

**U.S. Treasury Response to CBO Report  
on the Budgetary Effects of U.S. Participation in the IMF  
*January 2017***

***Key Messages***

- Treasury views the U.S. participation in the IMF as an exchange of monetary assets, similar to having a savings account at a local bank which earns interest and is available when requested. Treasury therefore believes the U.S. government should not record a budget cost.
- CBO bases its proposed budget score for the U.S. participation in the IMF on speculation of a possible catastrophic event causing widespread IMF losses.
- The IMF has not experienced credit losses in its 70-year history and recently weathered the worst recession since the Great Depression without suffering any credit losses at all. CBO's analysis does not give adequate weight to the IMF's rock-solid balance sheet, multi-layered risk management framework, and history of no credit losses, all of which underpin the exchange of monetary assets concept.
- CBO dismisses the widely-accepted, unique role of the IMF as a preferred creditor, whereby countries prioritize repaying the IMF even when they have to reschedule other debts. For a country in arrears, repaying the IMF is the first step in normalizing its role in the international system after a crisis. CBO underestimates the IMF's unique ability to leverage macroeconomic policy adjustment to promote a country's return to stability.
- CBO's analysis fails to take into account how the IMF actually operates. For example, CBO over-states the maximum amount of the IMF's resources that can be lent out, under-estimates IMF income and accumulation of reserves over time, and mistakenly points to IMF lending to low-income countries (which, since 1987 has been financed by a separate trust fund with no relationship to U.S.-provided resources).
- CBO's analysis of market risk mistakenly emphasizes IMF lending scenarios and states of the world which suggest that U.S. participation in the IMF exposes the United States to IMF borrowers, which is not the case. The United States is exposed only to the IMF, which has a rock-solid balance sheet. CBO's analysis implies that U.S. participation in the IMF has risk similar to lending to a BB or BBB sovereign borrower, when in reality the IMF's characteristics are more similar to a AAA supranational (such as the World Bank), or to the group of sovereigns (United States, highly rated euro area member states, UK, Japan, China) which the IMF uses to calculate compensation for use of U.S. resources.
- Considering the lack of market data comparable to the IMF or any historical precedent for a catastrophic event causing IMF losses (which CBO acknowledges), and the large amount of guesswork involved in CBO's estimate, it is clear that the IMF is a particularly poor candidate for application of the fair value methodology.

## ***EXECUTIVE SUMMARY***

In June 2016, CBO issued a report on The Budgetary Effects of U.S. Participation in the International Monetary Fund (IMF), as required by the Consolidated Appropriations Act, 2016. The purpose of this paper is to provide U.S. Treasury views on the CBO report.

In its report, CBO argues that budget scoring for U.S. participation in the IMF should employ fair value accounting. CBO's model projects a U.S. budgetary cost of two cents for every dollar increase in the U.S. quota at the IMF. CBO's model is driven by the assumptions that (1) there is a 0.33 percent chance per year that the IMF will suffer widespread defaults with losses to the IMF equal to 15 percent of total IMF resources, outstripping the ability of IMF reserves to absorb the loss; and that (2) if market participants were to lend to the IMF, they would demand a return four times the expected value of annual losses on the IMF's loans.

**Treasury does not believe CBO's model provides an accurate basis for determining the budgetary costs of U.S. participation in the IMF.** Treasury believes there is a very strong case for considering U.S. participation in the IMF to be an exchange of monetary assets with no budgetary cost. This is underpinned by the IMF's extremely strong balance sheet and history of no credit losses. But even setting this aside, CBO's model is highly problematic because it is based on poorly supported assumptions and is not sufficiently grounded in an understanding of how the IMF operates. Key flaws of the CBO approach include:

- CBO's cost estimate appears to rest on the unrealistic assumption that the IMF would lend all of its available resources in a severe crisis. Under current policies, the IMF's financial structure and prudential policies prevent it from lending more than 72 percent, and the IMF has never lent more than 38 percent.
- CBO's estimate that half of the loans in default during a severe crisis would result in loss is extremely high considering the IMF's preferred creditor status and history, including zero losses in the most recent crisis.
- The CBO model underestimates future IMF income and reserves, which would help cover any potential losses.

The CBO's estimates are very sensitive to these assumptions, and even small adjustments to the CBO model would reduce or eliminate the estimated cost of U.S. participation in the IMF. For illustrative purposes, Treasury has developed a rough approximation of CBO's model, based on our understanding of the model from the report, and then made small adjustments to the assumptions to better reflect how the IMF operates. The results are in the table below.

The bottom line is that CBO's analysis results in a 2 cent budgetary cost per \$1 of additional participation in the IMF, whereas more realistic assumptions based on IMF policies virtually eliminate the cost of a catastrophic loss event.

