in the coming light.

There had been this tantalizing fruit of a color he had never seen, hanging just out of reach. It was shiny, like the early sun when you could still gaze directly at its face. A long and rather large lizard at the edge of the brush distracted him momentarily. The lizard had been gazing at him for some time without interest, when it quickly retracted its legs and slithered off into the bushes . . . He now looked back with anticipation at the fruit and was annoyed to see the lizard had emerged in the tree above him and was devouring its strange produce. Initial alarm gave way to an abrupt rage, and he began jumping and grabbing for the legless lizard, when it intertwined itself several times before falling cool and hard and lifeless at his feet. Then he woke again.

Further attempts to re-enter the dream were pointless. He reran the images again and again through his mind, looking for connections to some more familiar territory, to no satisfaction. Finally, he put it aside. He would discuss it with the group at the evening lore fire. It would be a novel place of interest to conduct to their lore. He might even gain the satisfaction of garnering the lore tokens from the group for his contribution to their history.

Dawn was beginning to filter into the bower. No one else in his bower group stirred, but he did hear familiar rustling from the adjacent copse. Parting the bushes, he looked out across the field toward the ocean's edge in the direction of the growing light. A friend emerged from the bower to his left and raised both arms in the customary greeting. He returned the salute and made his way toward the stream at the far side of the field. Here he knelt down to quench his daybreak thirst and began to browse from the dark berry bushes on the far side of the stream.

The field and stream and surrounding groves gently unfurled from the western heights to the eastern sea. The group had no way of comprehending it in, but they where the sole human inhabitants of a large island near the earth's equator; sole across the extent of the island's geographic range and prehistoric age. The group's oral history held tales of other, distant places for browsing along the coast, and even suggested the insularity of the domain, but their biosphere being lush and generally unbroken, even the eldest members of the group had no direct knowledge of places more than a few dozen miles in either direction. Over this range there was no reorientation of the general shoreline with respect to the night sky.

Over time, the group slowly browsed their way back and forth across the slope and along the coast in response to changes in the immediate biosphere and cues from their lore. Being close to the equator, such time was normally measured in days and months, or rather cycles of the moon, since there was in daytime no discernable

seasonal variation to mark out the passage of a year. There was a recognized variation in the arc of the sun as it crossed the sky, with a ranging of its zenith from what we recognize as north to south and back again. It was noted that this oscillation coincided with a variation in the direction and frequency of the afternoon rains, which came in over the heights, but as there was no winter, summer, spring or fall, this was not of mundane interest.

This solar oscillation in turn coincided with a cycle of the nighttime sky as judged by the regressive rising of familiar stars and their groupings over the course of approximately 13 lunar cycles, and this was of interest not to the group's day to day concerns but to its lore. As with the members of their group, the sun too was seen to undergo a birth and death, daily emerging always in full vigor, ever young. The moon was apparently much older. Since she was observed going through a gradual cycle of quiescence and brilliant activity every 28 days or so, progressing in her change day or night to emerge the next in anticipated increase or decrease from the one before, she appeared not to die. Her influence appeared to be continuous as evidenced by the monthly flow of the fertile females of the group. It was obvious by this connection that she was herself essentially female.

As for the rest of the night sky, the stars and their groups appeared to be immutable, other than in their time of arrival on the evening horizon. Their lore told them that the stars were the lore fires of their ancestors. Then there were the other strange inhabitants of the night sky. There were the ones that moved slowly back and forth among the stars, spreading tales among the groups, the swift, bright ones that streaked alone and sometimes in groups like birds among the tree tops, and finally the ones that existed primarily in lore, that streaked like the swift bright ones, but much slower, over many nights. These were important beings . . . but they were all important beings.

While the group had long ago harnessed fire for the lore sessions, they seldom cooked. There were no large animals on the island, and there was such an abundance of browse vegetation that the practice rarely suggested itself. Certain insects and grubs, bird and reptile eggs, even the occasional lizard, using care to avoid the salamanders, were generally eaten as they were found, raw. Nor was fire used for heat. The temperature ranged between 16 and 32 degrees Celsius along the coastal slopes, though it was known to be cooler in the heights. There was generally no need for clothing, though the group members did like to indulge in individual adornment, generally of an ephemeral nature.

According to the lore, fire had been recovered on several occasions in the aftermath of a lightning strike, before its need for wood and air was finally understood. Means of ignition from friction and sparking eventually developed, which combined with its obvious capacity to dispel the dark, made it a fixture of the lore sessions, a response to the nightly lighting of the ancestral stars.

He slowly worked his way down the stream, picking berries and the occasional fruit from the bushes and trees. As the sun arose higher from the sea before him, his mate and girl child and a few other members of the group joined him for the morning browse. A short while passed as the small group worked its way from the fruit to the nut trees on the near side of the stream, drank from the stream, and being satiated, walked down to the shore and began to look among the shells in the wash of the gently breaking waves for a novel find that could be added to their lore tokens.

Heads bent to the surf, they slowly made their way along the beach, nudging the whelk and tusk and cone and cockle and cowry shells with toe and hand, flipping them in a quick glance for any inner luster; and for a nicely worn hole at the hinge mound of the bivalves to accommodate a lanyard. The cowries could be a special treat, prized for their durability and sheen.

The group members had developed a token culture of trading these and other trinkets, so that those of a more durable or unusual nature came to be held with some admiration and esteem. They had no economic value, however, as we think of it, since the economic need, the sustenance of the group was wholly met by browsing. However, such tokens did make their head and hearts feel full, just as the fruit and berries and other food did for their bellies.

There was no collection, therefore no hoarding of foodstuffs, or preparation for hunting or warfare. Nor was there any need to protect against predators, as there were none. Most significantly from our modern perspective, there was no division in either the perception or the thinking of the group members between the production and consumption of economic goods or services. As a result, there was no division of activities in the group, beyond the natural ones that occurred due to childbearing and age. Browsing and in turn all activities of the group and group members were simply processes of "conduction". Thus browsing was a process of conducting food spirits through their systems, sleeping, of conducting their own spirits into the dream places, sexual coupling, of conducting the spirits of new members into the group to replace the ones who had been lead away into the dream places.

When they gathered at the end of the day to discuss anything unusual they had observed or experienced during the day or anything noteworthy from the dream places they had been to the previous night, they were conducting lore, or as we would describe it, making history, transforming current events into collective memory. And since memory showed up in the dream places, and vice versa, where they often met members of the group who had already conducted there at death, the group had long ago, always they said, come to identify memory and the dream places along with all other places of thought as a unified, pervasive, permanent though changeable, aspect of themselves, individually and as a group. So any new individual experiences of conducting and of browsing or of dream places were turned into new words and phrases to join all the others that already existed in the lore of group memory and in more protean form in group dream places. In fact, it was this process of conducting history that was their identity.

There was no absolute division of their world into physical and mental realms, waking and sleeping states of consciousness, social and psychological significance, economic and political endeavor, individual and group identity. It was one world of various places and times, some found in immediate experience and some found in memory, past, present, or future as memory and the process of thinking itself were indistinguishable.

It was in this context, after a day browsing and conducting searches for trinkets among the shells on the beach and chatting with his friends, that he would approach the group gathering that evening and tell them about his dream. He was eager to hear if anyone else had been to such a place, though he was sure he would have heard about it if they had.

The members of the group had no concept of dream interpretations such as we might have, no Freudian or Jungian or other conception of a dream object or event as a representation of an unrecognized process or occurrence in the awake state. They did have an intense interest in how one person's dream place might relate to or lead to someone else's dream experience or how a dream experience might lead to some experience or place in the daylight. It was the interwoven nature of memory and experience that drove their investigation.

As the group worked its way along the gentle surf, he noticed a bright reflection in the upper beach sand where a wave had just retreated. The glint did not dissipate with the wave, indicating it was not due to surface wetness alone, and he hurried toward it to examine. The object was shiny but roughly pitted and irregular, unlike most shells, and much of its extent appeared to be buried in the sand. He began to dig around it and after a very short moment was able to lift the shiny stone and look at it closely. It was heavier than any stone of comparable size that he had encountered and the shiny surfaces between the pits were the color of the sun in early morning after it had washed itself of its natal redness.

It was early afternoon and the group was beginning to get hungry once again, but he did not want to leave the spot, which might harbor more such stones. This find was his by lore agreement, but if he could uncover more he would be happy to share the tokens with the others. Suggesting that his mate and the others should go first to the grove, he continued to dig.

In a while the lunch group returned from the grove, and he noticed that his mate carried with her a mat made of palm fronds in which she had placed two mangoes and several handfuls of nuts and berries. He had relayed his waking dream to her earlier in the morning, including the peculiar way that the legless lizard had been able to weave itself together in almost a nest like fashion, and it had occurred to her to emulate the scene with the slender leaves. She laid the crude basket on the beach next to him and smiled as he began to eat. He returned her smile and after finishing the meal, placed the shiny new stone on the mat. They laughed.



The group continued to dig for quite a while, but no other shiny stones were to be found. His mate tried to give the one he had uncovered back to him, but he refused it. As the sun lowered in the west, they placed the pile of shells they had gathered earlier on the mat, folded it up and headed to the lore site.

That evening's gathering was more energetic than the norm. He told them first of his dream, of the strange lizard with no legs and of the miraculous fruit just beyond his reach and that the lizard had devoured before he could retrieve it. Then he told them about the shiny stone, about which of course they had already heard. He motioned to his mate, who held it out for everyone to see, then passed it around the fire. Each member of the group tested its heft in the palm of their hand, examined its luster in the light of the fire, and passed it on to the next member of the group, before it made its round back to her. She next passed the mat around, and found that among some of the members there was at least as much interest in its interwoven configuration as there was in the weight and brightness of the stone. They picked at it and flexed it, then placed their token shells in it, picked it up by opposing edges, stood up and swung it back and forth to their side with the delight of broad smiles and chuckles.

There was much discussion among the members that evening, and toward the end of the lore fire all agreed to a double award of the lore tokens. As they rose and left the fire to return to their bowers, the members circled past his seat and that of his mate, depositing at each seat collections of cowry shells as they so deemed was warranted, to him for his dream and the find of the shiny nugget and to her for the woven mat. When everyone had passed, they would have seen that her pile was slightly larger than his, had anyone noticed such things.

They returned to their bower and slept soundly. In the morning and before the morning browse, everyone in the group gathered early at the palmetto grove and began to make mats . . . and then a basket. Then they went for a browse.

## Exegesis

The desire to satisfy basic human needs, both physical and psycho-social, inexorably drives economic activity back in the direction of its fundamental state in the browser economy. In that proverbial Eden there is no recognized intermediary between a desire and its satisfaction other than the time it takes to move to the location of natural produce or tokens of satiety, these latter being objects whose acquisition, and in some cases retention, result in emotional satisfaction. These latter items are socially recognized in general, although subject to individual appreciation.

An uncharacteristic dearth of immediately accessible produce in that Eden leads to the recognized development of technology in the form of productive tools and learned skills to mediate the hunt for and gathering of both remote natural produce and tokens of satiety. Chief among these technological innovations is a division of tasks according to the skills or status of the individual participants and the individual retention of at least some of the products of that skill, such as tools and habitat, along with any retained pure tokens of satiety, making barter and trade of goods possible. Second among these technologies, but first to be examined, is the use of broadly appreciated tokens for their exchange utility with natural produce, hunted and gathered, and with tools made by other individuals or groups.

The quantitative measure or value of exchange utility for such tokens is determined by negotiation of the parties to the exchange, which in turn make their determinations according to their perception of the relative abundance of the tokens of satiety and the items of consumable or productive utility to be exchanged. The persistence of such exchange utility results in a recognized mediation system, using persistent token exchange value, i.e. agreed utility or satisfaction of desire, for the acquisition and distribution of natural and human-made production.

The development and eventual rise of storable agricultural produce, which is secured in centrally managed granaries, gives rise to a second form of exchange, human-made tokens of dried clay or metal or other durable quality as a count of stored produce for use in redemption, as these tokens of account with right of redemption can be utilized for exchange in a similar manner as the tokens of satiety.

There is an inherent contradiction in the exchange utility of the tokens of satiety and the tokens of account, however, as the value persistence of the first is inherent in the token itself, while the value persistence of the second is dependent on the storage integrity of the granaries and the abundance of future harvests; that is satisfaction for the first is ultimately found in holding the token, while satisfaction of the second is ultimately found in exchanging the token for grain and is dependent on the value of production already achieved as well as of production yet to be realized.

As a result, value of the first is generally persistent as long as the token is appreciated or found to satisfy an acquisitive need, though it is incapable of being

consumed, while value of the second can fluctuate depending on the storage integrity of the granaries and the success or failure of subsequent crops and is therefore more subject to speculation as to its consumption value at the time of redemption. This inherent contradiction is not removed by the coinage of precious metals, such metals until recent history being chiefly token of satisfaction and without further productive or consumption value.

Coinage, however, is subject to debasement through shaving and alloy, and requires authoritative validation at the marketplace in the exchange process, so the development of standards of weight and measure along with secure storage of specie in banks in a manner analogous to granary storage arises, with the use of scrip and banknotes as the corresponding tokens of account, which are themselves subject to speculation.

While stored grain as consumable produce has a fundamental value as stored human productive effort and survival need, stored specie has both a fundamental value as tokens of satiety and a secondary, derived value as tokens of account for the fundamental value of the grain or any other stored consumable products for which it was issued.

Therefore, if we assume that specie is initially coined and issued as tokens of account of some stored product by a governing authority and redeemed from circulation with the consumption of that product, the total sum of specie in circulation should be of the order of the amount of stored production, where circulation includes storage of specie in any banks other than those of the governing authority.

Any excess of specie in circulation over the store of production has inherent, though negotiable, value as token of satiety, but depending on the frequency of transactions no more than a reduced value for the redemption of stored production based on the ratio of the coinage in circulation to the amount of the stored production. In a similar manner, if the utility of the stored production is reduced by inherent deterioration, acts of nature or human activity, the value of the specie in circulation as token of account is similarly reduced.

In light of such excess, if the transactional frequency of redemption is for a minor portion of the overall store of production, such reduction in value will not be apparent to the transacting parties; however, if it is for a significant portion, it will become apparent and result in devaluation of a unit of specie as the diminished quantity of remaining stock of product will be less than the nominal value or quantity of the remaining specie.

On the other hand, if there are other resources, productive or consumable, natural or human-made, beyond authorized storage and with owners ready for their conveyance, or if the remaining holders of specie have no immediate need of redeeming their currency, the remaining specie may maintain its value or even

increase in terms of its purchasing power. In fact, since in general there are always additional resources seeking a market, there may well be a desire for more specie than is provided by the governing authority, so that in the absence of additional issuance of specie by that authority such desire can only be met by borrowing from others holding specie, and generally this means through the lending of bank holdings.

As the production capacity of an economy exceeds the level of specie in circulation, it indicates a need for tokens of account in excess of tokens of satiety, and the validity of using scrip and banknotes as tokens of account becomes apparent, since they are without inherent consumption utility or rarity.

Since the issuance of scrip and banknotes and their use as tokens of account have the same effect in an exchange as tokens of satiety, they can be issued for lending with the same effect as issuance of specie, so that over time tokens of satiety become superfluous as reserve stores of value, unlike the stored production in granaries and elsewhere that maintains its fundamental consumption and productive utility and that the specie represents. As a result of this development, over time the total value of paper currency well exceeds that of specie or precious metal, bank reserve requirements can legally be met with reserve paper currency instead of specie, and the vast majority of the total of tokens of account in circulation exist as deposit accounting entries in the denomination of the paper currency.

In the final analysis in the modern economy, the paper currency is replaced by electronic accounting entries of suitable denomination and the monetary system becomes completely devoid of any relationship with a tangible token of satiety-in-its-own-right, though an account balance may retain a satiety of allusion by virtue of its universal appreciation and acceptance as a exchangeable token of account. Still, the final value of a modern monetary unit is devoid of inherent satisfaction and has only a negotiable value dependent on the perceived utility of current stored consumable and productive goods as well as the utility of consumable and productive goods and services yet to be created.

According to the Federal Reserve Statistical Release, dated September 18, 2014, for 2013, the reported value of financial assets in the household, nonfinancial corporate and nonfinancial noncorporate business sectors of the US economy is in the neighborhood of \$85T with nonfinancial or tangible assets of around \$57T. Assuming that the value in any financial asset is in its exchangeability for an existing or future tangible asset, consumable or productive, as quantified in its nominal value, at least one third of the stated financial asset value must necessarily be as claims against goods and services yet to be produced, and in fact the value of pension entitlements in the above three sectors is approximately \$20T.

Financial assets are either tokens of unspecified and universal redemption, i.e. money or "legal tender for all debts, public and private", to quote the US paper currency, or certificate tokens of contractual obligation, such as performance,

stocks, bonds, options, or other equity or liability shares, for specific redemption as goods, services, real estate or other financial assets; they are either universal or specific accounts of actual past or potential future transactions. The actual case is that these financial assets represent anticipated future as well as past production and as such are measures of both current real assets and projected future earnings and asset value.

The thing that bears emphasizing is that if we were to divide the financial assets by ten or multiply them by the same factor, the tangible physical or real asset base would remain the same, and its nominal valuation in terms of financial assets could be held to vary accordingly. However, holding the nominal value of real assets steady, along with employed factors of production, deflating the financial assets will have a tendency to reduce the production of new real assets and consumables, while inflating the financial assets will tend to increase their production.

The effect is simple; for the economy to run smoothly, the quantity of financial assets, particularly liquid assets, must be sufficient to first, engage the necessary factors of production, and second, provide them with capacity to purchase the resulting supply of production, both consumable and productive. In this regard in a market economy, any appreciation for money as a token of satiety, i.e. as something to be held, is irrelevant and can be counter productive, and it is principally the quantity of money as a token of account of transactional sufficiency that is relevant.

It follows that in a democratic society in which the chief function of government is preservation of the integrity of the social contract, which by inference indicates the maintenance of orderly markets and settlement of transactional disputes, one of the principal tools of government should be the oversight and provision of optimum liquidity in the marketplace.

With respect to access to means of consumption and production, as determined by ownership or entitlement to utility, goods are designated as either 1. excludable/2. non-excludable and A. rivalrous/B. non-rivalrous, so that we have 1A. private, 1B. club, 2A. common, and 2B. public goods.

Since money in an advanced market economy is an instrument of accounting and not a real asset in its own right, having utility only in the determination of relationships in exchange and contracting between individual parties both private and public, it cannot properly be considered a private good, which reserves the right of its full consumption to its individual owner. Money is therefore obviously not a private good as it is never consumed, and merely transfers its utility to another individual in the course of a transaction.

Money would not appear to be a club good since its use is non-excludable; one individual's use of the money in their possession may exclude others from the contemporaneous use of that same batch of cash, but it does not exclude them from the use of money in general, or of that same batch of cash once it leaves its original

holder, just as the air one individual breathes out may be inhaled by the person next to them, albeit laden with less oxygen and more carbon dioxide and who knows what else.

Money would not appear to be a common good, since its use is non-rivalrous as one individual's use on food at his private supper club does not prevent his neighbor's use of the same amount on drink at his private lounge. On the other hand, if two different goods are competing in the market place for the contents of the same purse, that would tend to indicate a type of rivalry.

We might be tempted to state that money is a public good, since there are cases where everyone has access to it and can use it without preventing its use by others; except for the fact that the use by some individuals of what is obviously not a private good can indeed result in a case where certain other individuals are denied access to its use. In a market where prices have been set by sellers for products that are not in short supply, the money used by one buyer is not rivalrous or excluding of others use, but if there are only a few products with open bidding, one well heeled individual can prevent the others from using their money. In this sense there are cases in which the accumulation of money in few hands effectively approximates it to a club good.

In fact, money does not completely fit any of these categories, but since its utility does not result in its consumption as does the utilization of a good or service and as it is not produced by any human factor of production, (people do not make money in the workplace, they provide their effort and make things in return for other people's money), we contend that at least a component of it should be treated as a public good where everyone has access to the basic amount needed to survive.

What money definitely is not, in its total supply, is a private good. Thus while money in a modern market economy is viewed by many if not most market participants as a private good with inherent value, in reality it is inherently non-private due to its exchange nature and without innate valuation.

We look now to the first of the previously mentioned new technologies arising from the browser economy, the breakdown of tasks into components for specialization and skill suitability and enhancement; the division of labor.

We can rightly believe that task specialization both results from and leads to the development of a status hierarchy within the browser economy. Ability to find the best food and the most comfortable sleeping bower would transfer to the benefit of those most familial to such apt individual and result in elevation of his or her esteem in their eyes. Inabilities in these regards would likely result in a contrary appraisal.

With the advent of hunting and gathering, tool making ability and hunting skills will have a similar effect, including choice of the best fire and hut site, whether given by the appreciative other members in the group or taken by the strong arm of

individual outright. The development of such individual skills, if they are transferable, also accrues to the benefit of the whole group through the learning of those skills and eventually of related group skills, resulting in an increase in consumption and a rise in the asset base of both lead individuals and the group.

In times of plenty such skills may be of marginal benefit to the group as it reverts to browsing, but in times of want they can mean the difference between mild hunger and starvation, between life and death. In recurring times of plenty, they can mean reduced time spent providing for the necessities of life and additional time for sport and the pursuit of individual curiosity and interest with the potential for derivative benefit to the whole group. In general, times of plenty provide for individual pursuits and times of want require group retrenchment and reliance, though both want and plenty can coexist but in a modern economy with social stratification.

Evidently, the persistence of a hierarchy of skills and knowledge and of attendant social status leads in time to hereditarily established class and caste systems which can be susceptible to corruption and abuse. Entitlement, i.e. ownership and license rights, are a straightforward component of such systems, and also subject to abuse.

Still, individual ownership, an enlightened perspective might say stewardship, of natural and human modified resources is in general a more efficient and effective method for the detailed allocation of those resources to direct human effort toward productive ends than is social ownership. However, the overall allocation of those resources is a social ownership; individual ownership is a socially derived entitlement and must ultimately serve a socially agreed and acceptable end in terms of the social contract or it is no different from the presumptive divine right of monarchs that the democratic revolution, now well into its third century, set itself to upend.

Monarchy of the absolute type is simply private ownership of the entire economy, as the legendary King Arthur emboldened with the presumption “The king and the land are one”, to good or ill effect. Free market economics presumes itself to prevent a resurgence of such monarchy, but without oversight, “free” markets, even in the absence of strong-arm tactics, work to the ascendance of those with competitive advantage, both through merit and through entitlement.

This is in part because a market by its nature is rarely a meeting of equals; generally the propensity to buy and the willingness to sell are not equal, even though an agreed price is reached. This is not generally recognized in theoretical constructs which idealize each transaction as an optimization for both parties. Either the buyer or the seller may have a greater urgency in concluding the transaction than the other party, though equivalence is possible and is usually suggested by both for a variety of reasons.

This may be true in a barter exchange as well, but in a monetary transaction the buyer is always a universal agent and can buy anything that his interest pursues and

his purse can afford, while the seller, unless his product has universal appeal, can only approach a limited market that is interested in his product. In addition, a seller generally has expended money or effort in acquiring or producing his product and from the instant of bringing it to market and even before, desires to exchange it for the universality of cash, while the buyer will try to maintain his universality of cash until the urgency of consumption or acquisition is immediate. If the buyer has a specific and urgent need to fill, of course, the roles may be reversed.

This is also true in the employment of other people's labor, where the laborer, having already invested in food and shelter and clothing and transportation to make himself employable, is ready to exchange his efforts for cash, while the employer would rather delay that employment until he is confident in his ability to readily exchange the product of that employment into cash.

Depending on the nature of their resource allocation, over time such differentials in the market can lead to oligarchy or effective monarchy. Some enterprises are inherently monopolistic by the nature of their resource involvement, and as long as they do not operate contrary to the widely perceived public good can be allowed to remain unregulated. When they are antithetical to that good, in a modern democracy they should be regulated. Thus free market economics is a relative concept and not a prescription for anarchy. Governance is necessary to preserve the social contract, of which access to the necessities of living is an integral part.

As an organizing principle in the production of marketable goods and services, private enterprise is arguably the most efficient, since the owner(s) need not consult anyone else's opinion in operational matters, and also the most susceptible to abuse, for similar reasons. Public enterprise, both of government and publicly traded firms, is subject to the inefficiencies of bureaucracy and regulation, but is more open to public scrutiny in its operations, or at least should be in a democratic society.

Private concerns are therefore highly governed by both the skill and the ethics of the parties involved. They may be more apt or at least able to embrace technologies of proven efficiency, but in conditions of rapidly changing technology this can be disruptive of the general social good, aside from any questions of ethics, for a couple of reasons.

First, the introduction of such technology means that the same amount of production can be achieved with employment of less human effort. If such disemployment is broadly based throughout the economy, it can be remedied by a general reduction in the workweek and more leisure time at the same relative level of pay and consumption, and this has occurred over the past century or so in the western democracies. However, where there is unevenness in this process across different industries and market segments it is likely to result in areas of underemployment or unemployment, which in a market economy results in segments of the population being cut off from access to necessary resource consumption.



Second and less immediately obvious is that the benefits of increases in productivity, to the degree that the increases are embodied technologically in plant and equipment instead of in the specialized and relatively hard to reproduce skill of their operating workers, accrue to those who own the plant and equipment and not to the employees. No matter how technologically advanced the skillset, those who first master new technological skills and have an initial competitive advantage in the job market may become enterprise owners themselves; otherwise they gradually lose their ability to command a wage premium as such skills become commonplace or are superseded by newer technology.

In this dynamic, the monetary tokens of successful productive enterprise accumulate with those employers who own the technology, while slowing to a subsistence level for those they employ increasingly as commodity labor. So along with an overabundant supply of production and productive capacity, at least until it no longer makes sense to maintain all of it, the market economy paradoxically results in a condition in which there is insufficient pay or other funding of workers to allow them to purchase the goods and services that they produce and that their employers would like to sell back to them.

The excess cash accumulation of employers then results in a disinvestment in productive real capital, by exporting of operations to areas of lower labor cost, and to a rise in non-productive asset pricing. As savings has fewer productive investment opportunities, it pursues more expensive toys and emblems of status, both real and financial, eventually attracting foreign financial capital to the excitement in the process.

A review of the attached table of Household Final Consumption Expenditures for selected countries and the world shows the effects of this dynamic over the past thirty some years in the United States starting with the implementation of supply side thinking in fiscal policy. The ratio of consumption spending to total production, designated in the following as,  $C_G$ , has steadily climbed since the early '80s with a brief period of leveling off during the Clinton administration. It is important to remember that the final consumption expenditures are for all factors of production in the economy and not just what is traditionally thought of as labor, and include the personal expenditures of professionals, business owners and managers, and rentiers.

This is the period of increasing globalization, which is another way of saying, at least for the US, a period of disinvestment in domestic production, both directly by the export of production or indirectly by the import of finished goods. Both direct and indirect processes result in an export of monetary tokens, or at least their electronic equivalent.

These in turn have found there way back into the western developed economies, adding to the funds bidding up the asset prices and service costs of everything from

real estate to corporate and financial equities to medical and related insurance costs to the funding of human capital in the form of college degrees. During this time, with the brief exception of a notable rise in income for all segments of the economy during the second term of the Clinton administration, as seen in the attached chart, the indexed income for the lowest 50% of households has been stagnant. Yet these households have continued to work and live in areas subject to the pressures of upward asset pricing of all types, many if not most with little access to non-market sources of consumption in the event of an economic downturn, i.e. as found in a rural environment.

The long-term trend is toward an increasingly productive, automated economy employing increasingly fewer skilled manufacturing workers and more semi-skilled retail and service workers at commodity priced wages. Once the differentials in wages between global segments have stabilized, incentives will increase for domestic reinvestment in manufacturing, but not necessarily with substantial wage increase.

We can expect that the income spread that now trends the 80<sup>th</sup> percentile closer to 90<sup>th</sup> than to the 50<sup>th</sup> will fall much closer to the 50<sup>th</sup> as the 90<sup>th</sup> falls further from the 95<sup>th</sup>, etc. These members of the upper middle class who make their livings as professionals and service consultants to the top fraction of a percent will become fewer in number and find their relative incomes drop. Small business will continue to fail or operate on tight budgets, offering little hiring to well paid positions.

This trend will continue as long as well-meaning voters on the right continue to believe that government spending is the source of their economic woes. Should the well-meaning voters on the left gain ascendancy, believing that government taxation and redistribution of income or even wealth is the solution to their economic woes, the problems will be likely to continue, though in a different vein.

A final innovation away from the browser economy, taxation arose with the division of labor as a means, other than plunder and slavery, of supporting the leading strata of the society and their enforcement branches, noticeably as a tax-in-kind of agricultural produce, i.e. a share of the granary deposits, on the largely agricultural base. With the rise of industrial democracies, this process resulted in the tax on income as a means of assuring a reliable flow of cash for government operations, since most currencies at the time were specie or precious metal based and governments could not make such metals or metal based specie on demand.

Government expenses are either for investment and the purchase of goods and services, particularly in infrastructure and police/military sectors or for transfer payments to others, and in an economy expecting tokens of satiety for payment of goods, services or transfer payments, taxation-in-kind of this kind of token is necessary.

However, in an economy where money is denominated by a fiat currency and transactions consist of computerized accounting entries in an electronic medium, with government payments consisting of such electronic direct deposit entries, and where cash transactions represent a small fraction of overall exchange and coin transactions represent much, much less, such taxation is likely an anachronism. I say likely, since from a rational point of view it is an anachronism, but it is hard to gauge how every citizen would respond to such innovation.

The potential for abuse of the alternative direct “printing” of money, while real and to be avoided by the institution of proper policy and systematic oversight, is no more a danger than the abuse of value creation engaged in by the speculative financial industry prior to and, of course, still continuing since the crisis of 2008, or by electronic arbitrage in the stock, commodity and other markets’ and with IPOs of enterprises of unproven value.

The complaint against such government monetary creation in the payment of expenses, as with similar complaints against quantitative easing, national debt and deficits, inflation, and of course, the Fed in general, comes from those with holdings of financial assets that would prefer not to see their value diluted by inflation. This is understandable. However, a key in successful management of any endeavor is in knowing how to interpret the effectiveness of ones policies and procedures and that involves understanding the feedback signs, so we turn to that next, with the aid of some mathematical analysis.

## Analysis

Macroeconomic analysis attempts to shed light at a domestic or global level on the interplay of the production and consumption of goods and services, the financial structures that facilitate that interplay, and the monetary and fiscal systems that govern those structures. This overview is of another such attempt, yet with what is believed to be a novel twist. It uses as its point of departure the browser economy to which we return. In general experience, most developments of economic theory start with the concepts of supply and demand, which are expressions in transactional monetary terms of the corollary physical production and consumption of goods and services. The value of such goods and services is expressed as a quantity of some monetary unit that is exchanged from the demanding consumer to the supplying producer.

A monetary unit is taken as an axiom of that exchange without regard to a definitive understanding of money. It is generally assumed to be a medium of exchange, a unit of account, and a store of value. While we would accept the first two of these, we would stipulate regarding the last that it is only token of a store of goods or services that have intrinsic use value, having no intrinsic use value itself other than in anticipation and execution of an exchange. While this is generally understood, the logical implications of the distinction are insufficiently pursued. Such pursuit as just outlined indicates that lacking any intrinsic value, the value of an individually held store of money is relative to what the entire population of money holders do with their money and not just what the individual holder does, so that money cannot be defined correctly as a private good as most analysis does.

In contrast as we have seen, the browser economy has no monetary system. Its analysis begins instead with the necessary propensity to consume natural produce in order to maintain human life. In the browser economy, all production is that of nature which is immediately consumed by the human population, without a mediating production arena, market or currency. There is no demand in the usual economic sense, just a utilization of resources to satisfy a need or want. And while there is a supply of natural resources, there is no human productive effort embodied in that supply other than the physical movement of each individual to the location of the produce in order to consume it. This same supply of natural resources also provides tokens of emotional satisfaction or satiety for individuals that are socially recognized and appreciated, that is valued, and which form the basis for the eventual evolution of a system of money, but in the browser economy such system is separate from the consumption of basic human survival needs.

We start with the consumption of natural production rather than with demand and supply of human production, because we hold it to be the primary motivator of everything else in the economic universe; biological need and want, healthy and pathological, generates demand, and demand generates attempts to access, provide and control supply. While all analysis realizes this fact on some level, all too often economic modeling embraces blithe absurdities about monetarily expressed

autogenous demand; as if factors of production such as labor can turn the “propensity” to consume off and on like a spigot to a reservoir of need during a financial crisis. As if a financial crisis, a scarcity of funding or more particularly for those who cause it, of returns on funding, is equivalent to an economic crisis, a scarcity of some necessary natural resource or factor of production, despite an obvious relationship.

We intend to show that the drive behind all modern economic activity, regardless of its self-perceived direction, is movement back in the direction of the browser economy; to the satisfying experience of living with a minimum of self-conscious effort in the company of a supportive family group or community. In dry economic terms we might say to the satisfaction of wants and needs via efficient production and consumption of goods and services in co-operation with our fellow factors of production. Such production is necessarily not “natural” production, since it is realized only through the acculturation of human effort in response to scarcity, but that effort is in turn increasingly less directly human through the growing productivity and inventiveness of human technology, culminating as of the present in the digitally mastered, productive environment in which any perceived scarcity is increasingly of human genesis.

For the browser economy, instead of the usual monetary income denominated production factors, from the microeconomic view, of labor, raw and intermediate materials, capital goods, rent and return on investment that go into the production function, we will start with a basic consumption or utility function,  $U$ , consisting only of the human,  $H$ , and natural resources,  $R$ , utilized in meeting the wants and needs of the economic population, all of which are human, i.e. they are households, not firms. This utility function can be written

$$U(H, R) . \quad (0.1)$$

In the browser economy, human consumption and productive effort are one and the same thing. Picking the berries off the bush, the fruit off the tree, and popping them in your mouth is both production and consumption in one motion. The human utility function, then, is measured or quantified by the human effort expended in consuming those resources,  $H_R$ , or by the quantity of natural resources that are thus consumed,  $R_N$ , or

$$U(H, R) = H_R = R_N = U . \quad (0.2)$$

Note that since the same utility is expressed in each term,  $H_R$  and  $R_N$ , the human effort is equal to the resource consumed. In such consumption quantity we include any resource, human or natural, “wasted” in the utilization process. Note that we do not add the human and natural resources to arrive at the utility. This Utility is understood in the active voice of Humans picking and eating berries or in the passive voice of Berries being picked and eaten by humans. Note however that this equality of effort, resource, and utility does not indicate an identity of any of the

components. According to customary mathematical logic you can only add quantities or equate sums of the same qualitative or “dimensional” units, i.e. apples and apples; unless you are counting up a more general qualitative unit, fruit, as in apples and pears and bananas. This forces us to make a couple of adjustments, which will prove to be helpful.

First, we can say that the value,  $v$ , expressed below as a pre-subscript, which is in essence a subjective, though quantifiable, property identified with a thing, the *value* of the three components is not only equal, it is an identity or

$${}_v H_R \equiv {}_v R_N \equiv {}_v U . \quad (0.3)$$

In fact we can make a case that the economic utility of a good or service is its value. In the marketplace, something that is recognized as having no utility has no value. So by definition the effort required to utilize a resource is equal to its value or the effort would not be expended to utilize it; similarly so with any utility imputed to a natural resource, without which it would not be valued. Still, in spite of a shared quantitative value, the human effort, the natural resource, and the satisfaction of want or need inherent in its utility are three separate properties or dimensional qualities.

Now in addition to the effort involved in using the resource in its entirety, let us suppose that there is some effort necessary to effect its utilization that is, however, not completely used up. We are now moving from a browsing economy to capitalism, in this case of the hunting and gathering type. Instead of eating all the fruit and berries at their source, we construct some baskets to collect more than we can currently consume and take the saved surplus back to our camp and store in pottery we have made, to eat later. Instead of being satisfied with the occasional hand caught raw fish or rabbit, we build some nets and spears to catch enough to take home and cook. When we have consumed all the fruit and berries and fish and rabbits, we can now use these baskets and nets and spears once more to go back out and bring back natural produce to our camp. We won't have to expend as much effort the next time out, though we will have to maintain the fire and spend a little time mending the baskets and bowls and nets and sharpening the spears, and perhaps making a few more of each.

The value identity expressed in (0.3) is not so simple now. The total utility expressed by  ${}_v U$ , which includes the extra meals now possible back at the camp, is still equal to the total human effort expended,  ${}_v H_R$ , and the total of resources utilized,  ${}_v R_N$ . But the total utility is found in both the food consumed during the browsing and the food gathered and brought back for later consumption, which can be thought of as the *product* of the human effort *operating on* the natural resources.

This brings us to our second adjustment. This product operation can be expressed mathematically as the cross-product of  ${}_v H_R$  on  ${}_v R_N$ , where this mathematical product

is the economic product to be utilized,  ${}_vP_U$ , of the total food browsed, caught and gathered, or

$${}_vH_R \times {}_vR_N = {}_vP_U = {}_vU. \quad (0.4)$$

In the case of a cross-product each of the three terms is dimensionally distinct, so that here, instead of an equation stating that the utility of an individual collecting apples equals the utility of apples collected equals the utility of a meal of apples, as with (0.2) we might have one stating that a human gatherer mashing up some picked apples produces apple sauce. But in our hunting and gathering party we have more than this, since in addition to the human effort expended,  $H_C$ , on hunting and gathering the food resources to be consumed on the expedition and later back at camp, we have the initial effort,  $H_I$ , invested in making the bowls and baskets and the masher and nets and spears from other natural resources. We have capital goods. And  $H_I$  includes the essential organizational understanding gained of the coordinated effort required to hunt and gather; beyond the social skills of browsing and the lore fire and in addition to learned individual skills.

