US Government Obligations & Contingent Liabilities: A High and Rising Fiscal Risk

On 29 September 2017, Scope affirmed its AA rating on the United States with a Stable Outlook. Among the factors constraining the rating, Scope identified high and rising federal obligations and contingent liabilities. The US' total obligations, including contingent liabilities, could be estimated at around USD 90trn, or 478% of GDP, which hints at significant economic and fiscal risks. This special comment explores this credit constraint in greater detail.

In Scope's assessment, the federal government's overall commitments include direct liabilities, pension- and healthcare-related obligations and contingent liabilities. Apart from direct liabilities, the government is not legally obliged to honour other commitments. These commitments, particularly those related to pension and healthcare obligations, are sensitive to assumptions, and in addition, subject to unilateral changes on the part of the government. However, they do constitute commitments that involve a moral obligation and the expectation of government responsibility, and thus have the potential to become public debt and affect a government's creditworthiness if and when they materialise.

Contingent liabilities are included to ensure comprehensiveness when assessing sovereign credit risk, and, while they are unlikely to result in a direct federal outlay, Scope is mindful that circumstances may arise which could call for federal intervention. Under the US fiscal framework, federal intervention would violate the sovereignty of its constitutive states. However, the outstanding debt of state and local governments as well as their unfunded pension liabilities are included in Scope's assessment as contingent liabilities may crystallise if alternative policy goals force legal circumvention. An overview of the total federal government commitments is provided in Table 1.

Table 1: US federal government commitments, 2016

Liability - category	Description	USD (trn)	% of GDP
Direct liabilities	Debt held by the public	14.2	75.1
	Intra-governmental debt	5.5	29.1
	Debt subject to the debt limit	**19.7**	**104.2**
	Federal employee & veteran benefits payable	7.2	38.1
	Other liabilities	1.3	6.9
		28.2	**149.2**
Obligations (75-year horizon)	Social Security (OASDI) - NPV	14.1	74.6
	Medicare Part A (HI) - NPV	3.8	20.1
	Medicare Part B (SMI) - PV future govt. transfers	20.0	105.8
	Medicare Part D (SMI) - PV future govt. transfers	8.7	46.0
		46.6	**246.6**
Total direct liabilities & obligations		**74.8**	**395.8**
Contingent liabilities	State & local govt. debt	3.0	15.9
	State & local govt. unfunded pension liabilities*	3.8	20.1
	Housing GSEs' liabilities & mortgage pools	8.7	46.0
		15.5	**82.0**
Grand total		**90.3**	**477.8**

Source: Financial Report US government 2016, Federal Reserve. *Liabilities discounted at Treasury yield (Hoover Institution, 2017). PV = Present Value; NPV = Net Present Value; GSEs = Government-sponsored enterprises.

In Scope's assessment, adding obligations and contingent liabilities to the federal government debt level, which includes debt held by the public and intra-governmental debt, would result in a debt-to-GDP ratio of around 478%. Scope notes that among 32 advanced economies, the US ranks second in terms of total government liabilities once the net present value of future pension and healthcare obligations is included. While all advanced economies have off-balance sheet commitments, these figures highlight the fiscal risk of an unexpected rise in the federal government debt burden.

Analysts

Rudolf Alvise Lennkh, CFA
+49 69 6677389-85
a.lennkh@scoperatings.com

Dr Giacomo Barisone
+49 69 6677389-22
g.barisone@scoperatings.com

Investor Outreach

Michael Pinkus
+49 30 27891 146
m.pinkus@scoperatings.com

Related Research

Polarisation in US Politics is Leading to Policy Inaction and Uncertainty – 12 October 2017

Why the United States is no longer AAA – 11 October 2017

Scope affirms the USA's newly published credit rating at AA and changes Outlook to Stable
29 September 2017

Scope Ratings AG

Neue Mainzer Straße 66-68
60311 Frankfurt am Main

Phone + 49 69 6677389 0

Headquarters

Lennéstraße 5
10785 Berlin

Phone +49 30 27891 0
Fax +49 30 27891 100

info@scoperatings.com
www.scoperatings.com

Bloomberg: SCOP

Overview

As part of its debt sustainability analysis for the United States, Scope notes the significant burden arising from direct liabilities, obligations and contingent liabilities of the federal government. In addition to debt held by the public and intra-governmental debt, these include: i) federal employee and veteran benefits payable; ii) accrued trust fund deficits related to Social Security and Medicare; iii) state and local government debts and unfunded pension obligations; and iv) liabilities of the housing-related government-sponsored enterprises (GSEs)[1].