<b>Budgetary Cost of Additional U.S. Commitments to the IMF -- Sensitivity Analysis using an approximation of CBO's model</b>				
<i>Variable</i>	<i>CBO Assumption</i>	<i>CBO Total Cost</i>	<i>Adjusted Assumption</i>	<i>Adjusted Total Cost</i>
1. Portion of total IMF resources lent out in loss scenario	100%	2.0%	72%	0.5%
2. Portion of loans in default that would never be repaid to IMF	50%	2.0%	31%	0%
3. IMF reserves to cushion a loss (in % of IMF resources)	10%	2.0%	13%	1.1%

Adjustment 1. CBO assumes that the IMF would lend out all quota and borrowed resources during a crisis scenario. But this is not realistic. Under the IMF's current policies, the maximum the IMF would lend out is 72 percent, because it holds back a prudential balance of 20 percent and does not lend out the quota resources of financially weak countries. Historically, the highest proportion the IMF has ever lent out is 38 percent. In a crisis scenario, the upper bound would likely be lower than 72 percent, as the IMF does not lend out the quotas of countries with weak balance of payments, and the list of such countries would likely grow. Thus 72 percent is a conservative upper bound. Adjusting *only* the assumption on the proportion of total IMF resources lent out in a severe crisis to 72 percent (rather than 100 percent) would cut the CBO's estimated cost by two-thirds to 0.6 percent.

Adjustment 2. CBO assumes that in a crisis, 30 percent of all IMF lending would go into default, and half of these defaults would never be repaid (a loss). The IMF has never experienced a credit loss. Even recognizing that the IMF could experience defaults and losses on a larger scale than in the past, CBO has taken the loss rate to an unrealistic extreme, asserting that countries would stop considering IMF debt to be senior to other debt. For the IMF to experience a loss, a country would have to choose to withdraw from the IMF and risk long-term isolation from international capital markets and official sector financing, rather than to work with the IMF toward eventual repayment. Even in a severe crisis, this would likely occur only rarely. The IMF's preferred creditor status operates as a powerful incentive both to avoid arrears (e.g. Argentina repaid the IMF even after announcing a formal default on \$93 billion in external government debt in 2001) and to repay arrears over time rather than walk away (e.g. Zimbabwe recently repaid its IMF arrears, which date from 2001, as it seeks to normalize its relations with the international financial community). It is also important to recognize that since 1987 the IMF has shifted to a donor-backed trust fund its lending to the riskiest low-income borrowers (such as Sudan and Somalia). Adjusting *only* the "loss given default" rate from CBO's 50 percent to 31 percent -- which Treasury believes is still much too high, even in a severe crisis -- would eliminate the estimated budget cost entirely.

Adjustment 3. The IMF's reserves are available to cushion the impact of potential losses. CBO does not factor in that the IMF Board is already targeting an increase in reserves of SDR 5 billion in the near term. Nor does CBO consider that in a lending surge of the magnitude CBO assumes, IMF lending income and reserves would rise by about SDR 40 billion over three years (to reach about 13 percent of total IMF resources). Incorporating *only* an additional SDR 40 billion (\$55 billion) build-up in IMF reserves reduces the CBO's estimated cost to 1.1 percent.

## ***BACKGROUND***

The remainder of this paper provides background in the following areas: (1) policies on the amount of its total resources the IMF can lend out, and the history of how much it has lent out; (2) the history of IMF arrears and the IMF's policy framework to mitigate against default and losses; (3) sources of IMF income and the trajectory of the IMF's reserves; (4) tranching and repayment timelines for IMF loans; (5) information gaps in CBO's analysis of market risk; (6) what CBO's methodology implies about the relative risk of providing resources to the IMF vs. other sovereign, corporate and supranational entities; and (7) the indirect benefits to the U.S. economy and budget of providing financing to the IMF.

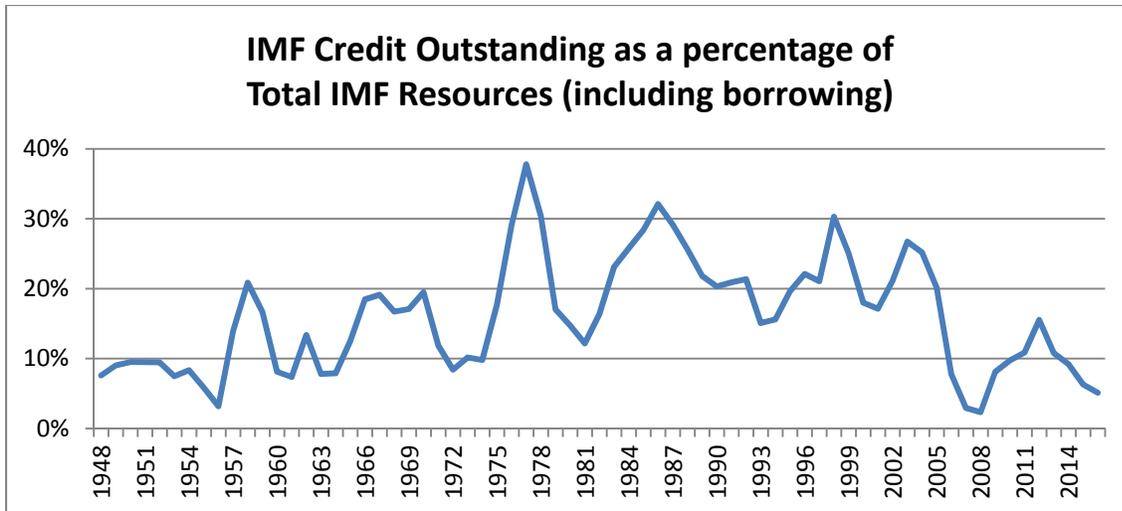
### 1. Amount of IMF Resources Disbursed.