Thus (0.4) can be elaborated as

$$({}_vH_{C0} + {}_vH_{I0}) \times {}_vR_{N0} = {}_vP_{C0} + {}_vP_{I0} = {}_vU_0, \quad (0.5)$$

where the efforts of this initial hunting and gathering party,  $E_0$ , (the subscript being a time sequence or cycle number), result in the production of consumable utility,  ${}_vP_C$ , in the form of food goods, and the production of tools and technological skills that can be reused on the next hunting and gathering effort, that is investment in productive or capital goods and services,  ${}_vP_I$ . That next party,  $E_1$ , has the advantage of reuse of the initial capital as a type of modified natural resource,  $R_I$ , where the new resource base for sequence 1 is

$${}_vR_1 = {}_vR_{N1} + {}_vR_{I1}. \quad (0.6)$$

For highly non-durable production goods, the value to be used up in the next round of production,  $n+1$ , is roughly equal to the value of the tools produced, but not consumed, in the current round,  $n$ , or

$${}_vR_{I(n+1)} \equiv {}_vP_{I(n)}. \quad (0.7)$$

For highly durable production goods, that value is the value of the tools currently produced less the retained or unused value in the next round,  ${}_vR_{+W(n+1)}$ , or

$${}_vR_{I(n+1)} = {}_vP_{I(n)} - {}_vR_{+W(n+1)}. \quad (0.8)$$

There must first be some tool mending and perhaps production of additional baskets, nets, spears and perhaps a club made, along with a discussion and refinement of hunting strategies so that the resulting production will be

$$({}_v H_{C1} + {}_v H_{I1}) \times {}_v R_1 = {}_v P_{C1} + {}_v P_{I1} = {}_v U_1 , \quad (0.9)$$

After  $n$  sorties into the wild to hunt and gather, the group has bunches of baskets, and pottery to store what they catch and gather, and elaborate snares and atlatls, bows, slings and arrows in addition to the spears and nets and a nice tribal hut where they can review their organization, not to mention boast about their daring, hunting skills, and outrageous fortune. In other words, they have a total man-made resource base or wealth,  ${}_v R_W$ , invested or the total amount produced less the total consumed after  $n$  sorties of

$${}_v R_W = {}_v P_{I\Sigma(n)} - {}_v R_{I\Sigma(n)} . \quad (0.10)$$

It then dawns on the elders of the group that the current utility they realize is not as expressed by (0.9). The capital goods investment of at least  ${}_v P_{I(n)}$  is advisable in replacing that of  ${}_v R_{I(n)}$  used in production period  $E_n$ , and while it is necessary for future production of  ${}_v P_{C(n+1)}$  at the current level of  ${}_v P_{C(n)}$ , it or its equivalent is only utilized or consumed in that next period. Therefore the value of the current utility is to be found not in (0.9) but in the following, where the gross product for the period is  ${}_v P_G$

$$({}_v H_{C(n)} + {}_v H_{I(n)}) \times {}_v R_{(n)} = {}_v P_{C(n)} = {}_v P_{G(n)} - {}_v P_{I(n)} = {}_v U_{(n)} , \quad (0.11)$$

The group is spending more and more time keeping up their growing stock of capital goods, but they are also living better as they see it, i.e. consuming more in any current period. They have instituted a token system to keep track of everyone's contributions, so that everyone is paid according to his efforts and in turn can retrieve his share of the sortie production. The elders want to know the optimum proportion of pay between  $H_C$  and  $H_I$ , since it is time consuming to make and maintain tokens. Assuming it is equal to the current utility,  ${}_v U$ , and to the value of effort expended on that consumable production,  ${}_v H_C$ , they want to know for each token unit of consumable production,  ${}_v H_C = {}_v P_C = 1\$$  , what should be the value of effort (but not necessarily the time) in tokens, \$, invested in making tools and other production goods,  ${}_v H_I$ , assuming that it is just enough to replace, i.e. be equal to, the used-up production goods,  ${}_v R_I$  . In other words, solve

$$(1_{C(n)} + x_{I(n)}) \times x_{(n)} = 1_{C(n)} = (1+x)_{G(n)} - x_{I(n)} = 1_{(n)} , \quad (0.12)$$

All the terms to the right equal 1 so that we have, as a positive real solution

$$\begin{aligned} x^2 + x - 1 &= 0 \\ x &= 0.618033989... \end{aligned} \quad (0.13)$$



meaning that for a given economic sequence or period at equilibrium, the ratio of capital goods and services to consumer goods production should conform to (0.13).

Plugging this figure into (0.12) gives the following

$$\left(1H_{C(n)} + 0.6...H_{I(n)}\right) \times 0.6...R_{(n)} = 1P_{C(n)} = 1.6...P_{G(n)} - 0.6...P_{I(n)} = 1U_{(n)} . \quad (0.14)$$

Therefore, in equilibrium, where capital is replenished at the rate of depletion, the ratio of consumption to total production,  $C_G$ , should be the same as capital to consumer production or

$$C_G = \frac{{}_vH_C}{{}_vH_C + {}_vH_I} = \frac{{}_vP_C}{{}_vP_G} = \frac{1}{1.618...} = 61.8...% \quad (0.15)$$

with the ratio of investment in capital goods and services, i.e. real and human, to total production,  $I_G$ , of

$$I_G = \frac{{}_vH_I}{{}_vH_C + {}_vH_I} = \frac{{}_vP_I}{{}_vP_G} = \frac{0.618...}{1.618...} = 38.2...% \quad (0.16)$$

Note that (0.16) is not a measure of relative energy or effort or time extended in producing  $P_I$  with respect to  $P_G$ ; rather it is the relative trade *value*,  ${}_vP_I$ , that it must represent in order for the income stream paid for  $H_C$  to match the sales price of  $P_C$ . As stated in the attached Production Cycle table, if  $I_G$  is valued at less than (0.16), there will be a mismatch with  $H_C$  greater than  $P_C$  and several things can occur, which we will go into in a minute. In general there will be (a) a shortage of current consumer supply or (b) price inflation, depending on whether (i) the propensity to sell or (ii) the propensity to buy is greater. If  $I_G$  is valued at more than (0.16), there will be a contrary mismatch with  $H_C$  less than  $P_C$ , resulting in (a) a surplus of current supply, (though not necessarily availability) or (b) price reduction, this time depending on whether (i) the propensity to buy or (ii) the propensity to sell is greater.

Over the long haul, real economic growth can only occur through increases in size of the working population or increased productivity for a given population or a combination of both. In the short run, it can be achieved by a given population producing more (consumables) than it consumes. Therefore, for stable growth to occur, the increase in production due to productivity and/or human working population of  $H_C$  and  $H_I$  should be such that a ratio of consumer to total spending a few points below (0.15) is maintained. Thus the monetary value of the increase should be reflected in both  $H$  and  $P_C$ , so that instead of percentages with respect to  $P_C$ , (0.11) in monetary terms becomes

Production Cycle with respect to proportionality constraints of Consumption and Investment Valuation

	Hc	Hi	R	Pc	Pi	Pg	Hc/(Hc+Hi)	Pc/Pg	Excess	Pi/Pg	Cycle	Growth	Liquidity	Capacity	Public	General Environment		
1	1	0.618	0.618	1.000	0.618	1.618	0.618	0.618	Eq	0.382	D	S	Eq	Opt	O,\$,I,R,T	Stable		
2	1	0.518	0.618	0.969	-	0.518	1.487	0.659	0.652	0.007 D	0.348	-	D	-	O -	O,\$,+,I,+,R+,T-	Below optimum slowdown	
3	1	0.518	0.518	0.887	-	0.518	1.405	0.659	0.631	0.028 D	0.369	-	T	S	CS	OS	O,\$,+,I,+,R+,T-	Trough or down plateau
4	1	0.618	0.518	0.915	-	0.618	1.533	0.618	0.597	0.021 D	0.403	+	I	+	C +	U +	O,\$,I,R,T	Recovery growth
5	1	0.618	0.618	1.000	0.618	1.618	0.618	0.618	Eq	0.382	I	S	Eq	Opt	O,\$,I,R,T	Stable		
6	1	0.718	0.618	1.030	+	0.718	1.748	0.582	0.589	0.007 S	0.411	+	I	+	D +	U +	O,\$,-,I,R,T+	Salubrious growth
7	1	0.718	0.718	1.111	+	0.718	1.829	0.582	0.607	0.025 S	0.393	+	P	S	DS	US	O,\$,-,I,-,R,T+	Peak, up plateau, overheating
8	1	0.618	0.718	1.078	+	0.618	1.696	0.618	0.636	0.018 S	0.364	-	D	-	D -	O -	O,\$,I,R,T	Slow down
1	1	0.618	0.618	1.000	0.618	1.618	0.618	0.618	Eq	0.382	D	S	Eq	Opt	O,\$,I,R,T	Stable		
1 Hc	Current valuation for consumption goods and services sum of current production factors, here theoretically set to 1 for all evaluations																	
2 Hi	Current valuation for capital goods and services current production factors																	
3 R	Current imputed valuation of natural resources and previously produced / currently consumed capital																	
4 Pc	Current valuation of consumption current final production - Sq Rt of ((Hc + Hi) x R)																	
5 Pi	Current valuation of capital goods and services current production - Hi																	
6 Pg	Current valuation of total goods and services current production - Pc + Pi																	
7 Hc/(Hc+Hi)	Ratio of current consumption production to total production - production factor valuation																	
8 Pc/Pg	Ratio of current consumption production to total production - product valuation																	
9 Excess	Difference in 7 and 8 as an excess of S = Supply or D = Demand, Eq = Equilibrium																	
10 Pi/Pg	Ratio of current capital production to total production - product valuation																	
11 Cycle	Position of row as a component of a production cycle, D = Decreasing, T = Trough or down plateau, I = Increasing, P = Peak or up plateau																	
12 Growth	Trend in Growth as the directional change in Hi, S = Stable, - = decreasing, + = increasing																	
13 Liquidity	Trend in market liquidity with respect to C = Concentration or D = Diffusion of fund pools, Eq = Equilibrium, S = Stable, - = decreasing and + = increasing toward cycle Peak production																	
14 Capacity	Trend in production Capacity with respect to O = Oversupply or U = Undersupply of Hc and/or Hi, Opt = Optimum, S = Stable, - = decreasing and + = increasing toward cycle Peak production																	
15 Public	Advised Public Involvement O = Oversight/general welfare, \$ = Money supply, I = Infrastructure, R = Research/development, T = Use based taxes, for baseline, - = decreasing, and + = increasing involvement																	
16 G. E.	Comments concerning basic economic environment																	

$$\sqrt{({}_\$H_C + {}_\$H_I) \times {}_\$R_I} = {}_\$P_C \quad (0.17)$$

This is because the product,  $P_C$ , is a separate dimensional property than either  $H$  or  $R$ , in the same sense that a square foot is a different dimensional property than the two lateral linear feet that comprise it. The token valuations, however, are all of the same kind or property and the square root of the computed product valuation gives the product transactional value in token or monetary dimensions. Instead of the square roots, we might decompose the product into other roots to reflect a weighted value for the  $H$  and the  $R$  components, i.e. the income and the asset components. This is what is done by the market in non-equilibrium conditions both beneficial to growth and to its detriment, and not coincidentally to the labor portions both of  $H_C$  and  $H_I$ .

It should be noted and emphasized that while there is a rough and maybe not so rough equivalence between labor and  $H_C$  and between entitlement to returns on capital and resources and  $H_I$ , there is return on labor and on capital in both of  $H_C$  and  $H_I$ . In other words,

$$\begin{aligned} {}_vH_C &= ({}_vH_{C_L} + {}_vH_{C_C}) \\ {}_vH_I &= ({}_vH_{I_L} + {}_vH_{I_C}) \end{aligned} \quad (0.18)$$

Thus labor,  $L$ , and capital,  $C$ , are

$$\begin{aligned} {}_vL &= ({}_vH_{C_L} + {}_vH_{I_L}) \\ {}_vC &= ({}_vH_{C_C} + {}_vH_{I_C}) \end{aligned} \quad (0.19)$$

The chief distinction between labor and capital made here is not primarily in the usual sense of ownership or relation to the means of production. Rather it is that the value in labor, regardless of skill level or remuneration, is invested in the product at the point of production (and trade, distribution, etc.) and is therefore current and variable, while capital is human effort, newly and previously invested in productive property, that is invested at the start of a production process and throughout the process as needed, which maintains and oversees the necessary continuity of that process and is therefore of long-term utilization. Laborers, all humans obviously, are in turn maintained, produced day by day, by consumption and other utilization of the necessities of life. The engine that drives the economy then is not some abstract, microscopic appraisal of the marginal utility of multiple market choices throughout the day, but instead the biological drive of humans to fulfill their consumption needs through the process of producing those needs at the workplace.

From this, it is straightforward that the value in capital,  ${}_vC$ , is from the accumulation of unconsumed production over time in the wealth of the economy,  ${}_vR_W$ . This includes not just the remaining utility of productive plant and equipment and other resources,  ${}_vP_{\Sigma(n)}$ , but also that of the furnished homes and automobiles and other durable products that are needed to “produce” the able bodied worker at the front

door of the factory or office or store or fast food restaurant or educational or medical institution every morning, five or more days a week. The value of the labor, the human capital,  $vL$ , is the value in the products from the factories and offices and stores and fast food restaurants and educational and medical institutions and invested in the experience of school and work and service to the community, embodied in the workers from cradle to grave, required to produce their human productive capacity that grows with that experience until the aging process begins to diminish its effectiveness. The current value utilized from this human capital is in the expenditures of food and drink and clothing and for the household and getting to and from work that is consumed or depleted over the course of each day, week or month.

There are two things we should address in regards to the production of human labor and human capital and its value in the market place. The first is that fungible labor skills that are in sufficient surplus become a commodity subject to commodity pricing. In the trend toward commodity pricing, market constraints indicate payment only for the cost of producing that good or service, which for labor is the day-to-day cost of food, shelter, clothing, and transportation to and from the workplace. It does not pay for the cost of schooling and upbringing, for medical care, especially major medical, or for retirement. Such human capital costs, like all capital costs, are sunk costs that cannot be recouped unless there is need for their replacement, i.e. in the manner in which  $vR_{In}$  is priced at its replacement cost of  $vP_{In}$ . Since commodity labor can be replaced by another laborer of like kind, except in time of full employment, in the free market all that commodity labor can command is the ongoing current costs of producing it, of getting it back to the work place from week to week or month to month.

Similarly, if a productive enterprise is forced by competition to implement commodity pricing of its whole line of products, it may not be able to fund its capital replacement and will continue to run only as long as it can employ commodity labor. When there is a general market slowdown and when the utility of its physical capital is depleted or degraded, as when the roof is leaking everywhere and needs to be replaced, if there is no funding available internally or externally, it will have to cease operations. There may be land value or cash value in plant and equipment and unfinished materials, but unless someone else can buy the enterprise, repair the roof and make the operation profitable, these are sunk costs and are gone.

As a result of this fact, there is no way that a competitive free market can answer the problems of long term health care, education loan repayment, and retirement needs of commodity labor. Only industry sub-sectors that are not subject to commodity pressure can do so. It bears repeating, *there is no way!* In the United States, especially in the wake of World War II when it was relatively free of competition, such needs were provided for in varying degrees by both private and public sectors until globalization and competition with foreign goods forced down the price of domestic production and reduced the corresponding labor toward commodity pricing. As a result of globalization, commodity labor can now make less

contribution to public sector protection, leaving the private sector employers, already cutting costs, to shoulder more of the responsibility. Tariffs could address this issue, but at the cost of potential foreign market share loss and trade rivalry.

This has nothing to do with the skill or education level of the labor. If the STEM programs for science, technology, engineering and mathematics succeed in providing an oversupply of graduates at a time when the human application of those skills is being widely superseded by foreign competition and advanced computerized equipment that can be operated by less skilled workers, except for a highly specialized subset for whom robotic replacement is infeasible, those graduates will find their compensation falling toward the commodity pricing of the less skilled workers. Their college fees will be a sunk and unrecoverable cost, and there will be no compensation for medical and retirement cost other than through public recourse.

There is nothing sinister about this, at least of intent, though there is a destructive effect. However, it does point to the fact that if you want everyone in your society to have at least a modicum of civic pride and sense of belonging, not to mention the basic necessities of life, you can't have open global trade and look for the "private" business sector or the "free" market to provide it for everyone. It just can't happen. Even if every employer is a decent, caring citizen, if he or she is competing against foreign products, which are often times not only cheaper, but better, he can't provide long term life care subsidization and still compete.

This application of the above relationship of consumption and investment valuation constraints is represented by the following Production Cycle table. For a unit level of valuation of production efforts for consumption final goods and services,  $H_C$ , and an assumed stable technological and population base, the table shows the effects of changes in capital goods investment resulting in the production cycle. As detailed there, the resulting excess in demand and supply, overall growth, liquidity needs and constraints, productive capacity and nature of required public involvement are shown. Each phase row represents a period of indeterminate duration and can last decades.

Phase 1, 5, and the final 1 represent periods of equilibrium as defined above through one cycle. While the 9 rows represent a hypothetical cycle of contraction, followed by return to equilibrium, then expansion and return, in actual practice contraction and return to equilibrium might be followed by a second contraction without any expansion and vice versa. So the Cycle designations of Decreasing or Increasing productive activity have relevance only in cases in which the equilibrium is surpassed in a movement of the cycle to the opposite side. The Excess column indicates that supply and demand for consumption goods is balanced or in Equilibrium, and the Liquidity column shows that the money supply facilitates this balance for these rows. Productive Capacity is Optimized, with a balance of capital goods and labor utilization. Finally, the Public expenditure column indicates a baseline involvement in Oversight and general welfare, maintenance of an optimum

and adequate money supply, \$, investment in Infrastructure, Research and development, and Taxation with an emphasis on common goods and externality use-based taxation. A positive or negative sense after a designation indicates an increase or decrease in the level of involvement based on the perceived phase of the cycle.

Phase 2 is a reduction in investment, resulting in a decline in the value of consumable production, and leading eventually to a reduction in employment. In the aftermath of a financial bubble or crises, this will often occur due to momentum from phase 8. Imbalance in supply and demand is shown by excess or unmet demand as indicated by unemployment, negative growth, and a concentrating of liquidity, C-, while production capacity is oversupplied, O-, and therefore underutilized both in terms of labor and capital. Advised public involvement includes increased diffusion in the money supply and in expenditures for infrastructure, R&D, with a decrease in taxation.

Phase 3 and 7 represent a respective trough and a peak in a cycle, but can also represent contraction and expansion plateaus prior to repeated contraction and expansion. No growth, as defined by no change in the investment/consumption mix, is indicated as stable for these rows. This indicates that extended periods of underemployment and overemployment of labor and capital are feasible.

Phase 3, Trough production, Excess is a period maximum for unmet demand, not necessarily in the marketplace, since there are liquidity constraints to market access, but in terms of unmet needs and wants. As shown, liquidity is at maximum concentration absent public redistribution or offset expenditure or issuance, and productive capacity is oversupplied and therefore underutilized both in terms of labor and capital. Advised public involvement is a continuation of Phase 2.

Phase 4 represents a swing back in the positive direction of Growth as indicated by both the sense in that column and the caret indicating the direction of equilibrium under the  $P_C/P_G$  ratio and the continued strength of the unmet demand in the next column. The cycle is in an increasing production phase, with liquidity still concentrated but expanding, C+. Capacity is undersupplied based on demand, but is increasing, based on the level of  $P_I/P_G$  which is actually above the equilibrium level of Phase 5. Public economic involvement can move back toward the baseline.

In a dynamic recovery, Phase 5 is quickly overshoot and Phase 4 moves into Phase 6 with a leading of supply over demand. This continued growth encourages assumption of debt and a resulting diffusion of liquidity, while capacity remains undersupplied, but increasing. At some point, advised public involvement may include contracting of the money supply, and a reduction in infrastructure, with an increasing of use based taxation.

With Phase 7, Peak production is marked by continued investment and risk of eventual oversupply of consumer products and/or inflation via diffuse and growing

liquidity if demand rises to meet it, while capacity is strained with the eventual undersupply of labor and thereby a move toward more productive real capital. If money creation via debt is unrestrained, inflation can occur resulting in an eventual bubble in affected asset classes and sectors. Advised public involvement is a continuation of Phase 6, but with a rapid and steep transition through Phase 8 may need to be agile and reverse itself.

Phase 8 is perhaps the most crucial for public involvement as a result, in dealing with the private sector retrenchment from the peak. The tendency is for a well known shrinkage in liquidity and lending, along with an oversupply in capacity and inventory. The public goal should be a soft landing in Phase 1 and not an overshoot into Phase 2 recession or a Phase 3 depression.

It is the assertion of this development that the figures shown in (0.15) and (0.16) represent valid natural optimization constraints on  $C_G$  and  $I_G$  in an advance market economy and that the cyclic dynamics just outlined play out and intertwine for locales and firms and industries within greater domestic and global cycles.

If the elders of the hunting and gathering group wanted to verify their thinking and had access to the internet and looked at the accompanying figures from the World Bank website, they would see that the Household Final Consumption Expenditure, from the table so named, as a percent of GDP for the world ranged between 60.51% and 58.29% over a period from 59.13% in 1970 to 60.37% in 2012, indicating a complementary expenditure range on productive goods and services of 39.49% to 41.71%. This is a range of 1.3% to 3.5% below/above the equilibrium positions and indicates a corresponding range for net investment above equilibrium. This is in keeping with the world economic growth rate for that time period of 1% to 4%. In general, for an individual country, a figure below (0.15) indicates a financial surplus or investment and a figure above indicates a deficit or disinvestment.

Among various countries selected the range was from a high of 92.25% for consumption spending in Greece at the start of the Junta in 1968 to a low of 10.68% for oil rich Qatar in 2011. The three oil states shown, plus the autocracies of Singapore and China are all well below the equilibrium, reflecting the resource exploitation and exportation of the first three and presumably the state provision of or assistance with dwelling and other consumption products in all five. A review of this table shows a wide range across the selected nations within the context of a steady global condition of modest growth. It is instructive that Switzerland has maintained a level within a few percentage points above and generally below the 61.8% benchmark over the fifty-year period.

As seen, the United States in 2012 was at 68.64%, or 6.84% above equilibrium. Note in particular that the United States figures from 1965 to 1969, during the height of the Vietnam War, were slightly above (0.15), dipped below from 1970 to 1981, and then rose back above that benchmark with the advent of Reaganomics in 1982 where they have steadily risen to the present level. The level rose 1.72% between

Household final consumption expenditure as % of GDP

Country Name	Code	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
World	WLD											59.13	59.00	58.87	58.29	58.48	59.50	59.16	59.19	58.90	58.97
United States	USA						62.75	62.10	61.94	62.28	62.36	60.21	60.03	60.00	59.58	60.17	61.15	61.25	61.20	60.39	60.29
United Kingdom	GBR						63.26	62.63	61.96	61.34	61.28	60.07	59.60	61.30	60.19	60.64	59.15	56.99	57.03	58.15	57.67
European Union	EUU											57.52	57.42	57.59	57.11	57.45	58.23	57.83	57.84	57.37	57.67
Germany	DEU											54.58	54.61	55.28	55.12	55.74	57.82	57.88	58.17	57.51	57.60
France	FRA											56.34	56.34	56.22	55.50	55.86	56.47	56.47	56.28	55.99	56.23
Canada	CAN						58.78	57.16	57.59	57.53	57.30	54.76	54.45	55.19	54.02	53.09	54.16	53.62	53.46	54.24	53.03
Switzerland	CHE						57.49	57.94	58.10	58.03	57.92	56.93	56.23	56.43	56.87	57.42	61.41	63.03	63.82	62.97	63.27
Israel	ISR	70.70	69.41	64.25	64.74	64.03	67.13	67.00	67.11	65.25	64.37	60.33	56.50	56.99	58.14	53.05	60.01	61.97	61.12	61.39	62.84
Ireland	IRL											68.81	67.90	64.97	64.40	68.03	63.72	64.26	64.17	63.82	65.08
Spain	ESP											63.24	63.59	63.11	62.71	63.01	63.18	64.52	64.03	63.05	63.57
Italy	ITA						57.82	59.10	59.44	57.73	57.60	58.40	58.58	58.84	58.89	58.29	59.84	58.83	58.54	57.31	57.77
Poland	POL																				
Portugal	PRT																				
Greece	GRC						47.77	87.66	71.92	95.25	80.84	64.63	67.96	63.64	63.47	70.57	77.57	74.19	69.93	66.45	66.28
Mexico	MEX	79.25	79.00	78.93	76.77	77.00	75.33	75.60	75.41	76.09	75.21	71.92	73.22	71.82	70.49	69.84	68.72	68.08	66.30	66.05	64.41
Brazil	BRA	66.28	64.06	70.04	67.93	68.98	66.92	68.12	71.54	70.56	66.77	68.55	69.58	69.66	67.54	70.74	66.49	68.76	69.16	68.56	69.55
Russian Federation	RUS																				
India	IND	80.83	79.49	78.00	76.90	77.63	76.22	77.08	78.12	77.82	76.20	75.37	73.41	74.06	75.13	73.51	72.54	71.03	72.05	70.34	70.03
China	CHN																				
Singapore	SGP	94.79	94.13	85.54	87.37	80.72	78.99	74.96	75.24	70.50	70.07	68.98	67.79	62.71	59.30	60.28	60.05	56.96	55.64	55.07	53.80
Saudi Arabia	SAU									33.14	35.47	34.86	28.15	24.92	21.18	11.01	16.56	16.95	26.28	31.80	31.49
United Arab Emirates	ARE																				
Qatar	QAT																				
High income	HIC											57.51	57.41	57.42	56.86	57.11	58.34	58.10	58.18	57.81	57.91
Upper middle income	UMC																				
Lower middle income	LMC	78.89	78.57	79.13	77.13	76.48	76.60	78.39	78.58	77.43	76.33	74.53	73.09	72.29	72.07	71.55	70.86	69.05	69.07	68.84	68.62
Low & middle income	LMY																				
Low income	LIC																				
Heavily indebted poor countries (HIPC)	HPC						74.96	74.32	74.19	72.86	71.92	71.04	72.77	72.03	71.39	71.35	74.06	73.31	72.44	72.71	73.03
High income: OECD	OECD																				
OECD members	OED																				
High income: nonOECD	NOC																				
Small states	SST																				
Sub-Saharan Africa (all income levels)	SSF						67.72	66.82	66.62	65.65	65.80	65.48	64.06	63.10	63.68	62.68	63.01	62.73	59.54	60.41	59.09
South Asia	SAS	81.23	80.04	78.28	77.49	78.09	76.64	77.27	78.56	77.64	76.73	76.18	74.10	74.59	76.65	76.16	75.66	74.04	73.99	73.11	73.19
Latin America & Caribbean (all income levels)	LCN	71.43	70.44	72.83	71.56	71.99	70.34	70.65	71.60	71.73	70.14	69.06	69.93	69.64	68.17	67.54	66.59	66.91	66.45	66.22	65.92
Middle East & North Africa (all income levels)	MEA									49.89	50.14	50.13	46.89	44.68	42.43	36.21	40.35	39.87	45.08	47.78	47.85

SOURCE NOTE

Household final consumption expenditure (formerly private consumption) is the market value of all goods and services, including durable products (such as cars, washing machines, and home computers), purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes payments and fees to governments to obtain permits and licenses. Here, household consumption expenditure includes the expenditures of nonprofit institutions serving households, even when reported separately by the country. This item also includes any statistical discrepancy in the use of resources relative to the supply of resources.



Household final consumption expenditure as % of GDP																					
Country Name	Code	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	WLD	59.44	59.28	59.56	60.06	59.53	59.69	59.74	59.63	59.47	59.10	59.07	59.31	59.50	59.73	59.66	59.63	59.91	59.67	60.04	60.24
United States	USA	61.29	60.34	62.00	62.85	61.82	62.64	63.14	63.49	63.72	63.50	63.98	64.14	64.47	65.00	64.87	65.03	65.04	64.60	64.95	65.35
European Union	GBR	57.65	58.02	58.46	58.77	59.15	58.84	60.84	60.77	61.48	61.43	62.07	62.61	63.30	64.09	63.54	63.17	63.90	64.00	64.49	65.12
Germany	DEU	58.13	58.79	58.93	58.87	58.69	58.62	58.41	58.61	58.17	58.17	57.71	58.07	58.53	58.89	58.60	58.16	58.49	58.31	58.34	58.53
France	FRA	56.75	58.31	58.56	58.31	58.36	58.88	58.28	58.98	57.85	57.55	57.47	57.34	57.37	57.60	57.27	56.97	57.42	56.37	56.18	55.90
Canada	CAN	53.14	52.51	53.14	53.73	53.55	54.15	55.28	55.15	54.46	54.83	55.81	57.07	57.48	57.53	56.59	55.70	56.17	56.78	56.90	56.27
Switzerland	CHE	62.53	62.32	62.39	63.32	62.06	61.38	60.88	60.86	59.58	58.37	57.57	59.08	60.37	60.36	59.54	60.06	61.09	61.12	61.03	61.67
Israel	ISR	53.11	54.87	57.80	59.32	54.64	57.98	62.91	64.33	63.06	62.21	55.60	60.42	60.54	62.43	63.37	55.63	54.86	53.54	53.86	53.95
Ireland	IRL	65.17	65.29	59.54	59.56	59.07	59.80	59.95	59.58	59.87	59.74	57.33	57.73	57.62	56.00	55.87	53.02	51.90	49.49	49.62	47.57
Spain	ESP	64.57	64.97	64.65	63.99	62.60	62.33	61.60	61.59	60.85	61.11	60.55	60.46	61.09	60.97	60.75	60.08	59.83	59.66	59.51	59.39
Italy	ITA	59.03	59.08	59.25	58.51	58.60	58.57	58.58	58.33	57.85	58.36	57.20	57.48	58.43	57.95	58.46	58.32	57.86	58.45	59.13	59.83
Portugal	POL																				
Poland	PRT	65.33	66.74	66.79	67.97	70.45	68.57	65.91	64.85	64.38	63.80	64.38	65.22	66.08	67.84	66.93	65.24	65.25	64.21	63.28	63.51
Greece	GRC	65.14	66.74	66.09	67.53	64.86	63.83	64.58	69.27	69.35	70.49	71.84	71.56	73.34	73.69	73.48	73.29	73.93	72.48	72.08	71.14
Mexico	MEX	65.07	64.39	61.61	60.86	63.08	64.52	68.45	65.84	67.64	68.85	69.58	70.50	71.81	69.83	70.52	65.67	65.85	67.18	67.03	66.98
Brazil	BRA	69.71	67.98	69.57	71.24	70.35	65.78	67.77	62.26	59.49	54.13	59.30	61.57	61.52	60.08	59.64	62.46	64.66	64.88	64.33	64.73
Russian Federation	RUS																				
India	IND	74.86	70.63	69.38	71.38	69.00	67.39	66.19	66.21	65.36	65.05	64.61	65.87	65.02	67.13	66.14	64.03	68.22	65.11	65.60	62.26
China	CHN			49.55	49.97	49.80	51.35	49.40	48.99	50.01	49.98	46.98	45.61	45.90	41.91	41.13	42.68	43.51	43.35	43.96	45.13
Singapore	SGP	52.24	49.23	44.83	42.23	42.62	45.16	48.09	48.95	47.11	45.12	44.80	43.59	43.57	43.96	42.93	41.32	39.86	38.63	37.52	40.96
Saudi Arabia	SAU	25.08	26.62	36.43	45.20	47.87	53.22	54.96	53.33	53.26	51.29	46.68	44.24	44.43	48.04	47.80	46.51	43.92	42.31	45.99	41.79
United Arab Emirates	ARE																				
Qatar	QAT															29.91	32.05	27.28	22.70	25.31	21.11
High income	HIC	58.38	58.22	59.16	59.61	58.97	59.18	59.25	59.38	59.15	58.79	58.79	59.08	59.23	59.82	59.84	59.73	59.88	59.68	59.99	60.23
Upper middle income	UMC			58.67	59.27	59.39	59.54	59.73	58.18	58.25	58.19	57.74	57.58	58.18	55.92	55.50	55.99	56.33	56.39	56.80	57.20
Lower middle income	LMC	70.16	68.52	68.31	69.40	68.90	68.28	67.66	67.55	67.57	65.94	66.51	66.69	67.80	67.22	67.04	69.53	67.77	69.08	68.16	68.16
Low & middle income	LMY			61.43	62.15	62.13	62.07	62.04	60.81	60.92	60.54	60.33	60.34	60.71	59.32	58.85	59.19	60.03	59.66	60.24	60.32
Low income	LIC		82.64	83.68	83.15	83.47	82.08	80.60	80.95	79.84	80.96	80.66	81.09	80.82	81.67	80.44	80.99	80.85	81.12	80.06	79.89
Heavily indebted poor countries (HIPC)	HPC	76.29	77.37	77.90	77.68	76.63	76.38	74.88	76.09	78.35	79.21	76.92	78.38	79.91	79.60	78.16	78.33	77.98	78.53	78.45	78.99
High income: OECD	OED	58.80	58.61	59.47	59.89	59.24	59.38	59.46	59.65	59.35	59.24	59.20	59.45	59.91	60.32	60.28	60.11	60.29	60.04	60.23	60.64
OECD members	OEC	59.17	58.98	59.72	60.14	59.58	59.75	59.89	59.91	59.62	59.58	59.55	59.78	60.25	60.61	60.58	60.32	60.51	60.28	60.43	60.86
High income: nonOECD	NOC										50.34	51.52	52.46	47.18	50.87	52.14	53.01	52.71	53.29	55.86	53.00
Small states	SST	57.89	61.26	63.26	63.51	62.38	60.65	60.16	59.77	59.59	60.04	61.40	61.58	62.26	63.31	59.89	59.08	58.18	63.79	64.97	63.03
Sub-Saharan Africa (all income levels)	SSF	58.86	61.88	65.06	64.04	65.05	62.25	62.36	63.86	64.41	62.19	64.06	64.75	67.83	67.56	65.57	68.68	69.46	69.59	71.66	69.90
South Asia	SAS	77.02	73.22	72.33	73.70	71.81	70.55	69.23	68.83	68.11	67.58	67.38	67.70	67.07	68.91	67.97	66.39	69.84	67.40	67.31	65.07
Latin America & Caribbean (all income levels)	LCN	66.37	66.09	66.01	66.85	66.99	65.82	67.92	66.00	65.27	64.36	66.07	67.99	68.94	67.32	67.17	66.18	66.54	66.61	66.73	66.49
Middle East & North Africa (all income levels)	MEA	45.90	48.04	52.19	53.97	54.83	57.79	61.17	58.55	61.26	60.93	58.09	60.46	56.00	56.50	55.24	54.52	52.93	52.82	56.00	53.00

Household final consumption expenditure as % of GDP

Country Name	Code	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	High	Low	Range Since
World	WLD	59.92	60.42	60.51	60.28	59.77	59.58	59.09	58.97	59.36	60.26	59.94	60.29	60.37		60.51	58.29	1
United States	USA	66.10	66.89	67.26	67.44	67.26	67.13	67.09	67.29	67.97	68.27	68.20	68.96	68.64	65.88	68.96	59.58	1
United Kingdom	GBR	65.62	65.70	65.63	64.95	64.65	64.66	63.86	63.63	63.51	64.37	64.53	64.57	65.23	65.88	65.88	56.99	1
European Union	EUU	58.66	58.62	58.38	58.40	58.12	58.24	57.73	57.03	57.32	58.46	58.42	58.48	58.62	58.66	58.93	57.03	1
Germany	DEU	58.37	58.68	58.18	58.88	58.46	58.76	57.89	55.87	56.17	58.65	57.52	57.41	57.53	57.46	59.94	54.58	1
France	FRA	56.20	56.51	56.43	56.84	56.62	56.91	56.73	56.49	56.88	58.10	58.09	57.72	57.68	57.46	58.98	55.50	1
Canada	CAN	54.58	55.04	55.95	55.64	54.64	54.12	54.10	54.36	54.14	57.22	56.53	55.70	55.66	55.72	58.78	52.51	1
Switzerland	CHE	60.58	60.60	60.57	60.79	60.40	59.88	58.21	56.81	56.47	58.47	57.94	57.33	57.41	57.28	63.82	56.23	1
Israel	ISR	53.89	55.48	56.32	55.87	56.28	55.75	55.69	56.82	57.10	56.27	56.88	57.28	56.23		70.70	53.05	1
Ireland	IRL	48.06	46.23	44.71	44.52	43.96	44.71	45.71	47.72	50.06	48.30	50.27	48.79	46.94		68.81	43.96	1
Spain	ESP	59.70	59.14	58.34	57.93	57.93	57.77	57.45	57.41	57.21	56.62	57.87	58.57	59.33	59.25	64.97	56.62	1
Italy	ITA	59.93	59.10	58.71	59.06	58.62	59.02	59.04	58.62	59.17	60.31	60.83	61.27	60.93	60.38	61.27	57.20	1
Poland	POL	64.13	65.00	66.95	65.82	64.69	63.39	62.48	60.50	61.56	61.07	61.26	61.11	61.42	60.80	66.95	48.30	1
Portugal	PRT	63.60	63.12	62.88	63.29	64.02	64.72	65.12	65.34	66.84	65.14	65.94	66.02	65.71	64.56	77.57	62.88	1
Greece	GRC	69.70	69.95	70.34	67.97	67.66	69.79	69.70	69.59	72.34	72.35	73.40	74.60	73.64	72.41	95.25	47.77	1
Mexico	MEX	66.82	68.93	70.00	68.24	68.43	68.48	67.31	67.65	66.99	66.61	67.52	67.42	66.27	67.18	79.25	60.86	1
Brazil	BRA	64.35	63.47	61.72	61.72	59.78	60.27	60.30	59.90	58.93	61.11	59.64	60.33	62.62	62.62	71.54	54.13	1
Russian Federation	RUS	46.19	48.94	51.20	49.85	49.87	49.36	48.71	49.92	47.43	52.85	50.58	48.43	49.09	51.99	59.63	37.46	1
India	IND	64.22	62.93	64.10	63.12	58.37	57.59	56.96	55.69	58.61	57.18	56.40	58.57	60.28	61.77	80.83	55.69	1
China	CHN	46.69	45.65	43.97	41.86	40.12	38.11	35.22	35.94	34.94	33.94	34.73	35.90	34.78	34.09	51.35	33.94	1
Singapore	SGP	42.08	44.25	44.91	43.27	40.01	38.62	37.53	36.54	38.13	38.52	35.52	36.57	37.82	37.74	94.79	35.52	1
Saudi Arabia	SAU	36.53	37.82	36.83	33.55	30.39	26.34	26.03	27.85	26.88	36.78	32.37	27.15	30.34	29.39	54.86	11.01	1
United Arab Emirates	ARE	61.26	63.51	60.55	62.39	62.39	58.27	57.76	61.74	61.34	54.56	58.96	51.69	49.75		63.51	49.75	2
Qatar	QAT	15.23	15.44	18.42	16.50	17.46	15.96	16.15	16.34	15.31	19.28	13.33	10.68	12.45		32.05	10.68	1
High income	HIC	59.95	60.50	60.72	60.64	60.31	60.26	60.00	59.79	60.23	61.28	61.01	61.29	61.36		61.36	56.86	1
Upper middle income	UMC	57.25	57.45	56.47	55.72	54.52	53.44	51.66	51.96	51.46	52.16	51.93	52.39	52.12	51.96	59.73	51.46	1
Lower middle income	LMC	65.74	66.47	67.32	66.07	64.19	64.25	63.16	63.68	65.06	63.82	62.55	63.81	64.99	66.44	79.13	62.55	1
Low & middle income	LMY	59.75	60.06	59.59	58.71	57.37	56.60	55.04	55.34	55.36	55.57	55.03	55.69	55.75	55.77	62.15	55.03	1
Low income	LIC	78.79	78.73	80.33	79.47	78.78	79.51	79.88	79.44	80.62	79.33	77.98	79.17	78.03		83.68	77.98	1
Heavily indebted poor countries (HIPC)	HPC	75.77	75.92	77.22	76.48	74.63	76.43	75.64	74.98	74.84	75.56	73.49	71.71	73.42		79.91	71.04	1
High income: OECD	OEC	60.58	61.06	61.25	61.27	60.95	60.99	60.76	60.47	60.98	61.90	61.71	62.10	62.14		62.14	57.23	1
OECD members	OED	60.83	61.30	61.52	61.53	61.23	61.27	61.00	60.75	61.20	62.10	61.93	62.34	62.33		62.34	57.75	1
High income: nonOECD	NOC	48.87	51.54	52.01	50.39	49.92	48.30	47.67	48.68	48.22	51.16	49.47	47.76	48.18	50.63	55.86	47.18	1
Small states	SST	60.09	61.13	60.86	59.02	60.39	57.21	56.77	60.18	64.49	69.46	68.70	68.86	64.44	64.17	69.46	56.77	1
Sub-Saharan Africa (all income levels)	SSF	63.25	67.98	67.89	68.09	67.01	67.46	65.14	67.37	66.07	68.32	64.43	63.64	64.44	64.17	71.66	58.86	1
South Asia	SAS	66.52	65.73	66.61	65.84	62.00	61.67	61.16	60.20	63.10	61.42	60.85	62.90	64.33	65.27	81.13	60.20	1
Latin America & Caribbean (all income levels)	LCN	66.35	67.15	66.22	65.63	64.25	64.00	63.22	63.41	63.15	64.25	63.71	63.74	64.73	65.31	72.83	63.15	1
Middle East & North Africa (all income levels)	MENA	48.30	51.47	51.45	49.81	49.20	46.26	45.03	45.96	45.00	49.07	47.62	44.55	45.32		61.26	36.21	1
																95.25	Greece	
																10.68 Qatar		

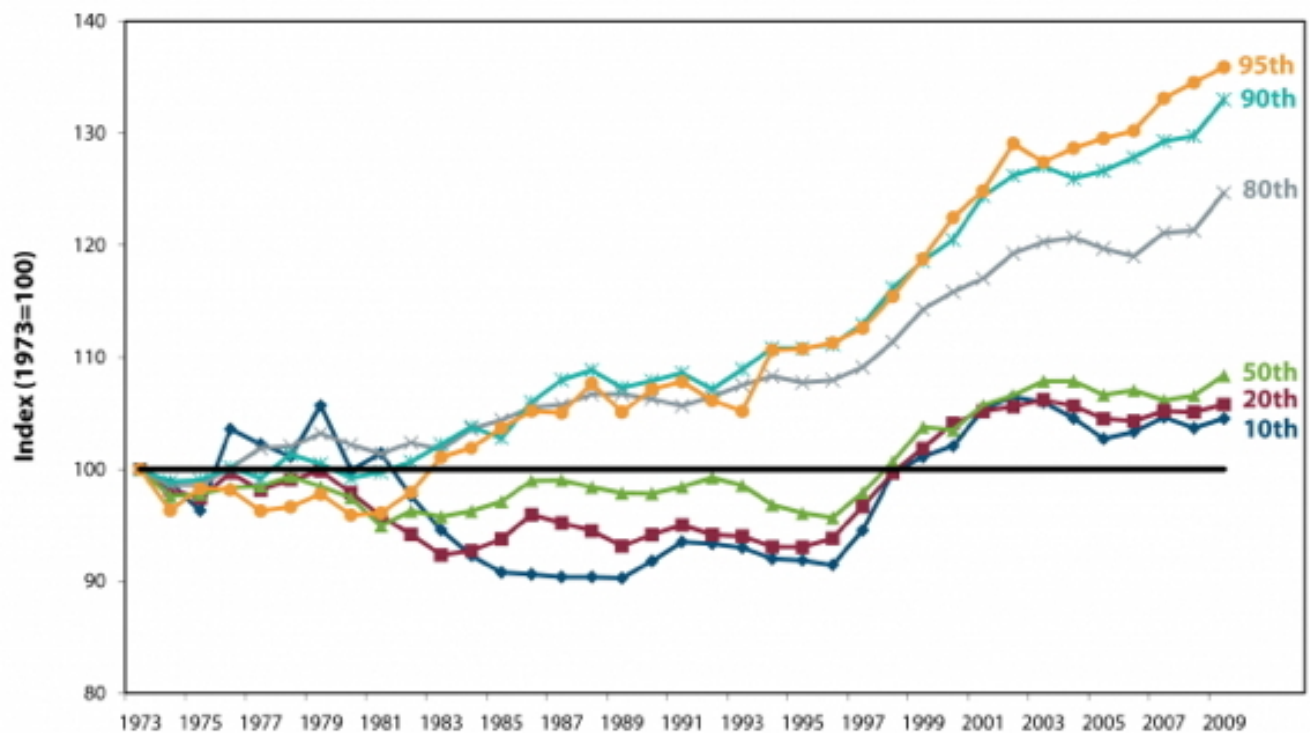
1982 and the end of the Reagan presidency, 0.75% during the first Bush tenure, 0.53% the first Clinton year in office, remained essentially flat for 6 years, before rising sharply with the dotcom crash in 2000 for a total 1.63% during his two terms, rose 1.87% during Bush II, and 0.67% during the first Obama term.

