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CAN REDISTRIBUTION HELP BUILD A MORE STABLE ECONOMY?

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Introduction

The ongoing recovery that started in June 2009 is about to become the longest recovery in the history of the United States. At the same time, the unemployment rate is low and there are no signs of significant inflationary pressures.

Nevertheless, seen from other angles the situation is bleak. The current recovery is the weakest in the postwar history of the US economy, and the jobs that have been created are mostly low-productivity and low-skill jobs. As we enter the second quarter of 2019, many clouds have gathered, which make a recession more probable than at any other time since the Great Recession of 2007–09.

In the present report, we analyze the main structural problems of the US economy. For better or worse, these structural characteristics—with some important exceptions—have not changed significantly over the last two-and-a-half decades. Hence, this identification allows us to analyze in a coherent way the factors that led to both the crisis and the weak and increasingly fragile recovery.

We point to four main structural problems: (1) weak net export demand; (2) fiscal conservatism; (3) increasing income inequality; and (4) financial fragility. These four problems are related to each other and can account for most of the financial woes of the US economy—but they can also explain a significant part of the otherwise perplexing political developments of the last few years.

Importantly, the situation on most of these fronts is getting worse. The economies of US trading partners are slowing down; income inequality keeps increasing (the latest step in this process was last year's tax reforms); the balance sheets of the private sector, especially nonfinancial firms, are more fragile than ever; and the stock market is clearly overvalued. These factors—and the feedback among them—will be the causes of the next recession.

For a robust and sustainable economic future, the US economy requires deep structural reforms that deal with the aforementioned problems. There is no single policy that can achieve this. Policymakers need to introduce and experiment with a wide range of measures. One such

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measure is an increase in the taxation of very high incomes and net worth. We simulate two variations of recent proposals that move in that direction. In the first, in accordance with a recent proposal by Senator Elizabeth Warren, there is a progressive annual wealth tax on households with high net worth (2 percent on household net worth above $50 million, with an additional 1 percent tax on net worth above $1 billion). In the second, there is a 10-percentage-point increase in the average tax rate for households belonging to the top 1 percent of the income distribution. Although the main justification for such policies is not economic, our simulations show that if these tax increases are accompanied by an equivalent increase in government outlays, they can have significant macroeconomic benefits.

The Recovery so Far

Output

According to the Business Cycle Dating Committee of the National Bureau of Economic Research, the current recovery, which started in June 2009, is about to become the longest since 1854 (the earliest the data allow us to pinpoint the stages of the business cycle). As of April 2019, the duration of the current expansion is 118 months, only two months shorter than the expansion of the 1990s, which lasted 120 months (March 1991 to March 2001). As Table 1 shows, this is three times the duration of the average expansion for the period 1854–2009. In the postwar period, active fiscal and monetary policy have doubled the average duration of expansions (from 28.8 months before 1945 to 58.4 months afterward). Still, the current expansion is also double the postwar average.

On the other hand, the duration of the latest contraction (18 months, from December 2007 to June 2009) is close to the prewar average. If we exclude the Great Recession, the average contraction of the postwar period is much shorter, around 10 months. Active fiscal and monetary policy are the main reasons behind this change as well.

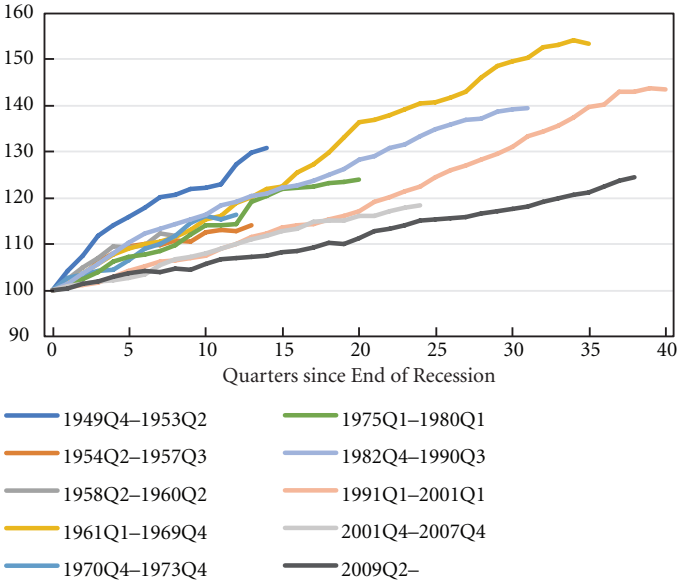
As Figure 1 shows, the current expansion is at the same time the weakest over the postwar period. For example, the gains that have been recorded in the 38 quarters of the current expansion (as a percentage of real GDP at the trough of the cycle) are roughly the same as the gains recorded in the expansion of 1975Q1–1980Q1, which were achieved in just half the time (that expansion of the second half of the 1970s was considered—and actually was, as the figure shows—weak by the postwar standards of that time).

Table 1 **Average Duration of US Business Cycle Expansions and Contractions (months)**

	Contraction	Expansion
1854–2009 (33 cycles)	17.5	38.7
1854–1919 (16 cycles)	21.6	26.6
1919–1945 (6 cycles)	18.2	35.0
1945–2009 (11 cycles)	11.1	58.4
Latest	18 (Dec '07 – Jun '09)	118 (Jun '09 –)

Source: NBER

Figure 1 **Index of Real GDP in US Recoveries, 1949Q4–2018Q4 (trough=100)**



Sources: BEA; authors' calculations

Labor Market

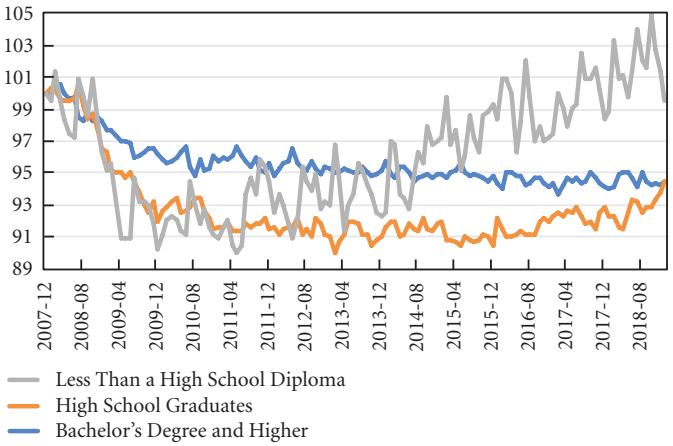
As output has recovered, albeit slowly, there has been a considerable decrease in the unemployment rate. According to the latest Bureau of Labor Statistics data, the unemployment rate was 3.8 percent in March 2019, down from 10 percent in October 2009, its highest level after the crisis.