In seeking to quantify the scale of potential losses in a severe crisis, CBO appears to assume that the IMF would disburse all of its resources (quota, NAB and bilateral loans). That is far too high. While CBO does not clearly state its assumption on the amount of resources disbursed, we have attempted to discern it indirectly.<sup>1</sup> In calculating the losses that could be absorbed by the IMF's reserves, CBO notes that reserves including the unrealized value of gold are \$126 billion, which are "less than 10 percent" of total IMF lending resources of \$1.3 trillion (quotas, NAB and bilateral loans). CBO then states that in a severe crisis, the loss rate to the IMF would be 15 percent and reserves would cover less than 10 percent, leaving uncovered losses of about 6 percent. Thus CBO appears to assume that the IMF would have disbursed the full \$1.3 trillion of its resources, with losses amounting to 15 percent (\$195 billion) and reserves including the unrealized value of gold covering only \$126 billion.

Contrary to the CBO assumption, the IMF lends out only a fraction of its total resources even in times of crisis. As a matter of policy, the IMF does not lend out the quota resources of less financially strong members (currently about 16 percent of quota resources). Also, the IMF holds back 20 percent of quota, NAB and bilateral loan resources as a prudential balance. Thus, the maximum proportion the IMF would lend out under current policies is 72 percent of its total resources (quota, NAB and bilateral loans). To put this in historical perspective, IMF credit outstanding peaked at SDR 94 billion in 2012 as a result of lending during the recent global financial and euro crises, less than 16 percent of total IMF resources (quotas of SDR 238 billion and bilateral and multilateral borrowings of SDR 368 billion). Even if the 2012 peak is expanded to include the SDR 70 billion in undisbursed commitments from the Flexible Credit Lines (financing committed to low-risk borrowers with strong policies on an "as needed" basis), it rises to only 27 percent of total IMF resources. The highest proportion of total resources that the IMF has ever lent out was 38 percent in 1977.

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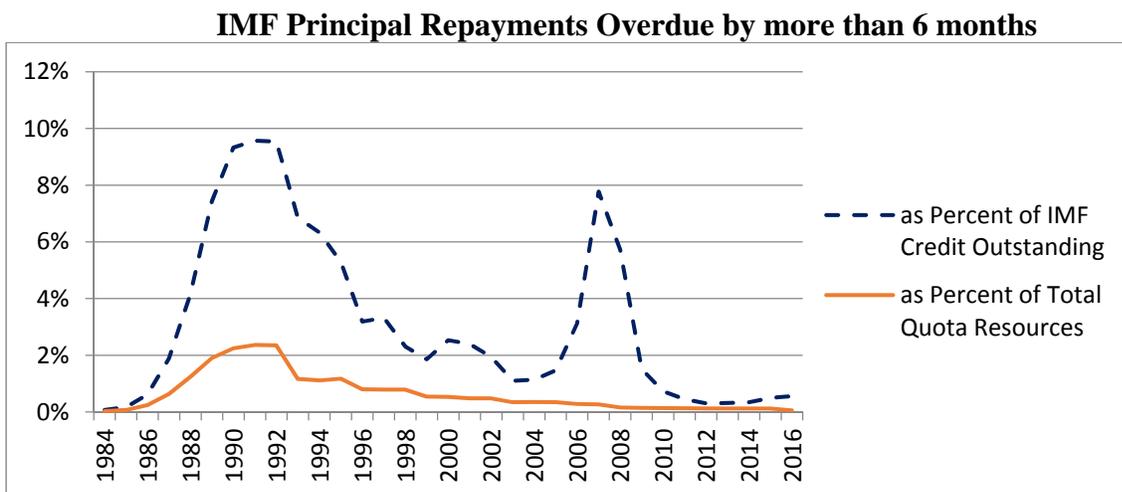
<sup>1</sup> The following CBO calculation requires that in the loss scenario, the IMF loans equal 100% of the IMF resources: "Multiplying the percentage of the IMF's loans projected to be in arrears (30 percent) by the percentage of loans expected to remain unrecovered (50 percent) yields a projected average loss rate to the IMF of about 15 percent in a severe crisis. Multiplying that projected loss rate by the probability of those losses occurring (1 in 300, or 0.33 percent) results in a projected annual loss of 0.05 cents per dollar committed to the IMF."