In Scope's assessment, the first category is a direct liability, while Social Security and Medicare (category two) refer to obligations which the federal government can alter unilaterally. Categories three and four are contingent liabilities which, although not explicitly related to the federal government, could, under specific circumstances, require federal intervention. Adding the first two categories to the officially reported federal government debt, which includes debt held by the public as well as intra-governmental debt, results in a debt-to-GDP ratio of approximately 400%; while adding contingent liabilities raises the potential burden to 478% of GDP. The paragraphs below explain these calculations in detail.

Direct liabilities

Federal employee and veteran benefits are explicit liabilities

Based on the 2016 Financial Report of the United States Government, total liabilities as of 30 September 2016 amounted to USD 22.7trn. These are federal debt securities held by the public (USD 14.2trn), federal employee & veterans benefits payable (USD 7.2trn) and other direct liabilities (USD 1.3trn).

The government offers its employees retirement and other benefits, as well as health and life insurance. The liabilities for these benefits apply to current and former civilian and military employees. The largest civilian pension plan, which covers all full-time, civilian federal employees, includes the Civil Service Retirement System[2] and the Federal Employees' Retirement System[3]. The basic benefit components of the two systems are financed and operated through the Civil Service Retirement and Disability Fund, a trust fund. In Scope's assessment, payable federal employee (USD 2.3trn) and veterans' (USD 4.9trn) benefits totalling USD 7.2trn[4] (or 37% of GDP) represent direct federal government liabilities.

Intra-governmental debt refers to assets used by trust funds

The Financial Report 2016 states that intra-governmental debt is effectively money that the government owes to itself, and should therefore not be included when accounting for government-wide obligations. However, Scope notes that the USD 5.5trn in Treasury securities held by the trust funds are counted as assets in the present value calculations of their respective obligations. Specifically, the report states:

The present values of estimated future expenditures in excess of estimated future revenue are calculated by subtracting the actuarial present values of future scheduled contributions as well as dedicated tax income by and on behalf of current and future participants from the actuarial present value of the future scheduled benefit payments to them or on their behalf. To determine a program's funding shortfall over any given period of time, the starting trust fund balance is subtracted from the present value of expenditures in excess of revenues over the period. […] Substantially all of the

[1] Scope has excluded guarantees from the Federal Deposit Insurance Corporation (FDIC) from this assessment, given the fact that even the recent global financial crisis was not enough to cause these guarantees to be called and result in a direct cash outflow from the US Treasury. However, the FDIC is a government corporation that was created as part of the Banking Act of 1933 to insure depositors against losses should their banks become insolvent, and, on 3 October 2008, Congress raised the limit on deposit insurance from USD 100,000 to USD 250,000.

[2] The Civil Service Retirement System was established by the Civil Service Retirement Act, which was passed on 22 May 1920. It is a standalone retirement plan intended to provide reasonable benefits for long-service federal employees. The retirement plan, which is closed to new participants, covers most federal employees who first took up a position before 1984.

[3] This system was established by the Federal Employees' Retirement System Act of 1986, passed on 6 June 1986. Using Social Security as a base, the pension provides an additional defined benefit and a voluntary thrift savings plan. The Federal Employees' Retirement System generally covers employees who first took up a position after 31 December 1983.