Despite the recent improvements in the labor market, the employment-to-population (E–P) ratio is less than halfway from returning to its precrisis levels. As Figure 2 shows, the E–P ratio was 60.7 percent in January 2019, up from 58.2 percent,

Figure 2 Civilian Employment–Population Ratio

Source: BLS

Figure 3 Employment–Population Ratio, 25 Years and Older (Dec 2007=100)



Source: BLS

which was its postcrisis low, but well below its precrisis peak of 63.4 percent in December 2006 and its historic peak of 64.7 percent in April 2000. These numbers show that the weak recovery of labor force participation is as much of a contributing factor to the fall in the unemployment rate as the employment gains. In other words, a significant number of employees have been discouraged and remained out of the labor force despite the recovery in output and employment.[1]

A more worrisome feature of recent labor market trends, which usually passes unnoticed, is that the jobs that have been created are mostly low-productivity, low-paid jobs. As Figure 3 shows, it is only the E–P ratio of employees with less than a high school diploma that has increased significantly. When it comes to employees with a high school diploma, the increase is much smaller, while there has been no increase whatsoever in the E–P ratio of employees with a bachelor's degree and higher. Given these data, it is not surprising that, despite the low unemployment rates, there are no significant pressures on wage inflation.

The Structure of the US Economy

In order to understand the US economy—or for that matter any economy—we need to identify its structural characteristics. These characteristics will allow us to link its precrisis trajectory to the present relatively slow recovery and, most importantly, its future prospects. Through this prism, it is also easier to understand major policy debates and concerns regarding foreign competition, such as the recent much-discussed "trade wars."

In several previous reports we have identified four main structural problems afflicting the US economy: (1) the weak net export demand for US products; (2) the fiscal conservatism that has prevailed for most of the last three decades; (3) the increase in income inequality; and (4) the associated financial fragility.[2]

These issues are not independent of each other. An economy that faces weak net export demand from abroad tends to have high trade deficits. From the financial balances perspective, a trade deficit implies a negative balance (deficit) for the private sector, the public sector, or both. If trade deficits are accompanied by austerity, the burden of the adjustment falls on the private sector. Such an economy faces the choice between growth accompanied by trade and private deficits—essentially growth fueled by private indebtedness—or a recession that will dampen output and reduce imports, thus reducing trade and private deficits. In the former case, private deficits accumulate into higher stocks of debt and make the financial position of the private sector more fragile.

Increasing income inequality makes the situation worse because households at the bottom and middle of the income distribution have higher propensities to consume than households at the top of the distribution. Therefore, a redistribution of income toward the top, as has happened in the United States over the last four decades, has a negative effect on consumption, demand, and growth. In such a situation, for the economy to keep growing it is necessary that poor and middle-class households finance part of their consumption by borrowing. Hence, income inequality adds another layer of instability, as the balance sheets of most households become more fragile (Papadimitriou et al. 2014; Nikiforos 2016).

Finally, such a situation is facilitated by asset inflation, for an increase in asset prices increases the value of the asset side of balance sheets and masks potential vulnerabilities on the liabilities side. As a result, asset inflation contributes to an increase in both the demand for and supply of new liabilities, as both households or other agents are more willing to increase their indebtedness (e.g., loans) and the banks or other institutions are ready to accommodate them. Asset inflation can also have some direct wealth effects on private expenditure, although according to our estimates for the US economy these are relatively small. This analysis shows the connection that oftentimes exists between the two Minskyan processes of fragile balance sheets, on the one hand, and asset inflation, on the other.

The identification of these four structural characteristics of the US economy allows us to understand the factors that led to the crisis of 2007–09 as well as why the recovery that followed has been so slow. In the decades before the crisis, the growth of the US economy (in the face of increasing trade deficits and strict fiscal policies) was largely based on private indebtedness. Due to widening income inequality, the increase in indebtedness was especially problematic for households at the bottom of the income distribution. This process was facilitated by the stock market inflation and the increase in real estate prices, especially after 2000. The crisis ensued when—in the face of high indebtedness—the Fed increased the interest rate and households increased their saving rates; this led to a decrease in growth rates and triggered the financial crisis, which then further reduced growth and employment.

In the period after the crisis, the slow GDP growth rate can be attributed to the same structural factors. Net export demand was weak (with the significant exception of petroleum products) and fiscal policy was constrained (until last year). Inequality also kept increasing. The major difference with the precrisis period is that the household sector has not increased its indebtedness, hence consumption has grown very slowly. Since most components of demand grew slowly (if they grew at all), it is only natural that the economy as a whole also stagnated.

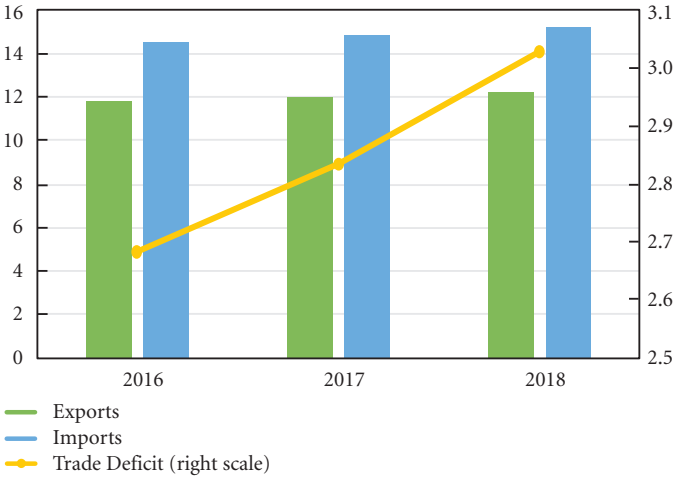
These four structural characteristics are very important for the present and the future prospects of the US economy, warranting more detailed discussion.

The Foreign Sector

The performance of net exports has been at the center of US policy debates over the last year because of the tariffs imposed by the United States on several imported products and the counter-tariffs introduced by some US trading partners. The last year has also seen intense trade negotiations with Canada, Mexico, and Europe, which have concluded with an agreement, and ongoing negotiations with China.