There is much analytical fodder in this relationship. It clearly shows supply side fiscal theory for the wishful thinking and fallacy that it is, since the most stable period of investment in the US, which was actually a period of no increase in disinvestment, observed during the Clinton administration was also the only period of any significant general wage increase over the last 40 years as seen in the attached chart from the Economic Policy Institute. A rising tide may lift all boats, but it is quicker to swamp those of meager freeboard. Perhaps better said, it may lift all boats, except for the ones in dry dock. This last chart shows the income levels of the 95<sup>th</sup> percentile have increased by roughly 35% since 1973 (others sources show as much as 65%) compared to about 5% for the 50<sup>th</sup> percentile.

A look at the total net worth of households in the next data from the Federal Reserve System shows a net worth of a bit under \$6 trillion in 1975 or 343% of GDP, while the 2013 net worth was almost \$79 trillion or 470% of the GDP. An uncritical approach would interpret this period as one of real economic growth for the US, when in fact this analysis shows that it has been one of disinvestment for the population as a whole. The last period of real overall domestic investment as outlined for Phase 6 & 7 was in the aftermath of the Vietnam War in the 1970's, culminating as typified in high inflation. Instead of providing for a soft landing, however, the advised public policy was replaced by the mistaken notions of supply side, privatization thinking, resulting in over thirty years of Phase 2 and 3 stagnation, at least for over half the citizenry.

With respect to the above benchmark, this period of globalization has been one of overall domestic disinvestment in both public and private facilities. The movement of domestic capital overseas for the finished production of consumer goods, along with the importation of foreign produced goods and services, resulted in pressure on domestic wages in the relocating and domestic replacement industries toward commodity pricing. This in turn was made possible by the importation of basic consumer commodities, particularly textiles and household durables, followed eventually by food products, making such goods and the wages they attract stable over time. The only finished good that was not directly importable was housing, though it came to rely heavily on "illegal" imported, commodity labor, and fell prey to the same dynamic through low interest rates and under-supervised lending.

Over the same period of deregulation, services and production that were not easily exported, along with financial services that as a result of globalization were no longer inherently domestic, but retained a genetic disposition for the US, were able to grow and appreciate at a more rapid rate than the production assets of basic commodities which were tied to commodity labor. The result was a bid up in the pricing of medical and educational services, along with commercial and other



### Indexed Stagnation of Wages by Percentile 1973 - 2009

**Source:** EPI analysis of U.S. Census Bureau, Current Population Survey, Outgoing rotations group.

income producing and high end real estate and other assets, since in periods of disinvestment money is concentrated, and seeks narrower investment opportunities in real and financial asset purchase. In addition, the bidder base for much of these assets and services was global, compounding the appreciation.

The shift overseas for higher margins is inseparable from the flight from more expensive and restrictive domestic labor, with governmental regulation and taxation in an atmosphere of declining willingness for tariff protection, to an environment of newer and more productive facilities abroad with an often greater tolerance of externalities or social costs.

We turn now to the Federal Reserve Statistical Release of September 18, 2014, to see whether it bears this out. The attached spreadsheets taken from that release compare annual data for 1975 against 2005 and 2013 with respect to structural changes in the economy as measured by account percentages of the corresponding GDP and, as applicable, asset or net worth values. This information comes from the Z.1 Financial Accounts of the United States and incorporates the following:

- Sheet 1 - Distribution of US Gross Domestic Product,
- Sheet 2 - Distribution of US National Income,
- Sheet 3 - US Savings and Investment by Sector
- Balance Sheets of the seven sectors;
  - Sheet 4 - Household and Nonprofit Organizations,
  - Sheet 5 - Nonfinancial Corporate Business,
  - Sheet 6 - Nonfinancial Noncorporate Business,
  - Sheet 7-8 - Financial Business,
  - Sheet 9-10 - Federal Government,
  - Sheet 11 - State and Local Government,
  - Sheet 12-13 - Rest of the World
- Sheet 14-15 - US Credit Market Debt and Total Liabilities and its Relation to Total Financial Assets
- Sheet 16-21 - US Sector Account Breakdown Comparison (from Bal. Shts.)
- Sheet 22 - US Assets and Liabilities of the Personal Sectors
- Sheet 23 - US Assets of the Public and Private Sectors
- Sheet 24-25 - US BS of the Federal Government with the addition of Human Capital at Market Value, Natural Resource and Infrastructure Value Allocations
- Sheet 26 - US BS of State & Local Government with addition of Land and Infrastructure
- Sheet 27 - US Assets of the Public and Private Sectors with the addition of Human Capital at Market Value, Natural Resource and Infrastructure Value Allocations to the Public Sectors
- Sheet 28-29 - US BS of the Federal Government with the addition of Human Capital at Total Value, Natural Resource and Infrastructure Value Allocations

Sheet 30      - US Assets of the Public and Private Sectors with the addition  
of Human Capital at Total Value, Natural Resource and  
Infrastructure Value Allocations to the Public Sectors

1975 was the last year that the United States ran a trade surplus, approximately 1% of that year's GDP, and was at the end of the first round of inflation about three years before the major inflation of 1979 to 1981 and before the start of the Reagan years and the embrace of laissez-faire macroeconomic policy. 2005 was near the peak of the asset bubble after 25 years of the supply side reign and a couple of years before its anticipated and realized crash.

Sheet 1 is abstracted from table F.6 for the distribution of gross domestic product. The data is arranged by year with the first column showing the detail amounts in billions of US dollars. The annual GDP is at the top of the column and the column to its right shows the amount for each account line as a percentage of the GDP. 1975 is first, followed by a corresponding pair for 2005, which is then followed by a column stating the change in line percentage for 2005 from the 1975 proportion. This is followed by the amounts and percentages for 2013, with the percentage variation for 2013 from 2005 and finally from 1975. This arrangement will be followed for each of the sheets with the addition of columns showing each entry as a percentage of total asset, net worth or account value for the seven sector balance sheets, credit market debt sheets, and sector account comparisons respectively. These are followed by a sheet showing assets and liabilities of the personal sector, taken from table L.10 of the Fed release and one compiled from various tables of the assets and liabilities of the public and private sectors.

Finally, a similar sheet for the public and private sectors is shown with the inclusion of values in the public sector for land, infrastructure and human capital to complete the picture of the national economy. The infrastructure values are a broad brush stroke based on recent figures from the American Society of Civil Engineers, found at <http://www.infrastructurereportcard.org/a/#p/grade-sheet/americas-infrastructure-investment-needs>, for the estimate of repairs required to bring existing infrastructure by the year 2020 to a B grade level, defined as "good: adequate for now", from the current grade of D+, defined as "poor: at risk". These have been extrapolated to a value for the installed base, using the repair estimate of \$3.6T as an assumed value of one half the cash value of the current infrastructure. This indicates a market value for the total infrastructure of \$7.2T, of which one third has been allocated to federal and two thirds to state and local balance sheets. With a total real estate value for the private sector of \$43.3T, this may be somewhat low, but is a necessary first guess. The ASCE had no figures for the installed base of national infrastructure.

Land was figured on 650M acres of public land at \$3,000/acre, with an assumed state and local figure of one-tenth that amount, which is probably on the high side.

The human capital account, as shown in the final balance sheet of the federal government, is based on a report by Michael S. Christian, entitled "Human Capital Accounting in the United States, 1994-2006", published by the U.S. Department of Commerce, Bureau of Economic Analysis, which can be found at [http://bea.gov/scb/pdf/2010/06%20June/0610\\_christian.pdf](http://bea.gov/scb/pdf/2010/06%20June/0610_christian.pdf). The report derives a market value and a nonmarket value for the national human capital stock, and states the amounts over the years 1994-2006 in both real and nominal terms. The nominal values were used for 2005, for both market value at \$200T and total value at \$667T, and extrapolated to 1975 and 2013. These values are properly included in the public account as a statement of national productive capacity, whose market value is realized in future balance sheets of both public and private sectors. The figures derived by Christian are borne out by this analysis for the market value of human capital. The nonmarket value of human capital, which is for the productive capacity that is not reflected in earnings of the individuals and valued by non-market time, i.e. raising a family, social activity, charity work, is approximately 70% of the total, and indicates a national asset value for 2013 for the US of over a quadrillion dollars, of which the national debt was less than 1.4%. An amount for both documented and undocumented aliens has been added to these sheets for 2005 and 2013 as well.

With respect to GDP, the percentage for personal consumption expenditures in 1975 was 61.2%, very close to the theoretical optimum of (0.15) at 61.8% and just above the current world average. The Fed document is primarily concerned with financial flows, and there is only a basic breakdown for consumer spending, but we do see that non-durable goods, the things that are readily produced and consumed over the short term was 20.7%, with services at 32.1%, making up over half of the GDP, with a balance of 8.4% for durable goods. The remaining 38.8% of GDP was for private investment at 15.2%, net exports at 0.9% and government consumption, federal at 7.9% and state and local at 9.8%, and government investment, federal at 2.4% and state and local at 2.6%, for a total government expenditure of 22.7%, over half of which was state and local.

We will deal with government first. After thirty years of laissez-faire policy and in the midst of the Iraq war, the 2005 total government expenditures had fallen to 19% of GDP or by 3.6%. Of this total, 3.0% was federal and 0.6% was state and local. In 2005 consumption expenditures had risen to 67.2% or by 6.0% from 1975, though paradoxically nondurable goods, a mix of the basics and no doubt some of the finer things in life, had fallen by 5.8% to 14.9% of the total or by 38.9% from its original proportion. Services rose by 11.6% to 43.6% of GDP or by 36.1% from the original. Consumer durables, cars and refrigerators and the like, stayed about even, rising only 0.2%.

The difference in personal consumption expenditures as a percentage of GDP was offset by a major shift in the balance of trades of 6.5% to a deficit 5.5% of the total, a reduction in public expenditures of 3.6%, and an increase in gross private domestic investment of 4.1%. Contrary to supply side prognostications, however, over this 30 year period in which fixed investment rose 3.2%, most of which was residential

investment by the household sector, that is a homeowner investment increase of 2.5% of GDP and nonprofit investment in households of 0.3%, nonfinancial corporate business investment rose by only 0.1% and nonresidential noncorporate business, of which mom and pop businesses constitute a significant part, actually fell by 0.4% of GDP. Fixed investment for financial institutions did rise by 0.6% and business inventories rose 0.8% indicating excess capacity as outlined previously. (An “x” to the left of a percentage change column in these tables merely indicates a point of interest. Percentage change totals may vary by 0.1% due to rounding discrepancies.) In the public sectors, reductions consisted of 2.6% in government consumption expenditures and 1.1% in government investments.

By 2013, in the aftermath of the financial crises of 2007 and 2008, consumer expenditures had risen another 1.3% to a new high of 68.5% of GDP. Durable goods fell this time by 1.2%, though nondurables rose by 0.6%. Both were still below their 1975 levels, nondurables by 5.2% of GDP. The bright spot remained services, medical, legal, financial, etc, up another 1.9% to 45.5% of GDP. Government managed to drop another 0.3%, all of it and more by state and local government. The federal government had a net increase of 0.1%. Private domestic investment adjusted by divesting down 3.5% of GDP, principally in the residential sector, 3.1%, along with nonprofits, 0.2%, and financial institutions, 0.2%, but corporate and noncorporate business did improve slightly, by 0.3%. And the balance of trades deficit fell by 2.5% of GDP. Private inventories rose in absolute terms, but remained level as a percent of GDP.

What does the related distribution of national income tell us? Between 1975 and 2005, wages and other labor income fell by 2.6% of GDP and another 1.2% by 2013. In contrast, combined proprietor's and corporation's business and rental income rose by 4.1% of GDP over the thirty years, but even more telling, in the aftermath of the crisis it rose by 3.5% between 2005 and 2013, in almost a quarter the time of the first period. After-tax profits for corporations went up 1.0% of GDP from 2005 to 2013. Tellingly, from 1975 to 2013, proprietorship profits rose by only 1.0%, while rental incomes rose by 2.2% and corporate profits rose 4.3% of GDP. Most significantly, domestic financial and rest of the world accounts were 2.0% and 1.5% of the corporate total. The only negative on the earnings side was in interest income, which has fallen by 2.8% of GDP over the 38-year period.

A look at the savings and investment picture reveals that there was only a slight increase in savings as a percentage of GDP for domestic business between 1975 and 2005, up just 0.5%, with a slightly greater adjustment in investment of 1.3% of GDP. The household picture was much different, however. While the household investment picture rose by 2.8% over this period, the savings fell by 7.6% of GDP and household borrowing switched from a net lending position of 7.2% to one of borrowing at 1.8% a shift of almost 9.0% of GDP. The popular portrayal of this fact is that the citizenry is made up of undisciplined spenders, but the correct analysis is that globalization has made it difficult to make ends meet for the majority of



workers, while those with the wherewithal found it advisable to borrow to capture the ongoing rise in asset appreciation.

The period between 2005 and 2013 has resulted in disinvestment across the board, more heavily for households and institutions than for business, but the former sector has cut borrowing by 4.5% and as of 2013 saves more than nonfinancial corporations.

Let's look at the balance sheets now. In 1975 total household and nonprofit assets were 388.4% of the year's GDP. In 2005 the same sector assets were 565.5% of that current year GDP and for 2013 552.7%. For the nonfinancial corporate business sector, the sector assets as a percent of GDP for the same years were 172.1%, 199.1% and 208.4% and for the nonfinancial noncorporate business sector, i.e. proprietorships, were 88.7%, 96.5% and 89.6%, all reasonably stable. In contrast, financial business assets of 193.1% in 1975 more than doubled to 438.9% in 2005 and 492.9% in 2013.

We can look at this another way and think of GDP as a return on the total assets of the economy by inverting the percentages. In this case, for the household sector, 1975 was a better year at 25.7% than 2005 at 17.7% though 2013 was an improvement over 2005 at 18.1%. For the nonfinancial corporate sector things were similar, starting out at in 1975 at 58.1%, with 2005 at 50.2%, but continued dropping slightly to 48.0% in 2013. For proprietorships, however, the thing is more interesting, starting out in 1975 at 112.8%, dropping to 103.6% for 2005, but rising back almost to the initial rate at 111.6% in 2013. For financial businesses, the figures are similar to the nonfinancial corporate sector, starting out at 51.8% in 1975, but then drop significantly to 22.8% in 2005 and to 20.3% in 2013. In other words, by this broad-brush approach, all sectors were 8 to 10 points more productive during 1975 than during 2005 and only the corporate sector contributions, nonfinancial and financial, were less productive in 2013 than in 2005. The financial sector in particular appears less productive and bloated in 2005 and 2013 compared with 1975.

In his recent book, Capital in the Twenty-First Century, Thomas Piketty uses a similar approach in contrasting an economy's wealth to the GDP, though he uses the closely related and approximate figure of National Income instead of the GDP. Though I am but half way through a read of this commendable work as of this writing, he reports national wealth over a three hundred year span for several important domestic economies to show the level of wealth in relation to national income. The implication appears to be that income tends toward a natural level of return on capital and thereby wealth generation, except for conditions of governmental intervention, notably around the period of World War I and II. While this is no doubt true, the position taken in this analysis is somewhat reversed in that the return on national capital in unregulated markets is shown to be appreciably less than the return on that capital with proper public oversight and intervention. The distribution of that return is necessarily different, but such oversight is more

productive and more egalitarian. Less oversight and involvement leads to commoditization of labor, disinvestment in human capital and infrastructure and inflation of private asset valuation.

As for the asset breakdown, for households and nonprofits over the 30-year period from 1975 to 2005, nonfinancial assets rose by 3.7% of total sector asset value, principally in real estate at 6.9%, though this fell for nonprofits, and consumer durable goods fell by 3.3%. Interestingly, this rise in nonfinancials for the sector and the corresponding offset by the same amount in a decline in financial assets, contrasts with the large contrary decrease in nonfinancial assets in the nonfinancial corporate and noncorporate sectors at 15.0% and 19.0% respectively. While there were noteworthy increases in the proportions of mutual fund shares, followed by pension entitlements, corporate equities, municipals, and a few others, these were more than offset, significantly by noncorporate business equity, time, savings and checking deposits. Liabilities were an additional 4.8% of asset value in 2005, primarily due to mortgages, though consumer credit was slightly lower, so that net worth was 4.8% less as well. Perhaps most interesting in the corporate balance sheet is the Miscellaneous assets line which rose from 7.3% in 1975 to 22.9% in 2005 and to 21.6% or over one third the corporate equities market value in 2013. Miscellaneous liabilities followed suit at roughly half the asset value.

For the financial business balance sheet, in which nonfinancial assets represent 2.7% of total asset value in 1975, followed by 2.3% in 2005 and 1.9% in 2013, not surprisingly net worth fell from 4.8% of total asset value in 1975 to a negative 2.0% in 2005 before the crash with a slight recovery to a negative 0.6% in 2013.

Yet by 2013 things are dramatically different for the household balance sheet, with an 8.7% swing in asset valuation from nonfinancial to financial assets, the first of which dropped from 38.35% to 29.9% of total asset value for households and nonprofits, the total asset value having appreciated \$18.6T from \$74.1T to \$92.7T or by 25% of its 2005 value. According to the Fed's report, the nonfinancial assets depreciated by \$863B but the financial assets grew by \$19.5T, more or less equally in pension entitlements, mutual funds, corporate equities, and liquidity. What does this tell us about the valuation of the pension entitlements, mutual funds, and corporate equities down the road? The ratio of financial to nonfinancial assets has gone from 1.60 to 2.34 in 8 years. In the same period of time, the equity in the noncorporate business sector, which includes most of the small businesses, which do most of the hiring, has gone up only \$585B.

Pension entitlements have to be turned into cash at some point, as do mutual funds and equities. What are the underlying assets? Mutual funds and equities are easy enough to understand if they represent a productive investment somewhere, something making consumables that can be sold for profit. The pension entitlements in 2013 were at \$19.9T, presumably deriving their value from future corporate earnings. Corporate net worth is \$19.1T, but it must continue paying dividends if it is to keep up its market value, rationally speaking. And during this time, 2005 to

2013, when the financial asset component of household equity has effectively risen by \$19T, while real asset value diminished by \$0.9T, the financial sector on which this wealth is ostensibly based, has managed to cut its negative net worth by only \$0.7T. But then one person's liability is (or was) someone else's asset. Fortunately (or not, based on your perspective), one person's asset does not have to be another person's liability.

This is perhaps not as gloomy as it appears since financial assets consist primarily of two types, those which are valued for their immediate or short term use as a medium of exchange for goods and services and those that exist as a combination of an intended long term store of value and source of future cash flow for future exchange for goods and services. As such the value of the financial business and its negative net worth is primarily in its future appreciation and dispensing of cash, still in 8 years it has only appreciated 0.6%. We might be tempted to shake this off as a result of the financial crisis of 2008 were it not for the fact that during the 30 years of the heyday of supply side policy, it has lost 6.9% of its relative asset value and entered into negative net worth territory at the same time going from a positive 9.3% of GDP to a negative 9.0% of GDP. The supply siders would like to convince us and perhaps even themselves that the financial crisis and its "worsening" is a result of government debt and deficits and the public sector getting in the way of the private, but it is the lack of investing in the public sector that has brought this on. Any improvement since the crisis is the result of government intervention, which could and should have been much stronger.

Now look at Sheet 14 for US Credit Market Debt where the net worth of all three sectors, instead of assets, is displayed across the top. This net worth line is not in the corresponding Fed table, but has been added to elucidate. Look at the inverted figure of net worth as a percentage of GDP, in other words GDP as a return on net worth. For 1975 it is 19.3%, for 2005, 15.4% and for 2013, up a bit at 15.7%. If the stock market keeps going up, with more guys needing pensions, that number is going to go down even further. Now look at the corporate equities line near the bottom. 1975 equities were valued at roughly 50% of GDP, 2005 were at 157% even though the return on net worth for the economy as a whole near the peak of the greatest run in asset value in recent history at 15.4% was 4% less than it was in 1975 when the equity value was only 50% and constrained by the government strangle hold on the economy. Now look at 2013 with equity valued at 200%, yet return on aggregate net worth is only 0.3% higher than in 2005. Is any body listening?

Now for a structural analysis, look at Sheet 16 of the US Sectors Accounts table where the values for the seven sectors of the economy are arranged for assets, with nonfinancial and financial breakdown, followed by liabilities and new worth. Note that the second percentage column and the corresponding differentials state each sector as a percentage of each particular account total. For total assets, 2005 sector percentages before the crisis were all down, with the exception of financial business and the rest of the world account, which were up 9.7% and 4.3% respectively from

1975 proportions. We might be tempted to think this simply means that the economy doesn't need as much of the other things, but remember that financial instruments are ultimately only worth what ever goods and services they can be exchanged for somewhere down the line.

Looking at the nonfinancial assets tells a somewhat different story, with nonfinancial business assets down 9.3%, government property down 6.2% and financial real assets up only 0.9%. Rest of the world does not have any real assets. The household sector is up 14.6% due to the housing bubble and the general run up of real estate and major durable pricing. The household financial assets are down almost as much at 13.6%, due in no small part to the down turn in deposits seen in the financial assets breakdown, and indicating the liquidity crisis that soon followed. The financial sector financial assets on the other hand are up 7.1% along with the 5.9% increase in rest of the world holdings.

In fact, the financial sector along with the necessarily related rest of the world sector are the only sectors that grew across all accounts in their share of structural change, including that of liabilities. This trend continues to the 2013 figures. However with regards to net worth, as previously indicated, for 2005 the financial sector shows a decrease in share, even greater than the federal government. The exception is the rest of world account, which continues to grow, presumably a result of the emergence of China and equity holders in the advanced economies. But the pull back of the financial sector with respect to the structure in 1975 while the federal government position is three times as extended as it was in 2005 is where we should be concerned. These figures show that a financial bubble still exists and that there will be even more intensified, though more ill advised, attempts to blame it on government spending and the accumulation of public debt.

Equally significant is the change in net worth accounts as a percent of the total for the rest of the sectors. In contrast to 1975, only two sectors have increased their share of the total net worth of the nation. The first is the household sector by 11.1% and the second is the rest of the world by 5.0%. The household sector, of course, doesn't mean everyone in that sector has benefited as is well documented. We are stating nothing new here. What is perhaps more starkly presented is the 3.9% decrease in proprietorships and the 1.7% decrease in nonfinancial corporate percentage since 1975. What this shows is the concentration and privatization of both public and private wealth to interests both domestic and international.

To shine some sunlight on this situation, we go to Sheet 22 for the US Assets and Liabilities of the Personal Sector table taken from the Fed release, table L.10. That table consolidates household, nonprofit and nonfinancial noncorporate balance sheets, leaving out the corporate, nonfinancial and financial, other world, and of course the public sectors. We have added a column in the financial assets and liabilities accounts to indicate the presumed nature of the financial asset as to whether it represents liquid or long term assets. Basically the liquid assets are those included in the Deposits account on Sheet 18, page 5 of the Financial Assets

Breakdown table. Note the asset, liability and net worth totals for these two sectors. For 2013 the total asset value is \$107.7T up from \$86.7T in 2005 after 8 years of very little real growth. This does not include the \$34.9T in nonfinancial corporate assets. The liability for 2013 is \$19.8T with net worth of \$87.9T, which with a corporate net worth from the earlier table of \$19.1T puts us back up to \$107.0 net worth for the three sectors.

We will use this information to consolidate our balance sheets for both the private and public sectors and then for the overall national balance sheet. We will need to state a few axioms, first one being that real assets have a real value that is exclusively based on the human effort required to produce or reproduce them and they have a financial value that is relative to what they can be traded for in money in the marketplace, and the second being that in the market place all liabilities are financial and not of in-kind goods and services, even though the value in long-term instruments is their exchangeability for consumer products. In the end this doesn't matter as collateral transfer due to default merely changes the party that has title to the property and does not change the value of the property itself. On the other hand it does matter in that the utility of the collateral or defaulted contractual agreement will likely be markedly different in effect on the debtor and on the creditor.

However, for our present analytical purpose, liabilities for one consolidated sector are exclusively financial assets to some other sector or sectors, so we will start by arriving at a net financial asset account for each sector in order to consolidate all sectors. We will thereby dispense with the liabilities accounts and add the corporate nonfinancial and net financial assets to the above personal sector table to arrive at a total for the domestic private sectors. This includes both nonfinancial and financial sectors, the latter of which has a deficit for the financial assets for 2005 and 2013.

We will then assume that the rest of the world accounts are private, at least with respect to the US economy and add the financial assets (there are no rest of world nonfinancial assets shown) to the domestic private sectors to arrive at a total value of assets for the private sectors. The rest of the world assets show up as negatives for 2005 and 2013 as they indicate foreign owned equity of domestic assets.

A similar treatment is performed for the two public sectors, federal and state and local governments, for nonfinancial and financial assets with totals and then for a consolidation of public and private. The results can be viewed in the table US Assets and Liabilities of the Public and Private Sectors and related tables of Sheets 23 to 30.

Note first that the total asset value and therefore net worth (liabilities have been deducted from financial assets remember) for the national private sector after including the rest of the world is \$93.1T as opposed to the \$107.0 for the three principal sectors mentioned above. The public sector has a net asset value of minus \$3.5T, which some would interpret as a liability. Added to the private sector value this gives a total national net worth of \$89.6T. Note also that the financial business sector contribution to this total is a negative half a trillion dollars. Of this total the

nonfinancial asset contribution is \$71.9T and the financial asset contribution is \$17.7T of which apparently \$6.3T consists of checkable deposits and currency and the balance is other sorts of deposits of which there was \$19.4T less the checkable deposits and currency prior to consolidation. This indicates the total net financial assets, if all were held to be liquid or money, backed by the public sector, are under the value stated in the Fed figures by \$1.7T.

Looking at the consolidation this way basically assumes that all forward appreciating financial assets, i.e obligations of the private sectors, are currently worthless, or to put it in more nuanced terms, of uncertain future value. However, the productive apparatus, homes, factories, cars, farms, oil fields, electrical grid, software, etc., of which there is \$71.9T worth, remains in play going forward to provide income for the citizenry and goods and services for them to buy. A complaint could be raised that the vast majority of the \$192.1T financial assets found on Sheet 16 represent obligations for future payment of liabilities, of which there are \$156.6T, leaving a net financial asset value of \$35.5T, and cannot just be “netted” out. This is almost precisely twice the consolidated asset value of \$17.7T stated above. But if \$0.9T worth of real assets can be replaced by \$19T worth of financial assets held by a financial sector that has a negative net worth, one must ask if a stampede toward liquidity couldn’t do just that, a liquidity backed by the public sector as insurer of last resort, in which the economic needs of the present are deemed to vastly outweigh those of an unknown future.

Putting ones faith in money is fine as long as everyone agrees everything else is running smoothly, but that hasn’t been the case for a while. Let’s complete the picture. The public sector accounts have nothing in them for the vast infrastructure in place and necessary for a functioning modern economy, infrastructure at both a federal and at a state and local level that could never be installed by and which so far has not been adequately maintained by private funding.

In addition to infrastructure there is approximately 650 million acres of publicly owned land and attendant natural resources in the US in addition to a smaller amount of state and local land. A large portion of this land was bought by the far sighted founding father Thomas Jefferson, not without some resistance on the grounds that it was “unconstitutional”, to quote the Wikipedia entry concerning the matter, “. . . though opposition was ultimately not widespread. Jefferson agreed that the U.S. Constitution did not contain provisions for acquiring territory, but decided to go ahead with the purchase anyway . . .”. Those founding fathers, for all their faults, had some gall.

Finally, there is no accounting in the balance sheets for human capital, without which we cannot achieve next quarter’s projected figures. We have added these three components to Sheets 24-25, in a revised balance sheet of the federal government as described earlier to arrive at a revised statement of US Assets and Liabilities of the Public and Private Sectors. This appears in the public sector instead of the private sector for the simple reason that unlike the regulations in place at the

founding of the constitution and in fact codified in that document, a human being can no longer claim another human as an asset and therefore human capital cannot be included in a private balance sheet but certainly can in a consolidated statement of assets. This does not mean that human capital is envisioned as a government entitlement, to those who might so fear, but it is certainly not a private property entitlement, other than to one's own self. Registration of human capital stock in the economy belongs in the consolidated public and private sector balance sheet as an entitlement of citizenship or guest worker status.

The first of these revised sheets uses the Christian evaluation for the market value of human capital stock for 2005 and extrapolates forward and backward for the other two years. The interesting thing is that the total asset value, public and private, arrived at by this method for 1975, almost forty years ago or one series of working lives assuming a working life is forty years long, at \$60.2T is reasonably close to the \$89.6T figure for 2013 arrived at without using the human capital figures. And if the total human capital value is used as in Sheet 30 for 1975 resulting in a national asset value of \$169.4T, the figure is to the other side of the 2013 figure and the Sector Account table net worth for all sectors of \$107.4T, indicating that the human capital derivation used by Christian is reasonable. Based on the total asset value of public and private sectors without the human capital accounts at \$89.6T, this indicates that Christian's market value figure as extrapolated to 1975 is actually a bit low, with implications for the 2005 and 2013 values. On the basis of this second total capital figure, the total asset value of the US national public and private sectors in 2013 was \$1,153.0T or almost \$1.2Q. This dwarfs the \$16.4T federal, state and local debt for this period, which was between 5.1% to 1.5% of the total asset value, using the market and the total human capital stock values for the range of values.

Also of interest is the imputed change in productivity of that capital based on this analysis, using the GDP as a measure of the return on total capital base. In 1975 the return was 3.4% using the market value of human capital and 1.1% using the total human capital. In 2013 the figures were 5.2% and 1.6%. This is a range of around 67% improvement in productivity for the whole economy over the 38-year span. A human capital stock of \$46.8T in 1975 with \$5.9T worth of real productive assets, (assuming all real assets enhance human life and thereby productivity, which is not quite true,), \$0.4T in fiat money, and another \$0.9T in negotiable assets, in 38 years produced \$71.9T in real productive assets, an increase of \$66.0T, with an additional \$6.0T in checkable deposits and currency and another \$12.0T in near money, plus an additional \$170.0+T of tokens of satisfaction of unknown future value, plus a human capital stock of market and nonmarket value worth an additional \$1 quadrillion.

Like any capital, the human type requires proper maintenance and utilization to stay in working order. The idea that any amount of current financial assets, (the net amount being much less than the \$192T shown on the national books), can of themselves create more wealth and provide an income stream for tens of millions of retirees is of course ridiculous. It cannot guarantee that natural or more financial

disasters or war or plague or social decay won't deplete the human capital to the point that it will barely support the working population, let alone the retirement and rentier population. Yet if it is properly educated, acculturated, and filled with enthusiasm for living, there is no reason that the next 40 years can't result in a transformation of the production of the necessary goods and services and reduction of the necessary work week that will usher in a new, technological browser economy, with plenty of opportunity left for those whose idea of play is entrepreneurial work. That is, provided that idea of work doesn't play out as most of us watching a handful of others playing poker with the national financial system.