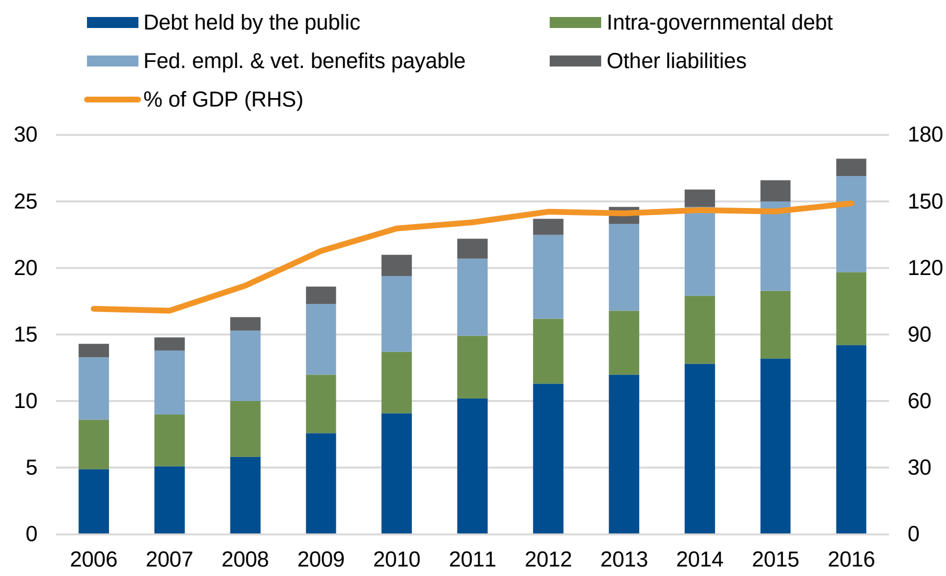
[4] U.S. Treasury, Citizen's Guide to the Financial Report of the United States Government, FY 2016.

Social Security (OASDI), Medicare Hospital Insurance (HI), and Supplementary Medical Insurance (SMI) Trust Fund balances consist of investments in special non-marketable U.S. Treasury securities that are backed by the full faith and credit of the US government.

Source: Financial Report 2016, note 22. Social Insurance, p.137

If these US Treasuries are not counted as federal government liabilities, the logical conclusion is that trust fund holdings of US Treasuries are not to be counted as assets either. Since this is not the case, Scope includes intra-governmental debt as a direct liability of the federal government.

Figure 1: Direct liabilities, USD trn



Source: Respective Financial Reports of the United States government

Obligations: Social Security & Medicare

Unfunded liabilities for the Social Security and Medicare programmes will pose significant fiscal challenges to the United States. Both are expected to experience cost hikes substantially greater than GDP growth through the mid-2030s as the large baby-boom generation enters retirement and lower-birth-rate generations take up employment.

Unfunded Social Security obligations

Over the programme's 82-year history, Social Security has collected USD 19.9trn and paid out USD 17.1trn, leaving asset reserves of more than USD 2.8trn in its two trust funds at the end of 2016. These are the Old-Age and Survivors Insurance and Disability Insurance trust funds (together, OASDI), which make monthly income available to insured workers and their families on retirement, death, or disability. At the end of 2016, the OASDI programme was providing benefit payments to about 61m people while, during the year, an estimated 171m people had earnings covered by Social Security and paid payroll taxes on those earnings[5].

According to the intermediate assumptions of the 2017 trustee report, projected OASDI expenditures will exceed total revenues by increasing amounts starting in 2022, depleting trust fund reserves by 2034. Thereafter, scheduled tax income is projected to be sufficient to pay about 75% of scheduled benefits until the end of the projection period in 2091. The estimated unfunded obligation of USD 12.5trn and the closely associated present value of the actuarial deficit (USD 13.3trn) mean that increases in revenues and/or reductions in

[5] The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds

benefit expenditures equivalent to a lump-sum amount today of USD 13.3trn would be necessary to financially balance the US Social Security programmes over the long-term[6].