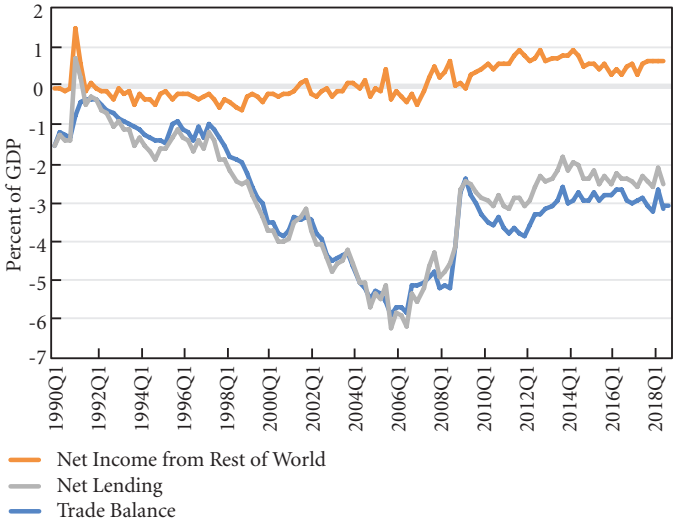
Despite the current administration's focus on trade issues, the US trade deficit has been increasing over the last two years. In 2018, the trade deficit increased—in nominal terms—to its highest level in history. Even as a percentage of GDP, the trade deficit has been increasing in the last two years. In 2018, it slightly exceeded 3 percent (Figure 4a).

Figure 4a US International Trade, 2016–18 (percent of GDP)



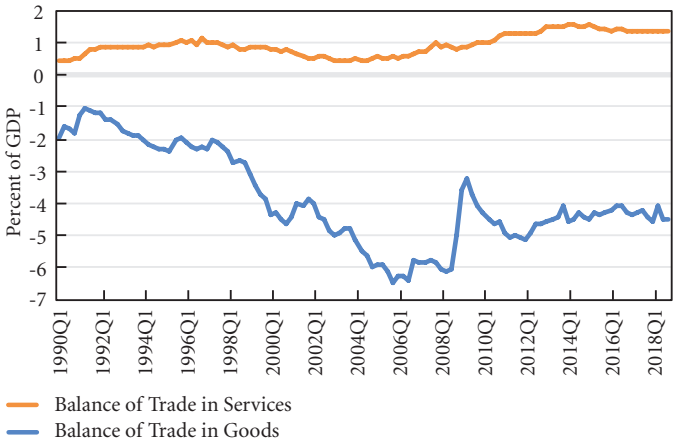
Sources: US Census; BEA

Figure 4b Current Account Balance



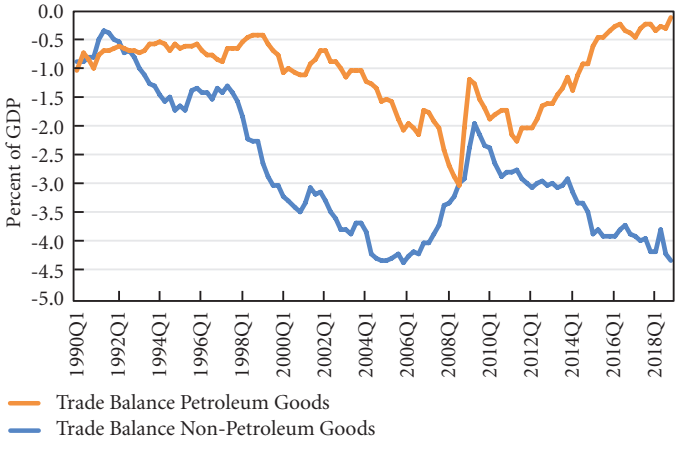
Source: BEA

Figure 4c Trade Balance in Goods and Services



Source: BEA

Figure 4d Trade Balance in Goods



Source: BEA

To get a better idea of the foreign sector, we can decompose the current account balance into the trade balance and net income from the rest of the world. As Figure 4b shows, net income receipts have slightly increased over the last two years. This increase has counterbalanced the deterioration of the trade deficit, so the current account has been relatively stable.

If we go one step further and decompose the trade balance into the respective balances of goods and services, we see that the trade surplus in services has been relatively stable over the last several years. Hence, the worsening of the trade position comes from the goods side (Figure 4c).

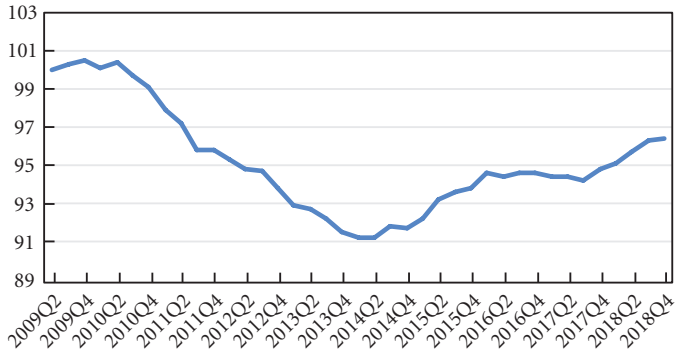
The main reason for the relative stability of the trade and current account balances is presented in Figure 4d. Since the beginning of the recovery, the trade deficit in goods *except for petroleum products* has been following its precrisis trend.[3] At the end of 2018 it reached its precrisis peak—and for that matter its historical peak—of around 4.4 percent. However, at the same time this increase has been counteracted by the improvement in the trade balance of petroleum goods, related to shale gas extraction. The trade deficit of petroleum goods is now close to zero, compared to 2.2 percent of GDP when shale gas extraction started in 2011 and 3 percent before the crisis. It is not then hard to calculate that, had it not been for this improvement in the petroleum products trade balance, the overall trade deficit of the US economy would be close to 7 percent, or more.

Two points are important here. First, Figure 4d shows that the underlying causes of the increase in the trade deficit remain in place. This has important macroeconomic, but also (even more significant) political, ramifications. Second, the future path of the trade balance of petroleum products is not clear. However, over the last three years, it has been stable at slightly below zero. If this stability continues and the trade deficit of non-petroleum goods keeps increasing, the overall trade and current account balances are bound to worsen.