Source: IMF Annual Reports and IMF Financial Data Query Tool

## 2. Loss Rate.

CBO assumes that 30 percent of IMF lending in a severe crisis would end up in default. This is also too high. It is three times higher than the historical peak of IMF protracted arrears as a percent of IMF credit outstanding. A limited number of historical cases of protracted arrears (lasting six months or more) occurred prior to the concessional lending endowments and before the consequences for arrears were clearly defined in the IMF's arrears strategy. Even at its peak in the late 1980s/early 1990s, principal arrears amounted to less than 10 percent of IMF credit outstanding and less than 3 percent of IMF quota resources. These historical cases of protracted arrears were resolved by countries eventually repaying overdue amounts, with the exception of Sudan and Somalia which have remaining arrears. Further, the IMF no longer uses quota resources to lend to low-income countries like Sudan and Somalia; instead the IMF lends to such countries through the concessional lending endowments financed separately by donors.



Source: IMF Annual Reports

CBO's leap from a 30 percent default rate to a 15 percent loss rate (50 percent loss rate given default) is particularly unconvincing, given the IMF's history. The IMF has not experienced credit losses in its 70 year history, and it recently weathered the worst recession since the Great Depression without suffering any credit losses at all. Countries in crisis typically seek options to maintain or regain access to external financing over the medium term, while if a country walks away from its IMF debt, it risks long-term isolation from external financing. While CBO dismisses the IMF preferred creditor status in a crisis, the history of countries and companies in debt distress show that seniority matters. Many countries facing debt distress have restructured their tradeable, private sector debt while repaying the IMF in full. The CBO report cited analysis by Moody's of corporate debt which shows that defaulting borrowers differentiate significantly among debt of different seniority, with senior debt, such as bank loans, having a loss rate of 7 percent, mezzanine level debt (such as secured or unsecured senior bonds) having a loss rate of 42 percent, and junior debt (such as subordinated bonds) having a loss rate of 79 percent.<sup>2</sup> More generally, CBO's assumptions about the loss rate do not sufficiently reflect the unique role of the IMF in the international monetary system. The IMF has a multi-layered framework for mitigating the financial risks of its credit portfolio, which includes a number of unique elements described below. While CBO acknowledges some of these elements, it dismisses the efficacy of a key element – preferred creditor status – when projecting losses in its serious crisis scenario.

*IMF lending policies on program design and conditionality improve the likelihood that a country will resolve its economic difficulties in a timely manner.* Disbursements under IMF lending arrangements are phased over one to four years, and each tranche is conditional on the country undertaking policies (agreed between the IMF and country authorities) designed to promote economic recovery and the country's capacity to repay the IMF. The structure of IMF charges encourages countries with large IMF loans to repay the IMF as early as feasible. Countries pay a 200 basis point surcharge on access above 187.5 percent of quota, and an additional 100 basis point surcharge on credit over 187.5 percent that is outstanding longer than 36 months (for Standby-Arrangements) or 51 months (for Extended Fund Facilities).

*The IMF's de facto preferred creditor status incentivizes countries to place top priority on repaying the IMF, even if the country faces very tight financial conditions.* Because delaying payment to the IMF risks a country being cut off from access to other sources of credit, including lending from the multilateral development banks, countries have a strong incentive to remain current on IMF repayments even if they do not prioritize paying their other creditors. As a unique financial institution with only governments as members and serving a governmental function, the IMF's de facto preferred creditor status protects the IMF from the kinds of sovereign default and "haircuts" that private financial institutions can experience. Moreover, the IMF's preferred creditor status provides an equally strong incentive for a country that has accrued IMF arrears to repay those arrears in full as soon as possible. Repaying IMF arrears is an essential step for a country to normalize its role in the international system and thus regain access not just to IMF finance but also to broader sources of official finance including export credit, as

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<sup>2</sup> Moody's Ultimate Recovery Database - Special Comment, see pg. 6:  
<https://www.moody.com/sites/products/DefaultResearch/2006600000428092.pdf>

well as private capital markets. For example, in October 2016 Zimbabwe fully cleared its \$108 million in arrears to the IMF dating from 2001, as a first step in its efforts to normalize its relations with the international financial community.

*The IMF's precautionary balances (reserves) of \$21 billion (and growing) provide a significant buffer to protect member country's quota resources from any potential future credit loss.* To date, the IMF has not needed to draw on its precautionary balances to cover a credit loss, large or small, not even in the aftermath of the recent global financial crisis. Beyond these precautionary balances, there is further underlying strength in the IMF's balance sheet in the unrealized value of the IMF's gold holdings, currently \$109 billion.