Hospital Insurance trust fund with a sizeable unfunded obligation over 75-year horizon

The Medicare programme has two separate trust funds: the Hospital Insurance Trust Fund (HI) and the Supplementary Medical Insurance Trust Fund (SMI)[7]. In 2016, Medicare covered 56.8m people: 47.8m aged 65 and older, and 9.0m disabled. The trustees have determined that the HI fund (covering Medicare part A) will not be adequately financed over the next 10 years. In fact, the HI trust fund has not met the trustees' formal test of short-range financial adequacy since 2003. HI experienced deficits from 2008 to 2015, but annual surpluses are expected from 2016 to 2022 before deficits return for the remainder of the 75-year projection period. The projected trust fund depletion date is 2029. The estimated unfunded obligation of USD 3.3trn and the closely associated present value of the actuarial deficit (USD 3.6trn) indicate that increases in revenues and/or reductions in benefit expenditures equivalent to a lump-sum amount today of USD 3.6trn would be necessary to financially balance the HI trust fund[8].

Supplementary Medical Insurance trust fund relies on large government transfers

The SMI trust fund (covering Medicare parts B and D) is expected to be adequately financed over the next 10 years and beyond as programme outlays in excess of premiums, state transfers and drug fees are financed by the automatic transfer of general revenues to the SMI. Thus, from a trust fund perspective, the present value of total revenues and total expenditures are roughly equal due to the annual adjustment of revenue from the government to meet programme costs. However, from a federal budget perspective, the transfers to cover SMI expenditures are automatic. Scope notes that the size of these transfers depends on how much the programme requires, not on how much revenue comes into the Treasury[9].

According to the Financial Report 2016, the reliance on general revenue financing for the SMI will amount to USD 28.7trn over the 75-year horizon. From a budget perspective, this is the amount which will be needed to keep the SMI programme solvent for the next 75 years. Therefore, if transfers to the SMI increase beyond growth in general revenues (which is projected to be the case), Congress must either raise taxes, cut other government spending, reduce SMI benefits or borrow, which are precisely the same policy options open to the federal government to honour its official direct on-balance sheet obligations.

The chart below illustrates the development of the present value of future expenditures in excess of future revenue for Social Security and Medicare as presented in the Financial Report 2016[10].

[6] The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds

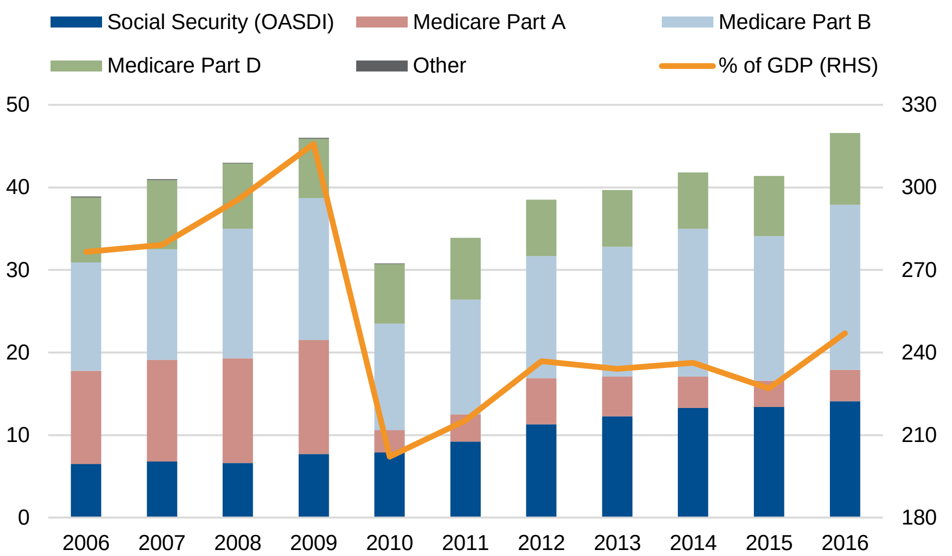
[7] HI, otherwise known as Medicare Part A, helps pay for hospital, home health services following hospital stays, skilled nursing facilities and hospice care for the aged and disabled. SMI consists of Medicare Part B and Part D. Part B helps pay for doctor, outpatient hospital, home health, and other services for the aged and disabled who have enrolled voluntarily. Part D provides subsidised access to drug insurance coverage on a voluntary basis for all beneficiaries as well as premium- and cost-sharing subsidies for low-income enrollees. Medicare also has a Part C, which serves as an alternative to traditional Part A and Part B coverage. Under this option, beneficiaries can choose to enroll onto and receive care from private Medicare Advantage and certain other health insurance plans. Medicare Advantage and the Program of All-Inclusive Care for the Elderly (PACE) plans receive prospective, capped payments for such beneficiaries from the HI and SMI Part B trust fund accounts; the other plans are paid from the accounts based on their costs. Trustee Report 2017.