Finally, the demand for US products is vulnerable to the weakening of the economies of the main US trading partners. The eurozone economy, as well as those of Canada, China, and, to a smaller degree, Mexico, are expected to slow down in 2019. This will have a significant effect on US exports and the more general macroeconomic performance of the US economy. Besides the direct demand effect for US products, a slowdown among US trading partners can lead to a worsening of the terms of trade (as long as weaker growth is accompanied by lower inflation), as well as to an appreciation of the dollar if there is an inflow of capital to the United States, or because of monetary policy differences.[4]

In previous reports (Papadimitriou et al. 2015; Papadimitriou, Nikiforos, and Zezza 2016), we have estimated that the combination of a slowdown in the growth rate of US trading partners by 1 percent, a decrease in their inflation rates, and dollar appreciation can lead to a decrease in the growth rate of the US economy of close to 1 percent in each year of our projection period. These dangers still remain.

Figure 5 Index of Government Consumption Expenditures and Gross Investment (2009Q2=100)



Source: BEA

Fiscal Policy

One of the main reasons for the slow recovery is that the US economy has been operating under austerity for most of the time since 2011. The 2011 Budget Control Act (BCA) and its later amendments imposed caps on discretionary spending, which led to a significant reduction in government outlays. Figure 5 shows that as of the last quarter of 2018, real government expenditure was almost 4 percent below its level at the beginning of the recovery, 10 years earlier. This is a remarkable feature of the current recovery, unique among all the postwar business cycles of the US economy.

In the period from 2011 until the end of 2017, government expenditure either decreased or remained stable. The exception to this postcrisis pattern was the period from the second half of 2014 through 2015—this is related mostly to the Affordable Care Act, whose major provisions came into force at that time.

A significant change in the direction of fiscal policy took place last year. The new tax law adopted in December 2017 introduced a wide array of tax cuts, and two bills passed in 2018—the Bipartisan Budget Act (February) and the Consolidated Appropriations Act (March)—raised the spending caps for the 2018 and 2019 fiscal years by $143 billion and $153 billion, respectively. The increase in spending during 2018 is evident in Figure 5.

In our report last year (Nikiforos and Zezza 2018), we argued that it was unlikely that the tax cuts would have significant effects because their benefits were heavily skewed in favor of high-income households and large corporations. Rich households have low marginal propensities to consume, hence the consumption effects are small. Also, for various reasons, large corporations' investment decisions have been decoupled from cash flows. Thus, the tax law supporters' main argument—that it would lead to an investment boom—seemed unlikely. It was more likely, we argued, that the increase in cash flows would lead to higher dividends or more stock buybacks.

A year later, these predictions are confirmed by the evidence. According to various sources, the corporate tax cuts had an insignificant effect on investment. For example, a recent *Business Conditions Survey* of the National Association for Business Economics finds exactly that (NABE 2018). The *Financial Times* summarized the evidence of the first 10 months of tax cuts in an article with the following title: "US Tax Cut Said to Have Little Impact on Investment: Survey Adds to the Evidence That Much of the Windfall Was Used for Share Buybacks" (Edgecliffe-Johnson and Crooks 2018).

For these reasons, the tax law has been very ineffective. By comparison, a similar increase in the government deficit could finance very ambitious projects that would make a big difference. For example, a large infrastructure plan with a similar ex ante budget impact would not only have a significant demand effect, but also important externalities in terms of productivity increases and improvements in the living standards of the average US citizen (who today has to endure the inconvenience of the country's decaying infrastructure).

As a side note, it is important to mention that the tax changes move the United States toward a territorial tax system that creates incentives for corporations to produce and be taxed in other countries. This is contradictory to the administration's effort to reduce trade deficits. By contrast, the productivity externalities of a large infrastructure plan would help the United States regain some of the ground lost to its main trade rivals.

As opposed to the tax cuts, the increase in the spending caps was expected to have more significant demand and growth effects. In last year's report, we projected that the growth rate of the US economy would increase to 3.1 percent in 2018. The latest Bureau of Economic Analysis estimate is 2.9 percent, which is close enough.

The immediate GDP growth response to last year's fiscal boost confirms the criticism of the austerity of the last decade—and the argument that so-called "secular stagnation" comes to a large extent from the demand side, as we have repeatedly argued over the last several years. Also, the fact that there was no discernible effect on wage and price inflation shows that the US economy is far from full employment, despite the low unemployment rates.

Looking into the future, the important question related to fiscal policy is whether there is going to be a return to austerity or not. For the moment, last year's agreement provides only for a small increase in fiscal expenditure this year, so the benefits will be lower. Given the political deadlock in Washington that became evident with the recent government shutdown, an agreement for further fiscal expansion seems unlikely. If anything, many lawmakers, after voting for last year's tax cuts, have expressed worries about the high fiscal deficit and proposed a revision of social provision programs—such as Social Security, Medicare, and Medicaid—to deal with it. Such a scenario, if it ever managed to make its way through the split Congress, would exert a dual negative effect: through fiscal consolidation and a further worsening of income inequality.

Financial Conditions

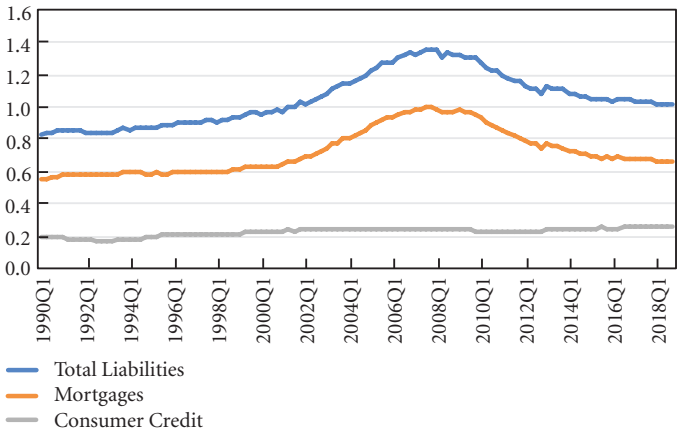
In the aftermath of the crisis, according to the Federal Reserve's Financial Accounts, the household sector has consolidated its balance sheets. The overall ratio of liabilities to disposable income has decreased from 130 percent on the eve of the crisis to slightly above 100 percent at the end of 2018 (Figure 6). Nevertheless, this ratio is still elevated by historical standards.