US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 1

Re: Distribution of US Gross Domestic Product  
F6 Comparison 1975/2005/2013

	1975	% GDP	2005	% GDP	+/- GDP from 1975	2013	% GDP	+/- % GDP from 2005	+/- % GDP from 1975
<b>GDP</b> Billions of dollars	1688.9		13093.7			16768.0			
<b>Personal consumption expenditures</b>	1032.8	61.2%	8794.1	67.2%	6.0% x	11484.3	68.5%	1.3%	7.3% x
Durable goods	142.2	8.4%	1127.2	8.6%	0.2%	1249.3	7.5%	(1.2%)	(1.0%) x
Nondurable goods	349.2	20.7%	1953.0	14.9%	(5.8%) x	2601.9	15.5%	0.6%	(5.2%) x
Services	541.4	32.1%	5713.8	43.6%	11.6% x	7633.2	45.5%	1.9%	13.5% x
<b>Gross private domestic investment</b>	257.3	15.2%	2527.1	19.3%	4.1% x	2648.0	15.8%	(3.5%)	0.6%
Fixed investment	263.5	15.6%	2467.5	18.8%	3.2% x	2573.9	15.4%	(3.5%)	(0.3%)
Nonresidential	196.8	11.7%	1611.5	12.3%	0.7%	2054.0	12.2%	(0.1%)	0.6%
Household sector (nonprofits)	11.0	0.7%	126.1	1.0%	0.3%	136.0	0.8%	(0.2%)	0.2%
Nonfinancial corporate business	143.8	8.5%	1132.2	8.6%	0.1%	1475.9	8.8%	0.2%	0.3%
Nonfinancial noncorporate business	29.0	1.7%	173.2	1.3%	(0.4%) x	240.7	1.4%	0.1%	(0.3%)
Financial institutions	12.9	0.8%	180.0	1.4%	0.6% x	201.5	1.2%	(0.2%)	0.4%
Residential	66.7	3.9%	856.1	6.5%	2.6%	519.9	3.1%	(3.4%)	(0.8%)
Household sector	53.1	3.1%	738.9	5.6%	2.5% x	433.4	2.6%	(3.1%)	(0.6%)
Nonfinancial corporate business	0.5	0.0%	6.0	0.0%	0.0%	(8.1)	(0.0%)	(0.1%)	(0.1%)
Nonfinancial noncorporate business	13.0	0.8%	108.7	0.8%	0.1%	79.9	0.5%	(0.4%)	(0.3%)
REITs	0.1	0.0%	2.5	0.0%	0.0%	14.7	0.1%	0.1%	0.1%
Change in private inventories	(6.3)	(0.4%)	59.6	0.5%	0.8%	74.1	0.4%	(0.0%)	0.8%
Nonfinancial corporate business	(8.3)	(0.5%)	52.5	0.4%	0.9%	56.7	0.3%	(0.1%)	0.8%
Nonfinancial noncorporate business	2.1	0.1%	7.1	0.1%	(0.1%) x	17.4	0.1%	0.0%	(0.0%)
<b>Net US exports of goods and services</b>	16.0	0.9%	(721.2)	(5.5%)	(6.5%) x	(508.2)	(3.0%)	2.5%	(4.0%) x
Exports	138.7	8.2%	1308.9	10.0%	1.8%	2262.2	13.5%	3.5%	5.3%
Imports	(122.7)	(7.3%)	(2030.1)	(15.5%)	(8.2%) x	(2770.4)	(16.5%)	(1.0%)	(9.3%)
<b>Government consumption exp &amp; gross inv</b>	382.9	22.7%	2493.7	19.0%	(3.6%) x	3143.9	18.7%	(0.3%)	(3.9%) x
Consumption expenditures	298.5	17.7%	1980.0	15.1%	(2.6%) x	2547.6	15.2%	0.1%	(2.5%) x
Federal	132.9	7.9%	723.4	5.5%	(2.3%) x	963.0	5.7%	0.2%	(2.1%)
State and local	165.6	9.8%	1256.6	9.6%	(0.2%)	1584.5	9.4%	(0.1%)	(0.4%)
Gross investment	84.4	5.0%	513.6	3.9%	(1.1%) x	596.3	3.6%	(0.4%)	(1.4%) x
Federal	39.8	2.4%	222.9	1.7%	(0.7%)	268.5	1.6%	(0.1%)	(0.8%)
State and local	44.6	2.6%	290.8	2.2%	(0.4%)	327.8	2.0%	(0.3%)	(0.7%)
<b>Net US income receipts from rest of world</b>	13.0	0.8%	92.6	0.7%	(0.1%) x	224.3	1.3%	0.6%	0.6%
US income receipts	28.0	1.7%	578.8	4.4%	2.8% x	810.4	4.8%	0.4%	3.2%
US income payments	(15.0)	(0.9%)	(483.2)	(3.7%)	(2.8%) x	(586.1)	(3.5%)	0.2%	(2.6%)
<b>GDP - net US income receipts</b>	1701.9	100.8%	13186.3	100.7%	(0.1%)	16992.4	101.3%	0.6%	0.6%

Source: Z. 1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, F6 Historical Annals, 1975-1984 and 2005-2013

# US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 2

Re: Distribution of US National Income  
F.7 Comparison 1975/2005/2013

	1975	% GDP	2005	% GDP	+/- GDP from 1975	2013	% GDP	+/- % GDP from 2005	+/- % GDP from 1975
<b>GDP Billions of dollars</b>	1688.9		13093.7			16768.0			
<b>National Income</b>	1451.2	85.9%	11299.8	85.8%	(0.1%)	14577.1	86.9%	1.1%	1.0%
<b>Compensation of employees</b>	950.2	56.3%	7086.8	54.1%	(2.1%)	8844.8	52.7%	(1.4%)	(3.5%)
<b>Wages and other labor income</b>	903.5	53.5%	6658.7	50.9%	(2.6%) x	8318.6	49.6%	(1.2%)	(3.9%) x
<b>Employer social insurance contributions</b>	46.7	2.8%	428.1	3.3%	0.5%	526.1	3.1%	(0.1%)	0.4%
<b>Proprietor's Income*</b>	118.2	7.0%	979.0	7.5%	0.5% x	1336.6	8.0%	0.5%	1.0% x
<b>Rental Income of persons*</b>	22.5	1.3%	238.4	1.8%	0.5% x	595.8	3.6%	1.7%	2.2% x
<b>Corporate profits*</b>	138.9	8.2%	1477.7	11.3%	3.1% x	2106.9	12.6%	1.3%	4.3% x
<b>Corporate profits with inventory adjustments</b>	144.2	8.5%	1621.2	12.4%	3.8%	2238.7	13.4%	1.0%	4.8%
<b>Profits before tax</b>	154.8	9.2%	1653.3	12.6%	3.5% x	2235.3	13.3%	0.7%	4.2%
<b>Domestic nonfinancial</b>	119.7	7.1%	1004.6	7.7%	0.6% x	1298.9	7.7%	0.1%	0.7%
<b>Domestic financial</b>	20.4	1.2%	409.7	3.1%	1.9% x	533.5	3.2%	0.1%	2.0%
<b>Rest of the world</b>	14.6	0.9%	239.1	1.8%	1.0%	403.1	2.4%	0.6%	1.5%
<b>Less:</b>									
<b>Taxes on corporate income</b>	51.6	3.1%	412.4	3.1%	0.1%	474.3	2.8%	(0.3%)	(0.2%)
<b>Domestic nonfinancial</b>	41.9	2.5%	271.9	2.1%	(0.4%)	329.3	2.0%	(0.1%)	(0.5%)
<b>Domestic financial</b>	9.7	0.6%	140.5	1.1%	0.5%	144.9	0.9%	(0.2%)	0.3%
<b>Equals:</b>									
<b>Profits after tax</b>	103.1	6.1%	1240.9	9.5%	3.4% x	1761.1	10.5%	1.0%	4.4%
<b>Net dividends</b>	22.0	1.3%	580.5	4.4%	3.1% x	959.6	5.7%	1.3%	4.4%
<b>Domestic nonfinancial</b>	24.6	1.5%	170.8	1.3%	(0.2%) x	536.9	3.2%	1.9%	1.7%
<b>Domestic financial</b>	1.8	0.1%	148.9	1.1%	1.0% x	289.8	1.7%	0.6%	1.6%
<b>Rest of the world</b>	6.6	0.4%	260.9	2.0%	1.6% x	132.9	0.8%	(1.2%)	0.4%
<b>Undistributed profits</b>	70.2	4.2%	660.4	5.0%	0.9%	801.5	4.8%	(0.3%)	0.6%
<b>Domestic nonfinancial</b>	53.2	3.1%	561.9	4.3%	1.1%	432.6	2.6%	(1.7%)	(0.6%)
<b>Domestic financial</b>	8.9	0.5%	120.3	0.9%	0.4%	98.7	0.6%	(0.3%)	0.1%
<b>Rest of the world</b>	8.1	0.5%	(21.8)	(0.2%)	(0.6%)	270.2	1.6%	1.8%	1.1%
<b>Inventory valuation adjustment</b>	(10.5)	(0.6%)	(32.1)	(0.2%)	0.4%	3.3	0.0%	0.3%	0.6%
<b>Capital consumption adjustment</b>	(5.4)	(0.3%)	(143.5)	(1.1%)	(0.8%)	(131.8)	(0.8%)	0.3%	(0.5%)
<b>Domestic nonfinancial</b>	(4.9)	(0.3%)	(101.5)	(0.8%)	(0.5%)	(88.3)	(0.5%)	0.2%	(0.2%)
<b>Domestic financial</b>	(0.5)	(0.0%)	(41.9)	(0.3%)	(0.3%)	(43.5)	(0.3%)	0.1%	(0.2%)
<b>Net interest and miscellaneous payments</b>	85.9	5.1%	496.8	3.8%	(1.3%) x	499.8	3.0%	(0.8%)	(2.1%)
<b>Taxes on production and imports</b>	135.3	8.0%	934.5	7.1%	(0.9%)	1162.4	6.9%	(0.2%)	(1.1%)
<b>Less Subsidies</b>	4.5	0.3%	60.9	0.5%	0.2%	60.2	0.4%	(0.1%)	0.1%
<b>Business current transfer payments (net)</b>	9.0	0.5%	93.9	0.7%	0.2%	120.6	0.7%	0.0%	0.2%
<b>Current surplus of government enterprises</b>	(4.4)	(0.3%)	(6.4)	(0.0%)	0.2%	(29.6)	(0.2%)	(0.1%)	0.1%
<b>Plus:</b>									
<b>Private consumption of fixed capital</b>	178.8	10.6%	1653.3	12.6%	2.0% x	2120.8	12.6%	0.0%	2.1%
<b>Government consumption of fixed capital</b>	58.7	3.5%	346.7	2.6%	(0.8%) x	506.4	3.0%	0.4%	(0.5%)
<b>Statistical discrepancy</b>	13.2	0.8%	(35.5)	(0.3%)	(1.1%)	(211.9)	(1.3%)	(1.0%)	(2.0%)
<b>Less:</b>									
<b>Net US income receipts from rest of the world</b>	13.0	0.8%	92.6	0.7%	(0.1%)	224.3	1.3%	0.6%	0.6%

\* with inventory & capital consumption adjustments

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, F.7 Historical Annuals, 1975-1984 and 2005-2013

# US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 3

Re: US Savings and Investment by Sector  
F8 Comparison 1975/2005/2013

	1975	% GDP	2005	% GDP	+/- GDP from 1975	2013	% GDP	+/- % GDP from 2005	+/- % GDP from 1975
<b>GDP Billions of dollars</b>	1688.9		13093.7			16768.0			
Gross saving	348.3	20.6%	2333.4	17.8%	(2.8%)	3034.1	18.1%	0.3%	(2.5%)
Net saving	110.7	6.6%	354.1	2.7%	(3.9%)	406.8	2.4%	(0.3%)	(4.1%)
Net private saving	213.3	12.6%	722.8	5.5%	(7.1%) x	1281.1	7.6%	2.1%	(5.0%)
Domestic business	54.3	3.2%	484.8	3.7%	0.5%	673.0	4.0%	0.3%	0.8%
Nonfinancial corporate business	45.5	2.7%	411.7	3.1%	0.5%	571.3	3.4%	0.3%	0.7%
Financial business	8.7	0.5%	73.1	0.6%	0.0%	101.7	0.6%	0.0%	0.1%
Households and institutions	159.0	9.4%	237.9	1.8%	(7.6%) x	608.1	3.6%	1.8%	(5.8%)
Net government saving	(102.5)	(6.1%)	(371.3)	(2.8%)	3.2%	(874.3)	(5.2%)	(2.4%)	0.9%
Federal	(97.0)	(5.7%)	(304.7)	(2.3%)	3.4%	(649.1)	(3.9%)	(1.5%)	1.9%
State and local	(5.6)	(0.3%)	(66.6)	(0.5%)	(0.2%)	(225.1)	(1.3%)	(0.8%)	(1.0%)
Consumption of fixed capital	237.5	14.1%	1982.0	15.1%	1.1%	2627.2	15.7%	0.5%	1.6%
Private	178.8	10.6%	1635.3	12.5%	1.9%	2120.8	12.6%	0.2%	2.1%
Domestic business	147.9	8.8%	1273.2	9.7%	1.0%	1693.7	10.1%	0.4%	1.3%
Households and institutions	30.9	1.8%	362.1	2.8%	0.9%	427.1	2.5%	(0.2%)	0.7%
Government	58.7	3.5%	346.7	2.6%	(0.8%)	506.4	3.0%	0.4%	(0.5%)
Federal	37.8	2.2%	189.4	1.4%	(0.8%)	268.0	1.6%	0.2%	(0.6%)
State and local	21.0	1.2%	157.3	1.2%	(0.0%)	238.4	1.4%	0.2%	0.2%
Gross domestic investment =, Capital acct & net lend	361.5	21.4%	2297.9	17.5%	(3.9%) x	2822.1	16.8%	(0.7%)	(4.6%)
Gross domestic investment	341.7	20.2%	3040.7	23.2%	3.0% x	3244.3	19.3%	(3.9%)	(0.9%)
Gross private domestic investment	257.3	15.2%	2527.1	19.3%	4.1% x	2648.0	15.8%	(3.5%)	0.6%
Domestic business	193.1	11.4%	1662.1	12.7%	1.3%	2078.6	12.4%	(0.3%)	1.0%
Households and institutions	64.2	3.8%	865.0	6.6%	2.8%	569.4	3.4%	(3.2%)	(0.4%)
Gross government investment	84.4	5.0%	513.6	3.9%	(1.1%) x	596.3	3.6%	(0.4%)	(1.4%)
Federal	39.8	2.4%	222.9	1.7%	(0.7%)	268.5	1.6%	(0.1%)	(0.8%)
State and local	44.6	2.6%	290.8	2.2%	(0.4%)	327.8	2.0%	(0.3%)	(0.7%)
Capital account transactions	0.1	0.0%	(12.9)	(0.1%)	(0.1%)	0.8	0.0%	0.1%	(0.0%)
Net lending or borrowing	19.8	1.2%	(730.0)	(5.6%)	(6.7%) x	(423.0)	(2.5%)	3.1%	(3.7%)
Private	143.3	8.5%	(173.7)	(1.3%)	(9.8%) x	534.5	3.2%	4.5%	(5.3%)
Domestic business	22.5	1.3%	60.3	0.5%	(0.9%)	80.6	0.5%	0.0%	(0.9%)
Households and institutions	120.8	7.2%	(234.0)	(1.8%)	(8.9%) x	454.0	2.7%	4.5%	(4.4%)
Government	(123.6)	(7.3%)	(556.3)	(4.2%)	3.1% x	(957.5)	(5.7%)	(1.5%)	1.6%
Federal	(103.4)	(6.1%)	(396.6)	(3.0%)	3.1% x	(705.6)	(4.2%)	(1.2%)	1.9%
State and local	(20.1)	(1.2%)	(159.7)	(1.2%)	(0.0%)	(252.0)	(1.5%)	(0.3%)	(0.3%)
Statistical discrepancy	13.2	0.8%	(35.5)	(0.3%)	(1.1%) x	(211.9)	(1.3%)	(1.0%)	(2.0%)
Disaster losses	0.0	0.0%	110.4	0.8%	0.8%	0	0.0%	(0.8%)	0.0%

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, F8 Historical Annuals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 4

Re: US Balance Sheet of Households and Nonprofit Organizations

B.100 Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b>	1688.9	25.7%		13093.7	17.7%				16768.0	18.1%					
Billions of dollars															
<b>Assets</b>	6560.1	388.4%	100.0%	74048.8	565.5%	100.0%	177.1%		92669.2	552.7%	100.0%	(12.9%)	0.0%	164.2%	0.0%
Nonfinancial assets	2286.5	135.4%	34.9%	28532.0	217.9%	38.5%	82.5%	3.7% x	27669.2	165.0%	29.9%	(52.9%)	(8.7%)	29.6%	(5.0%)
Real estate	1684.2	99.7%	25.7%	24138.7	184.4%	32.6%	84.6%	6.9% x	22295.9	133.0%	24.1%	(51.4%)	(8.5%)	33.2%	(1.6%)
Households	1413.7	83.7%	21.5%	22030.1	168.2%	29.8%	84.5%	8.2% x	19631.3	117.1%	21.2%	(51.2%)	(8.6%)	33.4%	(0.4%)
Nonprofit organizations	270.5	16.0%	4.1%	2108.6	16.1%	2.8%	0.1%	(1.3%) x	2664.6	15.9%	2.9%	(0.2%)	0.0%	(0.1%)	(1.2%)
Equipment (nonprofits)	19.2	1.1%	0.3%	206.1	1.6%	0.3%	0.4%	(0.0%)	306.9	1.8%	0.3%	0.3%	0.1%	0.7%	0.0%
Intellectual property products (nonprofits)	5.1	0.3%	0.1%	79.5	0.6%	0.1%	0.3%	0.0%	124.1	0.7%	0.1%	0.1%	0.0%	0.4%	0.1%
Consumer durable goods	578.0	34.2%	8.8%	4107.8	31.4%	5.5%	(2.9%)	(3.3%) x	4942.2	29.5%	5.3%	(1.9%)	(0.2%)	(4.7%)	(3.5%)
Financial assets	4273.7	253.0%	65.1%	45516.7	347.6%	61.5%	94.6%	(3.7%) x	65000.1	387.6%	70.1%	40.0%	8.7%	134.6%	5.0%
Deposits	924.5	54.7%	14.1%	6257.5	47.8%	8.5%	(6.9%)	(5.6%) x	9630.5	57.4%	10.4%	9.6%	1.9%	2.7%	(3.7%)
Foreign deposits	0.0	0.0%	0.0%	63.8	0.5%	0.1%	0.5%	0.1%	52.5	0.3%	0.1%	(0.2%)	(0.0%)	0.3%	0.1%
Checkable deposits and currency	158.7	9.4%	2.4%	285.9	2.2%	0.4%	(7.2%)	(2.0%) x	1035.0	6.2%	1.1%	4.0%	0.7%	(3.2%)	(1.3%)
Time and savings deposits	762.2	45.1%	11.6%	4965.0	37.9%	6.7%	(7.2%)	(4.9%) x	7397.8	44.1%	8.0%	6.2%	1.3%	(1.0%)	(3.6%)
Money market fund shares	3.7	0.2%	0.1%	942.7	7.2%	1.3%	7.0%	1.2% x	1145.2	6.8%	1.2%	(0.4%)	(0.0%)	6.6%	1.2%
Credit market instruments	320.8	19.0%	4.9%	3452.8	26.4%	4.7%	7.4%	(0.2%) x	3848.8	23.0%	4.2%	(3.4%)	(0.5%)	4.0%	(0.7%)
Open market paper	19.7	1.2%	0.3%	98.4	0.8%	0.1%	(0.4%)	(0.2%) x	15.0	0.1%	0.0%	(0.7%)	(0.1%)	(1.1%)	(0.3%)
Treasury securities	111.8	6.6%	1.7%	425.7	3.3%	0.6%	(3.4%)	(1.1%) x	949.0	5.7%	1.0%	(0.7%)	(0.1%)	(1.0%)	(0.7%)
Agency and GSE backed securities	7.6	0.4%	0.1%	587.4	4.5%	0.8%	4.0%	0.7% x	97.7	0.6%	0.1%	(3.9%)	(0.7%)	0.1%	(0.0%)
Municipal securities	66.8	4.0%	1.0%	1600.6	12.2%	2.2%	8.3%	1.1% x	1617.7	9.6%	1.7%	(2.6%)	(0.4%)	5.7%	0.7%
Corporate and foreign bonds	64.3	3.8%	1.0%	591.4	4.5%	0.8%	0.7%	(0.2%)	1004.6	6.0%	1.1%	1.5%	0.3%	2.2%	0.1%
Other loans and advances	0.0	0.0%	0.0%	8.7	0.1%	0.0%	0.1%	0.0%	25.9	0.2%	0.0%	0.1%	0.0%	0.2%	0.0%
Mortgages	50.5	3.0%	0.8%	140.8	1.1%	0.2%	(1.9%)	(0.6%)	79.8	0.5%	0.1%	(0.6%)	(0.1%)	(2.5%)	(0.7%)
Consumer credit (student loans)	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	59.1	0.4%	0.1%	0.4%	0.1%	0.4%	0.1%
Corporate equities (market value)	584.6	34.6%	8.9%	8025.4	61.3%	10.8%	26.7%	1.9% x	12451.3	74.3%	13.4%	13.0%	2.6%	39.6%	4.5%
Mutual fund shares	38.7	2.3%	0.6%	3527.1	26.9%	4.8%	24.6%	4.2% x	7152.4	42.7%	7.7%	15.7%	3.0%	40.4%	7.1%
Security credit	4.7	0.3%	0.1%	623.4	4.8%	0.8%	4.5%	0.8% x	815.5	4.9%	0.9%	0.1%	0.0%	4.6%	0.8%
Life insurance reserves	168.6	10.0%	2.6%	1082.6	8.3%	1.5%	(1.7%)	(1.1%)	1232.8	7.4%	1.3%	(0.9%)	(0.1%)	(2.6%)	(1.2%)
Pension entitlements	1037.1	61.4%	15.8%	13466.3	102.8%	18.2%	41.4%	2.4% x	19886.1	118.6%	21.5%	15.7%	3.3%	57.2%	5.7%
Equity in noncorporate business	1150.6	68.1%	17.5%	8473.0	64.7%	11.4%	(3.4%)	(6.1%)	9057.7	54.0%	9.8%	(10.7%)	(1.7%)	(14.1%)	(7.8%)
Miscellaneous assets	44.0	2.6%	0.7%	608.7	4.6%	0.8%	2.0%	0.2%	924.9	5.5%	1.0%	0.9%	0.2%	2.9%	0.3%
<b>Liabilities</b>	763.8	45.2%	11.6%	12162.4	92.9%	16.4%	47.7%	4.8% x	13801.2	82.3%	14.9%	(10.6%)	(1.5%)	37.1%	3.2%
Credit market instruments	736.9	43.6%	11.2%	11721.3	89.5%	15.8%	45.9%	4.6% x	13179.2	78.6%	14.2%	(10.9%)	(1.6%)	35.0%	3.0%
Home mortgages	459.1	27.2%	7.0%	8912.7	68.1%	12.0%	40.9%	5.0% x	9415.9	56.2%	10.2%	(11.9%)	(1.9%)	29.0%	3.2%
Consumer credit	207.0	12.3%	3.2%	2320.6	17.7%	3.1%	5.5%	(0.0%)	3097.9	18.5%	3.3%	0.8%	0.2%	6.2%	0.2%
Municipal securities	2.7	0.2%	0.0%	212.7	1.6%	0.3%	1.5%	0.2%	227.8	1.4%	0.2%	(0.3%)	(0.0%)	1.2%	0.2%
Depository/institution loans	21.5	1.3%	0.3%	-16.5	(0.1%)	(0.0%)	(1.4%)	(0.4%)	92.7	0.6%	0.1%	0.7%	0.1%	(0.7%)	(0.2%)
Other loans and advances	31.5	1.9%	0.5%	119.0	0.9%	0.2%	(1.0%)	(0.3%)	141.3	0.8%	0.2%	(0.1%)	(0.0%)	(1.0%)	(0.3%)
Commercial mortgages	15.0	0.9%	0.2%	172.8	1.3%	0.2%	0.4%	0.0%	203.5	1.2%	0.2%	(0.1%)	(0.0%)	0.3%	(0.0%)
Security credit	8.6	0.5%	0.1%	232.4	1.8%	0.3%	1.3%	0.2%	339.2	2.0%	0.4%	0.2%	0.1%	1.5%	0.2%
Trade payables	10.6	0.6%	0.2%	186.3	1.4%	0.3%	0.8%	0.1%	255.0	1.5%	0.3%	0.1%	0.0%	0.9%	0.1%
Deferred and unpaid life insurance premiums	7.7	0.5%	0.1%	22.4	0.2%	0.0%	(0.3%)	(0.1%)	27.9	0.2%	0.0%	(0.0%)	(0.0%)	(0.3%)	(0.1%)
<b>Net worth</b>	5796.4	343.2%	88.4%	61886.4	472.6%	83.6%	129.4%	(4.8%) x	78868.0	470.3%	85.1%	(2.3%)	1.5%	127.1%	(3.3%)

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, B.100 Historical Annuals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 5

Re: US Balance Sheet of Nonfinancial Corporate Business  
B.102 Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b> Billions of dollars	1688.9	58.1%		13093.7	50.2%				16768.0	48.0%					
<b>Assets</b>															
Nonfinancial assets	2906.1	172.1%	100.0%	26068.7	199.1%	100.0%	27.0%		34941.9	208.4%	100.0%	9.3%	0.0%	36.3%	0.0%
	2131.8	126.2%	73.4%	14168.0	108.2%	54.3%	(18.0%)	(19.0%) x	18861.3	110.7%	53.1%	2.5%	(1.2%)	(15.5%)	(20.2%)
Real estate	1170.9	69.3%	40.3%	7924.3	60.5%	30.4%	(8.8%)	(9.9%) x	10236.1	61.0%	29.3%	0.5%	(1.1%)	(8.3%)	(11.0%)
Equipment	550.2	32.6%	18.9%	3297.8	25.2%	12.7%	(7.4%)	(6.3%) x	4261.7	25.4%	12.2%	0.2%	(0.5%)	(7.2%)	(6.7%)
Intellectual property products	103.6	6.1%	3.6%	1322.0	10.1%	5.1%	4.0%	1.5% x	1916.9	11.8%	5.5%	1.3%	0.4%	5.3%	1.9%
Inventories	307.2	18.2%	10.6%	1623.9	12.4%	6.2%	(5.8%)	(4.3%) x	2146.6	12.8%	6.1%	0.4%	(0.1%)	(5.4%)	(4.4%)
Financial assets	774.2	45.8%	26.6%	11900.6	90.9%	45.7%	45.0%	19.0% x	16380.6	97.7%	46.9%	6.8%	1.2%	51.8%	20.2%
Foreign deposits	2.6	0.2%	0.1%	63.6	0.5%	0.2%	0.3%	0.2%	87.8	0.5%	0.3%	0.0%	0.0%	0.4%	0.2%
Checkable deposits and currency	58.7	3.5%	2.0%	268.0	2.0%	1.0%	(1.4%)	(1.0%)	357.3	2.1%	1.0%	0.1%	(0.0%)	(1.3%)	(1.0%)
Time and savings deposits	24.1	1.4%	0.8%	450.4	3.4%	1.7%	2.0%	0.9%	649.5	3.9%	1.9%	0.4%	0.1%	2.4%	1.0%
Money market fund shares	0.0	0.0%	0.0%	352.2	2.7%	1.4%	2.7%	1.4%	521.1	3.1%	1.5%	0.4%	0.1%	3.1%	1.5%
Security repurchase agreements	1.2	0.1%	0.0%	14.6	0.1%	0.1%	0.0%	0.0%	8.8	0.1%	0.0%	(0.1%)	(0.0%)	(0.0%)	(0.0%)
Credit market instruments	61.7	3.7%	2.1%	340.4	2.6%	1.3%	(1.1%)	(0.8%)	169.0	1.0%	0.5%	(1.6%)	(0.8%)	(2.6%)	(1.6%)
Commercial paper	8.4	0.5%	0.3%	111.0	0.8%	0.4%	0.4%	0.1%	38.0	0.2%	0.1%	(0.6%)	(0.3%)	(0.3%)	(0.2%)
Treasury securities	14.3	0.8%	0.5%	52.1	0.4%	0.2%	(0.4%)	(0.3%)	40.2	0.2%	0.1%	(0.2%)	(0.1%)	(0.6%)	(0.4%)
Agency and GSE backed securities	3.3	0.2%	0.1%	17.4	0.1%	0.1%	(0.1%)	(0.0%)	9.4	0.1%	0.0%	(0.1%)	(0.0%)	(0.1%)	(0.1%)
Municipal securities	4.8	0.3%	0.2%	32.1	0.2%	0.1%	(0.0%)	(0.0%)	12.1	0.1%	0.0%	(0.2%)	(0.1%)	(0.2%)	(0.1%)
Mortgages	9.7	0.6%	0.3%	68.3	0.5%	0.3%	(0.1%)	(0.1%)	25.8	0.2%	0.1%	(0.4%)	(0.2%)	(0.4%)	(0.3%)
Consumer credit	21.2	1.3%	0.7%	59.6	0.5%	0.2%	(0.8%)	(0.5%)	43.5	0.3%	0.1%	(0.2%)	(0.1%)	(1.0%)	(0.6%)
Mutual fund shares	0.9	0.1%	0.0%	134.4	1.0%	0.5%	1.0%	0.5%	211.4	1.3%	0.6%	0.2%	0.1%	1.2%	0.6%
Trade receivables	271.4	16.1%	9.3%	2108.2	16.1%	8.1%	0.0%	(1.3%)	2469.4	14.7%	7.1%	(1.4%)	(1.0%)	(1.3%)	(2.3%)
US direct investment abroad	141.0	8.3%	4.9%	2205.7	16.8%	8.5%	8.5%	3.6% x	4370.0	26.1%	12.5%	9.2%	4.0%	17.7%	7.7%
Miscellaneous assets	212.6	12.6%	7.3%	5963.2	45.5%	22.9%	33.0%	15.6% x	7536.1	44.9%	21.6%	(0.6%)	(1.3%)	32.4%	14.3%
<b>Liabilities</b>	1092.4	64.7%	37.6%	11181.8	85.4%	42.9%	20.7%	5.3% x	15827.8	94.4%	45.3%	9.0%	2.4%	29.7%	7.7%
Credit market instruments	572.7	33.9%	19.7%	5260.7	40.2%	20.2%	6.3%	0.5%	7118.0	42.4%	20.4%	2.3%	0.2%	8.5%	0.7%
Commercial paper	9.6	0.6%	0.3%	90.1	0.7%	0.3%	0.1%	0.0%	144.5	0.9%	0.4%	0.2%	0.1%	0.3%	0.1%
Municipal securities	6.7	0.4%	0.2%	227.3	1.7%	0.9%	1.3%	0.6%	518.5	3.1%	1.5%	1.4%	0.6%	2.7%	1.3%
Corporate bonds	253.8	15.0%	8.7%	2662.6	20.3%	10.2%	5.3%	1.5%	4134.5	24.7%	11.8%	4.3%	1.6%	9.6%	3.1%
Depository institution loans	141.9	8.4%	4.9%	590.9	4.5%	2.3%	(3.9%)	(2.6%)	654.5	3.9%	1.9%	(0.6%)	(0.4%)	(4.5%)	(3.0%)
Other loans and advances	52.7	3.1%	1.8%	903.4	6.9%	3.5%	3.8%	1.7%	1063.5	6.3%	3.0%	(0.6%)	(0.4%)	3.2%	1.2%
Mortgages	107.9	6.4%	3.7%	786.4	6.0%	3.0%	(0.4%)	(0.7%)	602.5	3.6%	1.7%	(2.4%)	(1.3%)	(2.8%)	(2.0%)
Trade payables	176.9	10.5%	6.1%	1700.5	13.0%	6.5%	2.5%	0.4%	1968.2	11.7%	5.6%	(1.2%)	(0.9%)	1.3%	(0.5%)
Taxes payable	22.3	1.3%	0.8%	86.2	0.7%	0.3%	(0.7%)	(0.4%)	44.6	0.3%	0.1%	(0.4%)	(0.2%)	(1.1%)	(0.6%)
Foreign direct investment in US	21.5	1.3%	0.7%	1549.4	11.8%	5.9%	10.6%	5.2% x	2610.3	15.6%	7.5%	3.7%	1.5%	14.3%	6.7%
Miscellaneous liabilities	299.1	17.7%	10.3%	2584.9	19.7%	9.9%	2.0%	(0.4%)	4086.7	24.4%	11.7%	4.6%	1.8%	6.7%	1.4%
<b>Net worth (market value)</b>	1813.7	107.4%	62.4%	14886.9	113.7%	57.1%	6.3%	(5.3%) x	19114.1	114.0%	54.7%	0.3%	(2.4%)	6.6%	(7.7%)
<b>Corporate profits</b>	138.9	8.2%	4.8%	1477.7	11.3%	5.7%	3.1%	0.9%	2106.9	12.6%	6.0%	1.3%	0.4%	4.3%	1.3%
<b>Return on equity</b>	138.9		7.7%	1477.1		9.9%	0.0%	2.3%	2106.9		11.0%		1.1%		3.4%
Profits after tax	103.1	0.0%	3.5%	1240.9	9.5%	4.8%	9.5%	1.2%	1761.1	10.5%	5.0%	1.0%	0.3%	10.5%	1.5%
<b>Return on equity after tax</b>	103.1		5.7%	1240.9		8.3%	0.0%	2.7%	1761.1		9.2%		0.9%		3.5%

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, B.102 Historical Annals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 6

Re: US Balance Sheet of Nonfinancial Noncorporate Business  
B.103 Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b>	1688.9	112.8%		13093.7	103.6%		7.9%	0.0%	16768.0	111.6%		7.0%	0.0%	0.9%	0.0%
<b>Assets</b>	1497.7	88.7%	100.0%	12641.7	96.5%	100.0%	(7.0%)	(15.0%) x	15023.1	89.6%	100.0%	(7.0%)	0.0%	(17.2%)	(20.1%)
Nonfinancial assets	1414.7	83.8%	94.5%	10044.9	76.7%	79.5%	(7.0%)	(15.0%) x	11166.7	66.6%	74.3%	(10.1%)	(5.1%)	(17.2%)	(20.1%)
Real estate	1197.0	70.9%	79.9%	9099.8	69.5%	72.0%	(1.4%)	(7.9%) x	9864.4	58.8%	65.7%	(10.7%)	(6.3%)	(12.0%)	(14.3%)
Residential	578.7	34.3%	38.6%	5822.7	44.5%	46.1%	10.2%	7.4% x	5513.4	32.9%	36.7%	(11.6%)	(9.4%)	(1.4%)	(1.9%)
Nonresidential	618.3	36.6%	41.3%	3277.1	25.0%	25.9%	(11.6%)	(15.4%) x	4351.0	25.9%	29.0%	0.9%	3.0%	(10.7%)	(12.3%)
Equipment	128.3	7.6%	8.6%	578.9	4.4%	4.6%	(3.2%)	(4.0%)	791.7	4.7%	5.3%	0.3%	0.7%	(2.9%)	(3.3%)
Residential	8.2	0.5%	0.5%	41.7	0.3%	0.3%	(0.2%)	(0.2%)	43.3	0.3%	0.3%	(0.1%)	(0.0%)	(0.2%)	(0.3%)
Nonresidential	120.1	7.1%	8.0%	537.2	4.1%	4.2%	(3.0%)	(3.8%)	748.3	4.5%	5.0%	0.4%	0.7%	(2.6%)	(3.0%)
Intellectual property products	9.3	0.6%	0.6%	147.8	1.1%	1.2%	0.6%	0.5% x	215.3	1.3%	1.4%	0.2%	0.3%	0.7%	0.8%
Inventories	80.1	4.7%	5.3%	218.4	1.7%	1.7%	(3.1%)	(3.6%)	297.3	1.8%	2.0%	0.1%	0.3%	(3.0%)	(3.4%)
Financial assets	83.0	4.9%	5.5%	2596.8	19.8%	20.5%	14.9%	15.0% x	3854.4	23.0%	25.7%	3.2%	5.1%	18.1%	20.1%
Checkable deposits and currency	24.3	1.4%	1.6%	374.2	2.9%	3.0%	1.4%	1.3%	540.5	3.2%	3.6%	(0.3%)	0.6%	(0.3%)	2.0%
Time and savings deposits	8.1	0.5%	0.5%	324.1	2.5%	2.6%	2.0%	2.0%	372.7	2.2%	2.5%	(0.3%)	(0.1%)	1.7%	1.9%
Money market fund shares	0.0	0.0%	0.0%	69.0	0.5%	0.5%	0.5%	0.5%	80.4	0.5%	0.5%	(0.0%)	(0.0%)	0.5%	0.5%
Credit market instruments	7.2	0.4%	0.5%	96.8	0.7%	0.8%	0.3%	0.3%	100.2	0.6%	0.7%	(0.1%)	(0.1%)	0.2%	0.2%
Treasury securities	1.3	0.1%	0.1%	56.2	0.4%	0.4%	0.4%	0.4%	50.3	0.3%	0.3%	(0.1%)	(0.1%)	0.2%	0.2%
Municipal securities	0.0	0.0%	0.0%	4.4	0.0%	0.0%	0.0%	0.0%	5.9	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mortgages	3.3	0.2%	0.2%	36.2	0.3%	0.3%	0.1%	0.1%	44.0	0.3%	0.3%	(0.0%)	0.0%	0.1%	0.1%
Consumer credit	2.7	0.2%	0.2%	0.0	0.0%	0.0%	(0.2%)	(0.2%)	0.0	0.0%	0.0%	0.0%	0.0%	(0.2%)	(0.2%)
Trade receivables	14.6	0.9%	1.0%	430.9	3.3%	3.4%	2.4%	2.4%	558.0	3.3%	3.7%	0.0%	0.3%	2.5%	2.7%
Miscellaneous assets	28.8	1.7%	1.9%	1301.8	9.9%	10.3%	8.2%	8.4% x	2202.6	13.1%	14.7%	3.2%	4.4%	11.4%	12.7%
Insurance receivables	17.5	1.0%	1.2%	99.3	0.8%	0.8%	(0.3%)	(0.4%)	108.5	0.6%	0.7%	(0.1%)	(0.1%)	(0.4%)	(0.4%)
Equity investment in GSEs	1.6	0.1%	0.1%	4.1	0.0%	0.0%	(0.1%)	(0.1%)	7.8	0.0%	0.1%	0.0%	0.0%	(0.0%)	(0.1%)
Other	9.7	0.6%	0.6%	1198.4	9.2%	9.5%	8.6%	8.8% x	2086.3	12.4%	13.9%	3.3%	4.4%	11.9%	13.2%
<b>Liabilities</b>	349.3	20.7%	23.3%	4180.5	31.9%	33.1%	11.2%	9.7% x	5983.1	35.7%	39.8%	3.8%	6.8%	15.0%	16.5%
Credit market instruments	287.6	17.0%	19.2%	2898.0	22.1%	22.9%	5.1%	3.7% x	4180.0	24.9%	27.8%	2.8%	4.9%	7.9%	8.6%
Depository institution loans	56.7	3.4%	3.8%	670.5	5.1%	5.3%	1.8%	1.5%	1121.8	6.7%	7.5%	1.6%	2.2%	3.3%	3.7%
Other loans and advances	30.0	1.8%	2.0%	134.6	1.0%	1.1%	(0.7%)	(0.9%)	186.9	1.1%	1.2%	0.1%	0.2%	(0.7%)	(0.8%)
Mortgages	201.0	11.9%	13.4%	2092.9	16.0%	16.6%	4.1%	3.1% x	2871.4	17.1%	19.1%	1.1%	2.6%	5.2%	5.7%
Trade payables	28.4	1.7%	1.9%	334.5	2.6%	2.6%	0.9%	0.7%	441.4	2.6%	2.9%	0.1%	0.3%	1.0%	1.0%
Taxes payable	6.6	0.4%	0.4%	86.7	0.7%	0.7%	0.3%	0.2%	105.4	0.6%	0.7%	(0.0%)	0.0%	0.2%	0.3%
Foreign direct investment in US	0.6	0.0%	0.0%	3.3	0.0%	0.0%	(0.0%)	(0.0%)	7.3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Miscellaneous liabilities	26.1	1.5%	1.7%	857.9	6.6%	6.8%	5.0%	5.0% x	1249.0	7.4%	8.3%	0.9%	1.5%	5.9%	6.6%
<b>Net worth</b>	1148.5	68.0%	76.7%	8461.2	64.6%	66.9%	(3.4%)	(9.8%) x	9040.1	53.9%	60.2%	(10.7%)	(6.8%)	(14.1%)	(16.5%)
Proprietor's income	118.2	7.0%	7.9%	979.0	7.5%	7.7%	0.5%	(0.1%) x	1336.6	8.0%	8.9%	0.5%	1.2%	1.0%	1.0%
Return on equity	118.2		10.3%	979.0	7.5%	11.6%		1.3% x	1336.6		14.8%		3.2%		4.5%