[8] The 2017 Annual Report of the Board of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds

[9] https://www.fiscal.treasury.gov/fsreports/rpt/finrep/finrep16/supp_info/fr_supplement_info_ss.htm

[10] In order to maintain consistency, all figures are taken from the Financial Report 2016. Figures thus vary slightly from the ones cited from the Trustee Reports published in 2017.

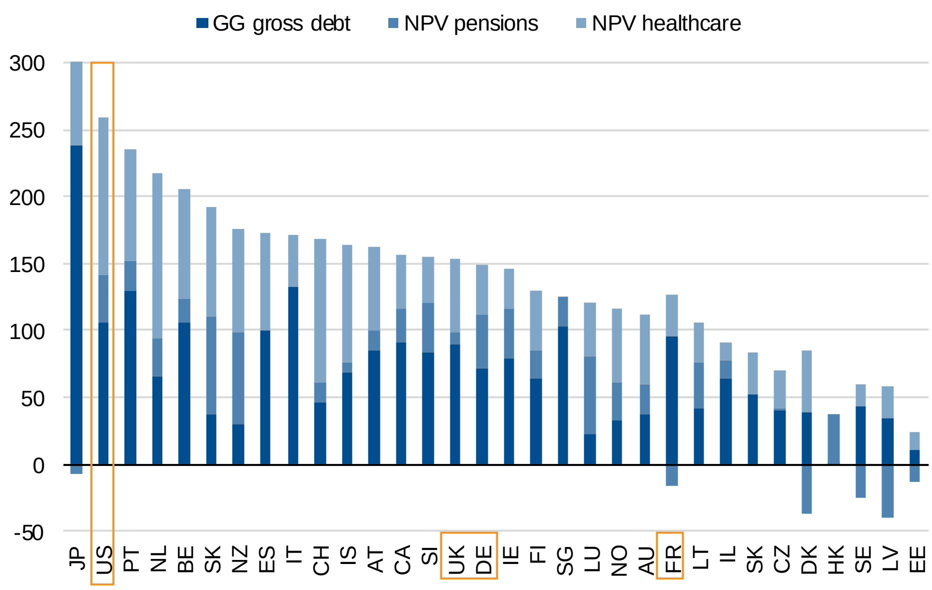
Figure 2: Social Security & Medicare: PV of future expenditures in excess of future revenue, 75-year horizon, USD trn



Source: Financial Report 2016 (P60) and respective Financial Reports of the United States government

While these figures may appear to be very high, the IMF Fiscal Monitor April 2017 finds that among 32 advanced economies, the United States ranks second in terms of total government liabilities, including the net present value of future pension and healthcare obligations for the horizon until 2050, with a ratio of 260% of GDP, just after Japan (294%), but significantly above the UK (153%), Germany (149%) and France (110%)[11].

Figure 3: General government obligations, including NPV of future pension and health-care obligations, 2050-horizon, % of GDP



Source: IMF Fiscal Monitor April 2017

[11] www.imf.org/en/Publications/FM/Issues/2017/04/06/fiscal-monitor-april-2017

Contingent liabilities

It is Scope's opinion that implicit liabilities, which, although they are not legally binding, are likely to be borne by governments because they involve a moral obligation or the expectation of government responsibility[12], should be included in the federal government's contingent liabilities. In Scope's assessment, these include state and local government debts together with their unfunded public pension and retiree healthcare liabilities as well as the liabilities of housing-related GSEs.