The adjustment is mostly due to the decrease in household mortgages. At the same time, consumer credit has slightly increased as a share of disposable income. In an economy whose growth before the crisis was based to a large extent on the increase in household indebtedness, this continuous deleveraging of the household sector is a major drag on aggregate demand, and one of the main reasons for the sluggish recovery.

The situation is different in the corporate sector. As Figure 7 shows, the debt liabilities (and the sum of debt and loans) of nonfinancial corporations are at an all-time high. The important related question is: To what extent are these liabilities mirrored by high-quality, liquid assets on the other side of the balance sheets? For example, it is well-known that the largest corporate debt issuer is Apple. However, Apple at the same time has a lot of liquidity and its balance sheet should be robust (Apple has a AA+ rating).

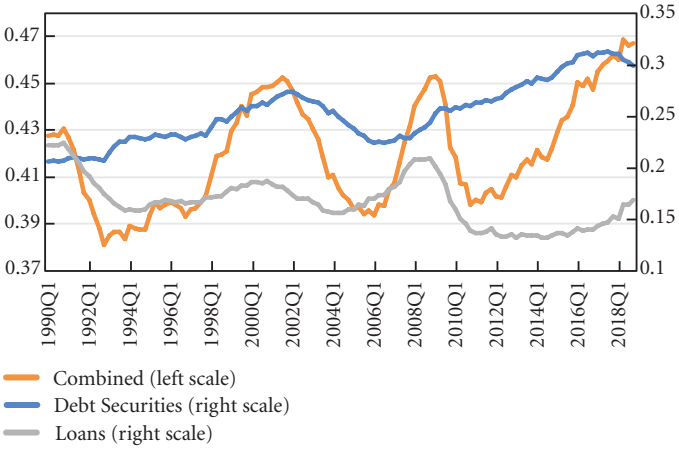
Several indicators show that a significant number of firms find themselves in a situation very different from that of Apple. To begin with, data from various sources show that the share of so-called zombie firms has increased. Various studies use different definitions of zombie firms, but they are essentially a variation of what Hyman Minksy (1992) called Ponzi firms: firms whose profits are not sufficient to cover the interest payments on their debt. The increase in the number of zombie firms has taken place despite the very low interest rates of late.[5] Other data show that the share of corporate bond issuers with a BBB investment grading—the lowest grading above junk status—has risen in recent years. As of 2018, the share of BBB issuers was around one-third (BIS 2019). Meanwhile, the share of the market capitalization with a credit rating above BBB has fallen to 50 percent, below its level in the late 1990s and before the crisis.[6]

Figure 6 Ratio of Household Liabilities to Disposable Income



Source: Federal Reserve

Figure 7 Ratio of Nonfinancial Corporate Sector Liabilities to GDP



Source: Federal Reserve

The increase in interest rates over the last two years—albeit small—poses some challenges for the firms that already have overstretched balance sheets, and they will need to refinance their debt at a higher interest rate. Relatedly, another source of potential instability is the vulnerability of these corporations to even small decreases in earnings stemming from a possible macroeconomic shock. Right now, most analysts expect that there will be a decrease in earnings in the upcoming quarters. Moreover, given that so many bonds are just above junk status, a potential downgrade of a significant number of firms with these kinds of bonds can trigger a fire sale whose consequences could ripple through the financial markets and the real economy.

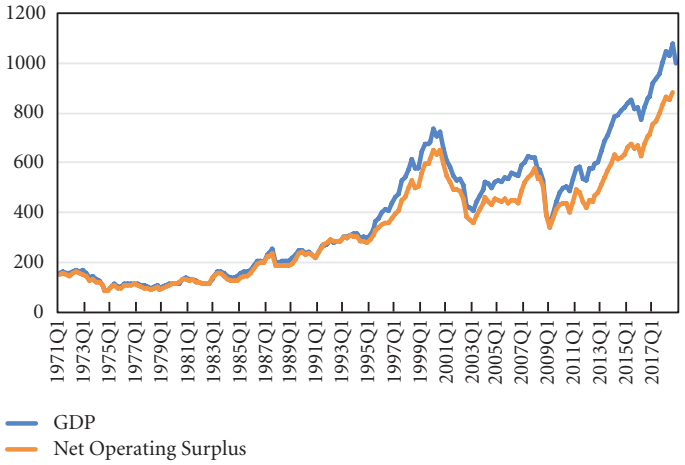
It is also important to note that the picture that emerges when looking at the balance sheets of firms is significantly bleaker than the one portrayed by the aggregated data of the Federal Reserve represented in Figure 7, which show a relatively mild increase in corporate liabilities.

Finally, the fragility of corporate sector balance sheets is accompanied by an obvious overvaluation of the stock market. As we can see in Figure 8a, despite the correction in the last quarter of 2018, the ratio of market capitalization to GDP (or to total profits) is still at historically high levels. Similarly, Figure 8b shows that the cyclically adjusted price-to-earnings ratio is still way above its historical average—it is higher than the level it reached in the early fall of 1929 and surpassed only by the level of the late 1990s.

The stock market overvaluation is another potential source of instability, especially in conjunction with the fragility of private sector balance sheets. According to simulations that we have presented in previous reports (Nikiforos and Zezza 2017, 2018), a stock market correction accompanied by a deleveraging of the private sector could have very severe consequences for the economy. For example, in last year's report we estimated that, under relatively conservative assumptions, such a scenario would lead to a cumulative loss of 7 percentage points of real GDP compared to the baseline scenario.[7]

Obviously, such a scenario is purely conjectural. Processes like these, unsustainable as they may be, can continue for a long time, especially when monetary policy is as accommodating as it is right now. In fact, the drop in the stock market in the last quarter of 2018 was a sign of the market's realization of the fragility of balance sheets in the face of tightening monetary policy. In turn, the slowdown in the pace of the Fed's interest rate increases seems to indicate policymakers' recognition of the same fragility.