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, B.103 Historical Annuals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 7

Re: US Balance Sheet of Financial Business  
S.6.a Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b> Billions of dollars	1688.9	51.8%		13093.7	22.8%				16768.0	20.3%					
<b>Assets</b>	3261.1	193.1%	100.0%	57468.5	438.9%	100.0%	245.8%		82657.4	492.9%	100.0%	54.0%	0.0%	299.9%	0.0%
Nonfinancial assets	86.9	5.1%	2.7%	1306.8	10.0%	2.3%	4.8%	(0.4%)	1584.2	9.4%	1.9%	(0.5%)	(0.4%)	4.3%	(0.7%)
Real estate	55.7	3.3%	1.7%	751.8	5.7%	1.3%	2.4%	(0.4%)	899.2	5.4%	1.1%	(0.4%)	(0.2%)	2.1%	(0.6%)
Equipment	27.8	1.6%	0.9%	445.4	3.4%	0.8%	1.8%	(0.1%)	519.0	3.1%	0.6%	(0.3%)	(0.1%)	1.4%	(0.2%)
Intellectual property products	3.4	0.2%	0.1%	109.5	0.8%	0.2%	0.6%	0.1%	166.1	1.0%	0.2%	0.2%	0.0%	0.8%	0.1%
Financial assets	3174.2	187.9%	97.3%	56161.7	428.9%	97.7%	241.0%	0.4% x	81073.2	483.5%	98.1%	54.6%	0.4% x	295.6%	0.7%
Monetary gold	11.6	0.7%	0.4%	11.0	0.1%	0.0%	(0.6%)	(0.3%)	11.0	0.1%	0.0%	(0.0%)	(0.0%)	(0.6%)	(0.3%)
Currency and deposits	87.4	5.2%	2.7%	764.8	5.8%	1.3%	0.7%	(1.3%)	3513.1	21.0%	4.3%	15.1%	2.9%	15.8%	1.6%
Debt securities	777.4	46.0%	23.8%	14758.1	112.7%	25.7%	66.7%	1.8% x	22426.0	133.7%	27.1%	21.0%	1.5% x	87.7%	3.3%
SDR certificates	0.5	0.0%	0.0%	2.2	0.0%	0.0%	(0.0%)	(0.0%)	5.2	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0%)
Open market paper	33.2	2.0%	1.0%	1124.7	8.6%	2.0%	6.6%	0.9%	720.0	4.3%	0.9%	(4.3%)	(1.1%)	2.3%	(0.1%)
Treasury securities	214.3	12.7%	6.6%	1647.4	12.6%	2.9%	(0.1%)	(3.7%)	4900.5	29.2%	5.9%	16.6%	3.1%	16.5%	(0.6%)
Agency and GSE backed securities	83.4	4.9%	2.6%	4140.2	31.6%	7.2%	26.7%	4.6% x	6310.9	37.6%	7.6%	6.0%	0.4%	32.7%	5.1%
Municipal securities	146.3	8.7%	4.5%	1346.1	10.3%	2.3%	1.6%	(2.1%) x	1946.9	11.6%	2.4%	1.3%	0.0% x	2.9%	(2.1%)
Corporate and foreign bonds	257.6	15.3%	7.9%	5614.6	42.9%	9.8%	27.6%	1.9% x	7191.6	42.9%	8.7%	0.0%	(1.1%) x	27.6%	0.8%
Nonmarketable government securities	42.1	2.5%	1.3%	882.9	6.7%	1.5%	4.3%	0.2% x	1352.3	8.1%	1.6%	1.3%	0.1% x	5.6%	0.3%
Loans	1330.3	78.8%	40.8%	19781.7	151.1%	34.4%	72.3%	(6.4%)	22325.8	133.1%	27.0%	(17.9%)	(7.4%)	54.4%	(13.8%)
Short term	640.1	37.9%	19.6%	8152.1	62.3%	14.2%	24.4%	(5.4%) x	9509.1	56.7%	11.5%	(5.5%)	(2.7%) x	18.8%	(5.8%)
Long term (mortgages)	690.2	40.9%	21.2%	11629.6	88.8%	20.2%	48.0%	(0.9%) x	12816.7	76.4%	15.5%	(12.4%)	(4.7%) x	35.6%	(8.1%)
Equity in government sponsored fund shares	290.9	17.2%	8.9%	15535.6	118.6%	27.0%	101.4%	18.1%	24957.4	148.8%	30.2%	30.2%	3.2%	131.6%	21.3%
Corporate equities	221.4	13.1%	6.8%	10376.3	79.2%	18.1%	66.1%	11.3% x	15853.9	94.5%	19.2%	15.3%	1.1% x	81.4%	12.4%
Mutual fund shares	3.4	0.2%	0.1%	2180.7	16.7%	3.8%	16.5%	3.7% x	3555.2	21.2%	4.3%	4.5%	0.5% x	21.0%	4.2%
Money market fund shares	0.0	0.0%	0.0%	516.4	3.9%	0.9%	3.9%	0.9%	651.7	3.9%	0.8%	(0.1%)	(0.1%)	3.9%	0.8%
Equity in government sponsored enterprises	2.7	0.2%	0.1%	42.0	0.3%	0.1%	0.2%	(0.0%) x	33.4	0.2%	0.0%	(0.1%)	(0.0%) x	0.0%	(0.0%)
US direct investment abroad	8.5	0.5%	0.3%	446.0	3.4%	0.8%	2.9%	0.5%	914.0	5.5%	1.1%	2.0%	0.3%	4.9%	0.8%
Stock in Federal Reserve Banks	0.9	0.1%	0.0%	13.5	0.1%	0.0%	0.0%	(0.0%)	27.5	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%
Investment in subsidiaries	54.0	3.2%	1.7%	1960.6	15.0%	3.4%	11.8%	1.8%	3921.7	23.4%	4.7%	8.4%	1.3%	20.2%	3.1%
Insurance, pension and std guarantee schemes	581.5	34.4%	17.8%	2304.7	17.6%	4.0%	(16.8%)	(13.8%) x	4102.5	24.5%	5.0%	6.9%	1.0% x	(10.0%)	(12.9%)
Other accounts receivable	95.1	5.6%	2.9%	3005.7	23.0%	5.2%	17.3%	2.3%	3737.4	22.3%	4.5%	(0.7%)	(0.7%)	16.7%	1.6%
<b>Total liabilities and net worth</b>	3261.1	193.1%	100.0%	57468.5	438.9%	100.0%	245.8%	0.0%	82657.4	492.9%	100.0%	54.0%	0.0%	299.9%	0.0%
<b>Liabilities</b>	3104.1	183.8%	95.2%	58641.8	447.9%	102.0%	264.1%	6.9%	83173.9	496.0%	100.6%	48.2%	(1.4%)	312.2%	5.4%
Currency and deposits	1241.7	73.5%	38.1%	8082.9	61.7%	14.1%	(11.8%)	(24.0%) x	15865.2	94.6%	19.2%	32.9%	5.1% x	21.1%	(18.9%)
Debt securities	219.8	13.0%	6.7%	11964.7	91.4%	20.8%	78.4%	14.1% x	12888.1	76.9%	15.6%	(14.5%)	(5.2%) x	63.8%	8.9%
Agency and GSE backed securities	107.3	6.4%	3.3%	6140.7	46.9%	10.7%	40.5%	7.4% x	7769.7	46.3%	9.4%	(0.6%)	(1.3%)	40.0%	6.1%
Corporate bonds	56.1	3.3%	1.7%	4653.8	35.5%	8.1%	32.2%	6.4%	4718.3	28.1%	5.7%	(7.4%)	(2.4%)	24.8%	4.0%
Commercial paper	56.4	3.3%	1.7%	1170.2	8.9%	2.0%	5.6%	0.3%	400.2	2.4%	0.5%	(6.6%)	(1.5%)	(1.0%)	(1.2%)
Loans	118.7	7.0%	3.6%	5029.8	38.4%	8.8%	31.4%	5.1%	4888.8	29.2%	5.9%	(9.3%)	(2.8%)	22.1%	2.3%
Short term	117.2	6.9%	3.6%	4884.3	37.3%	8.5%	30.4%	4.9% x	4686.6	27.9%	5.7%	(9.4%)	(2.8%) x	21.0%	2.1%
Long term (mortgages)	1.5	0.1%	0.0%	145.5	1.1%	0.3%	1.0%	0.2%	202.2	1.2%	0.2%	0.1%	(0.0%)	1.1%	0.2%

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 8

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP from 1975	+/- Assets	2013	% GDP	% Assets	+/- GDP from 2005	+/- Assets	+/- GDP from 1975	+/- Assets
Equity and investment fund shares	184.8	10.9%	5.7%	15146.2	115.7%	26.4%	104.7%	20.7%	25253.9	150.6%	30.6%	34.9%	4.2%	139.7%	24.9%
Money market fund shares	3.7	0.2%	0.1%	1993.1	15.2%	3.5%	15.0%	3.4%	2678.3	16.0%	3.2%	0.8%	(0.2%)	15.8%	3.1%
Corporate equity issues	75.0	4.4%	2.3%	4631.9	35.4%	8.1%	30.9%	5.8% x	6465.6	38.6%	7.8%	3.2%	(0.2%)	34.1%	5.5%
Mutual fund shares	43.0	2.5%	1.3%	6045.6	46.2%	10.5%	43.6%	9.2% x	11544.8	68.9%	14.0%	22.7%	3.4% x	66.3%	12.6%
Equity in government sponsored enterprises	4.4	0.3%	0.1%	46.7	0.4%	0.1%	0.1%	(0.1%)	41.7	0.2%	0.1%	(0.1%)	(0.0%)	(0.0%)	(0.1%)
Foreign direct investment in the US	3.2	0.2%	0.1%	353.2	2.7%	0.6%	2.5%	0.5%	559.3	3.3%	0.7%	0.6%	0.1%	3.1%	0.6%
Equity in noncorporate business	2.1	0.1%	0.1%	11.7	0.1%	0.0%	(0.0%)	(0.0%)	17.6	0.1%	0.0%	0.0%	0.0%	(0.0%)	(0.0%)
Investment by parent	52.5	3.1%	1.6%	2050.4	15.7%	3.6%	12.6%	2.0%	3919.0	23.4%	4.7%	7.7%	1.2%	20.3%	3.1%
Stock in Federal Reserve Banks	0.9	0.1%	0.0%	13.5	0.1%	0.0%	0.0%	(0.0%)	27.5	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%
Insurance, pension and std guarantee schemes	1277.5	75.6%	39.2%	15953.5	121.8%	27.8%	46.2%	(11.4%) x	23046.8	137.4%	27.9%	15.6%	0.1% x	61.8%	(11.3%)
Other accounts payable	61.6	3.6%	1.9%	2464.7	18.8%	4.3%	15.2%	2.4%	1231.0	7.3%	1.5%	(11.5%)	(2.8%)	3.7%	(0.4%)
Net worth (market value)	157.1	9.3%	4.8%	(1173.3)	(9.0%)	(2.0%)	(18.3%)	(6.9%)	(516.5)	(3.1%)	(0.6%)	5.9%	1.4%	(12.4%)	(5.4%)
Corporate profits		0.0%	0.0%		0.0%	0.0%	0.0%	0.0% x		0.0%	0.0%	0.0%	0.0% x	0.0%	0.0%

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, S.6.a Historical Annuals, 1975-1984 and 2005-2013



US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 9

Re: US Balance Sheet of Federal Government  
5.7.a Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets
<b>GDP</b>	1688.9	246.5%		13093.7	426.5%				16768.0	341.8%			
Billions of dollars	685.1	40.6%	100.0%	3070.2	23.4%	100.0%	(17.1%)		4905.4	29.3%	100.0%	5.8%	0.0%
<b>Assets</b>							from 1975					from 2005	
Nonfinancial assets	564.1	33.4%	82.3%	2426.5	18.5%	79.0%	(14.9%)	(3.3%) x	3191.7	19.0%	65.1%	0.5%	(14.0%) x
Real estate	288.1	17.1%	42.1%	1176.5	9.0%	38.3%	(8.1%)	(3.7%)	1472.1	8.8%	30.0%	(0.2%)	(8.3%)
Structures	288.1	17.1%	42.1%	1176.5	9.0%	38.3%	(8.1%)	(3.7%)	1472.1	8.8%	30.0%	(0.2%)	(8.3%)
Equipment	131.8	7.8%	19.2%	520.7	4.0%	17.0%	(3.8%)	(2.3%)	732.2	4.4%	14.9%	0.4%	(2.0%)
Intellectual property products	144.2	8.5%	21.0%	729.3	5.6%	23.8%	(3.0%)	2.7%	987.4	5.9%	20.1%	0.3%	(3.6%)
Financial assets	121.0	7.2%	17.7%	643.7	4.9%	21.0%	(2.2%)	3.3% x	1713.7	10.2%	34.9%	5.3%	14.0% x
Monetary gold and SDRs	2.3	0.1%	0.3%	8.2	0.1%	0.3%	(0.1%)	(0.1%)	55.2	0.3%	1.1%	0.3%	0.9%
Monetary gold	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%
SDR holdings	2.3	0.1%	0.3%	8.2	0.1%	0.3%	(0.1%)	(0.1%)	55.2	0.3%	1.1%	0.3%	0.9%
Currency and deposits	17.5	1.0%	2.6%	68.0	0.5%	2.2%	(0.5%)	(0.3%) x	221.8	1.3%	4.5%	0.8%	2.3% x
Official foreign currencies	0.0	0.0%	0.0%	18.7	0.1%	0.6%	0.1%	0.6%	23.6	0.1%	0.5%	(0.0%)	(0.1%)
Reserve position in IMF (net)	2.2	0.1%	0.3%	8.1	0.1%	0.3%	(0.1%)	(0.1%)	31.0	0.2%	0.6%	0.1%	0.4%
Currency and transferable deposits	11.2	0.7%	1.6%	37.0	0.3%	1.2%	(0.4%)	(0.4%)	163.0	1.0%	3.3%	0.7%	2.1%
Time and savings deposits	0.6	0.0%	0.1%	1.4	0.0%	0.0%	(0.0%)	(0.0%)	1.5	0.0%	0.0%	(0.0%)	(0.0%)
Nonofficial foreign currencies	3.6	0.2%	0.5%	2.6	0.0%	0.1%	(0.2%)	(0.4%)	2.6	0.0%	0.1%	(0.0%)	(0.0%)
Debt securities	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	0.6	0.0%	0.0%	0.0%	0.0%
Agency and GSE backed securities	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%
Corporate and foreign bonds	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	0.6	0.0%	0.0%	0.0%	0.0%
Loans	85.5	5.1%	12.5%	271.7	2.1%	8.8%	(3.0%)	(3.6%)	1039.2	6.2%	21.2%	4.1%	12.3%
Short term	66.4	3.9%	9.7%	195.2	1.5%	6.4%	(2.4%)	(3.3%)	923.7	5.5%	18.8%	4.0%	12.5%
Consumer credit	0	0.0%	0.0%	89.8	0.7%	2.9%	0.7%	2.9%	729.8	4.4%	14.9%	3.7%	12.0%
Other loans and advances	66.4	3.9%	9.7%	105.3	0.8%	3.4%	(3.1%)	(6.3%)	193.9	1.2%	4.0%	0.4%	0.5%
Long term (mortgages)	19.1	1.1%	2.8%	76.6	0.6%	2.5%	(0.5%)	(0.3%)	115.5	0.7%	2.4%	0.1%	(0.1%)
Equity and investment fund shares	4.1	0.2%	0.6%	43.2	0.3%	1.4%	0.1%	0.8%	98.9	0.6%	2.0%	0.3%	0.6%
Corporate equities	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	35.1	0.2%	0.7%	0.2%	0.7%
Equity in international organizations	4.1	0.2%	0.6%	43.2	0.3%	1.4%	0.1%	0.8%	59.5	0.4%	1.2%	0.0%	(0.2%)
Equity in government sponsored enterprises	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%
Equity in investment under Public-Private IP	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	4.4	0.0%	0.1%	0.0%	0.1%
Other accounts receivable	11.5	0.7%	1.7%	252.5	1.9%	8.2%	1.2%	6.5%	298.1	1.8%	6.1%	(0.2%)	(2.1%)
Trade receivables	6.5	0.4%	0.9%	71.0	0.5%	2.3%	0.2%	1.4%	48.8	0.3%	1.0%	(0.3%)	(1.3%)
Taxes receivables	5.0	0.3%	0.7%	91.6	0.7%	3.0%	0.4%	2.3%	165.8	1.0%	3.4%	0.3%	0.4%
Other (miscellaneous assets)	0.0	0.0%	0.0%	89.9	0.7%	2.9%	0.7%	2.9% x	83.4	0.5%	1.7%	(0.2%)	(1.2%) x

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 10

	1975	% GDP	% Assets	2005.0	% GDP	% Assets	+/- GDP from 1975	+/- Assets	2013.0	% GDP	% Assets	+/- GDP from 2005	+/- Assets	+/- GDP from 1975	+/- Assets
Total liabilities and net worth	685.1	40.6%	100.0%	3070.2	23.4%	100.0%	(17.1%)	0.0%	4905.4	29.3%	100.0%	5.8%	0.0%	(11.3%)	0.0%
Liabilities	931.6	55.2%	136.0%	7370.3	56.3%	240.1%	1.1%	104.1%	16132.6	96.2%	328.9%	39.9%	88.8%	41.1%	192.9%
SDR allocations	2.7	0.2%	0.4%	7.0	0.1%	0.2%	(0.1%)	(0.2%)	54.4	0.3%	1.1%	0.3%	0.9%	0.2%	0.7%
Currency and deposits	8.2	0.5%	1.2%	27.5	0.2%	0.9%	(0.3%)	(0.3%) x	25.6	0.2%	0.5%	(0.1%)	(0.4%) x	(0.3%)	(0.7%)
Debt securities	485.4	28.7%	70.9%	5587.0	42.7%	182.0%	13.9%	111.1%	13710.3	81.8%	279.5%	39.1%	97.5%	53.0%	208.6%
SDR certificates	0.5	0.0%	0.1%	2.2	0.0%	0.1%	(0.0%)	(0.0%)	5.2	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Treasury securities including savings bonds	434.9	25.8%	63.5%	4678.0	35.7%	152.4%	10.0%	88.9% x	12328.3	73.5%	251.3%	37.8%	99.0% x	47.8%	187.8%
Federal agency securities	7.9	0.5%	1.2%	23.8	0.2%	0.8%	(0.3%)	(0.4%)	24.5	0.1%	0.5%	(0.0%)	(0.3%)	(0.3%)	(0.7%)
Nonmarketable sec held by pension plans	42.1	2.5%	6.1%	882.9	6.7%	28.8%	4.3%	22.6%	1352.3	8.1%	27.6%	1.3%	(1.2%)	5.6%	21.4%
Loans (mortgages)	1.1	0.1%	0.2%	0.0	0.0%	0.0%	(0.1%)	(0.2%)	0.0	0.0%	0.0%	0.0%	0.0%	(0.1%)	(0.2%)
Insurance, pension and std guarantee schemes	421.4	25.0%	61.5%	1540.9	11.8%	50.2%	(13.2%)	(11.3%)	2089.3	12.5%	42.6%	0.7%	(7.6%)	(12.5%)	(18.9%)
Insurance reserves	10.2	0.6%	1.5%	42.7	0.3%	1.4%	(0.3%)	(0.1%)	50.3	0.3%	1.0%	(0.0%)	(0.4%)	(0.3%)	(0.5%)
Retiree Health Care Funds	0.0	0.0%	0.0%	75.4	0.6%	2.5%	0.6%	2.5%	246.9	1.5%	5.0%	0.9%	2.6%	1.5%	5.0%
Claims of pension fund on sponsor	411.2	24.3%	60.0%	1422.8	10.9%	46.3%	(13.5%)	(13.7%) x	1792.1	10.7%	36.5%	(0.2%)	(9.8%) x	(13.7%)	(23.5%)
Other accounts payable	12.9	0.8%	1.9%	208.0	1.6%	6.8%	0.8%	4.9%	253.0	1.5%	5.2%	(0.1%)	(1.6%)	0.7%	3.3%
Trade payables	11.8	0.7%	1.7%	202.6	1.5%	6.6%	0.8%	4.9%	250.7	1.5%	5.1%	(0.1%)	(1.5%)	0.8%	3.4%
Other (miscellaneous liabilities)	1.1	0.1%	0.2%	5.4	0.0%	0.2%	(0.0%)	0.0%	2.3	0.0%	0.0%	(0.0%)	(0.1%)	(0.1%)	(0.1%)
Net worth (market value)	(246.5)	(14.6%)	(36.0%)	(4300.1)	(32.8%)	(140.1%)	(18.2%)	(104.1%) x	(11227.2)	(67.0%)	(228.9%)	(34.1%)	(88.8%) x	(52.4%)	(192.9%)

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, S.7.a Historical Annals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 11

Re: US Balance Sheet of State and Local Government  
5.8.a Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b> Billions of dollars	1688.9	158.7%		13093.7	152.7%				16768.0	132.6%					
<b>Assets</b>															
Nonfinancial assets	1064.5	63.0%	100.0%	8576.2	65.5%	100.0%	2.5%		12641.4	75.4%	100.0%	9.9%	0.0%	12.4%	0.0%
Real estate	918.2	54.4%	86.3%	6259.0	47.8%	73.0%	(6.6%)	(13.3%)	9703.2	57.9%	76.8%	10.1%	3.8%	3.5%	(9.5%)
Structures	887.4	52.5%	83.4%	5976.8	45.6%	69.7%	(6.9%)	(13.7%)	9335.6	55.7%	73.8%	10.0%	4.2%	3.1%	(9.5%)
Land	887.4	52.5%	83.4%	5976.8	45.6%	69.7%	(6.9%)	(13.7%)	9335.6	55.7%	73.8%	10.0%	4.2%	3.1%	(9.5%)
		0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equipment	25.5	1.5%	2.4%	206.9	1.6%	2.4%	0.1%	0.0%	247.6	1.5%	2.0%	(0.1%)	(0.5%)	(0.0%)	(0.4%)
Intellectual property products	5.3	0.3%	0.5%	75.3	0.6%	0.9%	0.3%	0.4%	120.0	0.7%	0.9%	0.1%	(0.5%)	0.1%	0.5%
Financial assets	146.4	8.7%	13.8%	2317.2	17.7%	27.0%	9.0%	13.3%	2938.2	17.5%	23.2%	(0.2%)	(3.8%)	8.9%	9.5%
Currency and deposits	60.3	3.6%	5.7%	234.8	1.8%	2.7%	(1.8%)	(2.9%)	425.8	2.5%	3.4%	0.7%	0.6%	(1.0%)	(2.3%)
Currency and transferable deposits	13.4	0.8%	1.3%	66.0	0.5%	0.8%	(0.3%)	(0.5%)	123.9	0.7%	1.0%	0.2%	0.2%	(0.1%)	(0.3%)
Time and savings deposits	46.9	2.8%	4.4%	168.8	1.3%	2.0%	(1.5%)	(2.4%)	301.9	1.8%	2.4%	0.5%	0.4%	(1.0%)	(2.0%)
Debt securities	51.0	3.0%	4.8%	1217.4	9.3%	14.2%	6.3%	9.4%	1347.7	8.0%	10.7%	(1.3%)	(3.5%)	5.0%	5.9%
Open market paper	0.0	0.0%	0.0%	153.3	1.2%	1.8%	1.2%	1.8%	76.9	0.5%	0.6%	(0.7%)	(1.2%)	0.5%	0.6%
Treasury securities	27.8	1.6%	2.6%	512.3	3.9%	6.0%	2.3%	3.4%	593.4	3.5%	4.7%	(0.4%)	(1.3%)	1.9%	2.1%
Agency and GSE backed securities	18.2	1.1%	1.7%	413.4	3.2%	4.8%	2.1%	3.1%	490.9	2.9%	3.9%	(0.2%)	(0.9%)	1.8%	2.2%
Municipal securities	5.0	0.3%	0.5%	6.9	0.1%	0.1%	(0.2%)	(0.4%)	13.9	0.1%	0.1%	0.0%	0.0%	(0.2%)	(0.4%)
Corporate and foreign bonds	0.0	0.0%	0.0%	131.5	1.0%	1.5%	1.0%	1.5%	172.5	1.0%	1.4%	0.0%	(0.2%)	1.0%	1.4%
Loans	10.7	0.6%	1.0%	288.9	2.2%	3.4%	1.6%	2.4%	346.3	2.1%	2.7%	(0.1%)	(0.6%)	1.4%	1.7%
Short term	-2.1	(0.1%)	(0.2%)	130.0	1.0%	1.5%	1.1%	1.7%	132.5	0.8%	1.0%	(0.2%)	(0.5%)	0.9%	1.2%
Long term (mortgages)	12.8	0.8%	1.2%	158.9	1.2%	1.9%	0.5%	0.7%	213.9	1.3%	1.7%	0.1%	(0.2%)	0.5%	0.5%
Equity and investment fund shares	0.0	0.0%	0.0%	246.6	1.9%	2.9%	1.9%	2.9%	415.4	2.5%	3.3%	0.6%	0.4%	2.5%	3.3%
Money market fund shares	0.0	0.0%	0.0%	89.9	0.7%	1.0%	0.7%	1.0%	166.6	1.0%	1.3%	0.3%	0.3%	1.0%	1.3%
Corporate equities	0.0	0.0%	0.0%	116.0	0.9%	1.4%	0.9%	1.4%	167.6	1.0%	1.3%	0.1%	(0.0%)	1.0%	1.3%
Mutual fund shares	0.0	0.0%	0.0%	40.7	0.3%	0.5%	0.3%	0.5%	81.2	0.5%	0.6%	0.2%	0.2%	0.5%	0.6%
Other accounts receivable	24.4	1.4%	2.3%	329.4	2.5%	3.8%	1.1%	1.5%	403.0	2.4%	3.2%	(0.1%)	(0.7%)	1.0%	0.9%
Trade receivables	15.2	0.9%	1.4%	142.5	1.1%	1.7%	0.2%	0.2%	168.7	1.0%	1.3%	(0.1%)	(0.3%)	0.1%	(0.1%)
Taxes receivables	9.2	0.5%	0.9%	102.3	0.8%	1.2%	0.2%	0.3%	123.8	0.7%	1.0%	(0.0%)	(0.2%)	0.2%	0.1%
Other (miscellaneous assets)	0.1	0.0%	0.0%	84.6	0.6%	1.0%	0.6%	1.0%	110.5	0.7%	0.9%	0.0%	(0.1%)	0.7%	0.9%
<b>Total liabilities and net worth</b>	1064.5	63.0%	100.0%	8576.2	65.5%	100.0%	2.5%	0.0%	12641.4	75.4%	100.0%	9.9%	0.0%	12.4%	0.0%
<b>Liabilities</b>	349.5	20.7%	32.8%	3385.9	25.9%	39.5%	5.2%	6.6%	4931.0	29.4%	39.0%	3.5%	(0.5%)	8.7%	6.2%
Debt securities (municipals)	213.6	12.6%	20.1%	2579.2	19.7%	30.1%	7.1%	10.0%	2924.9	17.4%	23.1%	(2.3%)	(6.9%)	4.8%	3.1%
Short term	18.6	1.1%	1.7%	42.5	0.3%	0.5%	(0.8%)	(1.3%)	45.3	0.3%	0.4%	(0.1%)	(0.1%)	(0.8%)	(1.4%)
Other	195.0	11.5%	18.3%	2536.7	19.4%	29.6%	7.8%	11.3%	1879.6	11.2%	14.9%	(8.2%)	(14.7%)	(0.3%)	(3.4%)
Loans (short term)	5.8	0.3%	0.5%	10.6	0.1%	0.1%	(0.3%)	(0.4%)	16.2	0.1%	0.1%	0.0%	0.0%	(0.2%)	(0.4%)
Insurance, pension and std guarantee schemes	92.7	5.5%	8.7%	314.0	2.4%	3.7%	(3.1%)	(5.0%)	1204.1	7.2%	9.5%	4.8%	5.9%	1.7%	0.8%
(Claims of pension fund on sponsor)															
Other accounts payable (trade payables)	37.4	2.2%	3.5%	482.0	3.7%	5.6%	1.5%	2.1%	785.8	4.7%	6.2%	1.0%	0.6%	2.5%	2.7%
<b>Net worth (market value)</b>	715.0	42.3%	67.2%	5190.3	39.6%	60.5%	(2.7%)	(6.6%)	7710.4	46.0%	61.0%	6.3%	0.5%	3.6%	(6.2%)

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, 5.8.a Historical Annuals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 12

Re: US Balance Sheet of Rest of the World  
5.9.a Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b> Billions of dollars	1688.9	826.3%	100.0%	13093.7	122.6%	100.0%	from 1975		16768.0	79.5%	100.0%	from 2005		113.7%	100.0%
<b>Assets</b>	204.4	12.1%	100.0%	10678.1	81.6%	100.0%	69.4%	0.0%	21093.4	125.8%	100.0%	44.2%	0.0%	113.7%	0.0%
Nonfinancial assets	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Real estate	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Structures	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Land	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equipment	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Intellectual property products	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Financial assets	204.4	12.1%	100.0%	10678.1	81.6%	100.0%	69.4%	0.0%	21093.4	125.8%	100.0%	44.2%	0.0%	113.7%	0.0%
SDR allocations	2.7	0.2%	1.3%	7.0	0.1%	0.1%	(0.1%)	(1.3%)	54.4	0.3%	0.3%	0.3%	0.2%	0.2%	(1.1%)
Currency and deposits	40.2	2.4%	19.7%	560.1	4.3%	5.2%	1.9%	(14.4%)	1429.8	8.5%	6.8%	4.2%	1.5%	6.1%	(12.9%)
Currency	9.9	0.6%	4.8%	280.4	2.1%	2.6%	1.6%	(2.2%)	491.9	2.9%	2.3%	0.8%	(0.3%)	2.3%	(2.5%)
Transferable deposits	13.7	0.8%	6.7%	19.7	0.2%	0.2%	(0.7%)	(6.5%)	98.4	0.6%	0.5%	0.8%	0.3%	(0.2%)	(6.2%)
Time deposits	22.6	1.3%	11.1%	223.2	1.7%	2.1%	0.4%	(9.0%)	442.8	2.6%	2.1%	0.9%	0.0%	1.3%	(9.0%)
Net interbank items due from US banks	-6.0	(0.4%)	(2.9%)	36.7	0.3%	0.3%	0.6%	3.3%	396.7	2.4%	1.9%	2.1%	1.5%	2.7%	4.8%
Debt securities	88.0	5.2%	43.1%	4980.2	38.0%	46.6%	32.8%	3.6%	9592.0	57.2%	45.5%	19.2%	(1.2%)	52.0%	2.4%
Open market paper	5.3	0.3%	2.6%	156.8	1.2%	1.5%	0.9%	(1.1%)	101.7	0.6%	0.5%	(0.6%)	(1.0%)	0.3%	(2.1%)
Treasury securities	65.5	3.9%	32.0%	1984.4	15.2%	18.6%	11.3%	(13.5%)	5794.9	34.6%	27.5%	19.4%	8.9%	30.7%	(4.6%)
Agency and GSE backed securities	2.7	0.2%	1.3%	1006.1	7.7%	9.4%	7.5%	8.1%	885.3	5.3%	4.2%	(2.4%)	(5.2%)	5.1%	2.9%
Municipal securities	0.0	0.0%	0.0%	29.0	0.2%	0.3%	0.2%	0.3%	76.1	0.5%	0.4%	0.2%	0.1%	0.5%	0.4%
Corporate bonds	14.5	0.9%	7.1%	1803.8	13.8%	16.9%	12.9%	9.8%	2734.0	16.3%	13.0%	2.5%	(3.9%)	15.4%	5.9%
Loans (short term)	0.8	0.0%	0.4%	867.6	6.6%	8.1%	6.6%	7.7%	874.4	5.2%	4.1%	(1.4%)	(4.0%)	5.2%	3.8%
Security repurchases	0.5	0.0%	0.2%	705.0	5.4%	6.6%	5.4%	6.4%	734.1	4.4%	3.5%	(1.0%)	(3.1%)	4.3%	3.2%
Loans to US corporate business	0.3	0.0%	0.1%	132.5	1.0%	1.2%	1.0%	1.1%	140.4	0.8%	0.7%	(0.2%)	(0.6%)	0.8%	0.5%
Equity and investment fund shares	58.6	3.5%	28.7%	4210.0	32.2%	39.4%	28.7%	10.8%	8998.4	53.7%	42.7%	21.5%	3.2%	50.2%	14.0%
Money market fund shares	0.0	0.0%	0.0%	23.0	0.2%	0.2%	0.2%	0.2%	113.3	0.7%	0.5%	0.5%	0.3%	0.7%	0.5%
Corporate equities	33.4	2.0%	16.3%	2118.4	16.2%	19.8%	14.2%	3.5%	5163.7	30.8%	24.5%	14.6%	4.6%	28.8%	8.1%
Mutual fund shares	0.0	0.0%	0.0%	162.7	1.2%	1.5%	1.2%	1.5%	544.5	3.2%	2.6%	2.0%	1.1%	3.2%	2.6%
Foreign direct investment in the US	25.2	1.5%	12.3%	1906.0	14.6%	17.8%	13.1%	5.5%	3176.9	18.9%	15.1%	4.4%	(2.8%)	17.5%	2.7%
Other accounts receivable	14.2	0.8%	6.9%	55.3	0.4%	0.5%	(0.4%)	(6.4%)	144.4	0.9%	0.7%	0.4%	0.2%	0.0%	(6.3%)

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 13

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP from 1975	+/- Assets	2013	% GDP	% Assets	+/- GDP from 2005	+/- Assets	+/- GDP from 1975	+/- Assets
Total liabilities and net worth	204.4	12.1%	100.0%	10678.1	81.6%	100.0%	69.4%	0.0%	21093.4	125.8%	100.0%	44.2%	0.0%	113.7%	0.0%
Liabilities	288.5	17.1%	141.1%	9027.4	68.9%	84.5%	51.9%	(56.6%)	16709.8	99.7%	79.2%	30.7%	(5.3%)	82.6%	(61.9%)
SDR holdings	2.3	0.1%	1.1%	8.2	0.1%	(0.1%)	(0.1%)	(1.0%)	55.2	0.3%	0.3%	0.3%	0.2%	0.2%	(0.9%)
Currency and deposits	11.6	0.7%	5.7%	1213.8	9.3%	11.4%	8.6%	5.7%	1035.6	6.2%	4%	(3.1%)	(6.5%)	5.5%	(0.8%)
Official foreign currencies	0.1	0.0%	0.0%	37.6	0.3%	0.4%	0.3%	0.3%	47.4	0.3%	0.2%	(0.0%)	(0.1%)	0.3%	0.2%
Reserve position in IMF (net)	2.2	0.1%	1.1%	8.0	0.1%	0.1%	(0.1%)	(1.0%)	30.8	0.2%	0.1%	0.1%	0.1%	0.1%	(0.9%)
Us private deposits	5.8	0.3%	2.8%	1165.5	8.9%	10.9%	8.6%	8.1%	954.8	5.7%	4.5%	(3.2%)	(6.4%)	5.4%	1.7%
Nonofficial foreign currencies	3.6	0.2%	1.8%	2.6	0.0%	0.0%	(0.2%)	(1.7%)	2.6	0.0%	0.0%	(0.0%)	(0.0%)	(0.2%)	(1.7%)
Debt securities	27.1	1.6%	13.3%	1208.8	9.2%	11.3%	7.6%	(1.9%)	2657.3	15.8%	12.6%	6.6%	1.3%	14.2%	(0.7%)
Commercial paper	0.6	0.0%	0.3%	384.0	2.9%	3.6%	2.9%	3.3%	407.0	2.4%	1.9%	(0.5%)	(1.7%)	2.4%	1.6%
Bonds	26.5	1.6%	13.0%	824.8	6.3%	7.7%	4.7%	(5.2%)	2250.4	13.4%	10.7%	7.1%	2.9%	11.9%	(2.3%)
Loans (short term)	68.2	4.0%	33.4%	523.3	4.0%	4.9%	(0.0%)	(28.5%)	1030.8	6.1%	4.9%	2.2%	(0.0%)	2.1%	(28.5%)
Security repurchases	0.0	0.0%	0.0%	381.0	2.9%	3.6%	2.9%	3.6%	721.6	4.3%	3.4%	1.4%	(0.1%)	4.3%	3.4%
Other loans and advances	46.6	2.8%	22.8%	31.9	0.2%	0.3%	(2.5%)	(22.5%)	32.2	0.2%	0.2%	(0.1%)	(0.1%)	(2.6%)	(22.6%)
Depository institution loans	21.6	1.3%	10.6%	110.4	0.8%	1.0%	(0.4%)	(9.5%)	276.7	1.7%	1.3%	0.8%	0.3%	0.4%	(9.3%)
Nonofficial foreign currency (swap lines)	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	0.3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity and investment fund shares	166.7	9.9%	81.6%	6039.8	46.1%	56.6%	36.3%	(25.0%)	11885.6	70.9%	56.3%	24.8%	(0.2%)	61.0%	(25.2%)
Corporate equities	9.6	0.6%	4.7%	3317.7	25.3%	31.1%	24.8%	26.4%	6444.2	38.4%	30.6%	13.1%	(0.5%)	37.9%	25.9%
US government equity in IBRD, etc.	4.1	0.2%	2.0%	43.2	0.3%	0.4%	0.1%	(1.6%)	59.5	0.4%	0.3%	0.0%	(0.1%)	0.1%	(1.7%)
US direct investment abroad	149.5	8.9%	73.1%	2651.7	20.3%	24.8%	11.4%	(48.3%)	5284.0	31.5%	25.1%	11.3%	0.2%	22.7%	(48.1%)
Investment by holding companies	3.5	0.2%	1.7%	27.1	0.2%	0.3%	(0.0%)	(1.5%)	97.8	0.6%	0.5%	0.4%	0.2%	0.4%	(1.2%)
Other accounts payable	12.5	0.7%	6.1%	33.6	0.3%	0.3%	(0.5%)	(5.8%)	45.3	0.3%	0.2%	0.0%	(0.1%)	(0.5%)	(5.9%)
Net worth (market value)	(84.1)	(5.0%)	(41.1%)	1650.7	12.6%	15.5%	17.6%	56.6%	4383.6	26.1%	20.8%	13.5%	5.3%	31.1%	61.9%

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, S.9.a Historical Annuals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 14

Re: US Credit Market Debt and Total Liabilities and its Relation to Total Financial Assets  
L-485 Comparison 1975/2005/2013