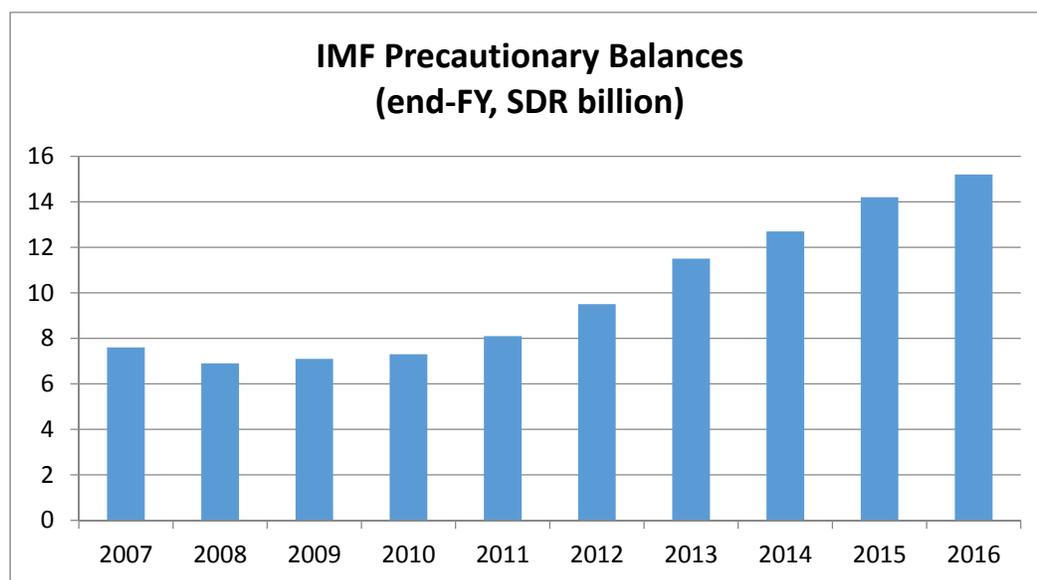
*The IMF mitigates the risk of misuse of IMF resources by requiring that IMF borrowers undergo an IMF safeguards assessment.* This is a due diligence exercise carried out by IMF technical staff aimed at assuring that the central bank receiving IMF resources has the internal control and audit systems necessary to manage the funds and provide reliable information.

*The IMF reduced its risk of protracted arrears in 1990 by adopting an arrears strategy with progressive sanctions that incentivize countries to repay arrears, and by creating a separate trust fund to lend to low-income countries which have higher credit risk.* The IMF's arrears strategy includes a timeline for imposing sanctions (including loss of access to IMF resources, reporting arrears to IMF Governors, suspension of technical assistance, loss of voting rights, and compulsory withdrawal) and sets forth expectations regarding cooperation on policy and payments necessary to stave off sanctions. The IMF has a separate trust fund, the Poverty Reduction and Growth Trust (PRGT), which is subsidized by donors and does not draw on IMF quotas. Through the PRGT, the IMF provides loans to low-income countries at a lower interest rate and on longer repayment terms than the IMF's quota-based lending. Therefore the IMF's quota resources are not exposed to credit risk from these countries. As countries move into lower-middle income country status, the IMF assesses them for readiness to graduate to access to IMF quota resources. There are presently two cases of protracted arrears, Sudan and Somalia, which date from the 1980s before the IMF had a separate trust fund for low-income countries. There was also a recent case of large, though short-lived, arrears related to IMF quota resources: Greece was several weeks late in making two repayments totaling about \$2.2 billion in June/July 2015. As a result of the IMF risk mitigation enhancements, no new protracted arrears cases involving IMF quota resources have emerged since 1995.

*The IMF further reduces its risk through co-financing arrangements with other official lenders, which recognize the IMF's de facto preferred creditor status.* For example, the IMF has co-financed recent programs for EU countries with the European Union, and EU borrowers have made repayments to the IMF while continuing to receive fresh resources from the EU.

### 3. Income and Reserves

The CBO paper notes that the IMF should be expected to gradually build its reserves over time, but the CBO model appears to underestimate IMF income and the build-up of IMF reserves. The CBO estimate assumes that the IMF's only source of income is the basic rate of charge, equal to the risk-free SDR interest rate plus a 100 basis point spread. This ignores other key sources of income, namely surcharges, fees and investment income, and does not reflect the history of the IMF Executive Board's ability and willingness to take action to generate income – for example by raising rates of charge -- when the IMF's income position has been challenged. The IMF Executive Board is presently targeting an increase in the IMF's precautionary balances (a key element of the IMF's reserves) to SDR 20 billion, from SDR 15 billion over the medium term. Furthermore, CBO fails to take into account that an unprecedented surge in IMF lending (as CBO assumes) would be accompanied by a dramatic increase in IMF income and reserves. The below chart indicates how quickly the IMF has built up its precautionary balances over the past decade.