Contingent liabilities from state and local government debt and unfunded benefit programmes

After rising rapidly from around USD 1.2trn in 2000 to USD 3.2trn in 2010, outstanding liabilities of existing state and local government debt have fallen slightly to around USD 3trn as of Q2 2017[13]. However, in Scope's view, the true fiscal risk to state and local government budget balances stems from the rise in significant unfunded pension obligations. Under the existing fiscal framework, the clear majority of states (46) report having a constitutional or statutory balanced budget requirement, with the remaining four having restrictions that effectively lead to a balanced budget[14]. To meet the rising pension obligations, state budgets will therefore either be forced to raise taxes, cut expenditures or reduce pension-related benefits. In extreme situations, Scope believes that federal intervention may also be required.

As of fiscal year 2015[15], states and local governments reported unfunded pension liabilities of USD 1.4trn. It is, however, alarming that despite being recently revised, accounting standards for state and local governments still allow future pension liabilities to be discounted by choosing an expected return on plan assets. Thus, on average, public pension plans assumed a nominal return of 7.6% on their whole portfolios, or 7.4% based on the new standards. Scope notes that an overall 7.6% return implies nominal stock returns of 9.6% whereas many investment firms project much lower equity returns close to 5-7%. While the return targets may or may not be met, public-sector accounting and budgeting operates under the assumption that they are certain to be met. In this context, Scope observes that the return for 2016 was far below assumptions at 0.6%, down from 3.2% in 2015 and 16.5% in 2014[16].

Discounting state pension liabilities with Treasury yields, instead of expected returns

In this context, the reported average coverage level of state and local government pension funding plans of about 72%[17] appears grossly overstated. The table below highlights the unfunded liability of plans in the Public Plans Database using different rates to discount the liabilities of all plans. For example, a more conservative discount rate of 4%, which is still above the return on 10-year US Treasuries, implies an unfunded liability of about USD 4.5trn.

Table 2: Unfunded state and local government pension liabilities

USD trillion	Discount rate (%)				
	7.6	7.0	6.0	5.0	4.0
Actuarial liability	4.8	5.5	6.2	7.0	8.0
Actuarial assets	3.5	3.5	3.5	3.5	3.5
Unfunded liability	1.4	2.0	2.8	3.6	4.5
Percent funded (%)	72	63	56	49	43

Source: Center for State & Local Government Excellence, 2017

A recent Hoover Institution study calculates that, using an average liability-weighted Treasury discount rate of 2.77%, as opposed to expected investment returns, unfunded

[12] https://www.imf.org/external/pubs/ft/fandd/1999/03/pdf/polackov.pdf
[13] https://fred.stlouisfed.org/series/SLGSDODNS
[14] NASBO, Budget Processes in the States, Spring 2015
[15] The latest year for which complete accounts are available.
[16] Alicia H. Munnell and Jean-Pierre Aubry, 'The Funding of State and Local Pensions: 2015-2020', June 2016, Center for State and Local Government Excellence and Center for Retirement Research at Boston College, http://slge.org/publications/the-funding-of-state-and-local-pensions-2015-2020 and http://slge.org/wp-content/uploads/2017/07/2017-Annual-Funding-Brief.pdf
[17] Several large plans, such as three Illinois plans (SERS, Teachers, and Universities) and one Connecticut plan (SERS), had funded levels below 50%.

liabilities amount to around USD 5trn. After adjusting for benefits not yet accrued, the study concludes that the true unfunded liability owed to workers based on their current service and salaries (i.e. if plans were to freeze benefits at today's promised levels) is USD 3.8trn[18]. These concerns are compounded by the observation that public pensions currently hold about 70% of their assets in risky investments, including more than half of their assets in equities. The fact that equity markets are at all-time highs exposes these plans to any market correction.