	Billions of dollars		1975	% GDP	% NW	2005	% GDP	% NW	+/- GDP	+/- NW	2013	% GDP	% NW	+/- GDP	+/- NW	+/- GDP	+/- NW
GDP			1688.9	19.3%		13093.7	15.4%		from 1975		16768.0	15.7%		from 2005		from 1975	
Net Worth	Household & Nonprofits, Nonfinancial Corporate & Noncorporate Business *		8758.6	518.6%	100.0%	85234.5	651.0%	100.0%	132.4%		107022.2	638.3%	100.0%	(12.7%)		119.7%	
Credit Market Debt			2616.9	154.9%	29.9%	41480.9	316.8%	48.7%	161.9%	18.8% x	56685.7	338.1%	53.0%	21.3%	4.3% x	183.1%	23.1%
Open market paper			66.6	3.9%	0.8%	1644.2	12.6%	1.9%	8.6%	1.2%	951.6	5.7%	0.9%	(6.9%)	(1.0%)	1.7%	0.1%
Treasury securities			434.9	25.8%	5.0%	4678.0	35.7%	5.5%	10.0%	0.5% x	12328.3	73.5%	11.5%	37.8%	6.0% x	47.8%	6.6%
Agency and GSE backed securities			115.2	6.8%	1.3%	6164.5	47.1%	7.2%	40.3%	5.9% x	7794.1	46.5%	7.3%	(0.6%)	0.1% x	39.7%	6.0%
Municipal securities			223.0	13.2%	2.5%	3019.3	23.1%	3.5%	9.9%	1.0% x	3671.2	21.9%	3.4%	(1.2%)	(0.1%) x	8.7%	0.9%
Corporate and foreign bonds			336.4	19.9%	3.8%	8141.2	62.2%	9.6%	42.3%	5.7% x	11103.2	66.2%	10.4%	4.0%	0.8% x	46.3%	6.5%
Depository institution loans			262.3	15.5%	3.0%	1583.0	12.1%	1.9%	(3.4%)	(1.1%)	2508.8	15.0%	2.3%	2.9%	0.5%	(0.6%)	(0.7%)
Other loans and advances			186.0	11.0%	2.1%	1819.8	13.9%	2.1%	2.9%	0.0%	1935.0	11.5%	1.8%	(2.4%)	(0.3%)	0.5%	(0.3%)
Mortgages			785.6	46.5%	9.0%	12110.3	92.5%	14.2%	46.0%	5.2% x	13295.5	79.3%	12.4%	(13.2%)	(1.8%) x	32.8%	3.5%
Consumer credit			207.0	12.3%	2.4%	2320.6	17.7%	2.7%	5.5%	0.4%	3097.9	18.5%	2.9%	0.8%	0.2%	6.2%	0.5%

<b>Total Liabilities and its Relation to Total Financial Assets</b>																	
<b>Total credit market debt</b>	2616.9	154.9%	29.9%			41480.9	316.8%	48.7%	161.9%	18.8% x	56685.7	338.1%	53.0%	21.3%	4.3% x	183.1%	23.1%
US official reserve assets	7.3	0.4%	0.1%			60.9	0.5%	0.1%	0.0%	(0.0%)	187.7	1.1%	0.2%	0.7%	0.1%	0.7%	0.1%
SDR certificates	0.5	0.0%	0.0%			2.2	0.0%	0.0%	(0.0%)	(0.0%)	5.2	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0%)
Treasury currency	8.2	0.5%	0.1%			27.5	0.2%	0.0%	(0.3%)	(0.1%)	25.6	0.2%	0.0%	(0.1%)	(0.0%)	(0.3%)	(0.1%)
Foreign deposits	5.8	0.3%	0.1%			1165.5	8.9%	1.4%	8.6%	1.3% x	954.8	5.7%	0.9%	(3.2%)	(0.5%) x	5.4%	0.8%
Net interbank liabilities	23.5	1.4%	0.3%			46.0	0.4%	0.1%	(1.0%)	(0.2%)	2795.4	16.7%	2.6%	16.3%	2.6% x	15.3%	2.3%
Checkable deposits and currency	331.1	19.6%	3.8%			1527.2	11.7%	1.8%	(7.9%)	(2.0%) x	3186.5	19.0%	3.0%	7.3%	1.2% x	(0.6%)	(0.8%)
Small time and savings deposits	726.5	43.0%	8.3%			4598.1	35.1%	5.4%	(7.9%)	(2.9%) x	8110.8	48.4%	7.6%	13.3%	2.2% x	5.4%	(0.7%)
Large time deposits	158.3	9.4%	1.8%			1892.4	14.5%	2.2%	5.1%	0.4%	1762.0	10.5%	1.6%	(3.9%)	(0.6%)	1.1%	(0.2%)
Money market fund shares	3.7	0.2%	0.0%			1993.1	15.2%	2.3%	15.0%	2.3%	2678.3	16.0%	2.5%	0.8%	0.2%	15.8%	2.5%
Security repurchase agreements	60.9	3.6%	0.7%			3756.6	28.7%	4.4%	25.1%	3.7% x	3652.9	21.8%	3.4%	(6.9%)	(1.0%)	18.2%	2.7%
Mutual fund shares	43.0	2.5%	0.5%			6045.6	46.2%	7.1%	43.6%	6.6% x	11544.8	68.9%	10.8%	22.7%	3.7% x	66.3%	10.3%
Security credit	24.6	1.5%	0.3%			893.3	6.8%	1.0%	5.4%	0.8%	1236.2	7.4%	1.2%	0.6%	0.1%	5.9%	0.9%
Life insurance reserves	168.6	10.0%	1.9%			1082.6	8.3%	1.3%	(1.7%)	(0.7%)	1416.5	8.4%	1.3%	0.2%	0.1%	(1.5%)	(0.6%)
Pension entitlements	1037.1	61.4%	11.8%			13466.3	102.8%	15.8%	41.4%	4.0% x	19886.1	118.6%	18.6%	15.7%	2.8% x	57.2%	6.7%
Trade payables	278.6	16.5%	3.2%			2982.6	22.8%	3.5%	6.3%	0.3%	3760.9	22.4%	3.5%	(0.3%)	0.0%	5.9%	0.3%
Taxes payable	31.3	1.9%	0.4%			214.5	1.6%	0.3%	(0.2%)	(0.1%)	90.9	0.5%	0.1%	(1.1%)	(0.2%)	(1.3%)	(0.3%)
Miscellaneous	1091.9	64.7%	12.5%			12195.8	93.1%	14.3%	28.5%	1.8% x	17190.4	102.5%	16.1%	9.4%	1.8% x	37.9%	3.6%
<b>Total Liabilities</b>	6729.5	398.5%	76.8%			97988.8	748.4%	115.0%	349.9%	38.1% x	143631.9	856.6%	134.2%	108.2%	19.2% x	458.1%	57.4%
<b>Financial assets not included in liabilities:</b>																	
** Gold	11.6	0.7%	0.1%			11.0	0.1%	0.0%	(0.6%)	(0.1%)	11.0	0.1%	0.0%	(0.0%)	(0.0%)	(0.6%)	(0.1%)
** Corporate equities by sector holding (MV)	839.4					20636.1					33671.6						
Corporate equities held - Households & nonprofits	584.6	34.6%	6.7%			8025.4	61.3%	9.4%	26.7%	2.7%	12451.3	74.3%	11.6%	13.0%	2.2%	39.6%	5.0%
Corporate equities held - Federal Government	0.0	0.0%	0.0%			0.0	0.0%	0.0%	0.0%	0.0%	35.1	0.2%	0.0%	0.2%	0.0%	0.2%	0.0%
Corporate equities held - Financial	221.4	13.1%	2.5%			10376.3	79.2%	12.2%	66.1%	9.6% x	15853.9	94.5%	14.8%	15.3%	2.6% x	81.4%	12.3%
Corporate equities held - State & local	0.0	0.0%	0.0%			116.0	0.9%	0.1%	0.9%	0.1%	167.6	1.0%	0.2%	0.1%	0.0%	1.0%	0.2%
Corporate equities held - Rest of the World	33.4	2.0%	0.4%			2118.4	16.2%	2.5%	14.2%	2.1%	5163.7	30.8%	4.8%	14.6%	2.3%	28.8%	4.4%
Corporate equities by sector Issuing (MV)	839.4					20636.2					33671.5						
Corporate equities issued - Nonfinancial	754.8	44.7%	8.6%			12686.6	96.9%	14.9%	52.2%	6.3% x	20761.7	123.8%	19.4%	26.9%	4.5% x	79.1%	10.8%
Corporate equities issued - Financial	75.0	4.4%	0.9%			4631.9	35.4%	5.4%	30.9%	4.6% x	6465.6	38.6%	6.0%	3.2%	0.6% x	34.1%	5.2%
Corporate equities issued - Rest of the World	9.6	0.6%	0.1%			3317.7	25.3%	3.9%	24.8%	3.8% x	6444.2	38.4%	6.0%	13.1%	2.1% x	37.9%	5.9%
** Household equity in noncorporate business	1150.6	68.1%	13.1%			8473.0	64.7%	9.9%	(3.4%)	(3.2%) x	9057.7	54.0%	8.5%	(10.7%)	(1.5%) x	(14.1%)	(4.7%)

## US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 15

[illegible]

\*\* “Total identified to sectors as assets” equals “Total Liabilities” plus accounts preceded by \*\*

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, L.4 & L.5 Historical Annuals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 16

Re: US Sector Accounts  
Various Comparision 1975/2005/2013

Billions of dollars															
Assets	1975			2005			from 1975			2013			from 2005		
	% GDP	% Acct		% GDP	% Acct	+/- GDP	+/- Acct		% GDP	% Acct	+/- GDP	+/- Acct			
Households & nonprofits															
Nonfinancial Corporate Business	2906.1	172.1%	18.0%	26068.7	199.1%	13.5%	27.0%	(2.1%)	92669.2	552.7%	35.1%	(12.9%)	(3.3%)	164.2%	(5.4%)
Nonfinancial Noncorporate Business	1497.7	88.7%	9.3%	12641.7	96.5%	6.6%	7.9%	(2.7%)	34941.9	208.4%	13.2%	9.3%	(0.3%)	36.3%	(4.7%)
Financial Business	3261.1	193.1%	20.2%	57468.5	438.9%	29.8%	245.8%	9.7%	15023.1	89.6%	5.7%	(7.0%)	(0.9%)	0.9%	(3.6%)
Federal Government	685.1	40.6%	4.2%	3070.2	23.4%	1.6%	(17.1%)	(2.6%)	82657.4	492.9%	31.3%	54.0%	1.5%	299.9%	11.2%
State & Local Government	1064.5	63.0%	6.6%	8576.2	65.5%	4.5%	2.5%	(2.1%)	4905.4	29.3%	1.9%	5.8%	0.3%	(11.3%)	(2.4%)
Rest of the World	204.4	12.1%	1.3%	10678.1	81.6%	5.5%	69.4%	4.3%	12641.4	75.4%	4.8%	9.9%	0.3%	12.4%	(1.8%)
	16179.0		100.0%	192552.2		100.0%			263931.8		100.0%			113.7%	6.7%
Nonfinancial assets															
Households & nonprofits	2286.5	135.4%	30.9%	28532.0	217.9%	45.5%	82.5%	14.6%	27669.2	165.0%	38.5%	(52.9%)	(7.0%)	29.6%	7.6%
Nonfinancial Corporate Business	2131.8	126.2%	28.8%	14168.0	108.2%	22.6%	(18.0%)	(6.2%)	18561.3	110.7%	25.8%	2.5%	3.2%	(15.5%)	(3.0%)
Nonfinancial Noncorporate Business	1414.7	83.8%	19.1%	10044.9	76.7%	16.0%	(7.0%)	(3.1%)	11168.7	66.6%	15.5%	(10.1%)	(0.5%)	(17.2%)	(3.6%)
Financial Business	86.9	5.1%	1.2%	1306.8	10.0%	2.1%	4.8%	0.9%	1584.2	9.4%	2.2%	(0.5%)	0.1%	4.3%	1.0%
Federal Government	564.1	33.4%	7.6%	2426.5	18.5%	3.9%	(14.9%)	(3.8%)	3191.7	19.0%	4.4%	0.5%	0.6%	(14.4%)	(3.2%)
State & Local Government	918.2	54.4%	12.4%	6259.0	47.8%	10.0%	(6.6%)	(2.4%)	9703.2	57.9%	13.5%	10.1%	3.5%	3.5%	1.1%
Rest of the World	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	7402.2		100.0%	62737.2		100.0%			71878.3		100.0%				
Financial assets															
Households & nonprofits	4273.7	253.0%	48.7%	45516.7	347.6%	35.1%	94.6%	(13.6%)	65000.1	387.6%	33.8%	40.0%	(1.2%)	134.6%	(14.8%)
Nonfinancial Corporate Business	774.2	45.8%	8.8%	11900.6	90.9%	9.2%	45.0%	0.3%	16380.6	97.7%	8.5%	6.8%	(0.6%)	51.8%	(0.3%)
Nonfinancial Noncorporate Business	83.0	4.9%	0.9%	2596.8	19.8%	2.0%	14.9%	1.1%	3854.4	23.0%	2.0%	3.2%	0.0%	18.1%	1.1%
Financial Business	3174.2	187.9%	36.2%	56161.7	428.9%	43.3%	241.0%	7.1%	81073.2	483.5%	42.2%	54.6%	(1.0%)	295.6%	6.0%
Federal Government	121.0	7.2%	1.4%	643.7	4.9%	0.5%	(2.2%)	(0.9%)	1713.7	10.2%	0.9%	5.3%	0.4%	3.1%	(0.5%)
State & Local Government	146.4	8.7%	1.7%	2317.2	17.7%	1.8%	9.0%	0.1%	2938.2	17.5%	1.5%	(0.2%)	(0.3%)	8.9%	(0.1%)
Rest of the World	204.4	12.1%	2.3%	10678.1	81.6%	8.2%	69.4%	5.9%	21093.4	125.8%	11.0%	44.2%	2.8%	113.7%	8.7%
	8776.9		100.0%	129814.8		100.0%			192053.6		100.0%				
Liabilities															
Households & nonprofits	763.8	45.2%	11.1%	12162.4	92.9%	11.5%	47.7%	0.4%	13801.2	82.3%	8.8%	(10.6%)	(2.7%)	37.1%	(2.3%)
Nonfinancial Corporate Business	1092.4	64.7%	15.9%	11181.8	85.4%	10.6%	20.7%	(5.3%)	15827.8	94.4%	10.1%	9.0%	(0.4%)	29.7%	(5.8%)
Nonfinancial Noncorporate Business	349.3	20.7%	5.1%	4180.5	31.9%	3.9%	11.2%	(1.1%)	5983.1	35.7%	3.8%	3.8%	(0.1%)	15.0%	(1.3%)
Financial Business	3104.1	183.8%	45.1%	58641.8	447.9%	55.3%	264.1%	10.2%	83173.9	496.0%	53.1%	48.2%	(2.2%)	312.2%	8.0%
Federal Government	931.6	55.2%	13.5%	7370.3	56.3%	7.0%	1.1%	(6.6%)	16132.6	96.2%	10.3%	39.9%	3.3%	41.1%	(3.2%)
State & Local Government	349.5	20.7%	5.1%	3385.9	25.9%	3.2%	5.2%	(1.9%)	4931.0	29.4%	3.1%	3.5%	(0.0%)	8.7%	(1.9%)
Rest of the World	288.5	17.1%	4.2%	9027.4	68.9%	8.5%	51.9%	4.3%	16709.8	99.7%	10.7%	30.7%	2.2%	82.6%	6.5%
	6879.2		100.0%	105950.1		100.0%			156559.4			124.5%			
Net Worth															
Households & nonprofits	5796.4	343.2%	62.3%	61886.4	472.6%	71.5%	129.4%	9.1%	78868.0	470.3%	73.5%	(2.3%)	2.0%	127.1%	11.1%
Nonfinancial Corporate Business	1813.7	107.4%	19.5%	14886.9	113.7%	17.2%	6.3%	(2.3%)	19114.1	114.0%	17.8%	0.3%	0.6%	6.6%	(1.7%)
Nonfinancial Noncorporate Business	1148.5	68.0%	12.3%	8461.2	64.6%	9.8%	(3.4%)	(2.6%)	9040.1	53.9%	8.4%	(10.7%)	(1.4%)	(14.1%)	(3.9%)
Financial Business	157.1	9.3%	1.7%	(1173.3)	(9.0%)	(1.4%)	(18.3%)	(3.0%)	(516.5)	(3.1%)	(0.5%)	5.9%	0.9%	(12.4%)	(2.2%)
Federal Government	(246.5)	(14.6%)	(2.7%)	(4300.1)	(32.8%)	(5.0%)	(18.2%)	(2.3%)	(11227.2)	(67.0%)	(10.5%)	(34.1%)	(5.5%)	(52.4%)	(7.8%)
State & Local Government	715.0	42.3%	7.7%	5190.3	39.6%	6.0%	(2.7%)	(1.7%)	7710.4	46.0%	7.2%	6.3%	1.2%	3.6%	(0.5%)
Rest of the World	(84.1)	(5.0%)	(0.9%)	1650.7	12.6%	1.9%	17.6%	2.8%	4383.6	26.1%	4.1%	13.5%	2.2%	31.1%	5.0%
	9300.1		100.0%	86602.1		100.0%			107372.5		100.0%				







## US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 19

Financial Asset Breakdown (continued)																
Billions of dollars																
Pensions & Life Insurance reserves		1975	% GDP	% Acct	2005	% GDP	% Acct	+/- GDP from 1975	+/- Acct	2013	% GDP	% Acct	+/- GDP from 2005	+/- Acct	+/- GDP from 1975	+/- Acct
Households & nonprofits		1205.7	71.4%	67.5%	14548.9	111.1%	86.3%	39.7%	18.9%	21118.9	125.9%	83.7%	14.8%	(2.6%)	54.6%	16.3%
Nonfinancial Corporate Business																
Nonfinancial Noncorporate Business																
Financial Business		581.5	34.4%	32.5%	2304.7	17.6%	13.7%	(16.8%)	(18.9%)	4102.5	24.5%	16.3%	6.9%	2.6%	(10.0%)	(16.3%)
Federal Government																
State & Local Government																
Rest of the World		1787.2		100.0%	16853.6		100.0%			25221.4		100.0%				
Receivables																
Households & nonprofits																
Nonfinancial Corporate Business		271.4	16.1%	62.9%	2108.2	16.1%	34.1%	0.0%	(28.8%)	2469.4	14.7%	32.4%	(1.4%)	(1.7%)	(1.3%)	(30.5%)
Nonfinancial Noncorporate Business		14.6	0.9%	3.4%	430.9	3.3%	7.0%	2.4%	3.6%	558.0	3.3%	7.3%	0.0%	0.4%	2.5%	3.9%
Financial Business		95.1	5.6%	22.1%	3005.7	23.0%	48.6%	17.3%	26.6%	3737.4	22.3%	49.1%	(0.7%)	0.5%	16.7%	27.1%
Federal Government		11.5	0.7%	2.7%	252.5	1.9%	4.1%	1.2%	1.4%	298.1	1.8%	3.9%	(0.2%)	(0.2%)	1.1%	1.3%
State & Local Government		24.4	1.4%	5.7%	329.4	2.5%	5.3%	1.1%	(0.3%)	403.0	2.4%	5.3%	(0.1%)	(0.0%)	1.0%	(0.4%)
Rest of the World		14.2	0.8%	3.3%	55.3	0.4%	0.9%	(0.4%)	(2.4%)	144.4	0.9%	1.9%	0.4%	1.0%	0.0%	(1.4%)
		431.2			6182.0					7610.3			0.0%		0.0%	0.0%
Miscellaneous assets																
Households & nonprofits		44.0	2.6%	15.4%	608.7	4.6%	7.7%	2.0%	(7.7%)	924.9	5.5%	8.7%	0.9%	0.9%	2.9%	(6.7%)
Nonfinancial Corporate Business		212.6	12.6%	74.5%	5963.2	45.5%	75.7%	33.0%	1.2%	7536.1	44.9%	70.7%	(0.6%)	(5.1%)	32.4%	(3.8%)
Nonfinancial Noncorporate Business		28.8	1.7%	10.1%	1301.8	9.9%	16.5%	8.2%	6.4%	2202.6	13.1%	20.7%	3.2%	4.1%	11.4%	10.6%
Financial Business																
Federal Government																
State & Local Government																
Rest of the World		285.4		100.0%	7873.7		100.0%			10663.6		100.0%				





US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 22

Re: US Assets and Liabilities of the Personal Sector  
L.10 Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b>	Billions of dollars	1688.9	21.0%	13093.7	15.1%	16768.0	15.6%		107692.3	642.2%	100.0%	(19.8%)	0.0%	165.1%	0.0%
<b>Assets</b>		8057.8	477.1%	86690.5	662.1%	107692.3	642.2%	(19.8%)							
Nonfinancial assets (BS-HH & BS-NN)		3701.2	219.1%	38576.9	294.6%	38837.9	231.6%	(63.0%)	(8.4%)	(9.9%)					
Real estate		2881.2	170.6%	33238.5	253.9%	32160.3	191.8%	(62.1%)	(8.5%)	(5.9%)					
Households		1992.4	118.0%	27852.8	212.7%	25144.7	150.0%	(62.8%)	(8.8%)	(1.4%)					
Nonprofit organizations & Nonresidential		888.8	52.6%	5385.7	41.1%	7015.6	41.8%	0.7%	0.3%	(10.8%)	(4.5%)				
Consumer durable goods		578.0	34.2%	4107.8	31.4%	4942.2	29.5%	4.6%	1.0%	(1.9%)	(0.1%)				
Equipment (nonprofits & noncorporate bus)		147.5	8.7%	785	6.0%	1098.6	6.6%	0.6%	0.1%	(2.2%)	(0.8%)				
Inventories (noncorporate business)		80.1	4.7%	218.4	1.7%	297.3	1.8%	0.3%	0.1%	(3.0%)	(0.7%)				
Intellectual property products (nonprofits)		14.4	0.9%	227.3	1.7%	339.4	2.0%	0.3%	0.3%	0.3%	0.1%	1.2%	0.1%		
Financial assets (BS-HH & BS-NN <i>vs</i> equal Fed)		3208.2	190.0%	39652.3	302.8%	59814.3	356.7%	55.5%	53.9%	9.8%	166.8%	15.7%			
Deposits	L	956.9	56.7%	7024.8	53.7%	10624.1	63.4%	9.9%	9.7%	1.8%	6.7%	(2.0%)			
Foreign deposits	L	0.0	0.0%	63.8	0.5%	52.5	0.3%	0.0%	(0.2%)	(0.0%)	0.3%	0.0%			
Checkable deposits and currency	L	183	10.8%	660.1	5.0%	1575.5	9.4%	1.5%	4.4%	0.7%	(1.4%)	(0.8%)			
Time and sav'ngs deposits	L	770.3	45.6%	5289.1	40.4%	7770.5	46.3%	7.2%	5.9%	1.1%	0.7%	(2.3%)			
Money market fund shares	L	3.7	0.2%	1011.7	7.7%	1225.6	7.3%	1.1%	(0.4%)	(0.0%)	7.1%	1.1%			
Securities	F	894.8	53.0%	14916.4	113.9%	23343.9	139.2%	21.7%	25.3%	4.5%	86.2%	10.6%			
Open market paper	F	19.7	1.2%	98.4	0.8%	15.0	0.1%	0.0%	(0.7%)	(0.1%)	(1.1%)	(0.2%)			
Treasury securities	F	113.1	6.7%	481.9	3.7%	999.3	6.0%	0.9%	2.3%	0.4%	(0.7%)	(0.5%)			
Agency and GSE backed securities	F	7.6	0.4%	587.4	4.5%	97.7	0.6%	0.1%	(3.9%)	(0.6%)	0.1%	(0.0%)			
Municipal securities	F	66.8	4.0%	1605	12.3%	1623.6	9.7%	1.5%	(2.6%)	(0.3%)	5.7%	0.7%			
Corporate and foreign bonds	F	64.3	3.8%	591.4	4.5%	1004.6	6.0%	0.9%	1.5%	0.3%	2.2%	0.1%			
Corporate equities (market value)	F	584.6	34.6%	8025.4	61.3%	12451.3	74.3%	11.6%	13.0%	2.3%	39.6%	4.3%			
Mutual fund shares	F	38.7	2.3%	3527.1	26.9%	7152.4	42.7%	6.6%	15.7%	2.6%	40.4%	6.2%			
Security credit	M	4.7	0.3%	4.7	0.0%	4.7	0.0%	0.0%	(0.0%)	(0.0%)	(0.3%)	(0.1%)			
Life insurance reserves	F	168.6	10.0%	1082.6	8.3%	1232.8	7.4%	1.1%	(0.9%)	(0.1%)	(2.6%)	(0.9%)			
Pension entitlements	F	1037.1	61.4%	13466.3	102.8%	19886.1	118.6%	18.5%	15.7%	2.9%	57.2%	5.6%			
Life Insurance Companies	F	72.3	4.3%	2004.9	15.3%	2816.9	16.8%	2.6%	1.5%	0.3%	12.5%	1.7%			
Private pension funds	F	314.5	18.6%	5435.9	41.5%	8141.8	48.6%	7.6%	7.0%	1.3%	29.9%	3.7%			
Governments	F	650.2	38.5%	6025.5	46.0%	8927.4	53.2%	8.3%	7.2%	1.3%	14.7%	0.2%			
Miscellaneous and other assets	?	150.7	8.9%	3162.3	24.2%	4727.4	28.2%	4.4%	4.0%	0.7%	19.3%	2.5%			
<b>Liabilities</b>		1113.0	65.9%	16342.9	124.8%	19784.3	118.0%	18.4%	(6.8%)	(0.5%)	52.1%	4.6%			
Home mortgages*	F	459.1	27.2%	8912.7	68.1%	9415.9	56.2%	8.7%	(11.9%)	(1.5%)	29.0%	3.0%			
Other mortgages*	F	216.0	12.8%	2265.7	17.3%	3074.9	18.3%	2.9%	1.0%	0.2%	5.5%	0.2%			
Consumer credit	M	207.0	12.3%	2320.6	17.7%	3097.9	18.5%	2.9%	0.8%	0.2%	6.2%	0.3%			
Policy loans*	M	31.5	1.9%	119.0	0.9%	141.3	0.8%	0.1%	(0.1%)	(0.0%)	(1.0%)	(0.3%)			
Security credit	M	8.6	0.5%	232.4	1.8%	339.2	2.0%	0.3%	0.2%	0.0%	10.9%	0.2%			
Other liabilities*	?	190.9	11.3%	2492.4	19.0%	3715.2	22.2%	3.4%	3.1%	0.6%	19.5%	1.1%			
<b>Net worth</b>		6944.8	411.2%	70347.6	537.3%	87908.0	524.3%	81.6%	(13.0%)	0.5%	113.1%	(4.6%)			

\* Fed figures in table L.10 differ slightly for Home and Other mortgages, but total is the same. Similar with Policy loans and other liabilities. These flow from BS-HH & BS-NN.

L = Liquidity held for near term transactions, F = Securities held for longer term cash flow, i.e. provision of liquidity, M = Mixed L & F, ? = unknown

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, L.10 Historical Annals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 23

Re: US Assets of the Public & Private Sectors  
L.10+ Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b> Billions of dollars	1688.9	21.5%		13093.7	17.7%				16768.0	18.0%					
<b>Total Assets (public &amp; private sectors)</b>	8319.7	492.6%	100.0%	74839.3	571.6%	100.0%	79.0%	from 1975	89565.1	534.1%	100.0%	(37.4%)		41.5%	
<b>Nonfinancial assets public &amp; private sectors</b>	7402.2	438.3%	89.0%	62737.2	479.1%	83.8%	40.9%	(5.1%)	71878.3	428.7%	80.3%	(50.5%)	(3.6%)	(9.6%)	(8.7%)
<b>Net financial assets public &amp; private sectors</b>	917.5	54.3%	11.0%	12102.1	92.4%	16.2%	38.1%	5.1%	17686.8	105.5%	19.7%	13.1%	3.6%	51.2%	8.7%
<b>Assets (public sectors)</b>	468.6	27.7%	100.0%	890.2	6.8%	100.0%	(20.9%)		(3516.8)	(21.0%)	100.0%	(27.8%)		(48.7%)	
<b>Nonfinancial assets public sectors</b>	1482.3	87.8%	316.3%	8685.5	66.3%	975.7%	(21.4%)	659.4%	12894.9	76.9%	(366.7%)	10.6%	(1342.3%)	(10.9%)	(683.0%)
<b>Nonfinancial assets Federal government</b>	564.1	33.4%	120.4%	2426.5	18.5%	272.6%	(14.9%)	152.2%	3191.7	19.0%	(90.8%)	0.5%	(363.3%)	(14.4%)	(211.1%)
<b>Nonfinancial assets State &amp; local government</b>	918.2	54.4%	195.9%	6259.0	47.8%	703.1%	(6.6%)	507.2%	9703.2	57.9%	(275.9%)	10.1%	(979.0%)	3.5%	(471.9%)
<b>Net financial assets public sectors</b>	(1013.7)	(60.0%)	(216.3%)	(7795.3)	(59.5%)	(875.7%)	0.5%	(659.4%)	(16411.7)	(97.9%)	466.7%	(38.3%)	1342.3%	(37.9%)	683.0%
<b>Net financial assets Federal government</b>	(810.6)	(48.0%)	(173.0%)	(6726.6)	(51.4%)	(755.6%)	(3.4%)	(582.6%)	(14418.9)	(86.0%)	410.0%	(34.6%)	1165.6%	(38.0%)	583.0%
<b>Net financial assets state &amp; local government</b>	(203.1)	(12.0%)	(43.3%)	(1068.7)	(8.2%)	(120.1%)	3.9%	(76.7%)	(1992.8)	(11.9%)	56.7%	(3.7%)	176.7%	0.1%	100.0%
<b>Assets (private sectors)</b>	7851.1	464.9%	100.0%	73949.1	564.8%	100.0%	99.9%		93081.9	555.1%	100.0%	(9.7%)		90.3%	
<b>Nonfinancial assets (Domestic private sectors)</b>	5919.9	350.5%	75.4%	54051.7	412.8%	73.1%	62.3%	(2.3%)	58983.4	351.8%	63.4%	(61.0%)	(9.7%)	1.2%	(12.0%)
<b>Households &amp; nonprofits nonfinancial assets</b>	3701.2	219.1%	47.1%	38576.9	294.6%	52.2%	75.5%	5.0%	38837.9	231.6%	41.7%	(63.0%)	(10.4%)	12.5%	(5.4%)
<b>Nonfinancial corporate business nonfin assets</b>	2131.8	126.2%	27.2%	14168.0	108.2%	19.2%	(18.0%)	(8.0%)	18561.3	110.7%	19.9%	2.5%	0.8%	(15.5%)	(7.2%)
<b>Financial business nonfinancial assets</b>	86.9	5.1%	1.1%	1306.8	10.0%	1.8%	4.8%	0.7%	1584.2	9.4%	1.7%	(0.5%)	(0.1%)	4.3%	0.6%
<b>Nonfinancial assets (breakdown)</b>															
<b>Real estate</b>	4107.8	243.2%	52.3%	41914.6	320.1%	56.7%	76.9%	4.4%	43295.6	258.2%	46.5%	(61.9%)	(10.2%)	15.0%	(5.8%)
<b>Households</b>	1992.4	118.0%	25.4%	27852.8	212.7%	37.7%	94.7%	12.3%	25144.7	150.0%	27.0%	(62.8%)	(10.7%)	32.0%	1.6%
<b>Nonprofit organizations &amp; nonresidential</b>	888.8	52.6%	11.3%	5385.7	41.1%	7.3%	(11.5%)	(4.0%)	7015.6	41.8%	7.5%	0.7%	0.3%	(10.8%)	(3.8%)
<b>Nonfinancial corporate business</b>	1170.9	69.3%	14.9%	7924.3	60.5%	10.7%	(8.8%)	(4.2%)	10236.1	61.0%	11.0%	0.5%	0.3%	(8.3%)	(3.9%)
<b>Financial business</b>	55.7	3.3%	0.7%	751.8	5.7%	1.0%	2.4%	0.3%	899.2	5.4%	1.0%	(0.4%)	(0.1%)	2.1%	0.3%
<b>Durable goods and equipment</b>	1303.5	77.2%	16.6%	8636.0	66.0%	11.7%	(11.2%)	(4.9%)	10821.5	64.5%	11.6%	(1.4%)	(0.1%)	(12.6%)	(5.0%)
<b>Consumer durable goods</b>	578.0	34.2%	7.4%	4107.8	31.4%	5.6%	(2.9%)	(1.8%)	4942.2	29.5%	5.3%	(1.9%)	(0.2%)	(4.7%)	(2.1%)
<b>Nonprofits &amp; nonfinancial noncorporate bus</b>	147.5	8.7%	1.9%	785	6.0%	1.1%	(2.7%)	(0.8%)	1098.6	6.6%	1.2%	0.6%	0.1%	(2.2%)	(0.7%)
<b>Nonfinancial corporate business</b>	550.2	32.6%	7.0%	3297.8	25.2%	4.5%	(7.4%)	(2.5%)	4261.7	25.4%	4.6%	0.2%	0.1%	(7.2%)	(2.4%)
<b>Financial business</b>	27.8	1.6%	0.4%	445.4	3.4%	0.6%	1.8%	0.2%	519.0	3.1%	0.6%	(0.3%)	(0.0%)	1.4%	0.2%
<b>Inventories</b>	387.3	22.9%	4.9%	1842.3	14.1%	2.5%	(8.9%)	(2.4%)	2443.9	14.6%	2.6%	0.5%	0.1%	(8.4%)	(2.3%)
<b>Nonfinancial noncorporate business</b>	80.1	4.7%	1.0%	218.4	1.7%	0.3%	(3.1%)	(0.7%)	297.3	1.8%	0.3%	0.1%	0.0%	(3.0%)	(0.7%)
<b>Nonfinancial corporate business</b>	307.2	18.2%	3.9%	1623.9	12.4%	2.2%	(5.8%)	(1.7%)	2146.6	12.8%	2.3%	0.4%	0.1%	(5.4%)	(1.6%)
<b>Intellectual property products</b>	121.4	7.2%	1.5%	1658.8	12.7%	2.2%	5.5%	0.7%	2422.4	14.4%	2.6%	1.8%	0.4%	7.3%	1.1%
<b>Nonprofits &amp; nonfinancial noncorporate bus</b>	14.4	0.9%	0.2%	227.3	1.7%	0.3%	0.9%	0.1%	339.4	2.0%	0.4%	0.3%	0.1%	1.2%	0.2%
<b>Nonfinancial corporate business</b>	103.6	6.1%	1.3%	1322.0	10.1%	1.8%	4.0%	0.5%	1916.9	11.4%	2.1%	1.3%	0.3%	5.3%	0.7%
<b>Financial business</b>	3.4	0.2%	0.0%	109.5	0.8%	0.1%	0.6%	0.1%	166.1	1.0%	0.2%	0.2%	0.0%	0.8%	0.1%
<b>Net financial assets domestic private sectors</b>	1847.1	109.4%	23.5%	21548.1	164.6%	29.1%	55.2%	5.6%	38482.1	229.5%	41.3%	64.9%	12.2%	120.1%	17.8%
<b>Net financial assets HH &amp; NN business</b>	2095.2	124.1%	26.7%	23309.4	178.0%	31.5%	54.0%	4.8%	40030.0	238.7%	43.0%	60.7%	11.5%	114.7%	16.3%
<b>Net financial assets NC business</b>	(318.2)	(18.8%)	(4.1%)	718.8	5.5%	1.0%	24.3%	5.0%	552.8	3.3%	0.6%	(2.2%)	(0.4%)	22.1%	4.6%
<b>Net financial assets financial business</b>	70.1	4.2%	0.9%	(2480.1)	(18.9%)	(3.4%)	(23.1%)	(4.2%)	(2100.7)	(12.5%)	(2.3%)	6.4%	1.1%	(16.7%)	(3.1%)
<b>Net financial assets private sectors</b>	1931.2	114.3%	24.6%	19897.4	152.0%	26.9%	37.6%	2.3%	34098.5	203.4%	36.6%	51.4%	9.7%	89.0%	12.0%
<b>Net financial assets rest of the world</b>	84.1	5.0%	1.1%	(1650.7)	(12.6%)	(2.2%)	(17.6%)	(3.3%)	(4383.6)	(26.1%)	(4.7%)	(13.5%)	(2.5%)	(31.1%)	(5.8%)

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, Various tables Historical Annuals, 1975-1984 and 2005-2013.