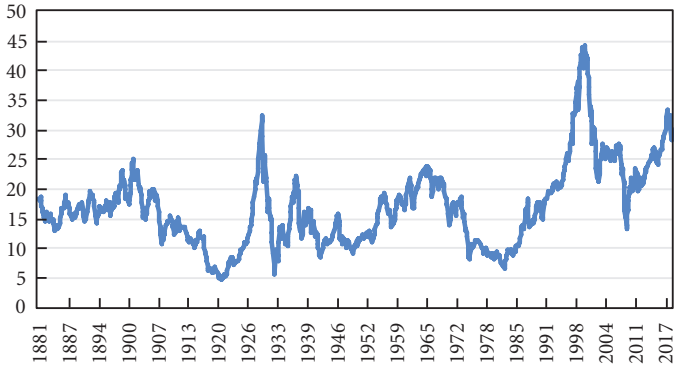
Figure 8a Ratio of Market Capitalization to GDP and Net Operating Surplus, 1971Q1–2018Q4 (1975Q1=100)



Note: The index is calculated as the ratio of end-of-period Wilshire 5000 index to GDP and net operating surplus, respectively.

Sources: BEA; Wilshire Associates; authors' calculations

Figure 8b Shiller Cyclically Adjusted Price–Earnings Ratio P/E 10, 1881–March 2019



Source: econ.yale.edu/~shiller/data.htm

Income Inequality

The fourth major structural problem of the US economy is the very high level of income inequality. Various studies using different methodologies have shown that since the late 1970s, the income of poor and middle-class households has stagnated. As a result, almost all the benefits from the growth of the US economy over that period have accrued to the top income brackets (Piketty 2014; Galbraith 2012; Wolff 2017). This increase in inequality is self-reinforcing. As the top income brackets capture a higher share of income, they are able to tilt the distribution further in their favor.

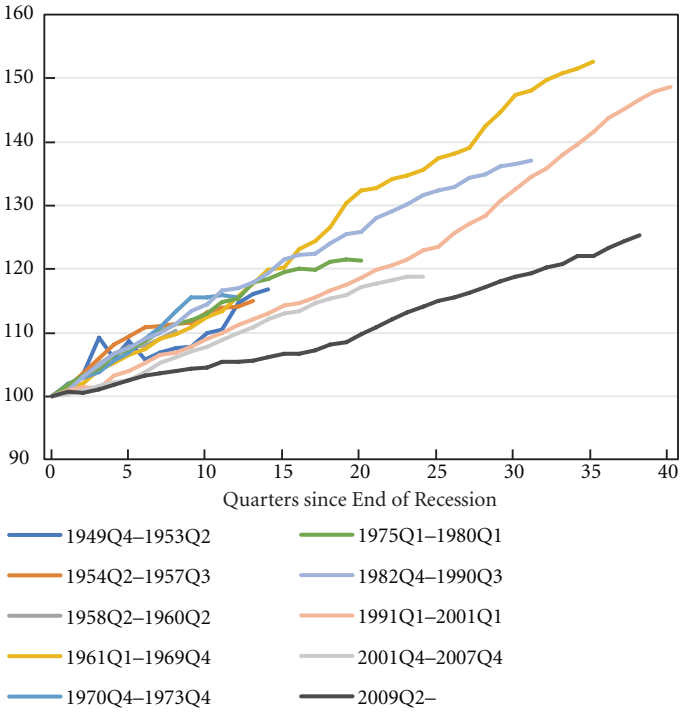
The most serious consequences of these extreme levels of inequality are political.[8] Nevertheless, they also have some important economic repercussions. The most straightforward effect of this redistribution is that the income of households with a high propensity to consume stagnates, while at the same time the income of rich households—with a lower propensity to consume—increases. This exerts a strong negative pressure on consumption. As we can see in Figure 9, the trajectories of consumption in postwar US recoveries are very similar to those of total GDP (Figure 1). Given that consumption is by far the largest component of GDP, increasing income inequality is one of the major sources of the poor GDP performance.

Moreover, according to the theory of induced technical change, as a factor of production becomes more expensive, firms are motivated to introduce new technologies that use less of this factor. The stagnation of the real wage over the last four decades has weakened this motivation to advance technical change through labor-saving technologies. This is a major source of the slowdown of productivity growth.

Finally, the increase in inequality is related to the financial instability discussed in the previous section. Figure 10 shows that there is a strong correlation between the financialization of the economy—captured here by the ratio of total financial assets to GDP—and income inequality. The increase in the income share of the top 10 percent, depicted in the figure, implies an increase of between $3 trillion and $4 trillion in the total income of households in this top income bracket, compared to a counterfactual in which there was no increase in inequality. Since the saving rate of these households is high, the resulting increase in liquidity has been a major contributing factor to the instability of the financial markets.

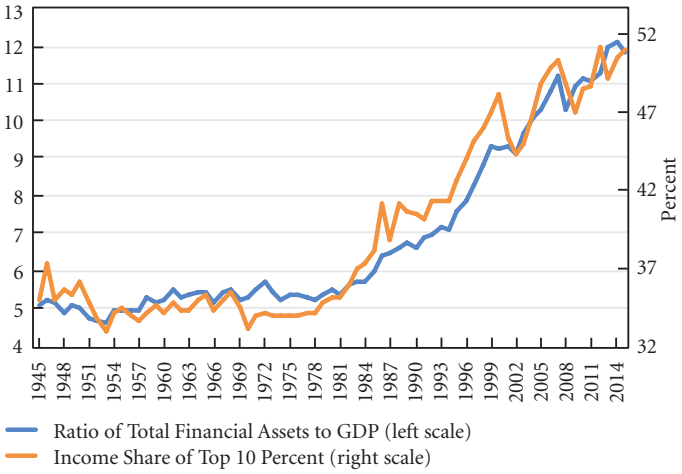
On the other side of the coin, the households at the bottom of the distribution, whose incomes stagnated, had to borrow

Figure 9 Index of Consumption in US Recoveries (trough=100)



Sources: BEA; authors' calculations

Figure 10 Financialization and Inequality, 1945–2015



Sources: BEA; Federal Reserve; World Inequality Database; authors' calculations

in order to finance their normal consumption expenditures, including some services—like education or health care—that became increasingly expensive. This rising indebtedness of middle-class households managed to support growth in the precrisis period. The inability or unwillingness of these households to continue increasing their debt-financed spending in the postcrisis period is a major drag on the economy, as is apparent in Figure 9.

The Macroeconomic Effects of Taxing the Rich

The discussion so far has suggested that the US economy has some serious structural problems that impede a sustainable recovery and growth in the future. Obviously, these issues are not easy to address, and there is no silver bullet for all of them. A concerted effort must be made to deal with these challenges in a holistic way—an effort that begins with a recognition of the structural weaknesses and their interrelationships and requires experimentation with various policies.