- Currently, countries pay a 200 basis point surcharge on access above 187.5 percent of quota, and an additional 100 basis point surcharge on credit over 187.5 percent that is outstanding longer than 36 months (for Standby-Arrangements) or 51 months (for Extended Fund Facilities). Annual surcharge income averaged about SDR 1.2 billion (\$ 1.7 billion) from FY2013 to FY2016. Countries also pay commitment fees for resources committed, but not drawn, which in the case of precautionary lending arrangements like the Flexible Credit Line can be substantial. The IMF had about SDR 276 million in fee income in FY2016.
- CBO assumes that virtually all of the income from the 100 basis point spread would be needed to cover operating expenses. However, the IMF also has investment income including returns on reserves, and projected payouts from an endowment which, beginning in FY2018, is expected to generate about SDR 150 million per year (\$200

million), even in the current low interest rate environment. This will cover a portion of IMF operating expenses, with any remainder used to build up reserves.

- In the CBO’s surge scenario, where the IMF lent out all of its resources, the IMF would generate a surge in income and reserves on the order of \$40 billion over the course of three years (see table below).

### **Simulation of Income Accumulation Based on CBO’s Lending Surge Scenario**

Figures in USD billion (using SDR = \$1.38, as of Nov. 1, 2016)

	Year 0	Year 1	Year 2	Year 3
IMF credit outstanding	77	484	891	1,300
Income from lending margin (100 bp)	0.7	2.8	6.9	10.9
Income from surcharges (based on average effective rate since 2010)	1.1	3.2	8.3	12.4
Other income	0.7	0.7	0.7	0.7
Expenses (based on FY 2016 level)	-1.1	-1.1	-1.1	-1.1
Net income accumulation		5.6	14.8	22.9

Estimates based on recent IMF budget and income outturns

#### 4. Time Lag

The costs in CBO’s model are driven significantly by the possibility of catastrophic loss in the near term because of discounting. Based on the Treasury understanding of the CBO model, the initial 10 years of the CBO estimate appears to comprise approximately 30 percent of the CBO score, which erroneously increases the score.

Because the IMF provides multi-year, tranching loans it would take a number of years for a serious financial crisis to feed through into elevated IMF lending and result in eventual arrears and/or losses. CBO’s model appears to be based on a one-year extreme-loss scenario, equally likely to happen in any given year, but this is not how events would likely unfold. For example, even if there were a severe global crisis this year, it would take a number of years for this to feed through into a massive surge in IMF lending and eventual arrears or losses. Thus the chance of IMF losses outstripping IMF reserves in the near-term is virtually zero, but the CBO model does not consider the time dimension of a crisis. A more realistic model would build in at least a four-year time lag, which Treasury estimates would reduce the budget cost by about 10 percent.

#### 5. Market Risk Adjustment

The CBO model is presented in over 24 pages and the basis of each model assumption is generally described in detail (even if unconvincing). CBO estimates that the fair-value/market-risk adjustment for U.S. participation in the IMF is four times the expected value of annual losses on the IMF’s loans. This means that if market participants were to lend to the IMF, they would demand a return four times the expected value of annual losses on the IMF’s loans. However, the basis for CBO’s estimate is not explained or supported by any evidence, and thus it is not possible to analyze its accuracy. One step in CBO’s process is analyzing the spread between a bond with a risk of default and a bond without default risk. In this step, CBO asserts that the

spread for A-rated sovereign loans (which CBO equates with IMF loans) is 0.5 percentage points, but does not state the source of this data, particularly what timeframe CBO used, which countries were A-rated at that time, and in which currency the yields were calculated. Spreads for A-rated sovereigns can vary over time and by currency. The risk-adjustment estimate also involves three additional steps, each of which is supported solely by the statement ‘CBO estimate’.

## 6. IMF Risk Relative to Comparators

Treasury believes that U.S. participation in the IMF is an exchange of monetary assets, and as such does not have a budget cost. But even if one rejects the exchange of assets principle, CBO does not provide convincing evidence that the interest the United States earns on its participation in the IMF is insufficient. When the IMF draws on U.S. quota or NAB resources, the IMF compensates the United States at an interest rate comprised of an average of the interest rate on short-term government securities of the United States, EU, Japan, UK and China. Moody’s rates the credit risks of these countries ranging from AAA (EU, US) to AA (China, UK) to single-A (Japan). The type of hypothetical, catastrophic loss envisioned by CBO is no more likely than the possibility of default by one of these highly rated governments on its short-term securities.

CBO asserts that IMF loans to member countries have an expected loss rate similar to a government with a single-A credit rating, which Treasury believes overstates the risk. Furthermore, Treasury’s analysis indicates that CBO’s estimated annualized loss rate may actually equate more closely to sovereign BB than single-A (see Annex 2).

A more defensible comparison of the quality of IMF credit would be to other high-quality supranationals such as the World Bank, which has a AAA rating. While not entirely comparable, the IMF’s strong balance sheet (reserves, precautionary balances and unrealized gains on gold) exemplary loan/loss performance, and credit risk mitigation framework (conditional lending, de facto preferred creditor status) make the IMF much more like the World Bank than like a single-A sovereign (e.g. Malaysia, Slovakia), let alone a BB sovereign (e.g. Brazil, Turkey, Vietnam).