# US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 24

Re: MW US Balance Sheet of Federal Government with the addition of Human Capital at Market Value, Natural Resource and Infrastructure Value Allocations  
S.7.a Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b> Billions of dollars	1688.9	3.4%		13093.7	5.9%				16768.0	5.1%					
<b>Assets</b>															
Nonfinancial assets	49520.1	2932.1%	100.0%	223520.2	1707.1%	100.0%	(1225.0%)		325680.4	1942.3%	100.0%	235.2%	0.0%	(989.8%)	0.0%
Real estate	49399.1	2924.9%	99.8%	222876.5	1702.2%	99.7%	(1222.8%)	(0.0%)	323966.7	1932.1%	99.5%	229.9%	(0.2%)	(992.9%)	(0.3%)
Structures	2323.1	137.6%	4.7%	5426.5	41.4%	2.4%	(96.1%)	(2.3%)	6197.1	37.0%	1.9%	(4.5%)	(0.5%)	(100.6%)	(2.8%)
* Land	288.1	17.1%	0.6%	1176.5	9.0%	0.5%	(8.1%)	(0.1%)	1472.1	8.8%	0.5%	(0.2%)	(0.1%)	(8.3%)	(0.1%)
Infrastructure	535.0	31.7%	1.1%	1950.0	14.9%	0.9%	(16.8%)	(0.2%)	2252.0	13.9%	0.7%	(1.0%)	(0.2%)	(17.8%)	(0.4%)
Equipment	1500.0	88.8%	3.0%	2300.0	17.6%	1.0%	(71.2%)	(2.0%)	2400.0	14.3%	0.7%	(3.3%)	(0.3%)	(74.5%)	(2.3%)
Intellectual property products	131.8	7.8%	0.3%	520.7	4.0%	0.2%	(3.8%)	(0.0%)	732.2	4.4%	0.2%	0.4%	(0.0%)	(3.4%)	(0.0%)
*** Human capital	144.2	8.5%	0.3%	729.3	5.6%	0.3%	(3.0%)	0.0%	987.4	5.9%	0.3%	0.3%	(0.0%)	(2.6%)	0.0%
*** Human capital of citizenry	46800.0	2771.0%	94.5%	216200.0	1651.2%	96.7%	(1119.9%)	2.2%	316050.0	1884.8%	97.0%	233.7%	0.3%	(886.2%)	2.5%
*** Human capital of aliens	46800.0	2771.0%	94.5%	200000.0	1527.5%	89.5%	(1243.6%)	(5.0%)	294000.0	1753.3%	90.3%	225.9%	0.8%	(1017.7%)	(4.2%)
*** Human capital of undocumented aliens	0.0%	0.0%	0.0%	8100.0	61.9%	3.6%	61.9%	3.6%	11025.0	65.8%	3.4%	3.9%	(0.2%)	65.8%	3.4%
Financial assets	121.0	7.2%	0.2%	643.7	4.9%	0.3%	(2.2%)	0.0%	11025.0	65.8%	3.4%	3.9%	(0.2%)	65.8%	3.4%
Monetary gold and SDRs	2.3	0.1%	0.0%	8.2	0.1%	0.0%	(0.1%)	(0.0%)	1713.7	10.2%	0.5%	5.3%	0.2%	3.1%	0.3%
Monetary gold	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SDR holdings	2.3	0.1%	0.0%	8.2	0.1%	0.0%	(0.1%)	(0.0%)	55.2	0.3%	0.0%	0.3%	0.0%	0.2%	0.0%
Currency and deposits	17.5	1.0%	0.0%	68	0.5%	0.0%	(0.5%)	(0.0%)	221.8	1.3%	0.1%	0.8%	0.0%	0.3%	0.0%
Official foreign currencies	0.0	0.0%	0.0%	18.7	0.1%	0.0%	0.1%	0.0%	23.6	0.1%	0.0%	(0.0%)	(0.0%)	0.1%	0.0%
Reserve position in IMF (net)	2.2	0.1%	0.0%	8.1	0.1%	0.0%	(0.1%)	(0.0%)	31	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%
Currency and transferable deposits	11.2	0.7%	0.0%	37	0.3%	0.0%	(0.4%)	(0.0%)	163	1.0%	0.1%	0.7%	0.0%	0.3%	0.0%
Time and savings deposits	0.6	0.0%	0.0%	1.4	0.0%	0.0%	(0.0%)	(0.0%)	1.5	0.0%	0.0%	(0.0%)	(0.0%)	(0.0%)	(0.0%)
Nonofficial foreign currencies	3.6	0.2%	0.0%	2.6	0.0%	0.0%	(0.2%)	(0.0%)	2.6	0.0%	0.0%	(0.0%)	(0.0%)	(0.2%)	(0.0%)
Debt securities	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Agency and GSE backed securities	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Corporate and foreign bonds	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Loans	85.5	5.1%	0.2%	271.7	2.1%	0.1%	(3.0%)	(0.1%)	1039.2	6.2%	0.3%	4.1%	0.2%	1.1%	0.1%
Short term	66.4	3.9%	0.1%	195.2	1.5%	0.1%	(2.4%)	(0.0%)	923.7	5.5%	0.3%	4.0%	0.2%	1.6%	0.1%
Consumer credit	0	0.0%	0.0%	89.8	0.7%	0.0%	0.7%	0.0%	729.8	4.4%	0.2%	3.7%	0.2%	4.4%	0.2%
Other loans and advances	66.4	3.9%	0.1%	105.3	0.8%	0.0%	(3.1%)	(0.1%)	193.9	1.2%	0.1%	0.4%	0.0%	(2.8%)	(0.1%)
Long term (mortgages)	19.1	1.1%	0.0%	76.6	0.6%	0.0%	(0.5%)	(0.0%)	115.5	0.7%	0.0%	0.1%	0.0%	(0.4%)	(0.0%)
Equity and investment fund shares	4.1	0.2%	0.0%	43.2	0.3%	0.0%	0.1%	0.0%	98.9	0.6%	0.0%	0.3%	0.0%	0.3%	0.0%
Corporate equities	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	35.1	0.2%	0.0%	0.2%	0.0%	0.2%	0.0%
Equity in international organizations	4.1	0.2%	0.0%	43.2	0.3%	0.0%	0.1%	0.0%	59.5	0.4%	0.0%	0.0%	(0.0%)	0.1%	0.0%
Equity in government sponsored enterprises	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity in investment under Public-Private IP	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	4.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other accounts receivable	11.5	0.7%	0.0%	252.5	1.9%	0.1%	1.2%	0.1%	298.1	1.8%	0.1%	(0.2%)	(0.0%)	1.1%	0.1%
Trade receivables	6.5	0.4%	0.0%	71	0.5%	0.0%	0.2%	0.0%	48.8	0.3%	0.0%	(0.3%)	(0.0%)	(0.1%)	0.0%
Taxes receivables	5.0	0.3%	0.0%	91.6	0.7%	0.0%	0.4%	0.0%	165.8	1.0%	0.1%	0.3%	0.0%	0.7%	0.0%
Other (miscellaneous assets)	0.0	0.0%	0.0%	89.9	0.7%	0.0%	0.7%	0.0%	83.4	0.5%	0.0%	(0.2%)	(0.0%)	0.5%	0.0%

\*Resource value of land was figured for 650M acres of federal land at \$3,000 acre in 2005 and extrapolated for 1975 and 2013.

\*\*American Society of Civil Engineers reports funding needs to raise US infrastructure to Grade B status of \$3.6T by 2020. Assuming depreciation of 33% gives current cash value of \$7.2T and it could be greater. One third of this amount has been assigned to the Federal and two thirds to the State & local accounts for 2013 and extrapolated backward for 2005 and 1975.

\*\*\* Figures in Nonfinancial assets Federal government include human capital based on figures from "Human Capital Accounting in the United States, 1994-2006" by Michael S. Christian, Survey of Current Business, June 2010, U.S. Department of Commerce, Bureau of Economic Analysis. Taken from Table 1, Human Capital Stock for 2005, Nonfinal, Total column and extrapolated for 1975 and 2013 and for alien population of 12M each category 2005 and 2013.

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, S.7.a Historical Annuals, 1975-1984 and 2005-2013



US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 25

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP from 1975	+/- Assets from 1975	2013	% GDP	% Assets	+/- GDP from 2005	+/- Assets from 2005	+/- GDP from 1975	+/- Assets from 1975
<b>Total liabilities and net worth</b>	49520.1	2932.1%	100.0%	223520.2	1707.1%	100.0%	(1225.0%)	0.0%	325680.4	1942.3%	100.0%	235.2%	0.0%	(989.8%)	0.0%
<b>Liabilities</b>	931.6	55.2%	1.9%	7370.3	56.3%	3.3%	1.1%	1.4%	16132.6	96.2%	5.0%	39.9%	1.7%	41.1%	3.1%
SDR allocations	2.7	0.2%	0.0%	7	0.1%	0.0%	(0.1%)	(0.0%)	54.4	0.3%	0.0%	0.3%	0.0%	0.2%	0.0%
Currency and deposits	8.2	0.5%	0.0%	27.5	0.2%	0.0%	(0.3%)	(0.0%)	25.6	0.2%	0.0%	(0.1%)	(0.0%)	(0.3%)	(0.0%)
Debt securities	485.4	28.7%	1.0%	5587	42.7%	2.5%	13.9%	1.5%	13710.3	81.8%	4.2%	39.1%	1.7%	53.0%	3.2%
SDR certificates	0.5	0.0%	0.0%	2.2	0.0%	0.0%	(0.0%)	(0.0%)	5.2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treasury securities including savings bonds	434.9	25.8%	0.9%	4678	35.7%	2.1%	10.0%	1.2%	12328.3	73.5%	3.8%	37.8%	1.7%	47.8%	2.9%
Federal agency securities	7.9	0.5%	0.0%	23.8	0.2%	0.0%	(0.3%)	(0.0%)	24.5	0.1%	0.0%	(0.0%)	(0.0%)	(0.3%)	(0.0%)
Nonmarketable securities held by pension pla	42.1	2.5%	0.1%	882.9	6.7%	0.4%	4.3%	0.3%	1352.3	8.1%	0.4%	1.3%	0.0%	5.6%	0.3%
Loans (mortgages)	1.1	0.1%	0.0%	0	0.0%	0.0%	(0.1%)	(0.0%)	0	0.0%	0.0%	0.0%	0.0%	(0.1%)	(0.0%)
Insurance, pension and std guarantee schemes	421.4	25.0%	0.9%	1540.9	11.8%	0.7%	(13.2%)	(0.2%)	2089.3	12.5%	0.6%	0.7%	(0.0%)	(12.5%)	(0.2%)
Insurance reserves	10.2	0.6%	0.0%	42.7	0.3%	0.0%	(0.3%)	(0.0%)	50.3	0.3%	0.0%	(0.0%)	(0.0%)	(0.3%)	(0.0%)
Retiree Health Care Funds	0.0	0.0%	0.0%	75.4	0.6%	0.0%	0.6%	0.0%	246.9	1.5%	0.1%	0.9%	0.0%	1.5%	0.1%
Claims of pension fund on sponsor	411.2	24.3%	0.8%	1422.8	10.9%	0.6%	(13.5%)	(0.2%)	1792.1	10.7%	0.6%	(0.2%)	(0.1%)	(13.7%)	(0.3%)
Other accounts payable	12.9	0.8%	0.0%	208	1.6%	0.1%	0.8%	0.1%	253	1.5%	0.1%	(0.1%)	(0.0%)	0.7%	0.1%
Trade payables	11.8	0.7%	0.0%	202.6	1.5%	0.1%	0.8%	0.1%	250.7	1.5%	0.1%	(0.1%)	(0.0%)	0.8%	0.1%
Other (miscellaneous liabilities)	1.1	0.1%	0.0%	5.4	0.0%	0.0%	(0.0%)	0.0%	2.3	0.0%	0.0%	(0.0%)	(0.0%)	(0.1%)	(0.0%)
<b>Net worth (market value)</b>	48588.5	2876.9%	98.1%	216149.9	1650.8%	96.7%	(1226.1%)	(1.4%)	309547.8	1846.1%	95.0%	195.3%	(1.7%)	(1030.9%)	(3.1%)

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, S.7.a Historical Annals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 26

Re: LI US Balance Sheet of State and Local Government with addition of Land and Infrastructure  
S.8.a Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b>	1688.9	41.0%		13093.7	97.9%				16768.0	93.8%					
Billions of dollars															
<b>Assets</b>	4118.1	243.8%	100.0%	13371.2	102.1%	100.0%	(141.7%)		17873.9	106.6%	100.0%	4.5%		(137.2%)	
Nonfinancial assets	3971.7	235.2%	96.4%	11054.0	84.4%	82.7%	(150.7%)	(13.8%)	14935.7	89.1%	83.6%	4.7%	0.9%	(146.1%)	(12.9%)
Real estate	3940.9	233.3%	95.7%	10771.8	82.3%	80.6%	(151.1%)	(15.1%)	14568.1	86.9%	81.5%	4.6%	0.9%	(146.5%)	(14.2%)
Structures	887.4	52.5%	21.5%	5976.8	45.6%	44.7%	(6.9%)	23.2%	9335.6	55.7%	52.2%	10.0%	7.5%	3.1%	30.7%
Land & Infrastructure	3053.5	180.8%	74.1%	4795.0	36.6%	35.9%	(144.2%)	(38.3%)	5233.5	31.2%	29.3%	(5.4%)	(6.6%)	(149.6%)	(44.9%)
* Equipment	25.5	1.5%	0.6%	206.9	1.6%	1.5%	0.1%	0.9%	247.6	1.5%	1.4%	(0.1%)	(0.2%)	(0.0%)	0.8%
Intellectual property products	5.3	0.3%	0.1%	75.3	0.6%	0.6%	0.3%	0.4%	120.0	0.7%	0.7%	0.1%	0.1%	0.4%	0.5%
Financial assets	146.4	8.7%	3.6%	2317.2	17.7%	17.3%	9.0%	13.8%	2938.2	17.5%	16.4%	(0.2%)	(0.9%)	8.9%	12.9%
Currency and deposits	60.3	3.6%	1.5%	234.8	1.8%	1.8%	(1.8%)	0.3%	425.8	2.5%	2.4%	0.7%	0.6%	(1.0%)	0.9%
Currency and transferable deposits	13.4	0.8%	0.3%	66.0	0.5%	0.5%	(0.3%)	0.2%	123.9	0.7%	0.7%	0.2%	0.2%	(0.1%)	0.4%
Time and savings deposits	46.9	2.8%	1.1%	168.8	1.3%	1.3%	(1.5%)	0.1%	301.9	1.8%	1.7%	0.5%	0.4%	(1.0%)	0.6%
Debt securities	51.0	3.0%	1.2%	1217.4	9.3%	9.1%	6.3%	7.9%	1347.7	8.0%	7.5%	(1.3%)	(1.6%)	5.0%	6.3%
Open market paper	0.0	0.0%	0.0%	153.3	1.2%	1.1%	1.2%	1.1%	76.9	0.5%	0.4%	(0.7%)	(0.7%)	0.5%	0.4%
Treasury securities	27.8	1.6%	0.7%	512.3	3.9%	3.8%	2.3%	3.2%	593.4	3.5%	3.3%	(0.4%)	(0.5%)	1.9%	2.6%
Agency and GSE backed securities	18.2	1.1%	0.4%	413.4	3.2%	3.1%	2.1%	2.6%	490.9	2.9%	2.7%	(0.2%)	(0.3%)	1.8%	2.3%
Municipal securities	5.0	0.3%	0.1%	6.9	0.1%	0.1%	(0.2%)	(0.1%)	13.9	0.1%	0.1%	0.0%	0.0%	(0.2%)	(0.0%)
Corporate and foreign bonds	0.0	0.0%	0.0%	131.5	1.0%	1.0%	1.0%	1.0%	172.5	1.0%	1.0%	0.0%	(0.0%)	1.0%	1.0%
Loans	10.7	0.6%	0.3%	288.9	2.2%	2.2%	1.6%	1.9%	346.3	2.1%	1.9%	(0.1%)	(0.2%)	1.4%	1.7%
Short term	-2.1	(0.1%)	(0.1%)	130.0	1.0%	1.0%	1.1%	1.0%	132.5	0.8%	0.7%	(0.2%)	(0.2%)	0.9%	0.8%
Long term (mortgages)	12.8	0.8%	0.3%	158.9	1.2%	1.2%	0.5%	0.9%	213.9	1.3%	1.2%	0.1%	0.0%	0.5%	0.9%
Equity and investment fund shares	0.0	0.0%	0.0%	246.6	1.9%	1.8%	1.9%	1.8%	415.4	2.5%	2.3%	0.6%	0.5%	2.5%	2.3%
Money market fund shares	0.0	0.0%	0.0%	89.9	0.7%	0.7%	0.7%	0.7%	166.6	1.0%	0.9%	0.3%	0.3%	1.0%	0.9%
Corporate equities	0.0	0.0%	0.0%	116.0	0.9%	0.9%	0.9%	0.9%	167.6	1.0%	0.9%	0.1%	0.1%	1.0%	0.9%
Mutual fund shares	0.0	0.0%	0.0%	40.7	0.3%	0.3%	0.3%	0.3%	81.2	0.5%	0.5%	0.2%	0.1%	0.5%	0.5%
Other accounts receivable	24.4	1.4%	0.6%	329.4	2.5%	2.5%	1.1%	1.9%	403.0	2.4%	2.3%	(0.1%)	(0.2%)	1.0%	1.7%
Trade receivables	15.2	0.9%	0.4%	142.5	1.1%	1.1%	0.2%	0.7%	168.7	1.0%	0.9%	(0.1%)	(0.1%)	0.1%	0.6%
Taxes receivables	9.2	0.5%	0.2%	102.3	0.8%	0.8%	0.2%	0.5%	123.8	0.7%	0.7%	(0.0%)	(0.1%)	0.2%	0.5%
Other (miscellaneous assets)	0.1	0.0%	0.0%	84.6	0.6%	0.6%	0.6%	0.6%	110.5	0.7%	0.6%	0.0%	(0.0%)	0.7%	0.6%
<b>Total liabilities and net worth</b>	4118.1	243.8%	100.0%	13371.2	102.1%	100.0%	(141.7%)	0.0%	17873.9	106.6%	100.0%	4.5%	0.0%	(137.2%)	0.0%
<b>Liabilities</b>	349.5	20.7%	8.5%	3385.9	25.9%	25.3%	5.2%	16.8%	4931.0	29.4%	27.6%	3.5%	2.3%	8.7%	19.1%
Debt securities (municipals)	213.6	12.6%	5.2%	2579.2	19.7%	19.3%	7.1%	14.1%	2924.9	17.4%	16.4%	(2.3%)	(2.9%)	4.8%	11.2%
Short term	18.6	1.1%	0.5%	42.5	0.3%	0.3%	(0.8%)	(0.1%)	45.3	0.3%	0.3%	(0.1%)	(0.1%)	(0.8%)	(0.2%)
Other	195.0	11.5%	4.7%	2536.7	19.4%	19.0%	7.8%	14.2%	1879.6	11.2%	10.5%	(8.2%)	(8.5%)	(0.3%)	5.8%
Loans (short term)	5.8	0.3%	0.1%	10.6	0.1%	0.1%	(0.3%)	(0.1%)	16.2	0.1%	0.1%	0.0%	0.0%	(0.2%)	(0.1%)
Insurance, pension and std guarantee schemes	92.7	5.5%	2.3%	314.0	2.4%	2.3%	(3.1%)	0.1%	1204.1	7.2%	6.7%	4.8%	4.4%	1.7%	4.5%
(Claims of pension fund on sponsor)															
Other accounts payable (trade payables)	37.4	2.2%	0.9%	482.0	3.7%	3.6%	1.5%	2.7%	785.8	4.7%	4.4%	1.0%	0.8%	2.5%	3.5%
<b>Net worth (market value)</b>	3768.6	223.1%	91.5%	9985.3	76.3%	74.7%	(146.9%)	(16.8%)	12942.9	77.2%	72.4%	0.9%	(2.3%)	(146.0%)	(19.1%)

\*Balance of infrastructure per note on Federal balance sheet plus 10% of land estimate for that sheet.

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, S.8.a Historical Annals, 1975-1984 and 2005-2013

# US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 27

Re: MV US Assets of the Public & Private Sectors with the addition of Human Capital at Market Value, Natural Resource and Infrastructure Value Allocations to the Public Sectors  
L.10+ Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b> Billions of dollars	1688.9	3.4%		13093.7	5.9%		from 1975		16768.0	5.2%		from 2005		from 1975	
<b>Total Assets (public &amp; private sectors)</b>	60208.2	3564.9%	100.0%	300084.3	2291.8%	100.0%	(122.3.1%)		415572.6	2478.4%	100.0%	186.5%		(1086.6%)	
<b>Nonfinancial assets public &amp; private sectors</b>	59290.7	3510.6%	98.5%	287982.2	2199.4%	96.0%	(1311.2%)	(2.5%)	397855.8	2372.9%	95.7%	173.5%	(0.2%)	(1137.7%)	(2.7%)
<b>Net financial assets public &amp; private sectors</b>	917.5	54.3%	1.5%	12102.1	92.4%	4.0%	38.1%	2.5%	17686.8	105.5%	4.3%	13.1%	0.2%	51.2%	2.7%
<b>Assets (public sectors)</b>	52357.1	3100.1%	100.0%	226135.2	1727.1%	100.0%	(1373.0%)		322490.7	1923.3%	100.0%	196.2%		(1176.8%)	
<b>Nonfinancial assets public sectors</b>	53370.8	3160.1%	101.9%	239303.5	1786.6%	103.4%	(1373.5%)	1.5%	338902.4	2021.1%	105.1%	234.5%	1.6%	(1139.0%)	3.2%
<b>Nonfinancial assets Federal government</b>	49399.1	2924.9%	94.4%	222876.5	1702.2%	98.6%	(1222.8%)	4.2%	329966.7	1922.1%	100.5%	229.9%	1.9%	(992.9%)	6.1%
<b>Nonfinancial assets State &amp; local government</b>	3971.7	235.2%	7.6%	11054.0	84.4%	4.9%	(150.7%)	(2.7%)	14935.7	89.1%	4.6%	4.7%	(0.3%)	(146.1%)	(3.0%)
<b>Net financial assets public sectors</b>	(1013.7)	(60.0%)	(1.9%)	(7795.3)	(59.5%)	(3.4%)	0.5%	(1.5%)	(16411.7)	(97.9%)	(5.1%)	(38.3%)	(1.6%)	(37.9%)	(3.2%)
<b>Net financial assets Federal government</b>	(810.6)	(48.0%)	(1.5%)	(6726.6)	(51.4%)	(3.0%)	(3.4%)	(1.4%)	(14418.9)	(86.0%)	(4.5%)	(34.6%)	(1.5%)	(38.0%)	(2.9%)
<b>Net financial assets state &amp; local government</b>	(203.1)	(12.0%)	(0.4%)	(1068.7)	(8.2%)	(0.5%)	3.9%	(0.1%)	(1992.8)	(11.9%)	(0.6%)	(3.7%)	(0.1%)	0.1%	(0.2%)
<b>Assets (private sectors)</b>	7851.1	464.9%	100.0%	73949.1	564.8%	100.0%	99.9%	4.4%	93081.9	555.1%	100.0%	(9.7%)		90.3%	
<b>Nonfinancial assets (Domestic private sectors)</b>	5919.9	350.5%	75.4%	54051.7	412.8%	73.1%	62.3%	(2.3%)	58983.4	351.8%	63.4%	(61.0%)	(9.7%)	1.2%	(12.0%)
<b>Households &amp; nonprofits nonfinancial assets</b>	3701.2	219.1%	47.1%	38576.9	294.6%	52.2%	75.5%	5.0%	38837.9	231.6%	41.7%	(63.0%)	(10.4%)	12.5%	(5.4%)
<b>Nonfinancial corporate business nonfin assets</b>	2131.8	126.2%	27.2%	14168.0	108.2%	19.2%	(18.0%)	(8.0%)	18561.3	110.7%	19.9%	2.5%	0.8%	(15.5%)	(7.2%)
<b>Financial business nonfinancial assets</b>	86.9	5.1%	1.1%	1306.8	10.0%	1.8%	4.8%	0.7%	1584.2	9.4%	1.7%	(0.5%)	(0.1%)	4.3%	0.6%
<b>Nonfinancial assets (breakdown)</b>															
<b>Real estate</b>	4107.8	243.2%	52.3%	41914.6	320.1%	56.7%	76.9%	4.4%	43295.6	258.2%	46.5%	(61.9%)	(10.2%)	15.0%	(5.8%)
<b>Households</b>	1992.4	118.0%	25.4%	27852.8	212.7%	37.7%	94.7%	12.3%	25144.7	150.0%	27.0%	(62.8%)	(10.7%)	32.0%	1.6%
<b>Nonprofit organizations &amp; nonresidential</b>	888.8	52.6%	11.3%	5385.7	41.1%	7.3%	(11.5%)	(4.0%)	7015.6	41.8%	7.5%	0.7%	0.3%	(10.8%)	(3.8%)
<b>Nonfinancial corporate business</b>	1170.9	69.3%	14.9%	7924.3	60.5%	10.7%	(8.8%)	(4.2%)	10236.1	61.0%	11.0%	0.5%	0.3%	(8.3%)	(3.9%)
<b>Financial business</b>	55.7	3.3%	0.7%	751.8	5.7%	1.0%	2.4%	0.3%	899.2	5.4%	1.0%	(0.4%)	(0.1%)	2.1%	0.3%
<b>Durable goods and equipment</b>	1303.5	77.2%	16.6%	8636.0	66.0%	11.7%	(11.2%)	(4.9%)	10821.5	64.5%	11.6%	(1.4%)	(0.1%)	(12.6%)	(5.0%)
<b>Consumer durable goods</b>	578.0	34.2%	7.4%	4107.8	31.4%	5.6%	(2.9%)	(1.8%)	4942.2	29.5%	5.3%	(1.9%)	(0.2%)	(4.7%)	(2.1%)
<b>Nonprofits &amp; nonfinancial noncorporate bus</b>	147.5	8.7%	1.9%	785	6.0%	1.1%	(2.7%)	(0.8%)	1098.6	6.6%	1.2%	0.6%	0.1%	(2.2%)	(0.7%)
<b>Nonfinancial corporate business</b>	550.2	32.6%	7.0%	3297.8	25.2%	4.5%	(7.4%)	(2.5%)	4261.7	25.4%	4.6%	0.2%	0.1%	(7.2%)	(2.4%)
<b>Financial business</b>	27.8	1.6%	0.4%	445.4	3.4%	0.6%	1.8%	0.2%	519.0	3.1%	0.6%	(0.3%)	(0.0%)	1.4%	0.2%
<b>Inventories</b>	387.3	22.9%	4.9%	1842.3	14.1%	2.5%	(8.9%)	(2.4%)	2443.9	14.6%	2.6%	0.5%	0.1%	(8.4%)	(2.3%)
<b>Nonfinancial noncorporate business</b>	80.1	4.7%	1.0%	218.4	1.7%	0.3%	(3.1%)	(0.7%)	297.3	1.8%	0.3%	0.1%	0.0%	(3.0%)	(0.7%)
<b>Nonfinancial corporate business</b>	307.2	18.2%	3.9%	1623.9	12.4%	2.2%	(5.8%)	(1.7%)	2146.6	12.8%	2.3%	0.4%	0.1%	(5.4%)	(1.6%)
<b>Intellectual property products</b>	121.4	7.2%	1.5%	1658.8	12.7%	2.2%	5.5%	0.7%	2422.4	14.4%	2.6%	1.8%	0.4%	7.3%	1.1%
<b>Nonprofits &amp; nonfinancial noncorporate bus</b>	14.4	0.9%	0.2%	227.3	1.7%	0.3%	0.9%	0.1%	339.4	2.0%	0.4%	0.3%	0.1%	1.2%	0.2%
<b>Nonfinancial corporate business</b>	103.6	6.1%	1.3%	1322.0	10.1%	1.8%	4.0%	0.5%	1916.9	11.4%	2.1%	1.3%	0.3%	5.3%	0.7%
<b>Financial business</b>	3.4	0.2%	0.0%	109.5	0.8%	0.1%	0.6%	0.1%	166.1	1.0%	0.2%	0.2%	0.0%	0.8%	0.1%
<b>Net financial assets domestic private sectors</b>	1847.1	109.4%	23.5%	21548.1	164.6%	29.1%	55.2%	5.6%	38482.1	229.5%	41.3%	64.9%	12.2%	120.1%	17.8%
<b>Net financial assets HH &amp; NN business</b>	2095.2	124.1%	26.7%	23309.4	178.0%	31.5%	54.0%	4.8%	40030.0	238.7%	43.0%	60.7%	11.5%	114.7%	16.3%
<b>Net financial assets NC business</b>	(318.2)	(18.8%)	(4.1%)	718.8	5.5%	1.0%	24.3%	5.0%	552.8	3.3%	0.6%	(2.2%)	(0.4%)	22.1%	4.6%
<b>Net financial assets financial business</b>	70.1	4.2%	0.9%	(2480.1)	(18.9%)	(3.4%)	(23.1%)	(4.2%)	(2100.7)	(12.5%)	(2.3%)	6.4%	1.1%	(16.7%)	(3.1%)
<b>Net financial assets private sectors</b>	1931.2	114.3%	24.6%	19897.4	152.0%	26.9%	37.6%	2.3%	34098.5	203.4%	36.6%	51.4%	9.7%	89.0%	12.0%
<b>Net financial assets rest of the world</b>	84.1	5.0%	1.1%	(1650.7)	(12.6%)	(2.2%)	(17.6%)	(3.3%)	(4383.6)	(26.1%)	(4.7%)	(13.5%)	(2.5%)	(31.1%)	(5.8%)

Figures in Nonfinancial assets Federal government include human capital based on figures from "Human Capital Accounting in the United States, 1994-2006" by Michael S. Christian, Survey of Current Business, June 2010, U.S. Department of Commerce, Bureau of Economic Analysis

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, Various tables Historical Annuals, 1975-1984 and 2005-2013.

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 28

Re: TV US Balance Sheet of Federal Government with the addition of Human Capital, Natural Resource and Infrastructure Value Allocations  
S.7.a Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b>	Billions of dollars	1688.9	1.1%	13093.7	1.8%				16768.0	1.6%					
<b>Assets</b>															
Nonfinancial assets	158720.1	9397.8%	100.0%	728320.2	5562.4%	100.0%	(3835.5%)		1063080.4	6339.9%	100.0%	777.6%	0.0%	(3057.9%)	0.0%
Real estate	158599.1	9390.7%	99.9%	727676.5	5557.5%	99.9%	(3833.3%)	(0.0%)	1061366.7	6329.7%	99.8%	772.3%	(0.1%)	(3061.0%)	(0.1%)
Structures	2323.1	137.6%	1.5%	5426.5	41.4%	0.7%	(96.1%)	(0.7%)	6197.1	37.0%	0.6%	(4.5%)	(0.2%)	(100.6%)	(0.2%)
* Land	288.1	17.1%	0.2%	1176.5	9.0%	0.2%	(8.1%)	(0.0%)	1472.1	8.8%	0.1%	(0.2%)	(0.0%)	(8.3%)	(0.0%)
Infrastructure	535.0	31.7%	0.3%	1950.0	14.6%	0.3%	(16.8%)	(0.1%)	2252.0	13.9%	0.2%	(1.0%)	(0.0%)	(17.8%)	(0.1%)
Equipment	1500.0	88.8%	0.9%	2300.0	17.6%	0.3%	(71.2%)	(0.6%)	2400.0	14.3%	0.2%	(3.3%)	(0.1%)	(74.5%)	(0.7%)
Intellectual property products	131.8	7.8%	0.1%	520.7	4.0%	0.1%	(3.8%)	(0.0%)	732.2	4.4%	0.1%	0.4%	(0.0%)	(3.4%)	(0.0%)
*** Human capital	144.2	8.5%	0.1%	729.3	5.6%	0.1%	(3.0%)	0.0%	987.4	5.9%	0.1%	0.3%	(0.0%)	(2.6%)	0.0%
*** Human capital of citizenry	156000.0	9236.8%	98.3%	721000.0	5506.5%	99.0%	(3730.3%)	0.7%	1053450.0	6282.5%	99.1%	776.0%	0.1%	(2954.3%)	0.8%
*** Human capital of aliens	156000.0	9236.8%	98.3%	667000.0	5094.1%	91.6%	(4142.7%)	(6.7%)	980000.0	5844.5%	92.2%	750.4%	0.6%	(3392.3%)	(6.1%)
*** Human capital of undocumented aliens	0.0%	0.0%	0.0%	27000.0	206.2%	3.7%	206.2%	3.7%	36750.0	219.2%	3.5%	13.0%	(0.3%)	219.2%	3.5%
Financial assets	121.0	7.2%	0.1%	643.7	4.9%	0.1%	(2.2%)	0.0%	36700.0	218.9%	3.5%	12.7%	(0.3%)	218.9%	3.5%
Monetary gold and SDRs	2.3	0.1%	0.0%	8.2	0.1%	0.0%	(0.1%)	(0.0%)	55.2	0.3%	0.0%	0.3%	0.0%	0.2%	0.0%
Monetary gold	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SDR holdings	2.3	0.1%	0.0%	8.2	0.1%	0.0%	(0.1%)	(0.0%)	55.2	0.3%	0.0%	0.3%	0.0%	0.2%	0.0%
Currency and deposits	17.5	1.0%	0.0%	68	0.5%	0.0%	(0.5%)	(0.0%)	221.8	1.3%	0.0%	0.8%	0.0%	0.3%	0.0%
Official foreign currencies	0.0	0.0%	0.0%	18.7	0.1%	0.0%	0.1%	0.0%	23.6	0.1%	0.0%	(0.0%)	(0.0%)	0.1%	0.0%
Reserve position in IMF (net)	2.2	0.1%	0.0%	8.1	0.1%	0.0%	(0.1%)	(0.0%)	31	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%
Currency and transferable deposits	11.2	0.7%	0.0%	37	0.3%	0.0%	(0.4%)	(0.0%)	163	1.0%	0.0%	0.7%	0.0%	0.3%	0.0%
Time and savings deposits	0.6	0.0%	0.0%	1.4	0.0%	0.0%	(0.0%)	(0.0%)	1.5	0.0%	0.0%	(0.0%)	(0.0%)	(0.0%)	(0.0%)
Nonofficial foreign currencies	3.6	0.2%	0.0%	2.6	0.0%	0.0%	(0.2%)	(0.0%)	2.6	0.0%	0.0%	(0.0%)	(0.0%)	(0.2%)	(0.0%)
Debt securities	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Agency and GSE backed securities	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Corporate and foreign bonds	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Loans	85.5	5.1%	0.1%	271.7	2.1%	0.0%	(3.0%)	(0.0%)	1039.2	6.2%	0.1%	4.1%	0.1%	1.1%	0.0%
Short term	66.4	3.9%	0.0%	195.2	1.5%	0.0%	(2.4%)	(0.0%)	923.7	5.5%	0.1%	4.0%	0.1%	1.6%	0.0%
Consumer credit	0	0.0%	0.0%	89.8	0.7%	0.0%	0.7%	0.0%	729.8	4.4%	0.1%	3.7%	0.1%	4.4%	0.1%
Other loans and advances	66.4	3.9%	0.0%	105.3	0.8%	0.0%	(3.1%)	(0.0%)	193.9	1.2%	0.0%	0.4%	0.0%	(2.8%)	(0.0%)
Long term (mortgages)	19.1	1.1%	0.0%	76.6	0.6%	0.0%	(0.5%)	(0.0%)	115.5	0.7%	0.0%	0.1%	0.0%	(0.4%)	(0.0%)
Equity and investment fund shares	4.1	0.2%	0.0%	43.2	0.3%	0.0%	0.1%	0.0%	98.9	0.6%	0.0%	0.3%	0.0%	0.3%	0.0%
Corporate equities	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	35.1	0.2%	0.0%	0.2%	0.0%	0.2%	0.0%
Equity in international organizations	4.1	0.2%	0.0%	43.2	0.3%	0.0%	0.1%	0.0%	59.5	0.4%	0.0%	0.0%	(0.0%)	0.1%	0.0%
Equity in government sponsored enterprises	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity in investment under Public-Private IP	0.0	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%	4.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other accounts receivable	11.5	0.7%	0.0%	252.5	1.9%	0.0%	1.2%	0.0%	298.1	1.8%	0.0%	(0.2%)	(0.0%)	1.1%	0.0%
Trade receivables	6.5	0.4%	0.0%	71	0.5%	0.0%	0.2%	0.0%	48.8	0.3%	0.0%	(0.3%)	(0.0%)	(0.1%)	0.0%
Taxes receivables	5.0	0.3%	0.0%	91.6	0.7%	0.0%	0.4%	0.0%	165.8	1.0%	0.0%	0.3%	0.0%	0.7%	0.0%
Other (miscellaneous assets)	0.0	0.0%	0.0%	89.9	0.7%	0.0%	0.7%	0.0%	83.4	0.5%	0.0%	(0.2%)	(0.0%)	0.5%	0.0%

\*Resource value of land was figured for 650M acres of federal land at \$3,000 acre in 2005 and extrapolated for 1975 and 2013.

\*\*American Society of Civil Engineers reports funding needs to raise US infrastructure to Grade B status of \$3.6T by 2020. Assuming depreciation of 33% gives current cash value of \$7.2T and it could be much greater, extrapolated back.

\*\*\* Figures in Nonfinancial assets Federal government include human capital based on figures from "Human Capital Accounting in the United States, 1994-2006" by Michael S. Christian, Survey of Current Business, June 2010.

U.S. Department of Commerce, Bureau of Economic Analysis. Taken from Table 1, Human Capital Stock for 2005, Nonfinal, Total column and extrapolated for 1975 and 2013 and for alien population of 12M each category 2005 and 2013.