One policy that moves in this direction is an increase in the tax rate of the very rich. Such an increase could tackle—at least partially—the problem of increasing inequality. Also, as will be shown in what follows, if the resulting increase in the federal government's revenues is accompanied by an increase in its outlays of the same size, this policy could have some significant positive macroeconomic demand effects.

Three related proposals have been made so far. First, Elizabeth Warren, the senior senator from Massachusetts and contender for the Democratic presidential nomination, proposed a progressive annual wealth tax on households with high net worth. More precisely, the proposal is an annual 2 percent wealth tax on household net worth above $50 million, with an additional 1 percent tax on net worth above $1 billion.[9] According to the estimates of the economists Emmanuel Saez and Gabriel Zucman that accompany the proposal, the tax would affect fewer than 1 percent of American households (around 75,000) and would generate around $2.75 trillion over the 10-year period 2019–28, or roughly 1 percent of GDP per year.[10]

Another proposal has been advanced by Bernie Sanders, junior senator from Vermont and another candidate for the Democratic nomination. His proposal suggests the establishment of an estate tax for estates worth more than $3.5 million. The tax would be progressive and would increase from 45 percent for estates worth between $3.5 million and $10 million to 50 percent for estates worth between $10 million and $50 million, 55 percent for estates worth more than $50 million, and finally 77 percent for estates valued in excess of $1 billion. The plan would also end the tax break for dynasty funds and close other potential loopholes currently in existence.[11] The proposal does not have estimates of how much revenue it would raise in total. It mentions that the families of the 588 billionaires in the United States, under the current valuation of their wealth, would eventually have to pay $2.2 trillion. Since this is an estate tax, the timing of these revenues is uncertain.

Finally, Alexandria Ocasio-Cortez, the newly elected representative for New York's 14th congressional district, recently suggested increasing the top marginal tax rate by creating a new 70 percent tax bracket for incomes above $10 million a year. According to some rough estimates, such a tax would raise around $300 billion over a period of 10 years.

In what follows, we simulate two related scenarios. Scenario 1 simulates the macroeconomic effects of the wealth tax proposed by Senator Warren. For the purposes of our simulations, this proposal has the benefit of a precise timeline that we can implement in our model. However, from a macroeconomic point of view, the results would be similar to those of an estate tax if the latter generated the same amount of revenue.

Scenario 2 simulates a 10 percentage point increase in the average tax rate paid by the top 1 percent of the income distribution. As mentioned, the proposal to introduce a top marginal tax rate of 70 percent on annual incomes above $10 million would raise an average of $30 billion per year. From a macroeconomic point of view, this amount is very small (around 0.15 percent of 2018 GDP) and applies to a tiny fraction of the population: the top 0.01 percent.[12] It is worth mentioning that the tax increase simulated here is less than the "optimal" tax rate that is proposed in the recent related public economics literature (e.g., Diamond and Saez 2011; Romer and Romer 2014).

For both scenarios, the running assumption is that the increase in tax revenues is compensated for by an equivalent increase in government outlays. This assumption allows us to isolate the macroeconomic effects of redistribution.

For Scenario 1, we use the aforementioned calculations by Saez and Zucman. After adjusting for potential tax avoidance and tax evasion, they estimate total revenues of $2.75 trillion over 10 years, or roughly 1 percent of GDP per year. On top of these calculations, we assume a marginal propensity to consume

for these very rich households of 0.2. Therefore, we adjust the potential effects downward by the related loss of consumption.

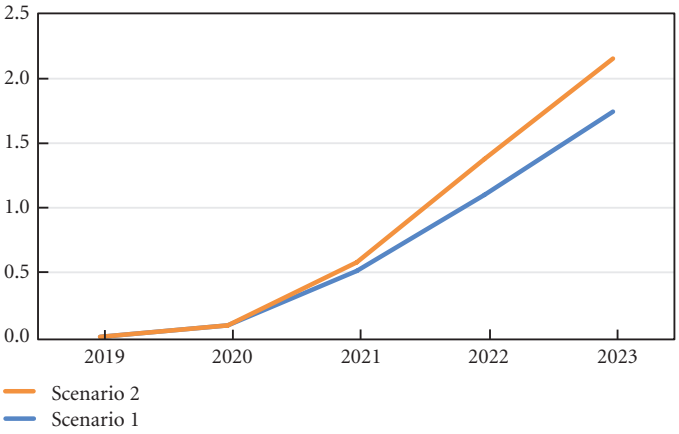
For Scenario 2, we use information from the Congressional Budget Office's *The Distribution of Household Income, 2015* (CBO 2018). According to these data, the average pre-tax income of the households in the top 1 percent in 2015 was $1.764 million, and those households paid an average tax rate of 33 percent, which results in an average post-tax income of $1.178 million. This rate is lower today, after last year's tax cuts. For the purposes of our simulations we age the data, assuming that total market income of the top 1 percent for the period 2019–23 grows at the rate of growth of nominal income. We also assume, in line with the related literature, that higher taxation acts as a disincentive to generate and/or report more income. This disincentive is captured by the elasticity of top incomes with respect to the net-of-tax rate (if the tax rate is τ, then the net-of-tax rate is $1-\tau$). More precisely, the elasticity measures the percent increase in average reported income when the net-of-tax rate increases by 1 percent. For our calculation, we use a value of 0.25 for this elasticity, which is the average estimated value in the literature. The total revenues from such a tax are around 1.3 percent of GDP. Finally, as in Scenario 1, we adjust for a marginal propensity to consume of 0.2 for the top 1 percent.

The two scenarios are implemented on top of a "business as usual" baseline scenario, where we use as a point of reference the projections of the CBO in its recent *Budget and Economic Outlook: 2019–2029*. A detailed description of the baseline scenario is provided in the appendix. The projection period for the baseline is the five-year period 2019–23. The two scenarios are implemented for the years 2020–23.

The macroeconomic effects of these policies are summarized in Figure 11. As we can see, GDP under Scenario 1 will be around 1.7 percent above the baseline by the end of 2023. In Scenario 2, GDP will be around 2.2 percent above the baseline. Hence, in both scenarios the overall multiplier of the proposed polices is around 1.7—that is, increasing the tax revenues from the very rich by 1 percent of GDP, if spent by the government, leads to a 1.7 percent increase in GDP.