## 7. Indirect Effects of U.S. Support for the IMF

CBO argues that budget scoring for the U.S. participation in the IMF should employ fair value accounting. However, while standard fair value methodology incorporates indirect effects, CBO’s model does not. CBO’s model ignores the positive impacts of a stable, cooperative international monetary system on the U.S. budget and the U.S. economy. By providing loans in situations of global systemic risk, the IMF helps mitigate the global fallout and thus lessens the chances of more serious contagion, deterring the scenario that CBO postulates. Yet CBO does not place a value on avoiding the costs associated with a world where there is no IMF, a world where the United States must either live with contagion from financial crises (and the resultant volatility in our export and financial markets) or seek to provide advice and assistance bilaterally to countries in crisis when contagion threatens. CBO acknowledges that “avoiding such contagion may help to stabilize the global economy”, but instead gives equal weight to the view that “availability of the emergency assistance offered by the IMF creates moral hazards.”

By creating the IMF, the international community was establishing a framework where all countries would be better off by following policies that promote a strong global economy, rather than the beggar-thy-neighbor policies that characterized the 1930's, and working collectively and cooperatively to resolve crises. While CBO argues that fair value accounting sends signals to lawmakers about changes in risk, to fail to consider these positive indirect effects, and equate the value of the IMF to "what a market participant would pay" is to ignore the well-established benefits of the IMF and provide the wrong cost and economic signals to U.S. policymakers.

## **Annex 1: Factual Corrections to the CBO Report**

### Investment of IMF Quota Contributions

The IMF does not invest any part of the U.S. quota contributions. The IMF only draws on the U.S. quota contribution when it needs to lend to countries in crisis; otherwise U.S. resources remain in a letter of credit. At the time of a quota increase, the U.S. does initially make a payment to the IMF of 25 percent of the increase, but this amount flows back to the U.S. when other countries pay their quota in U.S. dollars, making it a net wash. (In the case of the quota increase implemented in 2016, the U.S. paid in \$16 billion but received all of this, and slightly more, back when other countries made their payments in dollars.) So the end result of an increase in U.S. quota is an increase in the U.S. letter of credit to the IMF, and only if/when the IMF needs extra funds to lend out does it draw more money from the U.S. quota.

### IMF Concessional Lending to Low-Income Countries

The IMF's policies on lending to low-income countries are not relevant to a discussion of the budget cost of IMF quotas. IMF lending to low-income countries is financed from a Trust Fund that is independent from IMF quotas/NAB, and thus there is *no risk* to U.S. quota/NAB from such lending. Any default in the IMF's concessional lending would be covered by a separately-financed "Reserve Account of the Poverty Reduction and Growth Trust" (which amounts to SDR 4 billion or 63 percent of concessional loans outstanding as of July 2016), not the IMF's reserves. CBO does not recognize this distinction, mixing in discussion of policies such as low or zero interest rates for low-income countries as relevant to the IMF's general resources.

### Magnitude of U.S. participation in the IMF – Double Counting

CBO states that as of June 2016, "The United States' commitment to the IMF currently totals approximately \$164 billion, including \$118 billion in quotas, \$40 billion in the NAB, and \$6 billion in the GAB." The CBO figures double count GAB funds. The maximum U.S. commitment under NAB and GAB combined is \$40 billion. If the IMF requires secondary resources, it is required to have members vote on NAB activation first. If members decline to activate NAB funds, the IMF can seek to activate the smaller pool of GAB funds instead.

### Undrawn Balances of IMF Lending Programs

CBO states that "The potential call on the IMF's resources is larger than the outstanding loan balances at any particular time because most of the IMF's borrowing programs offer member countries a line of credit that can be drawn on as needed." Actually, only the IMF's Flexible Credit Line operates this way. Only countries with very strong economic policies, such as Mexico and Poland, qualify for the FCL, which does allow countries to draw the undrawn balance of the program "as needed", though also requires an annual review to verify continued strong policies. Other IMF programs are divided into quarterly or semi-annual tranches, with the disbursement of each tranche dependent on the country meeting strict policy conditionality – countries are not able to draw the undrawn balance "as needed." In fact, countries face delay in accessing tranches of IMF funding when they fail to meet policy conditionality.

## **Annex 2: Additional Technical Issues and Comments on the CBO Report**

Based on the CBO report, Treasury understands that the CBO's estimated 2 percent cost is based on weak CBO model assumptions. The CBO model assumes that a loss occurs in 1 out of every 300 scenarios. In the loss scenario, CBO assumes 100 percent of the U.S. commitment is outstanding with a 30 percent default rate to the IMF and a 15 percent loss rate to the IMF (50 percent loss rate given default). The CBO also assumes that IMF reserves reduce the loss rate to the United States from 15 percent to 5 percent (reserves do not grow and cover approximately 10 percent of the losses to the IMF). Further, the CBO model assumes that losses are equally likely to happen any year.