Systemic problems may require federal intervention at some point

Scope is aware that there is currently no mechanism for the US states to file for bankruptcy protection[19], and further, that federal intervention would violate state sovereignty, as US states have the power to raise taxes, cut spending and issue debt. However, the systemic importance of outstanding liabilities of existing state and local government debt and their additional unfunded pension liabilities (which range between USD 3-5trn depending on the plausible discount rate used) could result in circumstances that force policymakers to circumvent legal provisions in order to stabilise the financial system. In Scope's view, the possibility of federal intervention in some form does not appear remote given the systemic size of these figures; as illustrated by extraordinary interventions in the case of systemically important financial institutions and automobile companies in 2008-2010. The situation could, for instance, potentially force Congress at some point to authorise low-interest federal loans or longer-term loans from the Federal Reserve to US states, with the associated moral-hazard consequences.

Contingent liabilities from housing-related government-sponsored enterprises

Finally, in Scope's assessment, direct debt obligations of GSEs and other government housing agencies should also be included in the federal government's contingent liabilities. These agencies were originally created by an Act of Congress and are today entirely owned by the federal government[20]. As of Q2 2017, the total liabilities of the housing-related GSEs[21] were USD 6.7trn. In addition, agency- and GSE-backed mortgage pools amount to almost USD 2trn[22]. Notably, these liabilities do not have the same status as direct liabilities or even Treasury obligations given the offsetting assets, specifically, the underlying mortgages. However, they do expose the federal government to shifts in the housing sector as well as the creditworthiness of US households, as demonstrated during the Great Financial Crisis.

Similar studies

While the figures cited throughout this comment appear very high, they are in fact in line with similar studies. A Cato Institute study (2014)[23] estimated the total dollar value of the notional off-balance-sheet commitments of the federal government at around USD 70trn (or 360% of GDP) as of 2012. The study added deposits insured by the Federal Deposit Insurance Corporation but excluded possible contingent liabilities from state and local government commitments. In addition, the study also excluded intra-governmental debt from the federal government liabilities. Similarly, a 2016 Federal Reserve Bank study estimated that gross general government liabilities, including pensions and healthcare as well as state and local government debts, amounted to 316% of GDP in 2014[24].

In Scope's view, while all advanced economies have off-balance sheet commitments, the sheer volume of the US federal government's direct liabilities, pension- and healthcare-related obligations and contingent liabilities points to the urgent need for Congress to constructively address these underlying structural challenges in a bipartisan way.

---

[18] http://www.hoover.org/sites/default/files/research/docs/rauh_hiddendebt2017_final_webreadypdf1.pdf
[19] Under federal law, states may allow municipalities to file for reorganisation under the Chapter 9 provision.
[20] https://object.cato.org/sites/cato.org/files/serials/files/cato-papers-public-policy/2014/6/cppp-3-1.pdf
[21] Federal Home Loan Banks, the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), Federal Agricultural Mortgage Corporation (Farmer Mac), Farm Credit System, the Financing Corporation, and the Resolution Funding Corporation
[22] Federal Reserve Statistical Release, Financial Accounts of the United States, Second Quarter 2017, p.103 https://www.federalreserve.gov/releases/z1/current/z1.pdf
[23] https://object.cato.org/sites/cato.org/files/serials/files/cato-papers-public-policy/2014/6/cppp-3-1.pdf
[24] https://www.chicagofed.org/~/media/publications/chicago-fed-letter/2016/cfl353-pdf.pdf

Scope Ratings AG

Headquarters Berlin
Lennéstraße 5
D-10785 Berlin

Phone +49 30 27891 0

Frankfurt am Main
Neue Mainzer Straße 66-68
D-60311 Frankfurt am Main

Phone +49 69 66 77 389-0

Paris
33 rue La Fayette
F-75009 Paris

Phone +33 1 82 88 55 57

London
Suite 301
2 Angel Square
London EC1V 1NY

Phone +44 203-457 0 4444

Madrid
Paseo de la Castellana 95
Edificio Torre Europa
E-28046 Madrid

Phone +34 914 186 973

Milan
Via Paleocapa 7
IT-20121 Milan

Phone +39 02 30315 814

Oslo
Haakon VII's gate 6
N-0161 Oslo

Phone +47 21 62 31 42

info@scoperatings.com
www.scoperatings.com

Disclaimer