As mentioned, the assumption of the simulations is an ex ante balanced budget. As one would expect under these assumptions, the boost in demand and output eventually leads to an improvement in the ex post balance. At the same time, there is a deterioration of the private sector balance—due to the increase in taxation (which decreases disposable income)—and the current account balance, because of the increase in imports due to the boost in economic activity.

Figure 11 Percentage Difference in Real GDP Compared to Baseline



Source: authors' calculations based on the Levy Macroeconomic Model

Some final remarks are in order here. There is only so much of the increase in income inequality that can be reversed through taxation. A more important part of this process would be a change in the primary distribution of income. This would require a variety of policies that would change the structure of the labor and product markets. That discussion goes beyond the scope of this paper.

Second, our simulations do not mean to suggest that government should follow balanced budget policies. On the contrary, as emphasized earlier, the abandonment of treating the government as if it were a big household that faces a strict budget constraint is one of the required policy changes for sustainable recovery. A growing majority of macroeconomists, including ourselves, are in agreement with such policy change.

Finally, our simulations suggest that, given the current configuration of the US economy, a redistribution of income toward middle-class and poor households can have a significant positive macroeconomic effect, in the form of a boost in aggregate demand. Some positive side effects, which were not explicitly treated here, would include a greater incentive for productivity-enhancing technical change and a taming of financial instability. Important as all these effects may be, the main case for redistribution is not economic.

Conclusion

This report analyzed the recent trajectory, the present state, and the future prospects of the US economy. We pointed to four main structural problems: weak net export demand, fiscal conservatism, increasing income inequality, and financial fragility. These problems can explain how we arrived at the crisis of 2007–09 and the weak recovery that has followed, as well as why the prospect of a recession is increasingly likely.

The US economy is in dire need of deep structural reforms that will deal with these problems and propel it toward a sustainable future. In this report, we analyzed a pair of policies that move in that direction, both involving an increase in the tax rate for high-income and high-net-worth households. Even if the primary justification for such policies is not economic, we show that if this increase in taxes is accompanied by an equivalent increase in government outlays, the redistributive impact will have a positive macroeconomic effect: a 1 percent of GDP increase in tax revenues from the richest households would lead to a 1.7 percent increase in GDP, while a 1.3 percent increase in such revenues would result in a 2.2 percent boost to GDP (again, if matched by a rise in public spending in each case). Moreover, although a more wide-ranging policy effort is required to significantly reduce income and wealth inequality—particularly by addressing pre-tax inequality—the tax policies considered in this report would represent a step toward building a more stable US economy.

Appendix

For our baseline simulations, we follow our usual procedure of anchoring them to the CBO's most recent *Budget and Economic Outlook* for the years 2019–29 (CBO 2019). The baseline evaluates a "business as usual" scenario. The growth rate is assumed to be slightly above 2 percent for the first two years and converges toward 1.5 percent by the end of our projection period in 2023. Meanwhile, the primary government deficit remains relatively stable.

The simulations make assumptions that are as "neutral" as possible: a low level of inflation around 2 percent and a constant nominal exchange rate. US trading partners have the growth and inflation rates projected by the International Monetary Fund's October 2018 *World Economic Outlook* (IMF 2018) and its recent January update (IMF 2019). Equity and real estate market prices are assumed to increase mildly, and the effective federal funds rate grows according to the median projection of the Federal Open Market Committee. Finally, during the projection period the debt-to-disposable-income ratio of the household sector is assumed to remain stationary, in line with its behavior over the last few years, while the debt-to-income ratio of firms increases along its postcrisis trend.

Notes

1. For a more detailed discussion, see Papadimitriou, Hannsgen, and Nikiforos (2013), and Nikiforos (2013).
2. The reader can refer to Godley (1999), Papadimitriou, Hannsgen, and Nikiforos (2013), Papadimitriou et al. (2014, 2015), Papadimitriou, Nikiforos, and Zezza (2016), and Nikiforos and Zezza (2017, 2018).
3. To be more precise, the trade balance of non-petroleum goods started slowly improving in 2006, more than a year before the economy officially entered the recession. This improvement had to do with two main factors: (1) the slowdown of the US economy that had started already in 2006, and (2) the significant depreciation of the dollar that started in 2002 and continued up until 2008.
4. The recent (March 7, 2019) European Central Bank announcement that it will keep its interest rate low led to a quick appreciation of the dollar.
5. The term "zombie firms" was coined by Caballero, Hoshi, and Kashyap (2008) in a paper on Japan, without any reference to Minsky. Recent related studies for the United States and other economies include BIS (2017), Banerjee and Hofmann (2018), Adalet McGowan, Andrews, and Millot (2018), and Acharya et al. (2018). Caballero, Hoshi, and Kashyap (2008) and Acharya et al. (2018) define a zombie firm as a firm that received subsidized credit. Banerjee and Hofmann (2018) and Adalet McGowan, Andrews, and Millot (2018) identify zombie firms as firms that are at least 10 years old and have had an interest coverage ratio of less than one for at least three consecutive years. Banerjee and Hofmann (2018) also introduce a narrower definition: firms with a ratio of their assets' market value to their replacement cost (Tobin's q) that is below the median within their sector in any given year. These studies attribute the rise of the share of zombie firms to easy monetary policy that did not enforce the "creative-destruction" process of the market rigorously enough.

6. Henderson (2019) reports related data.
7. More specifically, the assumption of this scenario was a fall in the stock market of around 35 percent, which would induce a second round of deleveraging lasting until the end of the projection period, with the debt-to-income ratios of households and firms falling to their early-2000s levels.
8. The extreme concentration of income and wealth at the top—combined with the lack of control of political money—leads to the disproportionate influence of high-income households and corporations on the political decision-making process and undermines the democratic institutions of the country.
9. The proposal can be found here: https://www.warren.senate.gov/newsroom/press-releases/senator-warren-unveils-proposal-to-tax-wealth-of-ultra-rich-americans
10. The details of Saez and Zucman's calculations are here: https://www.warren.senate.gov/imo/media/doc/saez-zucman-wealthtax.pdf
11. The proposal can be found here: https://www.sanders.senate.gov/download/estate-tax-one-pager?id=DE8AEADA-A3F5-4D26-8517-F6730F161E29&download=1&inline=file
12. According to the World Inequality Database, the threshold income of the top 0.01 percent was $9.56 million in 2014.

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