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, S.7.a Historical Annuals, 1975-1984 and 2005-2013

US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 29

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP from 1975	+/- Assets from 1975	2013	% GDP	% Assets	+/- GDP from 2005	+/- Assets from 2005	+/- GDP from 1975	+/- Assets from 1975
Total liabilities and net worth	158720.1	9397.8%	100.0%	728320.2	5562.4%	100.0%	(3835.5%)	0.0%	1063080.4	6339.9%	100.0%	777.6%	0.0%	(3057.9%)	0.0%
Liabilities	931.6	55.2%	0.6%	7370.3	56.3%	1.0%	1.1%	0.4%	16132.6	96.2%	1.5%	39.9%	0.5%	41.1%	0.9%
SDR allocations	2.7	0.2%	0.0%	7	0.1%	0.0%	(0.1%)	(0.0%)	54.4	0.3%	0.0%	0.3%	0.0%	0.2%	0.0%
Currency and deposits	8.2	0.5%	0.0%	27.5	0.2%	0.0%	(0.3%)	(0.0%)	25.6	0.2%	0.0%	(0.1%)	(0.0%)	(0.3%)	(0.0%)
Debt securities	485.4	28.7%	0.3%	5587	42.7%	0.8%	13.9%	0.5%	13710.3	81.8%	1.3%	39.1%	0.5%	53.0%	1.0%
SDR certificates	0.5	0.0%	0.0%	2.2	0.0%	0.0%	(0.0%)	(0.0%)	5.2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Treasury securities including savings bonds	434.9	25.8%	0.3%	4678	35.7%	0.6%	10.0%	0.4%	12328.3	73.5%	1.2%	37.8%	0.5%	47.8%	0.9%
Federal agency securities	7.9	0.5%	0.0%	23.8	0.2%	0.0%	(0.3%)	(0.0%)	24.5	0.1%	0.0%	(0.0%)	(0.0%)	(0.3%)	(0.0%)
Nonmarketable securities held by pension pla	42.1	2.5%	0.0%	882.9	6.7%	0.1%	4.3%	0.1%	1352.3	8.1%	0.1%	1.3%	0.0%	5.6%	0.1%
Loans (mortgages)	1.1	0.1%	0.0%	0	0.0%	0.0%	(0.1%)	(0.0%)	0	0.0%	0.0%	0.0%	0.0%	(0.1%)	(0.0%)
Insurance, pension and std guarantee schemes	421.4	25.0%	0.3%	1540.9	11.8%	0.2%	(13.2%)	(0.1%)	2089.3	12.5%	0.2%	0.7%	(0.0%)	(12.5%)	(0.1%)
Insurance reserves	10.2	0.6%	0.0%	42.7	0.3%	0.0%	(0.3%)	(0.0%)	50.3	0.3%	0.0%	(0.0%)	(0.0%)	(0.3%)	(0.0%)
Retiree Health Care Funds	0.0	0.0%	0.0%	75.4	0.6%	0.0%	0.6%	0.0%	246.9	1.5%	0.0%	0.9%	0.0%	1.5%	0.0%
Claims of pension fund on sponsor	411.2	24.3%	0.3%	1422.8	10.9%	0.2%	(13.5%)	(0.1%)	1792.1	10.7%	0.2%	(0.2%)	(0.0%)	(13.7%)	(0.1%)
Other accounts payable	12.9	0.8%	0.0%	208	1.6%	0.0%	0.8%	0.0%	253	1.5%	0.0%	(0.1%)	(0.0%)	0.7%	0.0%
Trade payables	11.8	0.7%	0.0%	202.6	1.5%	0.0%	0.8%	0.0%	250.7	1.5%	0.0%	(0.1%)	(0.0%)	0.8%	0.0%
Other (miscellaneous liabilities)	1.1	0.1%	0.0%	5.4	0.0%	0.0%	(0.0%)	0.0%	2.3	0.0%	0.0%	(0.0%)	(0.0%)	(0.1%)	(0.0%)
Net worth (market value)	157788.5	9342.7%	99.4%	720949.9	5506.1%	99.0%	(3836.6%)	(0.4%)	1046947.8	6243.7%	98.5%	737.6%	(0.5%)	(3099.0%)	(0.9%)

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, S.7.a Historical Annals, 1975-1984 and 2005-2013

# US GDP and Wealth Comparisons 1975, 2005, 2013 - Sheet 30

Re: TV US Assets of the Public & Private Sectors with the addition of Human Capital, Natural Resource and Infrastructure Value Allocations to the Public Sectors  
L.10+ Comparison 1975/2005/2013

	1975	% GDP	% Assets	2005	% GDP	% Assets	+/- GDP	+/- Assets	2013	% GDP	% Assets	+/- GDP	+/- Assets	+/- GDP	+/- Assets
<b>GDP</b> Billions of dollars	1688.9	1.1%		13093.7	1.8%				16768.0	1.6%					
<b>Total Assets (public &amp; private sectors)</b>	169408.2	10030.7%	100.0%	80484.3	6147.1%	100.0%	(3883.6%)		1152972.6	6876.0%	100.0%	728.9%		(3154.7%)	
<b>Nonfinancial assets public &amp; private sectors</b>	168490.7	9976.4%	99.5%	79278.2	6054.7%	98.5%	(3921.7%)	(1.0%)	1135285.8	6770.5%	98.5%	715.9%	(0.0%)	(3205.8%)	(1.0%)
<b>Net financial assets public &amp; private sectors</b>	917.5	54.3%	0.5%	12102.1	92.4%	1.5%	38.1%	1.0%	17686.8	105.5%	1.5%	13.1%	0.0%	51.2%	1.0%
<b>Assets (public sectors)</b>	161557.1	9565.8%	100.0%	730935.2	5582.3%	100.0%	(3983.5%)		1059890.7	6320.9%	100.0%	738.6%		(3244.9%)	
<b>Nonfinancial assets public sectors</b>	162570.8	9625.8%	100.6%	738730.5	5641.9%	101.1%	(3984.0%)	0.4%	1076302.4	6418.8%	101.5%	776.9%	0.5%	(3207.1%)	0.9%
<b>Nonfinancial assets Federal government</b>	158599.1	9390.7%	98.2%	727676.5	5557.5%	99.6%	(3833.2%)	1.4%	1061366.7	6329.7%	100.1%	772.3%	0.6%	(3061.0%)	2.0%
<b>Nonfinancial assets State &amp; local government</b>	3971.7	235.2%	2.5%	11054.0	84.4%	1.5%	(150.7%)	(0.9%)	14935.7	89.1%	1.4%	4.7%	(0.1%)	(146.1%)	(1.0%)
<b>Net financial assets public sectors</b>	(1013.7)	(60.0%)	(0.6%)	(7795.3)	(59.5%)	(1.1%)	0.5%	(0.4%)	(16411.7)	(97.9%)	(1.5%)	(38.3%)	(0.5%)	(37.9%)	(0.9%)
<b>Net financial assets Federal government</b>	(810.6)	(48.0%)	(0.5%)	(6726.6)	(51.4%)	(0.9%)	(3.4%)	(0.4%)	(14418.9)	(86.0%)	(1.4%)	(34.6%)	(0.4%)	(38.0%)	(0.9%)
<b>Net financial assets state &amp; local government</b>	(203.1)	(12.0%)	(0.1%)	(1068.7)	(8.2%)	(0.1%)	3.9%	(0.0%)	(1992.8)	(11.9%)	(0.2%)	(3.7%)	(0.0%)	0.1%	(0.1%)
<b>Assets (private sectors)</b>	7851.1	464.9%	100.0%	73949.1	564.8%	100.0%	99.9%	4.4%	93081.9	555.1%	100.0%	(9.7%)		90.3%	
<b>Nonfinancial assets (Domestic private sectors)</b>	5919.9	350.5%	75.4%	54051.7	412.8%	73.1%	62.3%	(2.3%)	58983.4	351.8%	63.4%	(61.0%)	(9.7%)	1.2%	(12.0%)
<b>Households &amp; nonprofits nonfinancial assets</b>	3701.2	219.1%	47.1%	38576.9	294.6%	52.2%	75.5%	5.0%	38837.9	231.6%	41.7%	(63.0%)	(10.4%)	12.5%	(5.4%)
<b>Nonfinancial corporate business nonfin assets</b>	2131.8	126.2%	27.2%	14168.0	108.2%	19.2%	(18.0%)	(8.0%)	18561.3	110.7%	19.9%	2.5%	0.8%	(15.5%)	(7.2%)
<b>Financial business nonfinancial assets</b>	86.9	5.1%	1.1%	1306.8	10.0%	1.8%	4.8%	0.7%	1584.2	9.4%	1.7%	(0.5%)	(0.1%)	4.3%	0.6%
<b>Nonfinancial assets (breakdown)</b>															
<b>Real estate</b>	4107.8	243.2%	52.3%	41914.6	320.1%	56.7%	76.9%	4.4%	43295.6	258.2%	46.5%	(61.9%)	(10.2%)	15.0%	(5.8%)
<b>Households</b>	1992.4	118.0%	25.4%	27852.8	212.7%	37.7%	94.7%	12.3%	25144.7	150.0%	27.0%	(62.8%)	(10.7%)	32.0%	1.6%
<b>Nonprofit organizations &amp; nonresidential</b>	888.8	52.6%	11.3%	5385.7	41.1%	7.3%	(11.5%)	(4.0%)	7015.6	41.8%	7.5%	0.7%	0.3%	(10.8%)	(3.8%)
<b>Nonfinancial corporate business</b>	1170.9	69.3%	14.9%	7924.3	60.5%	10.7%	(8.8%)	(4.2%)	10236.1	61.0%	11.0%	0.5%	0.3%	(8.3%)	(3.9%)
<b>Financial business</b>	55.7	3.3%	0.7%	751.8	5.7%	1.0%	2.4%	0.9%	899.2	5.4%	1.0%	(0.4%)	(0.1%)	2.1%	0.3%
<b>Durable goods and equipment</b>	1303.5	77.2%	16.6%	8636.0	66.0%	11.7%	(11.2%)	(4.9%)	10821.5	64.5%	11.6%	(1.4%)	(0.1%)	(12.6%)	(5.0%)
<b>Consumer durable goods</b>	578.0	34.2%	7.4%	4107.8	31.4%	5.6%	(2.9%)	(1.8%)	4942.2	29.5%	5.3%	(1.9%)	(0.2%)	(4.7%)	(2.1%)
<b>Nonprofits &amp; nonfinancial noncorporate bus</b>	147.5	8.7%	1.9%	785	6.0%	1.1%	(2.7%)	(0.8%)	1098.6	6.6%	1.2%	0.6%	0.1%	(2.2%)	(0.7%)
<b>Nonfinancial corporate business</b>	550.2	32.6%	7.0%	3297.8	25.2%	4.5%	(7.4%)	(2.5%)	4261.7	25.4%	4.6%	0.2%	0.1%	(7.2%)	(2.4%)
<b>Financial business</b>	27.8	1.6%	0.4%	445.4	3.4%	0.6%	1.8%	0.2%	519.0	3.1%	0.6%	(0.3%)	(0.0%)	1.4%	0.2%
<b>Inventories</b>	387.3	22.9%	4.9%	1842.3	14.1%	2.5%	(8.9%)	(2.4%)	2443.9	14.6%	2.6%	0.5%	0.1%	(8.4%)	(2.3%)
<b>Nonfinancial noncorporate business</b>	80.1	4.7%	1.0%	218.4	1.7%	0.3%	(3.1%)	(0.7%)	297.3	1.8%	0.3%	0.1%	0.0%	(3.0%)	(0.7%)
<b>Nonfinancial corporate business</b>	307.2	18.2%	3.9%	1623.9	12.4%	2.2%	(5.8%)	(1.7%)	2146.6	12.8%	2.3%	0.4%	0.1%	(5.4%)	(1.6%)
<b>Intellectual property products</b>	121.4	7.2%	1.5%	1658.8	12.7%	2.2%	5.5%	0.7%	2422.4	14.4%	2.6%	1.8%	0.4%	7.3%	1.1%
<b>Nonprofits &amp; nonfinancial noncorporate bus</b>	14.4	0.9%	0.2%	227.3	1.7%	0.3%	0.9%	0.1%	339.4	2.0%	0.4%	0.3%	0.1%	1.2%	0.2%
<b>Nonfinancial corporate business</b>	103.6	6.1%	1.3%	1322.0	10.1%	1.8%	4.0%	0.5%	1916.9	11.4%	2.1%	1.3%	0.3%	5.3%	0.7%
<b>Financial business</b>	3.4	0.2%	0.0%	109.5	0.8%	0.1%	0.6%	0.1%	166.1	1.0%	0.2%	0.2%	0.0%	0.8%	0.1%
<b>Net financial assets domestic private sectors</b>	1847.1	109.4%	23.5%	21548.1	164.6%	29.1%	55.2%	5.6%	38482.1	229.5%	41.3%	64.9%	12.2%	120.1%	17.8%
<b>Net financial assets HH &amp; NN business</b>	2095.2	124.1%	26.7%	23309.4	178.0%	31.5%	54.0%	4.8%	40030.0	238.7%	43.0%	60.7%	11.5%	114.7%	16.3%
<b>Net financial assets NC business</b>	(318.2)	(18.8%)	(4.1%)	718.8	5.5%	1.0%	24.3%	5.0%	552.8	3.3%	0.6%	(2.2%)	(0.4%)	22.1%	4.6%
<b>Net financial assets financial business</b>	70.1	4.2%	0.9%	(2480.1)	(18.9%)	(3.4%)	(23.1%)	(4.2%)	(2100.7)	(12.5%)	(2.3%)	6.4%	1.1%	(16.7%)	(3.1%)
<b>Net financial assets private sectors</b>	1931.2	114.3%	24.6%	19897.4	152.0%	26.9%	37.6%	2.3%	34098.5	203.4%	36.6%	51.4%	9.7%	89.0%	12.0%
<b>Net financial assets rest of the world</b>	84.1	5.0%	1.1%	(1650.7)	(12.6%)	(2.2%)	(17.6%)	(3.3%)	(4383.6)	(26.1%)	(4.7%)	(13.5%)	(2.5%)	(31.1%)	(5.8%)

Figures in Nonfinancial assets Federal government include human capital based on figures from "Human Capital Accounting in the United States, 1994-2006" by Michael S. Christian, Survey of Current Business, June 2010, U.S. Department of Commerce, Bureau of Economic Analysis

Source: Z.1 Financial Accounts of the United States, Federal Reserve Statistical Release, September 18, 2014, Various tables Historical Annuals, 1975-1984 and 2005-2013.

## Conclusion

A review of these national accounts gives support to the description given above of the production phases and their relationship to the optimal consumption - capital expenditure mix. The mistaken notion that government participation in the economy is non-productive is clearly shown to be false by a thorough analysis of the data of the past 40 years. This does not mean that some of the government regulation is not onerous, but misguided regulations should be replaced by effective ones, not by a lack thereof. Despite the fact that government participation in the GDP and net worth percentage of the national economy has decreased respectively by 3.9% and by 8.3% from 1975 to 2013, business percentage, both financial and nonfinancial, corporate and noncorporate, of net worth of the economy has decreased by almost as much at 7.8%. The offsetting winners have been foreign interests at 5.0% and high net worth private individuals at 11.1% gain, hardly the lift-all-boats that was boasted by supply side theorists. Equally unimpressive is the 6.6% decrease in ownership of nonfinancial, productive goods assets of both nonfinancial business sectors. Coupled with the 3.2% reduction in federal government nonfinancial assets and a 7.6% increase in high-income household nonfinancial assets, principally in real estate and durable goods, this indicates a disinvestment in the economy between 1975 and 2013 in line with the increase of 7.3% in the personal consumption expenditures from 61.2% to 68.5%. Personal consumption has been going up for the fortunate few, but not for the 50% plus of the population that has had 40 years of stagnate wages.

This trend must be reversed and the consumption spending index brought back to the levels of 1975 if we are to arrest the deteriorating condition in education, medical care, retirement and national infrastructure. Acts of terrorism understandably get the press attention, but an individual is more likely to die in an infrastructure failure than at the hands of a religious fanatic. The cost of the misguided Iraq War would have gone a long way toward correcting the infrastructure deficiencies with no loss of national security and probably made the same contractors happy.

The objection to doing anything about this arises from the inability or unwillingness to address the question of where the money comes from, yet the only answer is deceptively simple. It starts with an understanding of what money is. The fact that people are attached to it emotionally, clinging to it as tokens of emotional satisfaction, obscures the fact that in the modern world it is simply a tool of accounting. It is not a thing of inherent value, a store of energy that can be used run the economic engine. For a mechanical analogy, it is more like the motor oil in the lubrication system of a car or the air in the pneumatic system used to inflate its tires. Too much or too little of either in the fluid reservoirs makes for inefficient operation.

This analysis has attempted to show that the reservoir of value for the US economy is not the financial assets that have mushroomed over the past 40 years, which can

disappear as quickly as they came, but rather the vast pool of human capital that is presently being underutilized and wasted. Such underutilization and waste is not the fault of business owners and managers per se, responding as they must to global competition, but it does not help that many sit on the sidelines while economic claptrap designed to elevate personal greed to a prerogative of the constitution is put into policy. The responsibility lies with the policy makers themselves, but they, in turn are elected by polarized and vocal groups that put special interest over the common good.

The left wants to tax or borrow. The right doesn't want to be taxed or to borrow, since they fear the latter may affect their own ability to borrow. They pontificate about the federal government's lack of fiscal restraint with the old saw that the government should be as fiscally responsible as its citizens; yet how many of them own a home with no mortgage that wasn't inherited. If they were to run their own households the way they demand the government run its house, they would have to charge their children for dinner and room rent, TV and computer time, not to mention the cell phones, require them don only fashion-free clothing unless they can pony up the premium, and make them go without seeing the doctors because they couldn't pay for the visits themselves. You get the picture.

The current polarization has substance. The problems of the blue states are generally those of urban developed areas while those of the red states are likely to originate in a more recent rural history. The fallback possibilities during economic hard times are prone to depend more on individual initiative and effort in a rural environment than in a dense urban one, making its population suspect of a policy from a remote federal bureaucracy run by people with an urban pedigree. It has not always been this way. That bureaucracy was a lifeline to these rural areas in the Great Depression, as it was to the Eastern banking establishments.

As stated, the answer is simple, but demands discipline. Fundamentally overhaul or phase out the income tax, retaining only those taxes that cover actual public costs, including compensation minimums and supporting tariffs, and phase in payment for necessary public programs, such as infrastructure, research and development, and the social safety net with electronic fiat money, recognizing that the money supply, if considered an economic good at all, is more public than private, more a common than a club good. From this recognition, provide the proper oversight of its operation and optimization. Allow private interests to provide a premium marketplace for whatever education, insurance, housing, retirement or other club-good programs they desire, but with zero public recourse in the event of their failure, no matter what size the failure. In financial matters someone's loss is someone else's gain, but this is not so in the resulting economic loss. Limit the size of financial establishments, but not their ability to work transparently together. Reign in the ridiculous compensation of management.

Publicly develop the human capital base through decentralized, community based education, employment training and basic medical care programs. Revamp



mortgage rules so that once a banking establishment, which not so incidentally is insured by the public through the FDIC, has qualified a buyer and closed the deal, the property cannot so easily be foreclosed, while also removing any regulatory compulsion to lend when the bank deems a buyer unqualified. In this regards, in the recent fiasco it would have been a lot cheaper for the public to provide mortgage insurance for everyone than to allow the development of a private, opaque credit default swap market. Implement a guest worker visa program. Decriminalize vice, but properly penalize and tax its damaging excesses. Develop quick response reprisals for foreign belligerents that are aimed at proportional response, not necessarily aimed at eradication, which avoid prolonged engagement, and offer negotiation. Etcetera, etcetera, and so forth.

The position taken here is not that markets should be arbitrarily controlled and regulated. The position is that in a competitive free market system under resource constraint and therefore faced with excess labor, not all goods and services will be produced and distributed by that system as needed due to the fact that labor is subject to the same commodity pressures as any other good or service. What is required, therefore, is not a redistribution of wealth from the haves to the have-nots that is disruptive of established and adequately functioning productive organizations, but a provision of liquidity distribution, albeit with necessary overall programs for the engagement of equivalent productive, meaningful employment. Such guarantees indicate that in the absence of real productive employment opportunity, as in the recent crisis, willing citizens should not be denied access to the liquidity necessary to maintain a decent life.

It is my belief that the liquidity structure outlined here offers a real liquidity optimization constraint in  $C_G$  and  $I_G$  and a target for policy implementation. The public *as public* should invest 4% of 2013 GDP in infrastructure and R&D for each of the next 6 years out of fiat liquidity, which is in line with ASCE suggestions, and private business should invest 2.7% of GDP in domestic investment toward the target reduction in net consumption spending to 61.8%. If private business won't invest the 2.7%, then the public should do the rest, and going forward provide adequately for the basics in education, medical, and appropriate end of life care for those for whom the free market fails to provide.

If the human capital of the United States, its citizenry and guest workers, is properly engaged, enhanced, and enriched, through enlightened public-private initiatives, there is no cause for pessimism.

PGFWABF,  
PHACHB,  
PHAYHH,  
PFSAHG.

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# Human Capital Accounting in the United States, 1994–2006

By Michael S. Christian

**T**HIS paper presents a human capital account for the United States from 1994 to 2006. Its methods are borrowed heavily from Jorgenson and Fraumeni (1989, 1992), although it deviates in some aspects. Like previous human capital accounts, it finds that the stock of human capital is very large—nearly three-quarters of a quadrillion dollars in 2006 if both its market and nonmarket components are included. The account breaks down human capital investment among the effects of births, deaths, aging, and education on human capital. Measures of gross investment in education are found to be very sensitive to counterfactual assumptions; consequently, investment in education is measured net of aging.

The account departs from Jorgenson-Fraumeni by measuring investment in education net of aging of enrolled persons rather than gross investment in education. A discussion of gross investment in education and its sensitivity to different assumptions concludes the paper.

## Creating an Analysis Data Set for Human Capital Accounting

The central data set used in producing the human capital account is the October school enrollment and March demographic supplements to the Current Population Survey (CPS). From these data, nearly all of the information needed to produce an analysis data set suitable for producing a human capital account is available.

### Population and school enrollment

The October CPS is used to measure the population and school enrollment components of the analysis data set. This part of the analysis data set includes population and school enrollment rates by age, sex, and individual year of education for persons ages 0 to 34 for

each year between 1994 and 2006. It also includes population by age, sex, and membership in one of five broad education categories (no high school diploma, high school diploma, some college, bachelor's degree, and advanced degree) for persons ages 35 and older. The greater detail in the data set for persons ages 0 to 34 is a result of this group being of school-going age; it is necessary to measure their educational attainment by the individual year to account for their investment in education from school enrollment. It is presumed that persons age 35 and older are past school-going age; age is top coded at 80.

A change in the CPS in 1992 makes the measurement of educational progress by individual year of education particularly challenging. Starting in 1992, the CPS switched to a set of education categories that focused more on degrees and certifications earned, such as "high school graduate," "some college but no degree," and "bachelor's degree." An informative discussion of this switch is in Jaeger (1997). To accommodate this switch, the distribution of persons by individual years of education is imputed using data from the October CPS. The October CPS school enrollment supplement includes variables about whether persons were enrolled in school and in which individual grade or year of school the person was enrolled. These variables make it possible to plausibly guess the number of years of education completed by persons who are enrolled in school: one can realistically assume that a person who is enrolled in a particular year of school has completed education up to the year before. The school enrollment variables are also useful in guessing the distribution of the individual years of education of persons who are not enrolled in school. In some cases, it is realistic to assume that the distribution of individual years of education of persons who are not enrolled in school is the same as that of persons who are enrolled in school, conditional on age, sex, and broadly measured educational attainment. In other cases, historical data on enrollments going backward into the past for a particular cohort can be used to guess the distribution of individual years of education of persons in that cohort at a given time.

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### Earnings, wages, hours of work, and nonmarket hours

The March CPS is used to measure the labor and earnings components of the data set. Average earnings, average hours of work, and the average post-tax wage are measured by age, sex, and broad education category (no high school, high school, some college, bachelor's degree, advanced degree) for the years 1994 to 2006. One implication of measuring average earnings, hours of work, and wages within five broad education categories is that in this human capital account, there are large direct payoffs to finishing degrees and diplomas and no direct payoffs to finishing the intermediate nondegree years of education in between. However, investment in education still has value even in nondegree years since each year of schooling moves a person 1 year closer to a degree, increasing the probability of earning the degree's payoff.

### Measuring births, deaths, education, and aging

At this point, the analysis data set contains the following variables, each within year, age, sex, and education, and (with the exception of death rates) drawn entirely from the CPS.

<i>pcount</i>	Population
<i>senr</i>	School enrollment rate
<i>ymi</i>	Average yearly earnings per person
<i>mhrs</i>	Average yearly work hours per person
<i>shrs</i>	Average yearly hours in school per person. $1300 \times \text{senr}$
<i>nmhrs</i>	Average yearly nonmarket hours per person. $5110 - \text{shrs} - \text{mhrs}$
<i>ynmi</i>	Average value of yearly nonmarket hours per person. Equals <i>nmhrs</i> times the post-tax wage rate
<i>sr</i>	Survival rate, from the life tables of the Centers for Disease Control. Only differentiated by year, age, and sex

From these data, changes in population can be broken down among births, deaths, aging, education, and a residual term that covers migration and measurement error. To account for changes in the CPS' approach to weighting observations from year to year, the CPS-based data were adjusted to conform to national aggregates from alternative sources: population from the Census Bureau; enrollment from the Common

Core of Data, the Private School Universe Survey, and the Integrated Postsecondary Education Data System, and births and deaths from the National Center for Health Statistics.<sup>1</sup>

### Measuring Human Capital and Human Capital Investment

With the analysis data set assembled, the work of producing a human capital account begins. The steps involved in producing a human capital account are borrowed heavily from the accounts of Jorgenson and Fraumeni (1989, 1992).

#### Per capita human capital

The human capital stock is equal to the lifetime labor incomes—market and nonmarket—of the entire U.S. population. The first step in measuring this stock is measuring average lifetime labor income by year, age, sex, and education, which could also be understood as a measure of per capita human capital. Per capita human capital by year, sex, age, and education is measured starting with the oldest age group and moving backward. Per capita market human capital for the oldest age group in the data set—the age 80 and older group—is measured as follows:

$$mi_{y,s,80+,e} = [1 - (1 + \rho)^{-1} sr_{y,s,81+,e} (1 + g)]^{-1} ymi_{y,s,80+,e}$$

where  $mi_{y,s,80+,e}$  is per capita market human capital in year  $y$  of persons age 80 and older of sex  $s$  and education  $e$ ,  $\rho$  is the yearly discount rate,  $sr_{y,s,81+,e}$  is the survival rate in year  $y$  of persons of sex  $s$  who are age 80 or older, and  $g$  is the yearly rate of income growth.<sup>2</sup> Per capita market human capital is equal to the present discounted value of expected lifetime market labor income of a person of age 80 or over, conditional on constant discount, income growth, and survival rates. Its nonmarket equivalent—which is based not on earnings but on the value of nonmarket time—is measured as

$$nmi_{y,s,80+,e} = [1 - (1 + \rho)^{-1} sr_{y,s,81+,e} (1 + g)]^{-1} ynmi_{y,s,80+,e}$$

where  $nmi_{y,s,80+,e}$  is per capita nonmarket human capital in year  $y$  of persons age 80 and older of sex  $s$  and education  $e$ .

From the oldest age group, one can work backwards to measure the human capital of persons 1 year younger. Between the ages of 35 and 79, it is presumed that persons do not enroll in school; consequently,

1. For a discussion of changes in weighting in the CPS, see the "Historical Comparability" section of the Bureau of Labor Statistics CPS documentation at [www.bls.gov/cps/eetech\\_methods.pdf](http://www.bls.gov/cps/eetech_methods.pdf).

2. This approach to handling persons age 80 and over is different from that of Jorgenson and Fraumeni, which sets the human capital of persons above a particular age threshold at zero.

there is no need to account for persons moving up to higher levels of education. Per capita human capital in these age groups is measured rather simply as:

$$mi_{y,s,a,e} = ymi_{y,s,a,e} + (1 + \rho)^{-1} sr_{y,s,a+1} (1 + g) mi_{y,s,a+1,e}$$

$$nmi_{y,s,a,e} = ynmi_{y,s,a,e} + (1 + \rho)^{-1} sr_{y,s,a+1} (1 + g) nmi_{y,s,a+1,e}$$

At these ages, per capita human capital is equal to earnings in the current year plus an expectation of per capita human capital in the following year, taking into account aging and rates of survival, time preference, and income growth.

Between the ages of 5 and 34, it is possible to enroll in school and move up to a higher level of education. Per capita human capital in these age groups is measured as

$$mi_{y,s,a,e} = ymi_{y,s,a,e} + [(1 + \rho)^{-1} sr_{y,s,a+1} (1 + g)]$$

$$[senr_{y,s,a,e} mi_{y,s,a+1,e+1} + (1 - senr_{y,s,a,e}) mi_{y,s,a+1,e}]$$

$$nmi_{y,s,a,e} = ynmi_{y,s,a,e} + [(1 + \rho)^{-1} sr_{y,s,a+1} (1 + g)]$$

$$[senr_{y,s,a,e} nmi_{y,s,a+1,e+1} + (1 - senr_{y,s,a,e}) nmi_{y,s,a+1,e}]$$

This is the same as that for the older age groups except that now expectations of per capita human capital in the following year includes the likelihood of school enrollment as well as aging, survival, time preference, and income growth. For ages below 15, earnings is set to zero as is the value of nonmarket time, so all human capital derives from expectations of future earnings and values of nonmarket time.

Finally, between the ages of 0 and 4, it is not possible to enroll in school. For this group, per capita human capital is set the same way as it is for those between the ages of 35 and 79 except that earnings and value of nonmarket time are set to zero. Education is also set to the lowest education group of no education.

### The human capital stock and net human investment

The human capital stock is measured by taking the weighted sum of the population within years across sex, age, and education using per capita human capital by year, sex, age, and education as a weight. In mathematical terms, this is equal to

$$\text{Human capital stock in year } y = \sum_s \sum_a \sum_e (pcount_{y,s,a,e} \times life_{y,s,a,e})$$

where *life* is the per capita human capital stock, the sum of its market (*mi*) and nonmarket (*nmi*) compo-

nents by year, age, sex, and education. The human capital stock is the total expected lifetime labor income—market and nonmarket—of the U.S. population.

Net investment in human capital is equal to the effects of changes from one year to the next in the size and distribution of the U.S. population on the human capital stock. This is mathematically equal to

$$\text{Net human investment} = \sum_s \sum_a \sum_e [(pcount_{y+1,s,a,e} - pcount_{y,s,a,e}) \times life_{y,s,a,e}]$$

### Breaking down net human investment into its components

Since changes in the population can be broken down across different causes (births, deaths, and so on), we can break down net human investment into components corresponding to these causes. This account breaks net human investment into five components: investment from births; depreciation from deaths; net investment from education and aging of persons enrolled in school; depreciation from aging of persons not enrolled in school; and the net investment value of residual population shifts that cannot be explained with the available data on births, deaths, aging, and education.

Of these components, the most substantial deviation from other human capital accounts is the decision to measure investment in education net of the aging of persons enrolled in school rather than as a gross measure distinct from the aging of persons enrolled in school. This is because measured gross educational investment in this account is very sensitive to counterfactual assumptions; this sensitivity is discussed in the last section of the paper.

### The Human Capital Stock

Applying the methods described above yields estimates of the human capital stock that, like those in Jorgenson and Fraumeni (1989, 1992), are very large. In 2006, assuming a discount rate of 4 percent and an income growth rate of 2 percent, the total stock of human capital was \$738 trillion (table 1). Of that \$738 trillion, \$526 trillion—71 percent—is the present discounted value of nonmarket, nonschool time, while the remaining \$212 trillion is the present discounted value of lifetime market earnings. The human capital stock is overwhelming in size compared with the stock of physical assets, which had a value of \$45 trillion in 2006.<sup>3</sup>

3. The stock of physical assets is equal to the stock of fixed assets and consumer durable goods in table 1.1 of the Bureau of Economic Analysis fixed assets tables.



Table 1. Human Capital Stock

	Nominal (trillions of dollars)			Real (trillions of 2006 dollars)		
	Total	Market	Nonmarket	Total	Market	Nonmarket
1994	395	117	278	619	189	430
1995	411	122	288	627	192	436
1996	432	130	303	635	194	441
1997	454	138	316	642	196	446
1998	477	145	332	650	198	452
1999	505	155	350	658	201	458
2000	531	163	368	665	202	463
2001	557	170	388	673	205	469
2002	589	177	412	679	206	473
2003	648	185	464	686	208	478
2004	642	191	451	691	209	482
2005	667	200	467	697	211	487
2006	704	212	492	704	212	492

The share of the human capital stock that is nonmarket fluctuates between 69 percent and 72 percent. The ratio of the stock of human capital to the stock of physical assets was 18 in 1994 and 16 in 2006, and the proportion of investment that is nonmarket ranges from 70 percent to 77 percent and (using a regression on time) rises at a rate of 0.5 percentage point per year.

In real terms, the human capital stock increased at an annual rate of 1.1 percent between 1994 and 2006; the market component grew at a rate of 1.0 percent, while the nonmarket component grew at a slightly faster rate that rounds down to 1.1 percent. The real human capital stock is measured as a cost-weighted Fisher index of the U.S. population by age, sex, and education, using per capita human capital by age, sex, and education as the cost weight. Changes in this series over time can be attributed entirely to changes in the size of the U.S. population and changes in the distribution of the U.S. population by age, sex, and education. The growth in real human capital lagged growth in physical assets, which grew at an annual rate of 3.1 percent over the 1994 to 2001 period, of 2.6 percent over the 2001 to 2006 period, and of 2.9 percent over the entire 1994 to 2006 period.<sup>4</sup>

Growth in the human capital stock is very similar to growth in a simple headcount of the U.S. population, which also grew at a rate of 1.1 percent over the 1994 to 2006 period. This implies that virtually all growth in the human capital stock is a result of changes in the size of the U.S. population rather than in the distribution of the U.S. population by age, sex, and education.

4. Author's calculation from table 1.2 of the Bureau of Economic Analysis fixed assets tables.

## Net Investment in the Human Capital Stock

Net investment in the human capital stock was \$6.4 trillion in 2005, of which \$1.6 trillion was investment in market human capital and \$4.9 trillion was investment in nonmarket human capital (table 2).<sup>5</sup> By comparison, net investment in the physical capital stock equaled \$1.0 trillion in 2005.<sup>6</sup> The nonmarket percentage of net human capital investment shows some volatility, ranging from 72 percent to 78 percent over 1994 to 2005. The general trend over time is toward a greater nonmarket proportion of investment; a simple regression of percent nonmarket on time implies that the percent nonmarket increases by 0.4 percentage point each year.

Table 2. Investment in human capital, 2005

(Trillions of dollars)

Component	Total	Market	Nonmarket
Net investment, total.....	6.1	1.6	4.5
Investment from births.....	9.3	3.2	6.1
Depreciation from deaths.....	2.6	0.4	2.2
Net investment from education, aging of enrolled.....	6.5	3.1	3.4
Depreciation from aging of nonenrolled.....	9.1	4.8	4.3
Residual net investment.....	2.0	0.4	1.5

The most important components of overall net human capital investment are investment from births and depreciation from aging of the nonenrolled; in 2005, births added \$9.7 trillion to the human capital stock, while aging subtracted \$9.5 trillion from the human capital stock. Net investment from education is the next most important component, adding \$6.9 trillion to the human capital stock; recall that this not only includes the effects of education itself but also the effect of the aging of persons while enrolled in school. Deaths had a relatively small impact, subtracting \$2.7 trillion from the human capital stock. The residual part of net investment has a relatively small value of \$2.0 trillion, although it is also quite volatile. The relative importance of these components of net human capital investment remained roughly the same over the 1994 to 2005 period.

The importance of the different components of human capital differs substantively between net investment in the market component of human capital and net investment in the nonmarket component of human capital. Aging of the nonenrolled is the largest

5. Investment is measured for 2005 while the stock is measured for 2006 because the stock is measured at the beginning of the year; consequently, it is investment in 2005 that adds into the 2006 stock.

6. Author's calculation from tables 1.3 and 1.5 of the Bureau of Economic Analysis fixed assets tables; net investment of the physical capital stock is measured as investment in fixed assets and consumer durable goods minus depreciation in fixed assets and consumer durable goods.



contributor to (or, in this case, detractor from) the market component of human capital investment. Deaths are virtually irrelevant, since most people die well past their prime earning years. In contrast, the largest contributor to the nonmarket component of human capital is births.

### Gross and Net Investment in Education

One shortcoming of this human capital account is the measurement of the contribution of education to human capital as net investment that includes the effects of the aging of the enrolled rather than gross investment that excludes the effects of aging. The account does not present measures of gross investment because of its sensitivity to assumptions about how persons who did enroll in school would have behaved in future years had they not enrolled in school. Gross investment in education in a given year is equal to the effect of school enrollment on the stock of human capital: the difference between actual human capital and what the stock of human capital would have been had no one enrolled in school that year. The latter depends substantially on what assumptions are made about the school enrollment decisions that people who actually did enroll in school would have made in future years had they not enrolled in school.

To illustrate this sensitivity, consider two different scenarios. The first scenario is similar to that of traditional human capital accounts. In this scenario, it is assumed that people who enrolled in school in real life would, in the counterfactual case of no enrollment for 1 year, become like people who did not enroll in school in real life. This has dramatic implications. Most persons who are enrolled in school are making normal progress in school enrollment with age and are “on track” to earn their high school diplomas at around age 18 or their bachelor’s degrees at around age 22. People who are behind normal progress by a year or two are in a sense “off track,” which has serious implications for eventual educational attainment. For example, in 1994, the probability that an “on track” 17-year-old male with an 11<sup>th</sup> grade education enrolls in 12<sup>th</sup> grade and finishes high school is 94 percent. If he misses a year of education and falls “off track” by 1 year, that probability drops to 79 percent; fall another year “off track,” and it drops further to 30 percent. If we assume that persons who are “on track” would behave like persons who fall “off track” if they missed a year of education, the cost of missing a year of education is very large. Consequently, gross investment in education is extremely high.

In contrast, consider an alternative scenario. In this scenario, we assume that people who attended school

in real life would not fall “off track” in the counterfactual of no enrollment for 1 year. Their likelihood of further enrollment would not drop; instead, they would enroll in further schooling at a rate equal to the enrollment rate of persons of the same education level who are 1 year younger. So, for example, consider again the 17-year-old male with an 11<sup>th</sup> grade education, whose probability of enrollment in 12<sup>th</sup> grade is 94 percent. If he did enroll in school, then we assume that had he not enrolled in school, his likelihood of enrollment in 12<sup>th</sup> grade as an 18 year old would still be 94 percent—and not 79 percent, which is the enrollment rate in 12<sup>th</sup> grade of actual 18 year olds with 11<sup>th</sup> grade educations. Consequently, the student stays “on track” toward finishing his diploma or degree when he misses a year of education; we assume in the counterfactual that his likelihood of enrollment in 12<sup>th</sup> grade is not affected by having missed a year. In this scenario, the cost of missing a year of education is much smaller, and as a result, gross investment in education is much smaller.

Under the assumption that persons who did enroll in school would have fallen “off track” had they not enrolled, the market component of gross investment in education in 2005 equals \$16 trillion, greater than the entire gross domestic product (GDP) of the United States. In contrast, under the assumption that persons who did enroll in school would have stayed “on track” with a year’s delay, the market component of gross investment in education in 2005 equals \$3.1 trillion. Under this assumption, the market component of gross investment in education is still nearly four times greater than the measured output of education in traditional GDP accounts, which was \$807 billion in 2005.<sup>7</sup> Substituting this measure of gross investment in education into GDP as a measure of the output of the education sector would increase total GDP by 18 percent (from \$12.4 trillion to \$14.7 trillion) and the share of education output in GDP from 6 percent to 21 percent—quite an impact for what is probably a conservative measure of human capital investment from education.

One possible reason for this result is that the analysis data set assumes that hourly earnings in adulthood only differ across five broad education categories: no high school diploma, high school diploma, some college, college degree, and advanced degree. Since this presumes a big payoff in earnings when one earns a

7. Author’s calculation from tables 2.4.5 and 3.17 of the national income and product accounts of the Bureau of Economic Analysis; calculated as the sum of personal consumption expenditures on education and research (\$226 billion) and government consumption expenditures on education (\$581 billion).

degree, assumptions about whether people would stay “on track” or fall “off track” from earning their degrees are extremely important. A version of the analysis data set that takes into account incremental increases in earnings with increases in the level of education by individual year may yield estimates of investment in education that are less sensitive to counterfactual assumptions.

### Conclusions

Like predecessor studies, this study finds that the size of the human capital stock in the United States is gigantic. When both market and nonmarket components of human output are combined, the stock of human capital was about three-quarters of a quadrillion dollars in 2006. About 70 percent of this stock is the nonmarket component. Net investment in human capital—which is primarily the effects of births, aging, and education—was about \$6 trillion in 2005; the nonmarket share of investment is normally between 70 and 80 percent.

The human capital account produced is not entirely satisfactory since it does not produce conclusive measures of gross investment in education. The measures of gross investment in education are inconclusive because they are sensitive to counterfactual assumptions about what the future enrollment patterns of

persons who are enrolled in school would have been had they not enrolled. Although the absence of conclusive measures of investment in education is disappointing, two interesting results come out of the analysis. First, it is useful to know that measures of gross investment in education can be very sensitive to the assumptions of the human capital account. Second, even the more conservative estimates of the market component of gross investment in education are nearly four times larger than the cost-based measures of educational output in the gross domestic product accounts.

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