### Outstanding Balance versus Commitments

The CBO estimates the expected value of the cost of U.S. participation in the IMF as \$2 for every \$100 committed. However, in the CBO estimate the expected outstanding balance in perpetuity is equal to \$10 for every \$100 committed. Therefore the CBO model estimates the expected value of the cost is \$2 for every \$10 outstanding. Therefore the expected cost is actually 20 percent of the outstanding balance (\$2/\$10).

Similarly, the CBO estimates both its loss rate and spreads as a percent of commitments. The appropriate method for quoting spreads and default/loss rates are as a percent of the balance outstanding. The methodology of quoting metrics as a percent of commitments instead of as a percent of the balance outstanding is misleading, and may cause readers to erroneously view the estimated cost (i.e. 2 percent) as appropriate for a high-credit-quality organization like the IMF.

### Annualized Loss Rate - Comparison to Sovereigns

While CBO states that its default rates are similar to Moody's Sovereign A default rates, our analysis indicates that the CBO default rate for IMF loans most closely resembles the default rate associated with a Moody's Sovereign BB borrower. Therefore the CBO is overstating the default rate. Using the Moody's Sovereign A default rate (or even BBB), in conjunction with the CBO model assumptions would result in a zero loss rate for U.S. participation in the IMF.

The CBO paper states on page 21, "Sovereign loans with a credit rating of A from Moody's, for example, have historically had annual default rates that are similar to CBO's estimated rate for IMF loans." In the terminology of the CBO paper, IMF loans are the loans from the IMF to member nations. We incorporated the Moody's sovereign default rates with the assumptions of the CBO model to estimate the following Moody's sovereign credit ratings implied by the CBO assumptions:

- BB Moody's sovereign credit rating for IMF loans to member nations
- BBB Moody's sovereign credit rating for U.S. loans to the IMF

We applied CBO assumptions in a manner consistent with the description of the default curve construction provided by the data source, Moody's.<sup>3</sup> The CBO paper describes the model assumption for IMF loans to member nations as non-amortizing loans outstanding for two years with 5 percent of the new U.S. obligation to the IMF disbursed each year with 10 percent of the new U.S. obligation to the IMF outstanding in perpetuity. Of the 10 percent of the increase of U.S. obligation to the IMF outstanding at any point in time, 5 percent matures in 1 year and the other 5 percent matures in 2 years. Therefore the 1-year cumulative default rate is applied to 5 percent while the 2-year cumulative default rate is applied to the other 5 percent.

#### Disbursement Profile of Old vs. New U.S. Quota Resources

CBO assumes that 10 percent of the U.S. quota increase would be lent out by the IMF on a rolling basis, beginning immediately. This overestimates the use of new U.S. quota resources, particularly in the short-term. Even assuming a proportional use of new and old U.S. quota resources for new IMF loans, new resources would only be employed gradually as new loans extended over a multi-year time horizon. And under what we consider a reasonable assumption that old resources would be used first, it is unlikely that any resources associated with the U.S. quota increase will be used in the medium term. Instead, the use of the increase would take place over the long term in periods of surges in IMF lending.

#### Deviation from Legislation Requirement Not Explained

CBO has developed a methodology that deviates from legislative requirements and is unusual from an accounting valuation perspective, but CBO neither explains nor justifies the approach. Specifically, the Consolidated Appropriations Act, 2016 requires that “the discount rate for purposes of the present value calculation shall be the appropriate interest rate on marketable Treasury securities, adjusted for market risk”. However, the CBO model deviates from these requirements in two ways: (1) it uses the SDR interest rate rather than the Treasury securities rate as the discount rate; and (2) it applies the market risk adjustment to the cash flows (the numerator in a present value calculation) rather than to the discount rate (the denominator), which is not mathematically equivalent. While CBO explains its use of the SDR interest rate based on the interest rate parity principle, it provides no justification or explanation for its unusual approach to the market risk adjustment, leaving us unconvinced that this is a preferable methodology.

#### Mislabeled Information on IMF Reserve Growth

Table 5 (pg. 16) erroneously indicates that 2.4% of total IMF funding increase was 'Income Retained by the IMF as Reserves'. Instead, this 2.4 percent represents the 100 basis point spread that CBO assumes the IMF uses for administrative expenses, as described on page 19, 'Income

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<sup>3</sup> The Moody's default rates are calculated as a percent of the balance outstanding at the beginning of each period, which is not equivalent to the CBO methodology of quoting as a percent of commitments. Moody's Investors Service, Sovereign Default and Recovery Rates, 1983–2012H1 (July 30, 2012), <http://tinyurl.com/zqf6ldx> (PDF, 1.43 MB), pg 13.

retained by the IMF'. Moreover, based on page 19, 'Losses Absorbed by the IMF's Reserves', the IMF's reserves are currently slightly less than 10 percent of IMF total funding, and will 'grow slowly over time' to 10 percent. Therefore CBO does not assume the IMF retains 2.4 percent for reserves growth.